APPENDIX A

NOP/Initial Study and Comment Letters

Orange Coast College Vision 2020 Facilities Master Plan
Initial Study

Prepared for:

Coast Community College District
1370 Adams Avenue
Costa Mesa, California 92626
Contact: Jerry Marchbank
Senior Director, Facilities, Planning and Construction

Prepared by:

DUDEK
31878 Camino Capistrano #200
San Juan Capistrano, California 92675
Contact: Rachel Struglia, PhD, AICP

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ACRONYMS AND ABBREVIATIONS

Acronym/Abbreviation	Definition
AB	Assembly Bill
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CMP	Congestion Management Program
CNRA	California Natural Resources Agency
District	Coast Community College District
EHS	Environmental Health and Safety Department
EIR	Environmental Impact Report
GHG	Greenhouse Gas
IS	Initial Study
NOP	Notice of Preparation
NPDES	National Pollutant Discharge Elimination System
OCC	Orange Coast College
PEIR	Program Environmental Impact Report
RWQCB	Regional Water Quality Control Board
SCAQMD	South Coast Air Quality Management District
SWPPP	Stormwater Pollution Prevention Program

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1.0 INTRODUCTION

The Coast Community College District (District) is updating its Facilities Master Plan for all three of its Orange County campuses: Orange Coast College (OCC), Golden West College (GWC), and Coastline Community College (CCC). The Vision 2020 Facilities Master Plan provides an analysis of the evolving student body and makes planning recommendations based on their educational needs. The District is undertaking a comprehensive improvement and building program to meet enrollment needs and to make the upgrades and repairs of existing buildings as well as to construct new facilities to improve the safety and educational experience of those attending the colleges in accordance with Measure M. Measure M was passed in November 2012 and issued $698 million in bonds to fund the expansion of courses and academic buildings in engineering, math, science, and technology, as well as to upgrade technologies, construct and repair facilities, and improve resources for active military personnel and veterans at all three District campuses.

At OCC, the District plans to construct new, larger buildings housing similar disciplines and replace the smaller and spatially less efficient classroom buildings in the center of the campus in addition to implementing various parking and pedestrian circulation improvements. An increase in attendance of out-of-district students at OCC is projected in the Facilities Master Plan; as a result, an increase in commuter students is expected. Therefore, the reconfiguration of existing parking lots, the creation of an off-campus multilevel parking structure, and the improvement of vehicular entryways are planned to alleviate traffic and parking issues.

1.1 California Environmental Quality Act Compliance

The California Environmental Quality Act (CEQA) serves as the main framework of environmental law and policy in California. CEQA emphasizes the need for public disclosure and identifying and preventing environmental damage associated with proposed projects. Unless the project or program is deemed categorically exempt, CEQA is applicable to any project or program that must be approved by a public agency in order to be processed and established. This proposed project does not fall under any of the statutory or categorical exemptions listed in the 2013 CEQA Statute and Guidelines (California Public Resources Code, Section 21000 et seq.; 14 CCR 15000 et seq.), and therefore must meet CEQA requirements.

> Considering the proposed project has the possibility of creating a significant impact, the preparation of an Environmental Impact Report (EIR) is required by CEQA. The EIR will be analyzed at a program level as the proposed project fits under the scope of a Program EIR, as stated in Section 15168(a) of the

CEQA Statute and Guidelines: A program EIR is an EIR which may be prepared on a series of actions that can be characterized as one large project and are related either:

1. Geographically,
2. A[s] logical parts in the chain of contemplated actions,
3. In connection with issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program, or
4. As individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways (14 CCR 15000 et seq.).

1.2 Purpose of the Notice of Preparation and Initial Study

The intent of this document is to provide an overview and analysis of the environmental impacts associated with the project proposed (the implementation of the Vision 2020 Facilities Master Plan) for OCC by the District. This document is accessible to the public, in accordance with CEQA, in order to receive feedback and input to be discussed in the Program Environmental Impact Report (PEIR).

1.3 Availability of the Notice of Preparation and Initial Study

The Initial Study/Notice of Preparation (IS/NOP) for OCC is being distributed directly to numerous agencies, organizations, and interested groups and persons during the scoping period. The IS/NOP is also available for review at the following locations:

- Coast Community College District Headquarters, 1370 Adams Avenue, Costa Mesa, California 92626
- Mesa Verde Branch Library, 2969 Mesa Verde Drive, Costa Mesa, California 92626

In addition, the IS/NOP is available online through the District website (http://www.cccd.edu/news/publications.aspx).

2.0 PROJECT LOCATION

OCC occupies an approximately 160-acre site in the City of Costa Mesa in central Orange County. The project site is surrounded by the Cities of Santa Ana to the north, Fountain Valley and Huntington Beach to the west, Newport Beach to the south, and Irvine to the east. Figure 1 shows the campus's regional location. Specifically, OCC is bounded by Adams Avenue to the north, Fairview Road to the east, Merrimac Way to the south, and Harbor Boulevard to the west (see Figure 2). North of the site, across Adams Avenue, are high-density residential developments, and low-density residential developments are south of Merrimac Way. Costa Mesa High School and the Orange County Fair & Event Center (OC Fairgrounds) are located to the east across Fairview Road, and commercial and residential development is located to the west of the campus along Harbor Boulevard. The District headquarters is located on the north side of Adams Avenue just west of the Adams Avenue entry to the campus. Primary freeway access to the campus would be via Interstate 405 and State Routes 55 and 73, which are within minutes of the campus.

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3.0 PROJECT DESCRIPTION

OCC is the District's oldest campus, with facilities dating to the late 1940s. The original campus concept supported smaller buildings, which are outdated for today's instructional needs. The intent is to replace these smaller buildings in the inner core of campus with larger buildings that will house similar disciplines and programs. The plan also includes opening the inner core of campus to pedestrians and relocating roadways to the perimeter. OCC had an enrollment of 25,947 students in 2009 and is projected to grow to 28,332 students in 2020, representing a 0.84% annual average growth rate (District 2011). Weekly student contact hours are also expected to increase from 329,970 in fall 2009 to 388,143 in fall 2020, as shown in Table 1. The Vision 2020 Facilities Master Plan identifies a need for an additional 100,000 assignable square feet of academic space at OCC by 2020 to accommodate this growth.

Table 1
Orange Coast College Planning Projections

Timing	Weekly Student Contact Hours	Unduplicated Student Enrollment
Fall 2009	329,970	25,947
Fall 2020	388,143	28,332

Source: District 2011.

OCC offers technical education courses but primarily focuses on transfer and general education, as 80% of weekly student contact hours in the fall 2009 semester were associated with courses in literature and languages, math and science, social and behavioral science, visual and performing arts, and consumer and health sciences (District 2011). Considering the projected enrollment growth and the popularity of general education courses, the District proposes construction of a Business/Math/Computing Center, a Language Arts and Social Sciences Building, a Multidisciplinary Building, and expansion and renovation of the Chemistry Building.

The Vision 2020 Facilities Master Plan examined enrollment trends for the fall semesters of the years 1999 and 2009 and concluded that there was an overall increase in the percentage of out-of district students from 41.9% to 48.0% in comparison to in-district students, which saw a decrease from 58.0% to 52.0%, as presented in Table 2. It is projected that there would be a 50-50 balance between in-district and out-of-district students in the future, which suggests an increase in commuting students. Student housing, reconfiguration of existing parking lots, and a possible off-site multilevel parking structure shared with the OC Fairgrounds are proposed by the District to accommodate this trend.

Table 2
Orange Coast College Enrollment Trends by Location

Source/Location	Fall 1999	Fall 2009
In-district students	58.0%	52.0%
Out-of-district students	41.9%	48.0%

Source: District 2011.

The District would like to increase entrepreneurial activities and attract visitors to the campus through the development of new facilities and the improvement of programs in place. A recycling center on the north side of campus is currently in use by residents of Costa Mesa, as the city does not offer curbside recycling services. Improvements include the expansion of the center and reconfiguration to alleviate traffic congestion on Adams Avenue. A mixed-use housing/retail development on the corner of Merrimac Way and Fairview Road would provide services for campus students, employees, and visitors. Additional revenue generated by the bookstore and food service facilities is expected upon the construction of a new Student Union/ Bookstore/Culinary Arts/Student Success Center. A new Planetarium would not only serve as an educational resource for OCC students, but would also attract K–12 students and other visitors.

3.1 Project Objectives

- Provide the building space to meet the District's instructional needs and academic mission.
- Update and modernize existing building space to meet the District's instructional needs.
- Accommodate growth in the student body over the planning horizon.
- Provide joint venture and entrepreneurial opportunities that generate revenue and support the academic needs and mission of the campus.
- Provide on-campus student housing.
- Foster projects that support innovative solutions to reduce resource consumption and support environmentally responsible practices to change behavior in the campus community and beyond.

3.2 Environmental Setting

Once part of the Santa Ana Army Air Base developed during World War II, OCC still remains under government ownership and is designated as Public/Institutional Land (City of Costa Mesa 2002). Currently, OCC houses more than 80 buildings, which occupy 651,951 assignable square feet (District 2011). The northwest corner currently contains undeveloped land, some of which is used for parking. Classrooms and academic buildings are predominantly in the center to the south end of the campus. Athletic buildings and fields make up the majority of the northeast corner of the site. Parking lots are located all throughout the campus, but are mainly found along the perimeter. The OC Fairgrounds parking lot across Fairview Road serves as additional off-site parking for students. An additional feature to this campus is a recycling center on the north side of the campus, which provides additional revenue to OCC.

3.3 Proposed Master Plan Elements

Based on the information contained in the Vision 2020 Facilities Master Plan, some Master Plan elements (identified below) would be assessed at the program level because specific project details are not known at this time. A few of these elements are dependent upon a future joint-venture partnership between the District and the OC Fairgrounds or a developer yet to be identified. Project-specific plans would be developed after the joint venture was initiated. Other Master Plan elements (identified below) have detailed information available and would receive project-level assessment. See Figure 3 for existing campus land uses and Figure 4 for proposed campus land uses.

Program elements include:

- **Mixed-use development at the corner of Fairview Road and Merrimac Way.** This project would consist of commercial/retail uses on the street level and student residential on the upper levels. The District envisions a private partner that has yet to be identified.
- **A student housing project (approximately 1,300 beds) at the corner of Adams Avenue and the campus entry.** The proposed approximately 200,000-square-foot facility would be supported by a private partner.
- **Multifamily residential housing.** The District site adjacent to District headquarters on Pinecreek Lane is identified for multifamily residential development (e.g., senior housing or market-rate housing) in the Facilities Master Plan. A private partner is envisioned that has yet to be identified.
- **New Planetarium.** This proposed 9,300-square-foot facility would be used by the college and the community and is sited to allow for public access from the Merrimac lot.
- **New Student Union/Bookstore/Culinary Arts/Student Success Center.** This project is planned to be developed slightly north of the corner of Fairview Road and Merrimac Way. **New Administration Building.** This building may be integrated with the new Student Union.

Project elements include:

- **Recycling center expansion and circulation/parking improvements.** The proposed location for these improvements is on the north side of campus where the existing recycling center is located.
- **A new parking structure either on campus or off campus.** The off-campus parking structure may be a Fairgrounds Parking Structure with shared parking between the OC Fairgrounds and the District. If constructed on campus, the parking structure would be located in Parking Lot E.
- **Reconfigured Parking Lot E.**
- **Reconfigured campus entries at Monitor Way, Pirate Way and Arlington Avenue.**
- **Renovation and expansion of the Chemistry Building.**
- **New Business, Math, and Computing Center.**
- **New Language Arts and Social Science Building.**
- **New Multidisciplinary Building.Pedestrian circulation enhancements. New Adaptive PE Facilities, Mens and Womens Locker Rooms, Pools, and Fitness Facilities.**

Additional detail about these project elements is provided in this section.

Recycling Center Expansion and Circulation/Parking Improvements

The District proposes to expand the existing recycling center for the purposes of accommodating recycling demand in the City of Costa Mesa, which does not have curbside recycling. The expansion would primarily enhance pedestrian and vehicular safety on approach to and within the recycling center. The proposed expansion would include a deceleration lane on Adams Avenue so that vehicles intending to enter the site can move out of the flow of traffic on Adams Avenue more quickly. It would also provide greater on-site space for visitors to drop sorted recyclable materials at designated areas; landscaped frontage along Adams Avenue; an area for composting; raised planter beds; outdoor instructional space; a 2,500-square-foot covered storage area for trucks, forklifts, and equipment; and 50- by 40-foot modular spaces for storage. A 54-foot truck turnaround area would be provided for vehicles transporting recyclable materials out of campus. Standard roll-off trucks would deliver materials from campus six times a week between the hours of 9 a.m. and 5 p.m. Semi-trucks and 55-foot flatbed trucks would pick up recyclable waste once a month. All trucks would access the recycling center from the interior of the campus. The expansion of the site would also involve increasing the number of parking spaces from approximately 8 to 45 dedicated spaces.

OC Fairgrounds Parking Structure

The District proposes, in partnership with the State of California, to construct up to a four-level parking structure for 2,000 vehicles on an existing OC Fairgrounds lot at the corner of Fairview Road and Arlington Avenue. The lot is owned by the State of California and is currently being used by the District for student parking as part of a shared-use agreement. The existing parking lot can accommodate approximately 500 vehicles, and the proposed parking structure would accommodate an increase of approximately 1,500 vehicles. It is envisioned that the parking structure would be used by students attending regularly scheduled classes and by patrons of OCC’s Robert B. Moore Theatre. Vehicle entry into the parking structure is planned for the north, south, and east sides. If a parking structure is not constructed off campus, an alternative parking structure would be constructed on-campus in Parking Lot E.

Reconfigured Parking Lot E

Parking Lot E, located in the southwestern corner of the campus, is one of the largest student lots at OCC. Reconfiguration of this parking lot would include development of a primary entry from Merrimac Way, as well as two secondary entries from Merrimac Way. Parking Lot E would serve as an alternative site for the OC Fairgrounds Parking Structure.

Reconfigured Campus Entry at Monitor Way, Pirate Way and Arlington Avenue

These entries from Fairview Road would be enhanced with the addition of formal gateways and marked pedestrian drop-off points. The enhancement of these entries would be coordinated with the replacement of the Student Union/Bookstore/Culinary Arts/Student Success Center/ Administration Building, and Adaptive PE Facilities in order to enhance the visibility of these facilities.

New Business, Math and Computing Center

A new Business, Math, and Computing Center is proposed in the center of campus, just south of Le Bard Stadium and north of the central quad. The new building would be 75,080 square feet and would house the business, math, and computing programs.

New Language Arts and Social Science Building

A new Language Arts and Social Science Building is proposed in the center of campus, just south of Le Bard Stadium and north of the central quad to the east of the proposed new Business, Math, and Computing Center. The new building would be 107,760 square feet and would house language arts and social science programs.

New Multidisciplinary Building

A new Multidisciplinary Building is proposed south of Lot F and west of the new Business, Math, and Computing Center. The new building would house a variety of programs, including business, math, computing, language arts, and social sciences. New Adaptive PE Facilities, Men's and Women's Locker Rooms, Pools and Fitness Facilities New adaptive PE and fitness facilities, men's and women's locker rooms, and swimming/dive pools are proposed north of the existing Locker Room and Gymnasium Facilities and northeast of the Track and Field. These buildings may include remodeling existing facilities or new buildings/structures.

3.3.1 Proposed Building Renovations/Modernization

The following are proposed for renovation and would be addressed at the project level:

- Chemistry Building—Renovation and expansion of current Chemistry building
- Skill Center—Renovation of current Skill Center in order to meet instructional demands
- College Support Center—Renovation of the current Literature and Languages Building to provide centralized instructional support services
- Auditorium—Renovation of current Auditorium in order to meet academic demands.

3.3.2 Site Improvement Elements

Pedestrian Circulation

The Vision 2020 Facilities Master Plan builds on the existing pedestrian pathways, completing the pedestrian connectivity around the central quad. Pedestrian pathways are shown on Figure 5.

Other Improvements

Pedestrian nodes or plazas would include campus maps for wayfinding and seating for information interaction. Pedestrian pathways would be landscaped to signify that they are entryways into the campus. A third food service location would be added to the west side of campus, which would help create another student hub supporting that side of campus.

3.4 Project Phasing

The Vision 2020 Facilities Master Plan would be implemented over 8 academic years in three phases. The proposed construction phasing is outlined below.

Phase 1 (2013–2015)

- Recycling Center Expansion and Circulation/Parking Improvements
- Business, Math, and Computing Center
- Administration Building/Student Union/Instructors Classrooms
- Planetarium.
- Reconfiguration of Parking Lot E
- OC Fairgrounds Parking Structure or Lot E Alternative Parking Structure.

Phase 2 (2015–2017)

- Adaptive Physical Education, Gymnasium, Pool Construction
- Administrative/Student Support Center
- Student Services Improvements
- Student Union/Bookstore/Culinary Arts/Student Success Center
- Student Housing Project

Phase 3 (2017–2021)

- Skill Center Renovation

College Support CenterUnscheduled Projects

- Multidisciplinary Building (Behavioral & Social Science / Literature & Languages)
- Mixed-Use Development
- Language Arts/Social Sciences Building
- Chemistry Building Expansion/Renovation.

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4.0 PUBLIC REVIEW PROCESS

Required Permits and Approvals

The lead agency, the District, is responsible for CEQA clearance and site plan review. A public agency, other than the lead agency, that has discretionary approval over the project is known as a "responsible agency," as defined by the CEQA Guidelines (14 CCR 15000 et seq.). The responsible agencies and their corresponding approvals for this project include the following:

State of California

- Division of the State Architect (approval of construction drawings)
- Department of Toxic Substances Control
- State of California General Services Agency for the OC Fair & Event Center (Fairgrounds Parking Structure is on state-owned land).

Regional Agencies

- Santa Ana Regional Water Quality Control Board (National Pollutant Discharge Elimination System Permit Program).

City of Costa Mesa

- Department of Public Works (traffic)
- Fire Department (emergency access)

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5.0 SUMMARY OF FINDINGS

The District finds that the project could have a significant adverse effect on the environment based on the results of the Initial Study Checklist, as described in Section 6.0. Potentially significant effects have been identified, and the District has decided to prepare a PEIR to address these impacts:

1. **Aesthetics:** The proposed project could have a substantial effect by degrading the existing visual quality of a site or creating a new source of substantial light or glare. See Section 6.1, Aesthetics, for additional information.
2. **Agriculture and Forestry Resources:** The proposed project would not have an impact on agricultural resources. See Section 6.2, Agriculture and Forestry Resources, for additional information.
3. **Air Quality:** Short-term, construction-related impacts are anticipated to occur due to fugitive dust and emissions from vehicles. The operational phase of the project could also result in a substantial increase in emissions. In order to accurately determine the project’s potential impacts on air quality, further analysis will be required. Impacts are considered potentially significant. See Section 6.3, Air Quality, for additional information.
4. **Biological Resources:** The proposed project could result in significant impacts to special-status wildlife and plant species and habitat on the project site and could interfere substantially with the movement of a migratory wildlife species. These issues will be analyzed further in the PEIR. Impacts are considered potentially significant. See Section 6.4, Biological Resources, for additional information.
5. **Cultural Resources:** The proposed project could have the potential to expose cultural, archaeological, or paleontological resources during ground-disturbing activities, or cause a substantial adverse change in the significance of a historical resource. Impacts are considered potentially significant. See Section 6.5, Cultural Resources, for additional information.
6. **Geology and Soils:** The proposed project could expose people or structures to adverse risks associated with hazardous geologic or soil conditions. Impacts are considered potentially significant. See Section 6.6, Geology and Soils, for more information.
7. **Greenhouse Gas Emissions:** The proposed project would result in temporary construction-related emissions. During the operational phase, emissions would also increase due to higher energy usage. In order to accurately determine the proposed project’s potential impacts on GHG emissions, further analysis will be required. Impacts are considered potentially significant. See Section 6.7, Greenhouse Gas Emissions, for additional information.

8. **Hazards and Hazardous Materials:** The proposed project could introduce hazardous materials to people or the environment. See Section 6.8, Hazards and Hazardous Materials, for additional information.
9. **Hydrology and Water Quality:** Construction activities associated with implementation of the proposed project could have the potential to result in temporary construction-related impacts on water quality from erosion and sedimentation. Proposed project operation could violate water quality standards or waste discharge requirements, deplete groundwater supplies, and degrade water quality. Impacts to hydrology and water quality will be analyzed further in the PEIR. See Section 6.9, Hydrology and Water Quality, for additional information.
10. **Land Use and Planning:** The proposed project would have a less than significant impact on land use and planning. See Section 6.10, Land Use and Planning, for more information.
11. **Mineral Resources:** The proposed project would not have an impact on mineral resources. See Section 6.11, Mineral Resources, for additional information.
12. **Noise:** The proposed project could expose persons to noise levels that exceed standards or to excessive ground-borne vibration or ground-borne noise levels, and result in a substantial permanent, temporary, or periodic increase in ambient noise levels during construction or operation of the proposed project. Noise impacts will be analyzed further in the PEIR. Refer to Section 6.12, Noise, for more information.
13. **Population and Housing:** The proposed project would not divide an established community or displace people or housing. However, the proposed project could stimulate growth. This impact will be analyzed further in the PEIR as discussed in Section 6.13, Population and Housing.
14. **Public Services:** The proposed project could result in impacts to fire protection, police protection, and schools due to access issues and possible disturbances from project construction and operation. See Section 6.14, Public Services, for additional information.
15. **Recreation:** The proposed project would not have an impact on recreational facilities. See Section 6.15, Recreation, for additional information.
16. **Transportation/Traffic:** During construction and operation of the proposed project, increases in traffic due to construction worker commutes, equipment and materials deliveries, and increases in student enrollment and campus visitors may occur. The proposed project could also introduce hazards to roadways, walkways, and bike paths. This impact will be analyzed further in the PEIR. See Section 6.16, Transportation and Traffic, for additional information.

17. **Utilities and Service Systems:** The proposed project could have a significant impact to utilities and service systems, as the project may require the construction of new stormwater drainage facilities and water and wastewater treatment facilities and could require new or expanded water entitlements or resources. The proposed project would be required to comply with solid waste statutes and would be required not to adversely impact landfill capacity. See Section 6.17, Utilities and Service Systems, for additional information.
18. **Mandatory Findings of Significance:** The proposed project could result in significant impacts. See Section 6.18, Mandatory Findings of Significance, for more information.

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6.0 INITIAL STUDY CHECKLIST

1. Project title:

Orange Coast College Vision 2020 Facilities Master Plan Program Environmental Impact Report

2. Lead agency name and address:

Coast Community College District
1370 Adams Avenue
Costa Mesa, California 92626

3. Contact person and phone number:

Jerry Marchbank, Senior Director, Facilities, Planning and Construction, 714.438.4731

4. Project location:

Orange Coast College
2701 Fairview Road
Costa Mesa, California 92626

5. Project sponsor's name and address:

Coast Community College District
1370 Adams Avenue
Costa Mesa, California 92626

6. General plan designation:

Public/Institutional

7. Zoning:

Institutional and Recreational

8. Description of project. (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary):

The District plans to prepare a Program Environmental Impact Report (PEIR) to provide the public and responsible agencies with information about the potential environmental effects of the proposed Vision 2020 Facilities Master Plan improvements for Orange Coast College (OCC), located in Costa Mesa, California. The Vision 2020 Facilities

Master Plan provides an analysis of the evolving student body and makes planning recommendations based on educational needs. The Coast Community College District

(District) is undertaking a comprehensive improvement and building program to meet enrollment demands and to make the upgrades and repairs of existing buildings as well as constructing new facilities to improve the safety and educational experience of those attending the colleges in accordance with Measure M.

9. Surrounding land uses and setting (Briefly describe the project's surroundings):

The proposed project site is an approximately 160-acre site located in the City of Costa Mesa in central Orange County. The project site is surrounded by the Cities of Santa Ana to the north, Fountain Valley and Huntington Beach to the west, Newport Beach to the south, and Irvine to the east. Specifically, OCC is bounded by Adams Avenue to the north, Fairview Road to the east, Merrimac Way to the south, and Harbor Boulevard to the west. North of the site, across Adams Avenue, are high-density residential developments, and low-density residential developments are south of Merrimac Way. Costa Mesa High School and the OC Fair & Event Center (OC Fairgrounds) are located to the east across Fairview Road, and commercial and residential development is located to the west of the campus along Harbor Boulevard. The District headquarters is located on the north side of Adams Avenue just west of the Adams Avenue entry to the campus.

10. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement):

- Division of the State Architect for approval of construction drawings
- Department of Toxic Substances Control for any activity that may involve the hazardous waste handling and disposal
- State of California General Services Agency for the OC Fair & Event Center as the Fairgrounds Parking Structure is on state-owned land
- Occupational Health and Safety Administration to be notified of the proposed construction, renovation, and demolition plans
- Santa Ana Regional Water Quality Control Board for the issuance of a National Pollutant Discharge Elimination System Permit
- Costa Mesa Department of Public Works for activities that could impact traffic
- Costa Mesa Fire Department for review of project design regarding emergency access
- Costa Mesa Building Division for issuance of building permit.

6.1 Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact," as indicated by the checklist on the following pages.

☒	Aesthetics	☐	Agriculture and Forestry Resources	☒	Air Quality
☒	Biological Resources	☒	Cultural Resources	☒	Geology and Soils
☒	Greenhouse Gas Emissions	☒	Hazards and Hazardous Materials	☒	Hydrology and Water Quality
☐	Land Use and Planning	☐	Mineral Resources	☒	Noise
☒	Population and Housing	☒	Public Services	☐	Recreation
☒	Transportation and Traffic	☒	Utilities and Service Systems	☒	Mandatory Findings of Significance

6.2 Determination

(To be completed by the Lead Agency)

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☒ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature

11/1/13

Date

6.3 Evaluation of Environmental Impacts

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an Environmental Impact Report (EIR) is required.
4. "Negative Declaration: Less Than Significant with Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).
5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
   a. Earlier Analysis Used. Identify and state where they are available for review.
   b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
   c. Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
9. The explanation of each issue should identify:
   a. The significance criteria or threshold, if any, used to evaluate each question; and
   b. The mitigation measure identified, if any, to reduce the impact to less than significance.

6.3.1 Aesthetics

I. AESTHETICS – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☒	☐	☐	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☒	☐	☐	☐

a) Would the project have a substantial adverse effect on a scenic vista?

Less Than Significant Impact. The proposed project involves the construction of a variety of structures, pedestrian and access road improvements, and landscaping improvements on the Orange Coast College (OCC) campus as part of the Vision 2020 Facilities Master Plan. Some of the structures would be large, multistory buildings, which could obstruct views of the surrounding area. Construction activities, including grading and excavation, could have a temporary impact on views due to the presence and staging of equipment. However, the area surrounding the project site is characterized by residential and commercial uses. The City of Costa Mesa 2000 General Plan does not identify any scenic areas, vistas, or corridors in the vicinity of the campus (City of Costa Mesa 2002). The closest nature preserves are the Upper Newport Bay Nature Preserve and the Talbert Nature Preserve. The edge of the Upper Newport and the Talbert Nature Preserve are approximately 1.5 and 1.9 miles away, respectively; therefore, the project site is sufficiently far away that implementation of the proposed project would not interfere with any preserve-associated vistas. There are no scenic vistas within the vicinity of the proposed project site; therefore, impacts would be less than significant. This topic will not be analyzed further in the Program Environmental Impact Report (PEIR).

b) Would the project substantially damage scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Less Than Significant Impact. The proposed project involves the construction of a variety of structures on the OCC campus, some of which could obstruct views of the surrounding area. Construction activities, including grading and excavation, could have a temporary impact on views due to the presence and staging of equipment. However, the project would not have an impact on scenic resources associated with a state scenic highway. According to the California Department of Transportation (Caltrans 2013), the nearest eligible scenic roadway is the stretch of the Pacific Coast Highway (State Route 1 (SR 1)) from San Juan Capistrano to Long Beach, which is approximately 3 miles from the project site at its closest point. This highway is not an officially designated scenic roadway, but it is considered eligible. There are no designated scenic roadways within the project vicinity. There are no other scenic resources near or within the proposed project site that are visible from a scenic roadway. The proposed project would not damage scenic resources within a state scenic highway and no further analysis is required. This topic will not be analyzed further in the PEIR.

c) ***Would the project substantially degrade the existing visual character or quality of the site and its surroundings?***

Potentially Significant Impact. The proposed project entails implementation of the Vision 2020 Facilities Master Plan for the OCC campus. Because it introduces a wide variety of projects to the campus, implementation of the proposed project could substantially impact the visual character and quality of the site and its surroundings. The focus of much of the proposed project is on the campus periphery (new and renovated buildings), which would be most visible to surrounding viewers. The District's intent is to replace smaller, outdated buildings in the inner core of campus with larger buildings that house similar disciplines and programs and create pedestrian walkways and roadways, and these modifications would have visual impacts. The intent of these modifications would be to improve pedestrian circulation, increase the amount of open space on campus, and create a cohesive physical image and clear entry pathways and signage. The visual character and quality of the project site would be enhanced through the construction of facilities with consistent architectural themes. The proposed project could possibly degrade the view for residents located north, west, and south of the campus. Impacts are potentially significant and will be examined further in the PEIR.

d) ***Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?***

Potentially Significant Impact. New sources of light and glare could be introduced as a result of the proposed project. Additional exterior and interior lighting would likely be added upon construction of the new facilities. Windows and other reflective features associated with newly renovated and constructed facilities could also introduce glare to the project site and the surrounding areas. Although light and glare considerations would be factored into the proposed project design, further analysis is necessary to prevent light and glare from adversely affecting day or nighttime views in the area. Impacts are potentially significant and will be analyzed further in the PEIR.

6.3.2 Agriculture and Forestry Resources

II. AGRICULTURE AND FORESTRY RESOURCES – In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

a) Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

No Impact. The proposed project would not convert Farmland to non-agricultural use. A parcel of Unique Farmland, located in Huntington Beach, is east of and runs parallel to the Santa Ana River. This Farmland is located approximately 1.5 miles east of the campus and appears to contain greenhouses and small rows of various crops. A parcel of land considered to be Farmland of Statewide Importance and Prime Farmland that currently appears to be undeveloped is located approximately 1 mile north of the campus, in the City of Costa Mesa (CDC 2013). The proposed project would not occur within these isolated Farmland locations, and would not result in the conversion of this land to non-agricultural use. This issue will not be analyzed further in the PEIR.

b) Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. The Williamson Act, also known as the California Land Conversion Act of 1969 (California Government Code Section 51200 et seq.), preserves agricultural and open space lands from the conversion to urban land uses by establishing a contract between local governments and private landowners to voluntarily restrict their land holdings to agricultural or open space use. The project site is not located on any lands with Williamson Act contracts. The proposed project location is designated as Institutional and Recreational Land, according to the City of Costa Mesa 2000 General Plan (City of Costa Mesa 2002), and is therefore not zoned for agricultural use. The surrounding areas are designated as Commercial-Limited, Single-Family Residential, Multiple-Family Residential, Institutional and Recreational, and Local Business land use types. None of these zones allow agricultural uses; therefore, no conflict with agricultural zoning exists. According to the General Plan, no areas within the city are considered Agricultural land use type and therefore the proposed project has no impact on agriculturally zoned land. No further analysis is required and this topic will not be included in the PEIR.

c) Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

No Impact. No land within the City of Costa Mesa is zoned as forest land, timberland, or timberland zoned Timberland Production, according to the City of Costa Mesa 2000 General Plan (City of Costa Mesa 2002). Therefore, the proposed project site would not conflict with existing zoning or cause rezoning of any of any forest or timberland, as none of those land types are located within the vicinity of the project site. No further analysis is required regarding this issue and it will not be included in the PEIR.

d) Would the project result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. The proposed project is located in an urban, developed area and is not located within or in the vicinity of forest land. The closest forests are the Cleveland National Forest (to the east of Orange County) and the Angeles National Forest (north of Los Angeles) (USFS 2013). There are no state forests within Orange County. The proposed project would not contribute to the loss of forest land; therefore, there is no impact and this issue will not be included in the PEIR.

e) Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

No Impact. No Farmland or forest land exists within the vicinity of the proposed project site, as described in Sections 6.3.2(a)–6.3.2(d). Therefore, no farmland or forests would be converted for non-agricultural or non-forest use due to the proposed project. No impact on Farmland or forest land would occur due to the proposed project; therefore, no further analysis is required. This issue will not be included in the PEIR.

6.3.3 Air Quality

III. AIR QUALITY – Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	☒	☐	☐	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☒	☐	☐	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☒	☐	☐	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☒	☐	☐	☐
e) Create objectionable odors affecting a substantial number of people?	☒	☐	☐	☐

a) ***Would the project conflict with or obstruct implementation of the applicable air quality plan?***

Potentially Significant Impact. The City of Costa Mesa is within the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The Air Quality Management Plan, prepared by SCAQMD, incorporates planning projections to devise a plan to meet federal and state air quality requirements. The proposed project would increase air pollutants in the short term due to construction activities, and long-term increases would likely result from an increase in student enrollment. An increase in commuting students and visitors, projected by the Vision 2020 Facilities Master Plan, would likely result in an increase in vehicular pollutants as well as pollutants associated with campus operations compared to the current campus emission levels. Campus energy demands would likely increase due to expanded enrollment and the increased number of buildings on campus, contributing to an increase of greenhouse gas (GHG) emissions. These scenarios would introduce more air pollutants into the proposed project area and could potentially obstruct implementation of the Air Quality Management Plan. These issues will be analyzed further in the PEIR.

b) ***Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?***

Potentially Significant Impact. The proposed project could violate an air quality standard or contribute substantially to an air quality violation. Construction of the proposed project would result in a temporary addition of pollutants to the local airshed caused by soil disturbance, dust emissions, and combustion pollutants from on-site construction equipment, as well as from construction worker vehicles, vendor/delivery trucks, and off-site haul trucks. Oxides of nitrogen (NO_x) and carbon monoxide (CO) emissions would primarily result from the use of construction equipment and motor vehicles. Fugitive dust emissions would primarily result from trenching and grading activities. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation, and, for dust, the prevailing weather conditions.

Long-term air pollution could result from vehicular emissions and campus operations. An increase in student enrollment, projected by the Facilities Master Plan, could contribute to additional NO_x and CO emissions. Campus energy demands would likely increase due to the development of the new buildings, contributing to an increase of GHG emissions. In order to determine the proposed project's potential for violating any air quality standards, further analysis is required and will be included in the PEIR.

c) ***Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?***

Potentially Significant Impact. The proposed project could result in a cumulatively considerable net increase of criteria pollutants that are under non-attainment under a federal or state standard. Criteria pollutants under non-attainment in the South Coast Air Basin include ozone (O_3) and particulate matter (PM_{10} and $PM_{2.5}$) (SCAQMD 2013). Ozone emitted from construction vehicles and commuter vehicles could contribute to long-term air quality impacts. Particulate matter emitted from construction activities could contribute to temporary impacts. Further investigation is required in order to determine the proposed project's potential to result in a considerable net increase of these criteria pollutants. These issues will be analyzed further in the PEIR.

d) ***Would the project expose sensitive receptors to substantial pollutant concentrations?***

Potentially Significant Impact. Sensitive receptors include population groups that are susceptible to the effects of air pollutants. Sensitive receptors include the elderly, children, those with serious medical conditions, or any other group considered sensitive to the harmful effects of air pollutants. Sensitive receptors located within the vicinity of the campus include Costa Mesa High School, Middle College High School, Davis Magnet School, College Park Elementary School, Adams Elementary School, Sonora Elementary School, Killybrooke Elementary School, Paularino Elementary School, and surrounding residential neighborhoods. Substantial pollutant concentrations could be emitted as a result of project construction activities and campus operations. Further analysis is required regarding the amount of emitted pollutants and whether this would be considered substantial. This issue will be analyzed further in the PEIR.

e) ***Would the project create objectionable odors affecting a substantial number of people?***

Potentially Significant Impact. It is possible that odors could be released during construction activities and while the new facilities are in operation. Preconstruction and construction activities include grading and painting, which could result in the temporary release of objectionable odors. While in operation, odors associated with waste and chemicals used for cleaning and facility maintenance could be released from the project site. This issue will be analyzed further in the PEIR.

6.3.4 Biological Resources

Information in this section is based on a general reconnaissance biological survey conducted by Dudek biologist Johanna Page on August 6, 2013. A biological resources letter report will be prepared for the PEIR.

IV. BIOLOGICAL RESOURCES – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game[1] or U.S. Fish and Wildlife Service?	☒	☐	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☒	☐	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

[1] The California Department of Fish and Game (CDFG), effective September 2012, has changed its name to the California Department of Fish and Wildlife (CDFW).

a) ***Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?***

Potentially Significant Impact. Cooper's hawk (*Accipiter cooperii*), a species on the California Watch List, has the potential to nest in tall ornamental trees within the proposed project site, according to a general reconnaissance biological survey conducted on the OCC campus. If trees were to be removed during proposed project activities, this could have a substantial adverse effect on this special-status avian species. Therefore, impacts are potentially significant. Further analysis is required and will be included in the PEIR.

b) ***Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?***

No Impact. The proposed project site is composed of developed, disturbed, eucalyptus woodland, ornamental plantings, and ruderal vegetation communities/land covers, according to a general reconnaissance biological survey conducted on the OCC campus (see Figure 6). These are not considered to be native plant communities. The project site is not located in riparian habitat or a sensitive natural community, and would not have an adverse effect on these habitats. Therefore, no impacts would occur and no further analysis is required. This topic will not be analyzed further in the PEIR.

c) ***Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?***

No Impact. According to a general reconnaissance biological survey conducted on the OCC campus, the proposed project site is composed of developed, disturbed, eucalyptus woodland, ornamental plantings, and ruderal vegetation communities/land covers (see Figure 6). The proposed project site does not contain federally protected wetlands and therefore no impacts would occur. This topic will not be analyzed further in the PEIR.

d) ***Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?***

Potentially Significant Impact. The proposed project site contains stands of Australian eucalyptus trees and ornamental trees, which provide nesting and perching sites for several raptor species, according to a general reconnaissance biological survey conducted on the OCC campus. Cooper's hawks, which have been identified in urban and suburban areas, have the potential to nest in these types of trees. Construction activities or removal of these trees could create disturbances or interfere with the movement of Cooper's hawks or impede their use of these habitats. Further analysis is required and will be included in the PEIR.

e) ***Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?***

Less Than Significant Impact. The proposed project would follow all guidelines established by the City of Costa Mesa's Streetscape and Median Development Standards (City of Costa Mesa 2008). The District would obtain a permit from the City if new trees or landscaping would be added to or removed from the public right-of-way. Impacts are less than significant and no further analysis is required. This topic will not be included in the PEIR.

f) ***Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?***

No Impact. The proposed project is not located within any adopted habitat conservation plan (HCP), natural community conservation plan (NCCP), or local or regional HCP areas. Additionally, the proposed project is not located within any non-reserve supplemental habitat special linkages and/or existing use areas identified within the NCCP and HCP for the County of Orange Central and Coastal Subregions (Central-Coastal NCCP/HCP) (County EMA 1996). Since the proposed project is not located within any approved plan areas, the proposed project would not impact the goals and objectives of any adopted plans. Therefore, impacts would not occur, and no further analysis is required. This topic will not be included in the PEIR.

6.3.5 Cultural Resources

V. CULTURAL RESOURCES – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☒	☐	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☒	☐	☐	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☒	☐	☐	☐
d) Disturb any human remains, including those interred outside of formal cemeteries?	☒	☐	☐	☐

a) Would the project cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

Potentially Significant Impact. Renovations are planned for the Auditorium and Gymnasium, which were constructed more than 50 years ago. A historical resources survey will be performed to determine whether these or any other buildings or structures are considered historically significant as defined in the CEQA Guidelines, Section 15064.5. Further analysis is required and this topic will be addressed in the PEIR.

b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Potentially Significant Impact. Excavation would occur to create foundations for new facilities. Archaeological resources could be adversely altered or damaged as a result of these activities. Therefore, impacts are potentially significant and will be analyzed further in the PEIR.

c) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Potentially Significant Impact. OCC lies on a plateau a few miles from the coast, and it is possible that marine invertebrate fossils are located in the vicinity of the proposed project site. Excavation and ground-disturbing activities associated with the construction of the proposed project could adversely alter geological features and paleontological resources. A paleontological study is required and will be included in the PEIR.

d) Would the project disturb any human remains, including those interred outside of formal cemeteries?

Potentially Significant Impact. Excavation would occur to create foundations for new facilities. Although it is unlikely due to previous ground disturbance, human remains could be located within the proposed project site and could be disturbed by these activities. This topic will be analyzed further in the PEIR.

6.3.6 Geology and Soils

VI. GEOLOGY AND SOILS – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☒	☐	☐	☐
ii) Strong seismic ground shaking?	☒	☐	☐	☐
iii) Seismic-related ground failure, including liquefaction?	☒	☐	☐	☐
iv) Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☒	☐	☐	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☒	☐	☐	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☒	☐	☐	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒

a) ***Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:***

i) ***Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.***

Potentially Significant Impact. The proposed project could expose people or structures to the adverse effects of fault rupture. No active fault lies directly underneath the proposed project site and the proposed project is not located within an Alquist-Priolo Earthquake Fault Zone; however, due to the proximity to fault zones, the campus could be vulnerable to the effects of fault rupture. The nearest faults or zones include the Newport–Inglewood Fault Zone located in the southern portion of Costa Mesa, with the main trace 0.3 mile south of the Costa Mesa City line, and the Whittier Fault Zone, the closest approach to which is 15 miles northeast of Costa Mesa. Farther away are the San Andreas Fault Zone and the San Jacinto Fault Zone, the closest approaches to which are 48 and 44 miles from Costa Mesa, respectively (City of Costa Mesa 2002). Impacts associated with fault rupture are potentially significant and will be analyzed further in the PEIR.

ii) ***Strong seismic ground shaking?***

Potentially Significant Impact. Given the campus's proximity to the Newport–Inglewood and Whittier Fault Zones, it would be vulnerable to the adverse effects of strong seismic ground shaking. These adverse effects would be minimized as building design and renovations would comply with the Division of the State Architect requirements and the Costa Mesa Municipal Code (Municipal Code) Section 5-1, Amendments to Municipal Code Section 5-1 by the City, and the State of California Uniform Building Code, as controlled by the permitting process. These codes impose design standards and requirements that seek to minimize the damage associated with seismic events. Further analysis is required to determine the potential impacts associated with a seismic event on the proposed project site. Impacts are potentially significant and will be addressed in the PEIR.

iii) ***Seismic-related ground failure, including liquefaction?***

Potentially Significant Impact. The proposed project could potentially expose people and structures to seismic ground failure, including liquefaction. Liquefaction occurs when partially saturated soil loses its effective stress and enters a liquid state, which can result in the soils inability to support structures above. Liquefaction can be induced by ground-shaking events and is dependent on soil saturation conditions. According to the California Geological Survey, the project site is located within the Anaheim and Newport Beach 7.5-minute Quadrangle, a zone vulnerable to the effects of liquefaction (CDC 1998). Project design and construction would conform to the Division of the State Architect requirements, the Municipal Code, and the Uniform Building Code. These codes would abate the effects of seismic-related ground failure and liquefaction. However, the impacts associated with seismic-related ground failure are potentially significant and further examination will be included in the PEIR.

iv) Landslides?

Less Than Significant Impact. Potential for a landslide event is very low, as the proposed project site and surrounding area are flat. In general, the City of Costa Mesa is located on flat terrain, making the risks associated with landslides extremely low. According to the City of Costa Mesa 2000 General Plan (City of Costa Mesa 2002), the area most vulnerable to landslides would be within the vicinity of the bluffs located in the southern half of the city, more than 2 miles away from the proposed project site. Impacts associated with a landslide event are considered less than significant, and no further analysis is required. This topic will not be included in the PEIR.

b) Would the project result in substantial soil erosion or the loss of topsoil?

Potentially Significant Impact. The proposed project would potentially induce soil erosion and loss of topsoil, as unearthed soil exposed through excavation and grading activities could be transported away through wind or water flow. The proposed project would comply with standards and requirements in order to obtain a Stormwater Construction Activities permit and a National Pollutant Discharge Elimination System (NPDES) permit from the Santa Ana Regional Water Quality Control Board (RWQCB). This requires that a stormwater pollution prevention program (SWPPP) be prepared and implemented in order to mitigate and minimize the effects of soil erosion and loss of topsoil. Impacts are potentially significant and will be analyzed further in the PEIR.

c) Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Potentially Significant Impact. The proposed project could be vulnerable to or result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse. Because the majority of the project site would be located on Cropley Clay and Myford Sandy

Loam (see Figure 1-7), the project site could be vulnerable to the effects of lateral spreading, subsidence, liquefaction, or collapse. Project design and construction, however, would conform to Municipal Code Section 1-5 and the Uniform Building Code. These regulatory requirements include measures that would prevent and abate effects of lateral spreading, subsidence, liquefaction or collapse. Impacts are potentially significant and will be analyzed further in the PEIR.

d) ***Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?***

Potentially Significant Impact. The proposed project could be vulnerable to the effects associated with expansive soil, as the project site is located on Cropley Clay and Myford Sandy Loam, both of which have expansive properties (see Figure 1-7). However, the project would comply with Uniform Building Code, which would minimize the risks to life and property in relation to expanding soils. Nonetheless, impacts are potentially significant and will be analyzed further in the PEIR.

e) ***Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?***

No Impact. The proposed project does not include septic tanks or alternative wastewater disposal systems; therefore, no impact would occur. This issue will not be analyzed further in the PEIR.

6.3.7 Greenhouse Gas Emissions

VII. GREENHOUSE GAS EMISSIONS – Would the project:				
	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☒	☐	☐	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☒	☐	☐	☐

a) ***Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?***

Potentially Significant Impact. Global climate change is a cumulative impact; a project has a potential impact through its incremental contribution combined with the cumulative increase of all other sources of GHGs. Thus, GHG impacts are recognized as exclusively cumulative impacts: there are no non-cumulative GHG emission impacts from a climate change perspective (CAPCOA 2008). This approach is consistent with that recommended by the California Natural Resources Agency, which noted in its public notice for the proposed CEQA amendments that the evidence indicates that in most cases, the impact of GHG emissions should be considered in the context of a cumulative impact, rather than a project-level impact (CNRA 2009a). Similarly, the Final Statement of Reasons for Regulatory Action for amendments to the CEQA Guidelines confirms that an EIR or other environmental document must analyze the incremental contribution of a project to GHG levels and determine whether those emissions are cumulatively considerable (CNRA 2009b).

The proposed project would result in the emission of GHGs. Temporary impacts would result from the operation of construction vehicles and equipment. The operation of new, on-campus facilities would increase campus energy demand and therefore would result in the ongoing emission of GHGs. Further analysis is required to determine the estimated project-generated GHG emissions and their impact on global climate. Impacts are potentially significant and will be addressed in the PEIR.

b) ***Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?***

Potentially Significant Impact. There are several federal and state regulatory measures aimed at the identification and reduction of GHG emissions; most of these measures focus on area source emissions (e.g., energy usage) and changes to the vehicle fleet (hybrid, electric, and more fuel-efficient vehicles). The Global Warming Solutions Act (Assembly Bill (AB) 32) prepares a scoping plan and established regulations to reduce California GHG emission levels to 427 million metric tons of carbon dioxide (CO_2) equivalent (CARB 2006). The proposed project would comply with regulations established by AB 32. However, further investigation is required to determine estimated project-generated GHG emissions and their relationship to AB 32 and other applicable plans and policies. Impacts are potentially significant and will be addressed in the PEIR.

6.3.8 Hazards and Hazardous Materials

VIII. HAZARDS AND HAZARDOUS MATERIALS – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☒	☐	☐	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☒	☐	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☒	☐	☐	☐
d) Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☒	☐	☐	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☒	☐
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☒	☐	☐	☐
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☒	☐

a) Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Potentially Significant Impact. The District Environmental Health and Safety Department (EHS) manages issues regarding health and safety through the development and execution of its programs and policies. The EHS is responsible for ensuring that the transportation, use, and disposal of hazardous materials is conducted safely throughout all District campuses. Hazardous materials would be used during maintenance and construction processes; these materials might include fuels, lubricating fluids, solvents, and cleaning products. If these materials are released, they could prove to be hazardous; therefore, the EHS would be responsible for implementing programs to prevent any risks involved with handling these materials.

The proposed project involves the construction, renovation, and demolition of several buildings. Some of the older buildings proposed for renovation may contain lead and asbestos, as their construction predated regulation of these materials. Although it is not known whether the existing buildings contain these materials, precautions must be taken during renovation processes. Other pollutants or materials could also be released during renovation processes. SCAQMD and the local California Occupational Safety and Health Administration (Cal/OSHA) office would be notified of the proposed construction, renovation, and demolition plans before prior to their execution.

The proposed project involves the renovation and expansion of the current Chemistry Building. Hazardous materials used for laboratory purposes would be transported, stored, and disposed of during the proposed renovation and later during facility operation. The types, amounts, and concentrations of these materials are not known at this point; however, the transport, use, and disposal of hazardous materials will be analyzed further in the PEIR.

b) Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Potentially Significant Impact. As discussed in Section 6.3.8(a), the proposed project would potentially create a significant hazard to the public through the release of hazardous materials into the environment. Therefore, impacts are considered potentially significant and will be analyzed further in the PEIR.

c) Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Potentially Significant Impact. As discussed in Section 6.3.8(a), the proposed project could emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school. This is especially a risk as the proposed project is within 0.25 mile of Costa Mesa High

School, Middle College High School, and Davis Magnet School. Impacts are considered potentially significant and this issue will be analyzed further in the PEIR.

d) ***Would the project be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?***

Potentially Significant Impact. The proposed project site could be included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 (DTSC 2013). The Department of Toxic Substances Control is responsible for this list, which includes hazardous waste facilities known to have an unauthorized release of hazardous materials, hazardous waste facilities subject to corrective action, and sites known to have been used for authorized or unauthorized solid waste disposal. A hazardous materials site search will be conducted and this issue will be analyzed further in the PEIR.

e) ***For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?***

Less Than Significant Impact. The Airport Land Use Commission for Orange County has adopted the Airport Environs Land Use Plan. The project site is located approximately 2 miles west of John Wayne International Airport. Proposed project activities would not pose a hazard for people residing or working in the project area. The proposed project includes the construction of several multistory buildings. Although the height of these proposed buildings is not yet known, if they are designed to exceed 200 feet (approximately 10 stories), then federal and state law as well as requirements set by the Airport Land Use Commission would be followed and a Notice of Landing Area Proposal (Form 7480-I) would be filed (City of Costa Mesa 2002). Impacts are less than significant and no further analysis on this issue is required. This topic will not be analyzed in the PEIR.

f) ***For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?***

No Impact. The proposed project is not located within the vicinity of a private airstrip. No private airstrips exist within 2 miles of the proposed project site; therefore, there is no impact and this issue will not be analyzed further in the PEIR.

g) ***Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?***

Potentially Significant Impact. The Costa Mesa Fire Department as well as the Division of the State Architect would review all proposed project designs. An Access Compliance review and Fire and Life Safety review would be performed in order to prevent implementation impairment of or physical interference with an adopted emergency response plan or emergency evacuation plan. However, it is not known whether the proposed project would interfere with an adopted emergency response plan or emergency evacuation plan, and further analysis is required. Impacts are potentially significant and will be analyzed further in the PEIR.

h) ***Would the project expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?***

Less Than Significant Impact. It is unlikely that the project would expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands. The proposed project is in an urbanized area with no adjacent wildlands. The area surrounding the project site is generally urbanized and developed. Therefore, impacts are considered less than significant and no further analysis is required. This topic will not be analyzed in the PEIR.

6.3.9 Hydrology and Water Quality

IX. HYDROLOGY AND WATER QUALITY – Would the project:				
	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?	☒	☐	☐	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☒	☐	☐	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☒	☐	☐	☐
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☒	☐	☐	☐
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☒	☐	☐	☐
f) Otherwise substantially degrade water quality?	☒	☐	☐	☐
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☒	☐
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

a) Would the project violate any water quality standards or waste discharge requirements?

Potentially Significant Impact. Water quality could be adversely affected by stormwater runoff from the proposed project site. Pollutants existing on campus come from campus operations and vehicle usage, maintenance, construction, and landscaping activities.

These pollutants include fuel, oil, fertilizers, paints, solvents, cleaners, loose soil, and trash. The nearest water bodies include the Pacific Ocean, which is approximately 4 miles southwest of campus, and the Upper Newport Bay, which is approximately 1.5 miles southeast of campus. Storm events could carry pollutants to these bodies of water. The proposed project would comply with standards and requirements in order to obtain a Stormwater Construction Activities permit and an NPDES permit from the Santa Ana RWQCB. This requires that a SWPPP be prepared and implemented in order to mitigate and minimize the effects of soil erosion and loss of topsoil. The SWPPP would also contain measures that would require the proper handling, storage, and disposal of hazardous materials, preventing their release into the surrounding environment. The SWPPP would be implemented during the construction of the proposed project; therefore, impacts associated with campus operations need to be examined further. Analysis is required to determine whether water quality standards or waste discharge requirements could be violated by operation of the project. Impacts are considered potentially significant and will be analyzed further in the PEIR.

b) Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (i.e., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?

Potentially Significant Impact. The Orange County Water District manages the Lower Santa Ana Basin, which provides groundwater to the City of Costa Mesa. The Mesa Consolidated Water District owns nine wells that produce water from the Lower Santa Ana Groundwater Basin. The Mesa Consolidated Water District receives additional groundwater supplies from deep aquifers located within Costa Mesa (City of Costa Mesa 2002). Water would be required for construction and renovation activities, including dust abatement during grading, cement mixing, and cleaning. Water is also needed for campus operations, including landscape maintenance and cleaning, and would need to be provided for students and employees. Although water demands are not anticipated to substantially deplete groundwater supplies, further investigation is required to determine estimated campus water demands. This topic will be analyzed further in the PEIR.

c) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?

Potentially Significant Impact. The proposed project could alter the drainage pattern of the campus, and may result in substantial erosion or siltation on or off site. A SWPPP would be prepared that would include measures to prevent substantial erosion or siltation during construction activities. However, further analysis is required to determine the impacts associated with campus operations. The proposed project would not alter the course of a stream or river, as neither of these exists within the vicinity of the campus. Impacts are potentially significant and will be analyzed further in the PEIR.

d) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

Potentially Significant Impact. The project would alter the existing drainage pattern of the site and could increase the rate or amount of surface runoff. The site would introduce new impervious surface area to the project site; however, the site is already developed and contains both impervious surfaces and permeable surfaces (grass fields). Further analysis is required to determine the risk of on- or off-site flooding associated with the proposed project. Impacts are potentially significant and will be analyzed further in the PEIR.

e) Would the project create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Potentially Significant Impact. As discussed in Section 6.3.9(d), new impervious surfaces would be introduced by the proposed project; however, further analysis is required to determine if there would be a contribution to runoff exceeding the capacity of existing or planned stormwater drainage systems. A standard urban stormwater mitigation plan would be prepared by the District that would require that water runoff undergo treatment to improve water quality. Impacts are potentially significant and will be analyzed further in the PEIR.

f) Would the project otherwise substantially degrade water quality?

Potentially Significant Impact. Due to the introduction of pollutants from construction vehicles, maintenance, and construction activities, the water quality of stormwater runoff would be degraded. As mentioned in Section 6.3.9(a), a SWPPP would be developed and implemented to mitigate the effects of construction activities on stormwater runoff water quality. However, further analysis is required to determine campus operations impacts on water quality. Impacts could be significant and will be analyzed in the PEIR.

g) ***Would the project place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?***

No Impact. According to the FEMA Flood Insurance Rate Map, the proposed project site is not located within the 100-year flood hazard area (FEMA 2009). Therefore, the proposed project would not locate housing in a 100-year flood hazard area. Impacts would not occur and no further analysis is required. This topic will not be analyzed in the PEIR.

h) ***Would the project place within a 100-year flood hazard area structures which would impede or redirect flood flows?***

No Impact. According to the FEMA Flood Insurance Rate Map, the proposed project site is not located within the 100-year flood hazard area (FEMA 2009). Therefore, the proposed project would not place structures that would impede or redirect flood flows in a 100-year flood hazard area. Impacts would not occur and no further analysis is required. This topic will not be analyzed in the PEIR.

i) ***Would the project expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?***

Less Than Significant Impact. The Prado Dam is located more than 20 miles northeast of the campus. The Seven Oaks Dam is located 40 miles upstream of the Prado Dam on the Santa Ana River. The dams were designed to work together to control flow into the Santa Ana River channel and prevent flooding into Orange County. The Santa Ana River crosses through Huntington Beach and Costa Mesa and is confined by a levee approximately 1.5 miles west of the campus. The Prado Dam, Seven Oaks Dam, and improvements to the Lower Santa Ana River channel as well as other features of the Santa Ana River Main Stem project were designed to prevent flooding of the Lower Santa Ana River levees (City of Costa Mesa 2002). Flooding due to levee or dam failure is therefore unlikely. Impacts are less than significant and no further analysis is required. This topic will not be analyzed in the PEIR.

j) ***Inundation by seiche, tsunami, or mudflow?***

No Impact. According to the City of Costa Mesa 2000 General Plan, the project site is not at risk for inundation by seiche, tsunami, or mudflow (City of Costa Mesa 2002). No large bodies of water exist in Costa Mesa; therefore, there are no risks of inundation by seiche. Because the project site and surrounding areas are flat, it is unlikely that inundation by mudflow would occur. Most of Costa Mesa is 30–100 feet above sea level; therefore, a tsunami would not pose a risk to most of the city or the project site (City of Costa Mesa 2002). Lastly, the project site is approximately 4 miles northeast of the Pacific Ocean and would therefore not be at risk for inundation by a tsunami. No further analysis is required as no impacts would occur. This topic will not be analyzed in the PEIR.

6.3.10 Land Use and Planning

X. LAND USE AND PLANNING – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?	☐	☐	☒	☐
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

a) Would the project physically divide an established community?

Less Than Significant Impact. The proposed project site has been developed since the 1950s, and the residential areas developed around the campus over time. The campus does not divide or isolate an established community. The proposed construction and renovation would occur on campus and would not divide the surrounding community. The only planned construction off site would be a multistory parking structure at the Fairgrounds Parking Lot, located east of the campus. However, this site is surrounded by the OC Fairgrounds and Costa Mesa High School. Impacts are less than significant and no further analysis is required. This topic will not be analyzed in the PEIR.

b) Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Less Than Significant Impact. The proposed project does not conflict with any land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental impact. The proposed project is compatible with the goals and regulations established by the City of Costa Mesa 2000

General Plan, including Zoning Regulations and the Land Use Element (City of Costa Mesa 2002). The proposed project would also conform to the Uniform Building Code and the Municipal Code Section 5-1. Impacts are less than significant and no further analysis is required. This topic will not be analyzed in the PEIR.

c) Would the project conflict with any applicable habitat conservation plan or natural community conservation plan?

No Impact. The proposed project is not located within any adopted HCP, NCCP, or local or regional HCP areas. Additionally, the proposed project is not located within any non-reserve supplemental habitat special linkages and/or existing use areas identified within the Central-Coastal NCCP/HCP (County EMA 1996). Since the proposed project is not located within any approved plan areas, the proposed project would not impact the goals and objectives of any adopted plans. Therefore, no impacts would occur, and no further analysis is required. This topic will not be analyzed in the PEIR.

6.3.11 Mineral Resources

XI. MINERAL RESOURCES – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

a) Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

No Impact. The proposed project site is located approximately 2 miles from the West Newport Oil Field, located in Newport Beach. However, there are no known mineral resources within the project site and therefore there would be no loss in the availability of a known mineral resource that would be of value to the region and the residents of the state. No further analysis of this issue is required and this issue will not be analyzed further in the PEIR.

b) *Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?*

No Impact. The City of Costa Mesa 2000 General Plan does not identify a locally important mineral resource recovery site within the Conservation Element of the plan (City of Costa Mesa 2002). Therefore, no impact would occur and no further analysis is required. This issue will not be analyzed further in the PEIR.

6.3.12 Noise

XII. NOISE – Would the project result in:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☒	☐	☐	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☒	☐	☐	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☒	☐	☐	☐
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☒	☐	☐	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

a) *Would the project result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*

Potentially Significant Impact. The proposed project could expose persons to a noise level in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. Excessive noise could result from construction activities and the operation of construction vehicles. Noise levels are considered unacceptable by federal and state agencies if the Community Noise Equivalent Level (CNEL) exceeds 70 dBA for multiple-family and low-density residences and industrial, manufacturing, and utilities land use areas, 65 dBA for schools, and 67.5 dBA for parks, office buildings, commercial businesses, and professional businesses (City of Costa Mesa 2002). The City Noise Ordinance also requires that exterior noise not exceed 55 dBA from 7 a.m. to 11 p.m. and 50 dBA from 11 p.m. to 7 a.m., and that interior noise not exceed 55 dBA from 7 a.m. to 11 p.m. and 45 dBA from 11 p.m. to 7 a.m. (City of Costa Mesa 2002). It is possible that construction activities could temporarily exceed these noise levels; therefore, impacts are considered potentially significant. This issue will be analyzed further in the PEIR.

b) Would the project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Potentially Significant Impact. Construction activities could expose persons to or generate excessive ground-borne vibration or ground-borne noise levels. Although there are no vibration thresholds set by the City of Costa Mesa (City of Costa Mesa 2002), construction activities could expose nearby residences, Costa Mesa High School, and the OC Fairgrounds to excessive ground-borne vibrations and noise. Impacts are potentially significant and this issue will be analyzed further in the PEIR.

c) Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Potentially Significant Impact. The proposed project could result in a substantial permanent increase in ambient noise levels, due to noise generated within the school (by machinery, sporting events, music events, etc.) and traffic noise. Impacts are potentially significant and this topic will be analyzed further in the PEIR.

d) Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Potentially Significant Impact. The proposed project could result in a substantial temporary or periodic increase in ambient noise levels due to construction activities, grading, and demolition and traffic associated with construction vehicles. Impacts are potentially significant and this issue will be analyzed further in the PEIR.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. Although Orange County has adopted the Airport Environs Land Use Plan, the proposed project site is located approximately 2 miles west of John Wayne

International Airport. This airport is not within the vicinity of the project site; therefore, the project would not expose people to excessive noise levels. No impacts would occur and no further analysis is required. This topic will not be analyzed in the PEIR.

f) ***For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?***

No Impact. The proposed project is not located within the vicinity of a private airstrip. No private airstrips exist within 2 miles of the proposed project site. People residing or working in the proposed project area would not be exposed to excessive noise levels from a private airstrip. No impacts would occur and no further analysis is required. This topic will not be analyzed in the PEIR.

6.3.13 Population and Housing

XIII. POPULATION AND HOUSING – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☒	☐	☐	☐
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

a) Would the project induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Potentially Significant Impact. The proposed project includes the construction of a mixed-use development, which would include retail/housing facilities. The District would like to increase entrepreneurial activities and attract visitors to the campus through the redevelopment of the recycling center on the north side of campus and the development of a new Planetarium, which would attract K–12 students and other visitors. These project elements could induce substantial population growth in the area. Further analysis is required and this topic will be analyzed in the PEIR.

b) ***Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?***

No Impact. The proposed project would not displace existing housing. Plans are to renovate and construct educational facilities, parking lots and structures, and non-educational facilities serving students and the surrounding community. No housing units currently exist on the campus; however, construction of a student housing development is proposed by the District. No impact would occur and no further analysis is required. This topic will not be analyzed in the PEIR.

c) ***Would the project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?***

No Impact. The proposed project would not displace substantial numbers of people. There are no plans to move any facilities that would result in the displacement of people from the project area. No impact would occur and no further analysis is required. This topic will not be analyzed in the PEIR.

6.3.14 Public Services

XIV. PUBLIC SERVICES				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Fire protection?	☒	☐	☐	☐
Police protection?	☒	☐	☐	☐
Schools?	☒	☐	☐	☐
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

a) ***Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:***

Fire protection?

Potentially Significant Impact. The proposed project could have an adverse impact on fire protection providers. The nearest fire station is the Royal Palm Fire Station No. 1, located 0.3 mile northwest of the project site at 2803 Royal Palm Drive in the City of Costa Mesa. This station would be the primary responder for OCC. As the proposed project includes the development of housing facilities and an increase in student enrollment is anticipated as part of the Vision 2020 Facilities Master Plan, the area would experience an increase in the local population, which could affect the service ratio, response time, or other performance objectives of fire protection services. Renovated and newly constructed facilities would conform to the Uniform Building and Fire Code, which would impose design standards and requirements that seek to minimize and mitigate fire risk. Impacts are potentially significant; therefore, further analysis is required and this issue will be addressed in the PEIR.

Police protection?

Potentially Significant Impact. The proposed project may have an adverse impact on police protection providers. The nearest police station is the Costa Mesa Police Department, located 0.2 mile southeast of the project site at 99 Fair Drive. The proposed project includes the development of housing facilities; therefore, the area would experience an increase in the local population, which could affect the service ratio, response time, or other performance objectives of police protection services. Impacts are potentially significant; therefore, further analysis is required and this issue will be addressed in the PEIR.

Schools?

Potentially Significant Impact. The proposed project would include the development of housing facilities, and as a result of projected increased student enrollment, more staff and professors may be needed to meet the increased enrollment at the campus. Therefore, there could be a need for new K-12 schools. Impacts are potentially significant and will be analyzed further in the PEIR.

Parks?

No Impact. The proposed project would have no impact on local parks. The proposed project area would experience an increase in population; however, the campus offers athletic fields and recreational opportunities, so nearby parks would not see a significant increase in visitors and acceptable service ratios would be maintained. There are several parks in the vicinity of the project site. The closest parks are the Civic Center Park, located 0.3 mile southeast of the campus, and Tanager Park, located 0.7 mile west of the campus. Access to these parks would not be adversely affected by project construction activities, as a traffic control plan would be implemented in compliance with state and municipal construction codes in order to prevent access issues. No impacts would occur and no further analysis is required. This topic will not be analyzed in the PEIR.

Other public facilities?

No Impact. The project would have no impact on libraries and other public facilities. OCC has a library on campus to serve the students; therefore, any increase in student enrollment would not adversely affect local libraries and acceptable service ratios would be maintained. The nearest library is the Mesa Verde Branch Library, which is located approximately 0.5 mile northwest of campus. No impacts would occur and no further analysis is required. This topic will not be analyzed in the PEIR.

6.3.15 Recreation

XV. RECREATION				
	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

No Impact. The proposed project would not increase the use of existing parks or recreation areas. Although the campus is projected to experience an increase in student enrollment, recreational facilities are available on the campus; therefore, off-site recreational facilities would not experience substantial physical deterioration due to an increase of use. No impacts would occur and no further analysis is required. This topic will not be analyzed in the PEIR.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

No Impact. As discussed in Section 6.3.15(a), the proposed project would not increase the use of existing parks or recreation areas outside of the campus. Therefore, the expansion or addition of recreational facilities or parks is not required. Recreational facilities on campus do not require expansion and would be sufficient to serve the needs of students and residents living on campus. No impacts would occur and no further analysis is required. This topic will not be analyzed in the PEIR.

6.3.16 Transportation and Traffic

XVI. TRANSPORTATION/TRAFFIC – Would the project:				
	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☒	☐	☐	☐
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☒	☐	☐	☐
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☒	☐	☐	☐
e) Result in inadequate emergency access?	☒	☐	☐	☐
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☒	☐	☐	☐

a) ***Would the project conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?***

Potentially Significant Impact. The proposed project could conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system. Applicable plans include the Circulation Element of the City of Costa Mesa 2000 General Plan. The proposed project has the potential to impact the streets immediately surrounding the campus, which include Adams Avenue, Fairview Road, Merrimac Way, and Harbor Boulevard. The Vision 2020 Facilities Master Plan projects an increase in student enrollment and various projects, such as a new Planetarium, an expanded and reconfigured recycling center, and even mixed-use developments, would attract members of the community to the campus, thus resulting in an increase in traffic.

A significant increase in traffic could result in level of service scores lower than "D" for signalized and unsignalized intersections (City of Costa Mesa 2002). Impacts are considered potentially significant. A traffic impact analysis will be conducted and the results included in the PEIR.

b) ***Would the project conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?***

Potentially Significant Impact. The proposed project could conflict with the Orange County Congestion Management Program (CMP; OCTA 2011). As described in Section 6.3.16(a), conflicts could occur due to an increase in student enrollment and campus visitors. The CMP requires that intersections do not fall below a level of service score of "E." It is unknown whether the project would conflict with level of service standards, or any other standards set by the CMP. A traffic impact analysis will be conducted and the results included in the PEIR.

c) ***Would the project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?***

No Impact. The proposed project site is not located within the vicinity of an airport or private airstrip. The nearest airport is John Wayne International Airport, located 2 miles east of the proposed project site. No private airstrips exist within 2 miles of the proposed project site. Air traffic patterns would not be affected by the proposed project. This issue will not be analyzed further in the PEIR.

d) Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Potentially Significant Impact. The proposed project could increase hazards due to a design feature or incompatible uses. The proposed project would reconfigure and improve parking lots, construct additional parking, and improve parking lot entryways. These project elements could introduce hazardous circulation or design features; further analysis is needed to determine the risk associated with the proposed project design. A traffic impact analysis will be conducted and the results included in the PEIR.

e) Would the project result in inadequate emergency access?

Potentially Significant Impact. The proposed project could result in inadequate emergency access. The proposed project would alter access to the recycling center on Adams Avenue, and other improvements would have to be designed so as not to inhibit emergency access to the campus or any surrounding areas. The parking improvements described in Section 6.3.16(d), as well as all other project renovations and construction would comply with the Uniform Building Code. The Costa Mesa Fire Department and the Division of the State Architect would review all project designs. However, a traffic impact analysis is required to determine whether project design would impact emergency access. Impacts are potentially significant and will be analyzed further in the PEIR.

f) Would the project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

Potentially Significant Impact. The proposed project could conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities in the Circulation Element of the City of Costa Mesa 2000 General Plan or the Orange County CMP (City of Costa Mesa 2002; OCTA 2011). A traffic impact analysis is required to determine whether the proposed project would conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities. Impacts are potentially significant and will be analyzed further in the PEIR.

6.3.17 Utilities and Service Systems

XVII.UTILITIES AND SERVICE SYSTEMS – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☒	☐	☐	☐
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☒	☐	☐	☐
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☒	☐	☐	☐
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☒	☐	☐	☐
e) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☒	☐	☐	☐
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☒	☐	☐	☐
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☒	☐	☐	☐

a) Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Potentially Significant Impact. The proposed project includes a projected increase in student enrollment, which is stimulating the need for new and upgraded buildings and mixed-use and residential opportunities on the campus. These new buildings would result in an increase in wastewater discharge from the project site. Further investigation is required to determine whether wastewater treatment would exceed the requirements of the RWQCB. This topic will be analyzed further in the PEIR.

b) Would the project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Potentially Significant Impact. The proposed project could require the construction of new water or wastewater treatment facilities or expansion of existing facilities, as the proposed project is a response to a projected increase in student enrollment. Further analysis will be conducted to determine the projected water demand and whether this demand would require the construction of additional water and wastewater facilities. Impacts are considered potentially significant and will be addressed in the PEIR.

c) ***Would the project require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?***

Potentially Significant Impact. The proposed project could require the construction of new stormwater drains and infrastructure in order to support the newly constructed and renovated buildings and structures. Drains and infrastructure would be designed to carry stormwater flow to existing stormwater drainage facilities. Although there would not be a significant increase in impervious surfaces as a result of the project, further analysis is needed to determine whether additional stormwater flow would result from the proposed project. This topic will be analyzed further in the PEIR.

d) ***Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?***

Potentially Significant Impact. The proposed project includes the development of new facilities as a response to a projected increase in student enrollment, which would result in an increase in water demand. The proposed residential development in the northwest corner of the campus would house 1,300 students; however, projected water demands are not yet known. Further analysis is required to determine the expected water demands and whether current water supplies are sufficient or whether new or expanded entitlements would be needed. Impacts are potentially significant and this topic will be analyzed further in the PEIR.

e) ***Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?***

Potentially Significant Impact. As described in Section 6.3.17(a), the proposed project would include an increase in student enrollment. It is possible that the project could create a demand that would exceed the wastewater treatment capacity of the area. Further analysis is required and this issue will be addressed in the PEIR.

f) ***Would the project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?***

Potentially Significant Impact. The Frank R. Bowerman Landfill in Irvine serves the City of Costa Mesa, including the OCC campus. This landfill permits a maximum of

11,500 tons of waste a day (County of Orange 2013). The proposed project includes the construction of new facilities, including a student housing development with 1,300 beds. Further analysis is required to determine the increased in solid waste generated by OCC, and whether this would exceed the capacity at the Frank R. Bowerman Landfill. Impacts are potentially significant and this topic will be addressed in the PEIR.

g) ***Would the project comply with federal, state, and local statutes and regulations related to solid waste?***

Potentially Significant Impact. AB 939 requires that at least 50% of solid waste generated by a state jurisdiction be diverted from landfill disposal through source reduction, recycling, or composting. Cities, counties, and regional agencies are required to develop a waste management plan that would achieve a 50% diversion from landfills (California Public Resources Code, Section 40000 et seq.). Further investigation is required to confirm that the proposed project would comply with AB 939. Impacts are potentially significant and this topic will be analyzed in the PEIR.

6.3.18 Mandatory Findings of Significance

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE				
	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☒	☐	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☒	☐	☐	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☒	☐	☐	☐

a) ***Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?***

Potentially Significant Impact. As discussed in Section 6.3.4, Biological Resources, the proposed project would have the potential to impact fish or wildlife species and plant communities. As discussed in Section 6.3.5, Cultural Resources, proposed construction activities could impact examples of the major periods of California history or prehistory if archaeological, paleontological, or historical resources were impacted. These issues will be analyzed further in the PEIR.

b) ***Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?***

Potentially Significant Impact. The proposed project could have impacts that are individually limited, but cumulatively considerable. The PEIR will analyze past, present, and reasonably foreseeable projects in the vicinity of the proposed project.

c) ***Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?***

Potentially Significant Impact. The proposed project could have environmental effects that would cause substantial adverse effects on human beings. This topic will be analyzed further in the PEIR.

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7.0 REFERENCES AND PREPARERS

7.1 References Cited

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7.2 List of Preparers

Coast Community College District

Jerry Marchbank, Senior Director, Facilities, Planning and Construction
Richard Pagel, Vice President of Administrative Services, Orange Coast College

Dennis Reid, Program Manager, Measure M

Dudek

Rachel Struglia, PhD, AICP Project Manager
Caitlin Munson, Environmental Analyst
Johanna Page, Biologist
Laurel Porter, Technical Editor
Devin Brookhart, Publications Production Assistant
Hannah DuBois, Publications Production Lead
Coral Welton, GIS

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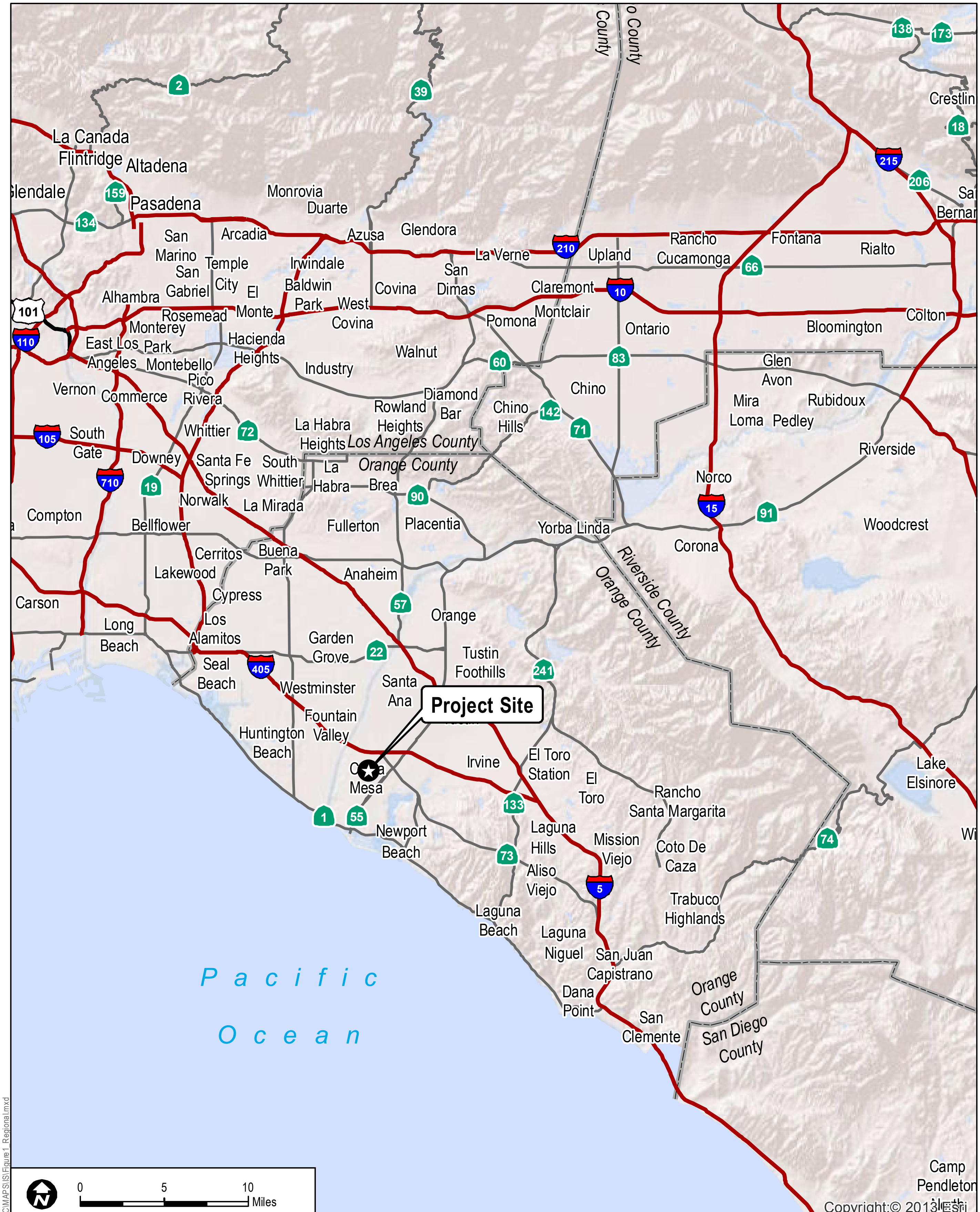

SOURCE: ESRI 2013

FIGURE 1
Regional Location

7910

ORANGE COAST COLLEGE VISION 2020 FACILITIES MASTER PLAN INITIAL STUDY

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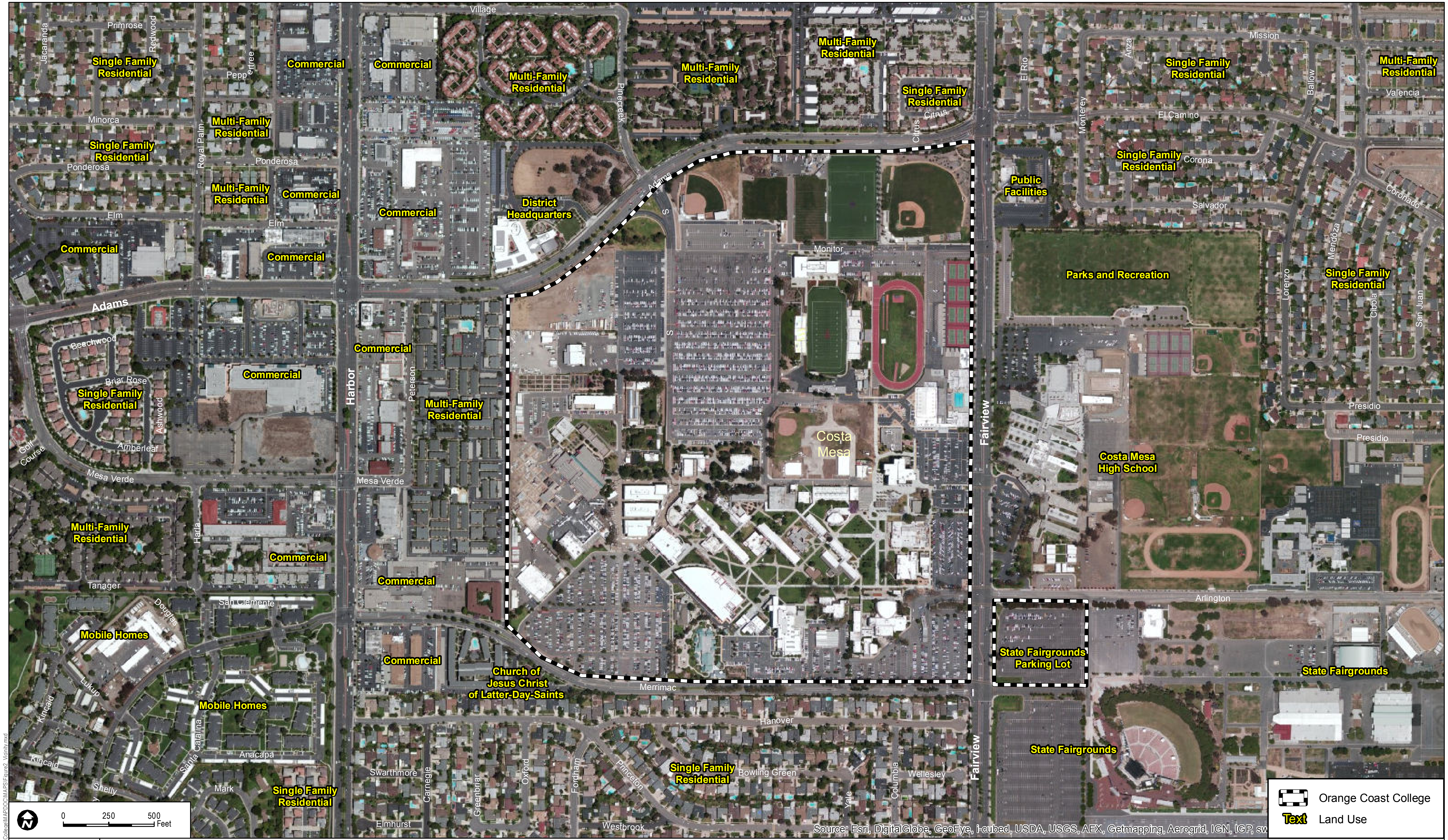

SOURCE: ESRI 2013, Coast Community College Vision Plan 2012, SCAG 2008

FIGURE 2
Local Vicinity

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ORANGE COAST COLLEGE VISION 2020 FACILITIES MASTER PLAN INITIAL STUDY

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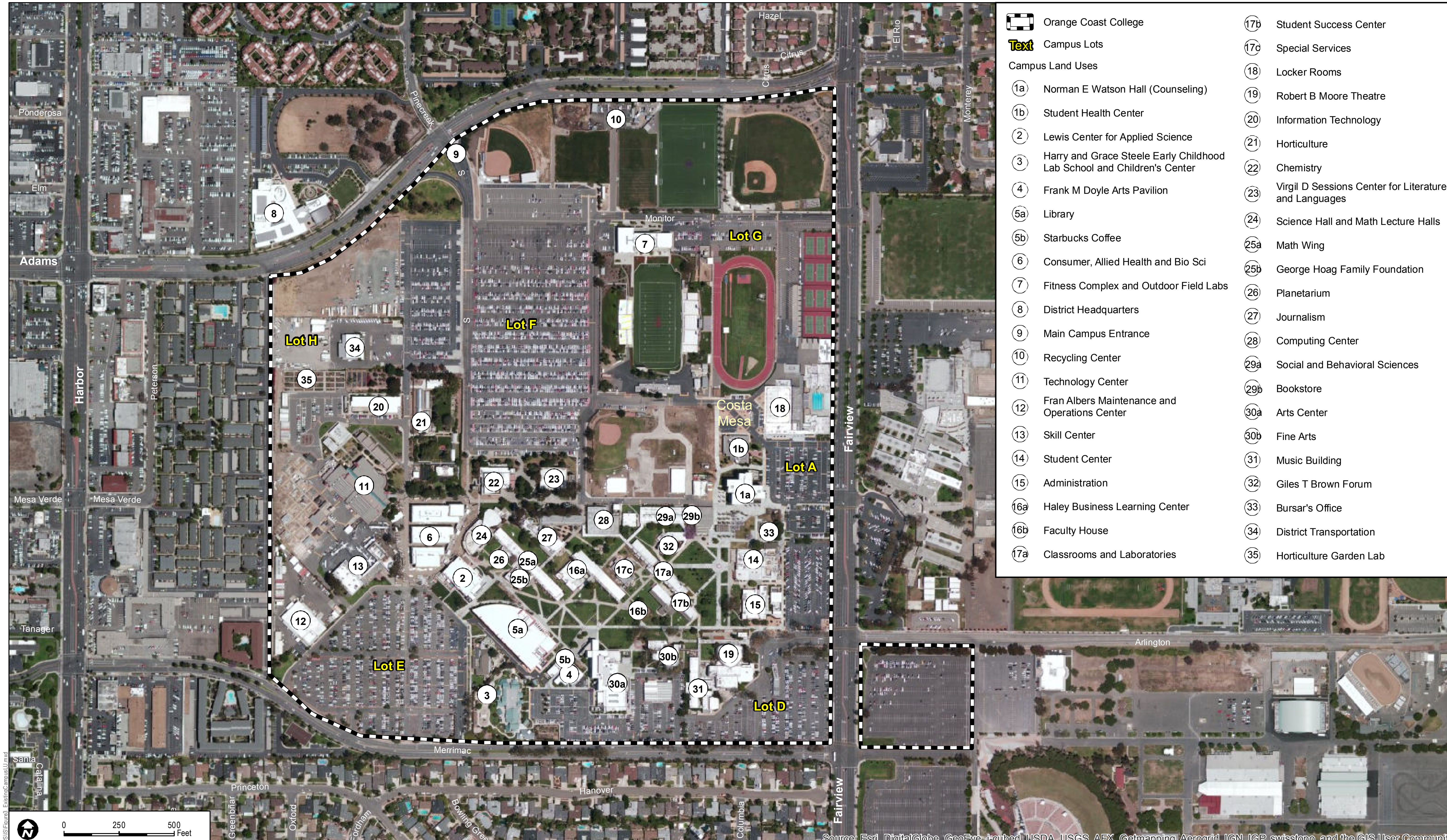

SOURCE: ESRI 2013, Coast Community College Vision Plan 2012

FIGURE 3
Existing Campus Land Uses

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ORANGE COAST COLLEGE VISION 2020 FACILITIES MASTER PLAN INITIAL STUDY

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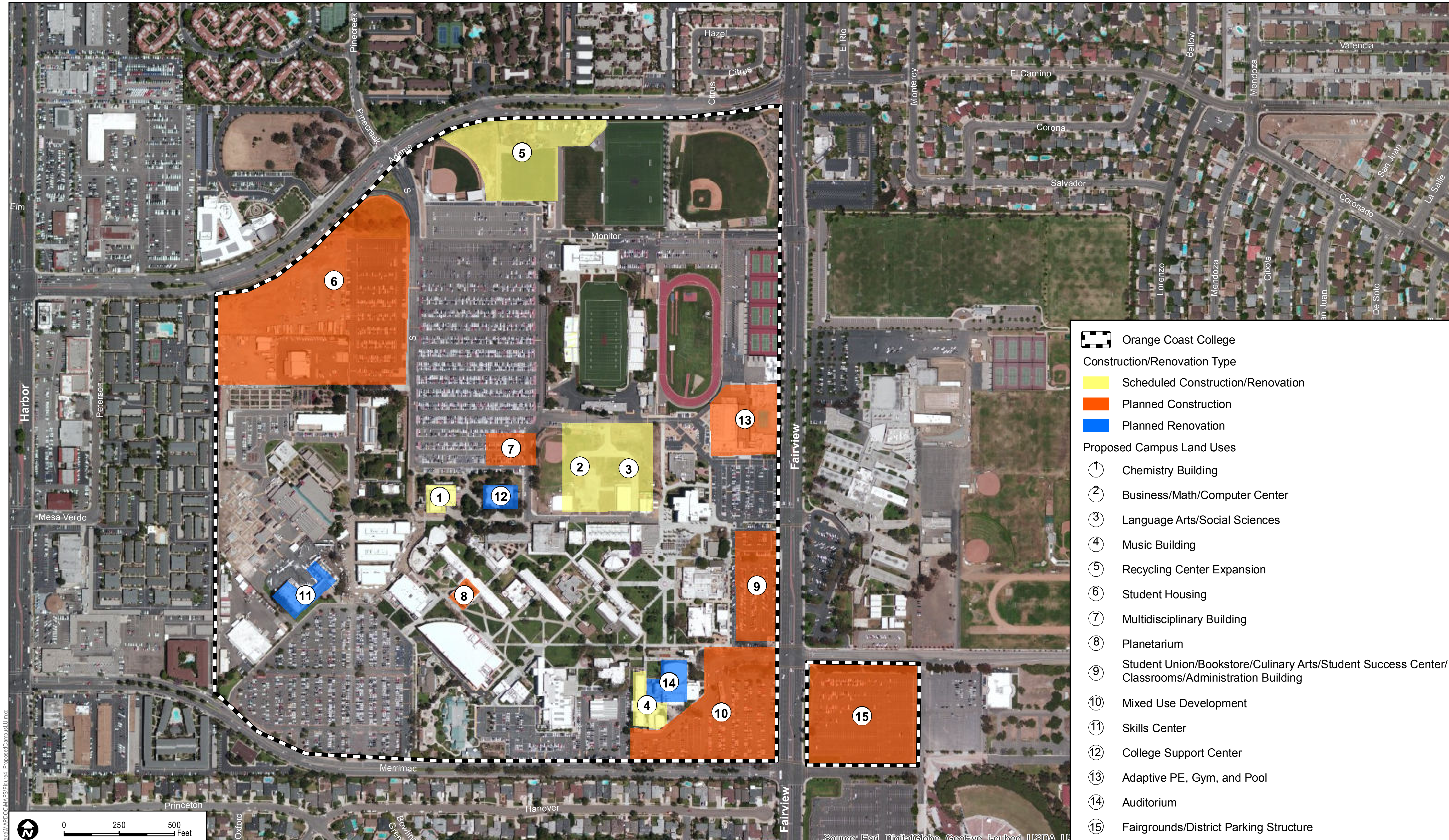

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SOURCE: ESRI 2013, Coast Community College Vision Plan 2012

FIGURE 4

Proposed Campus Land Uses

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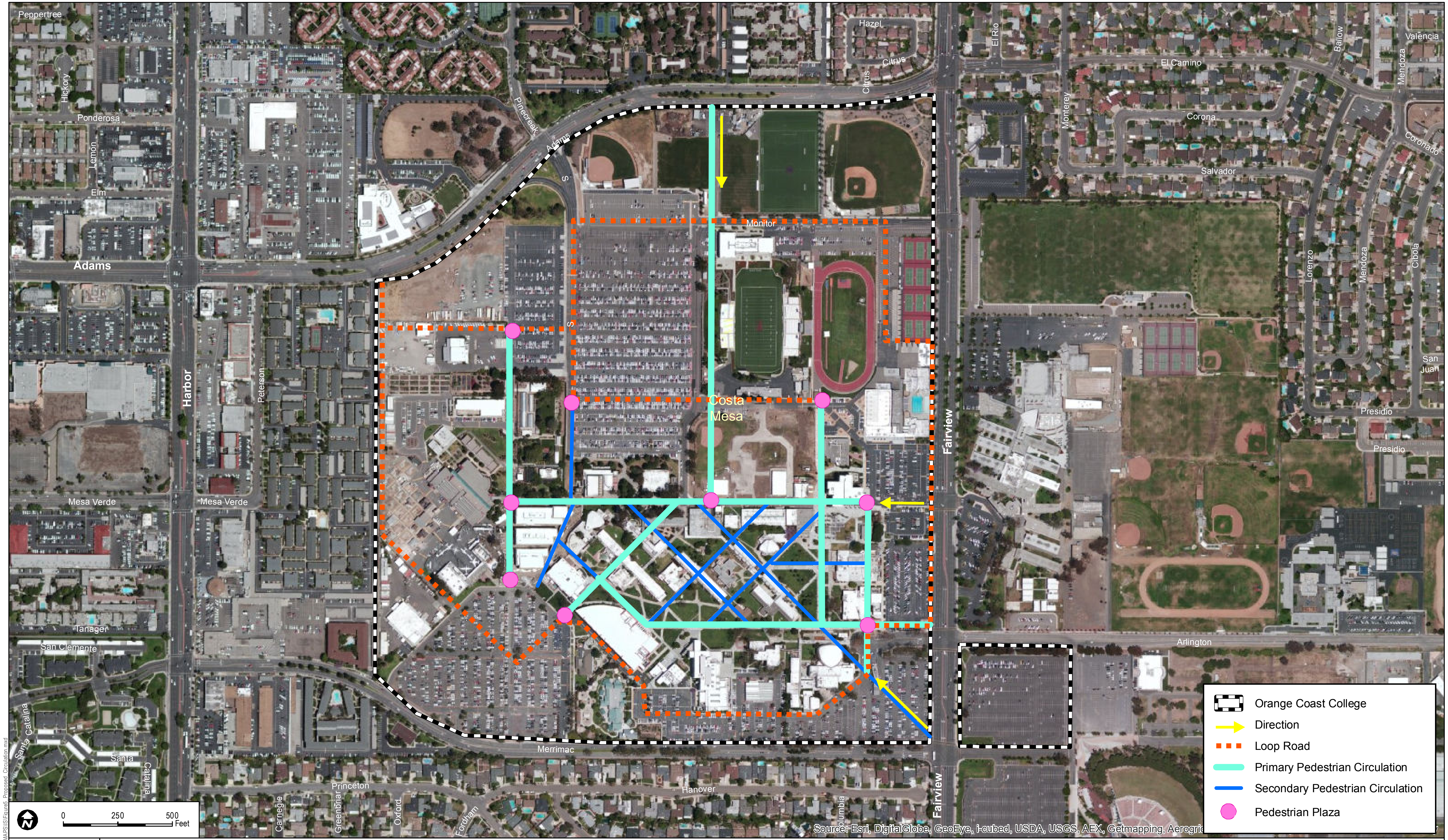

SOURCE: ESRI 2013, Coast Community College Vision Plan 2012,

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FIGURE 5

Proposed Pedestrian Circulation Improvements

ORANGE COAST COLLEGE VISION 2020 FACILITIES MASTER PLAN INITIAL STUDY

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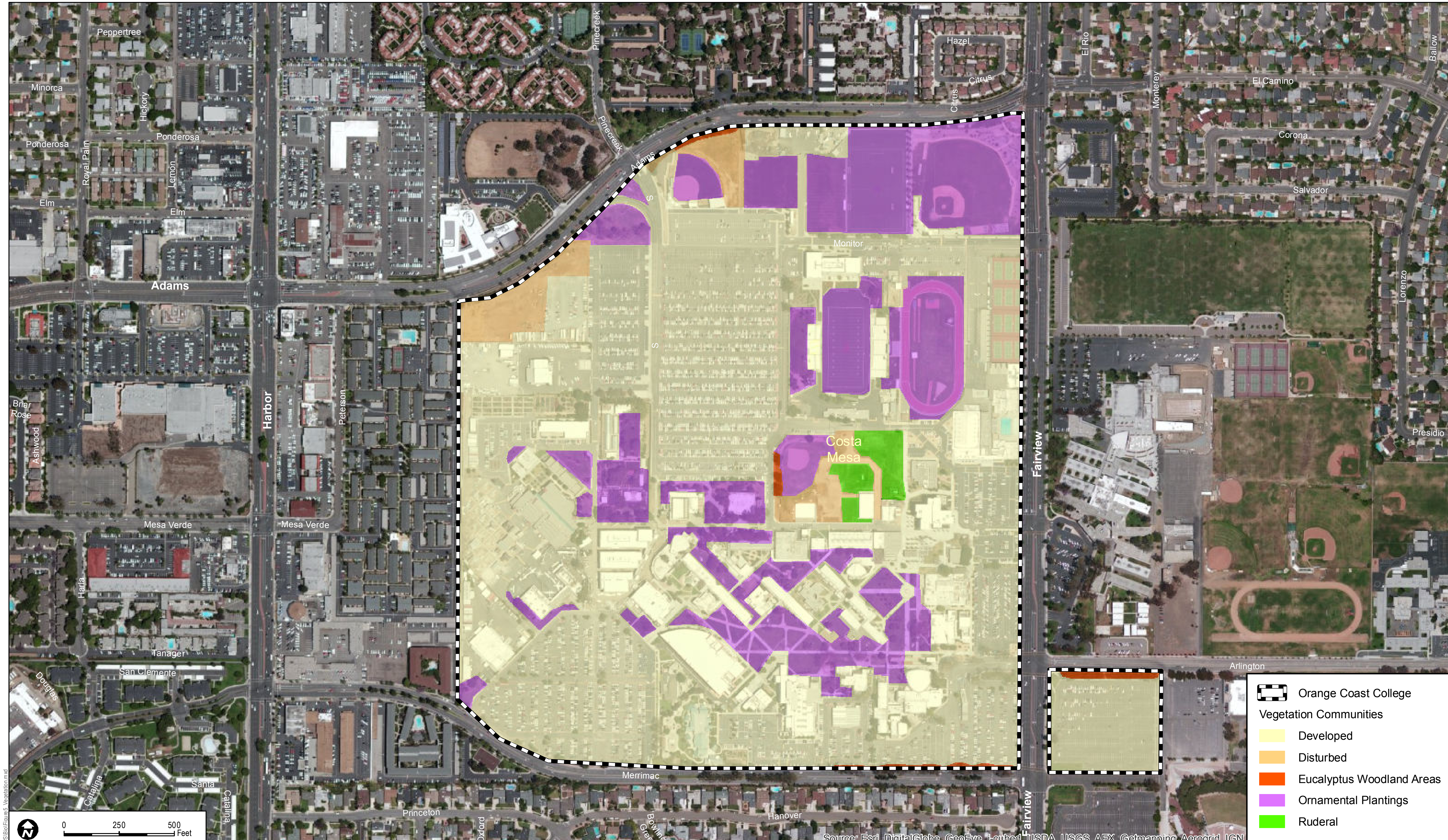

SOURCE: ESRI 2013, Coast Community College Vision Plan 2012

FIGURE 6

Vegetation Map

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ORANGE COAST COLLEGE VISION 2020 FACILITIES MASTER PLAN INITIAL STUDY

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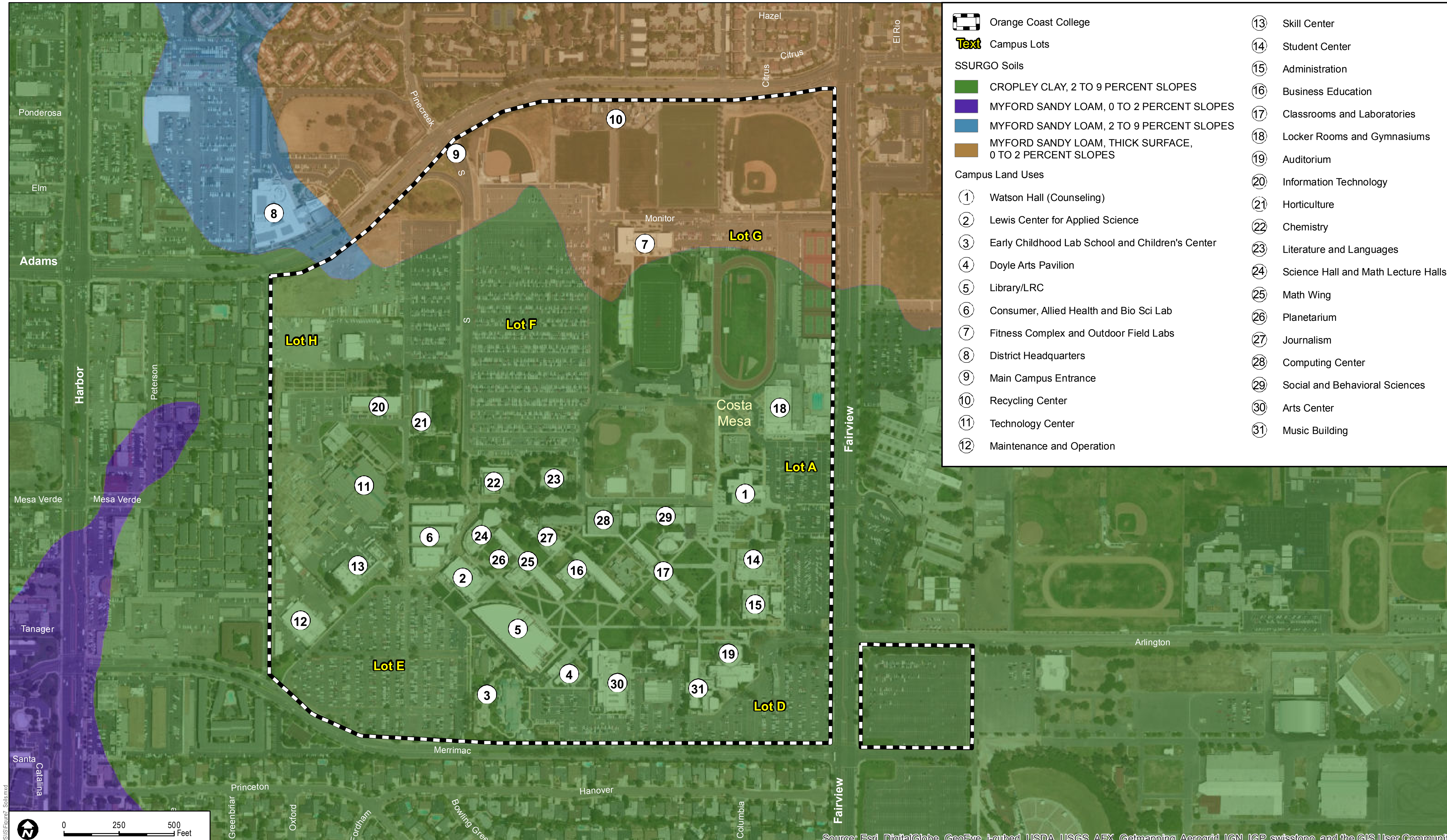

SOURCE: ESRI 2013, Coast Community College Vision Plan 2012, Dept. fo Conservation 2010

FIGURE 7

Soils Map

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ORANGE COAST COLLEGE VISION 2020 FACILITIES MASTER PLAN INITIAL STUDY

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APPENDIX A
NOP Distribution List

First Name	Last Name	Title	Organization	Division	Address	City	State	ZIP
PROPERTY OWNERS								
Lisa	Reedy	HOA President	Mesa Del Mar Homeowners Association		2747 San Carlos Lane	Costa Mesa	CA	92626
Robin	Leffler		Costa Mesans for Responsible Government		3000 Ceylon Road	Costa Mesa	CA	92626
Geoff	West		A Bubbling Cauldron		1973 Aliso Avenue	Costa Mesa	CA	92626
John	Rittenhouse		Mesa Del Mar Homeowners Association		966 Presidio Dr	Costa Mesa	CA	92626
Andy	Salas	Chairperson	Gabrieleno Band of Mission Indians/Kizh Nation		P.O. Box 393	Covina	CA	91723
John Tommy	Rosas	Tribal Administrator	Tongva Ancestral Territorial Tribal Nation		tattnlaw@gmail.com			
Conrad	Acuna		Gabrielino-Tongva Tribe		P.O. Box 180	Bonsall	CA	92003
LIBRARIES								
			Mesa Verde Branch Library		2969 Mesa Verde Drive	Costa Mesa	CA	92626
LOCAL--COUNTY--REGIONAL								
Tom	Daly	Clerk-Recorder	County of Orange		12 Civic Center Plaza, Room 101	Santa Ana	CA	92701
			City of Costa Mesa	Community Development Department	77 Fair Drive	Costa Mesa	CA	92626
			City of Costa Mesa	Fire Department	78 Fair Drive	Costa Mesa	CA	92626
			City of Huntington Beach	Planning Division	2000 Main Street 3rd Floor	Huntington Beach	CA	92648
			City of Newport Beach	Community Development Department	100 Civic Center Drive	Newport Beach	CA	92660
			City of Irvine	Community Development Department	1 Civic Center Plaza	Irvine	CA	92606-5207
			City of Fountain Valley	Housing and Community Development	10200 Slater Avenue	Fountain Valley	CA	92708
			City of Santa Ana	Planning and Building Agency	20 Civic Center Plaza	Santa Ana	CA	92701
			South Coast Air Quality Management District		21865 Copley Dr.	Diamond Bar	CA	91765
STATE (Sent by OPR as indicated on SCH Notice of Completion)								
Ken	Alex	Director	State Clearinghouse	Governor's Office of Planning & Research	1400 Tenth Street	Sacramento	CA	95814
PROJECT SPONSORS and RESPONSIBLE AGENCIES								
Jerry	Marchbank	Senior Facilities D	Coast Community College District		1370 Adams Avenue	Costa Mesa	CA	92626
Richard	Pagel	VP of Administrative Services	OCC		1370 Adams Avenue	Costa Mesa	CA	92626
Doug	Lofstrom	Interim CEO	OC Fair and Event Center		88 Fair Drive	Costa Mesa	CA	92626
Hung	Cheng	Architect	tBP Architecture		4611 Teller Avenue	Newport Beach	CA	92660
Betsy Olenick	Dougherty, FAIA, LEED AP	Architect	Dougherty + Dougherty Architects, LLP		3194 D Airport Loop Drive	Costa Mesa	CA	92626
Dudek - electronic only								
Rachel	Struglia		Dudek					

Coast Colleges

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POSTED

NOV 07 2013

HUGH NGUYEN, CLERK-RECORDER

BY: ________ DEPUTY

November 8, 2013

To: See Attached Distribution List

From: Coast Community College District
ATTN: Jerry Marchbank
1370 Adams Avenue
Costa Mesa, California 92626

Subject: Notice of Preparation of a Draft Program Environmental Impact Report (PEIR)

Coast Community College District (CCCD) will be the lead agency and will prepare a Program Environmental Impact Report (PEIR) for the proposed project identified below. CCCD is requesting your view as to the scope and content of the environmental information to be included in the PEIR. Responsible agencies are requested to indicate their statutory responsibilities in connection with the proposed project.

The description, location and the potential environmental effects resulting from the proposed project are contained in the Initial Study which is available through the Coast Community College District website (http://www.cccd.edu/news/publications.aspx).

Due to the time limits mandated by state law, your response must be sent at the earliest possible date but no later than 30 days after receipt of this notice. A public scoping meeting will be held on November 21, 2013 at 1:00 p.m. in the Administration Building (01) in Room 108.

Please send your response to Mr. Jerry Marchbank at the address shown above. We will need the name for a contact person in your agency.

Project Title: Vision 2020 Facilities Master Plan Program EIR, Orange Coast College

Project Location: Orange Coast College, generally bound by Fairview Road to the east, Harbor Blvd. to the west, Adams Avenue to the north, and Merrimac Way to the south.

Jerry Marchbank
Senior Director, Facilities, Planning and Construction

South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

RECEIVED
JAN 02 2013
By

December 24, 2013

Jerry Marchbank
Coast Community College Distrct
1370 Adams Avenue
Costa Mesa, CA 92626

Notice of Preparation of a CEQA Document for the
Vision 2020 Facilities Master Plan

The South Coast Air Quality Management District (SCAQMD) staff appreciates the opportunity to comment on the above-mentioned document. The SCAQMD staff's comments are recommendations regarding the analysis of potential air quality impacts from the proposed project that should be included in the draft CEQA document. Please send the SCAQMD a copy of the Draft EIR upon its completion. Note that copies of the Draft EIR that are submitted to the State Clearinghouse are not forwarded to the SCAQMD. Please forward a copy of the Draft EIR directly to SCAQMD at the address in our letterhead. **In addition, please send with the draft EIR all appendices or technical documents related to the air quality and greenhouse gas analyses and electronic versions of all air quality modeling and health risk assessment files. These include original emission calculation spreadsheets and modeling files (not Adobe PDF files). Without all files and supporting air quality documentation, the SCAQMD will be unable to complete its review of the air quality analysis in a timely manner. Any delays in providing all supporting air quality documentation will require additional time for review beyond the end of the comment period.**

Air Quality Analysis
The SCAQMD adopted its California Environmental Quality Act (CEQA) Air Quality Handbook in 1993 to assist other public agencies with the preparation of air quality analyses. The SCAQMD recommends that the Lead Agency use this Handbook as guidance when preparing its air quality analysis. Copies of the Handbook are available from the SCAQMD's Subscription Services Department by calling (909) 396-3720. More recent guidance developed since this Handbook was published is also available on SCAQMD's website here: www.aqmd.gov/ceqa/hdbk.html. SCAQMD staff also recommends that the lead agency use the CalEEMod land use emissions software. This software has recently been updated to incorporate up-to-date state and locally approved emission factors and methodologies for estimating pollutant emissions from typical land use development. CalEEMod is the only software model maintained by the California Air Pollution Control Officers Association (CAPCOA) and replaces the now outdated URBEMIS. This model is available free of charge at: www.caleemod.com.

The Lead Agency should identify any potential adverse air quality impacts that could occur from all phases of the project and all air pollutant sources related to the project. Air quality impacts from both construction (including demolition, if any) and operations should be calculated. Construction-related air quality impacts typically include, but are not limited to, emissions from the use of heavy-duty equipment from grading, earth-loading/unloading, paving, architectural coatings, off-road mobile sources (e.g., heavy-duty construction equipment) and on-road mobile sources (e.g., construction worker vehicle trips, material transport trips). Operation-related air quality impacts may include, but are not limited to, emissions from stationary sources (e.g., boilers), area sources (e.g., solvents and coatings), and vehicular trips (e.g., on- and off-road tailpipe emissions and entrained dust). Air quality impacts from indirect sources, that is, sources that generate or attract vehicular trips should be included in the analysis.

The SCAQMD has also developed both regional and localized significance thresholds. The SCAQMD staff requests that the lead agency quantify criteria pollutant emissions and compare the results to the recommended regional significance thresholds found here: http://www.aqmd.gov/ceqa/handbook/signthres.pdf. In addition to analyzing regional air quality impacts, the SCAQMD staff recommends calculating localized air quality impacts and comparing the results to localized significance thresholds (LSTs). LST's can be used in addition to the recommended regional significance thresholds as a second indication of air quality impacts when preparing a CEQA document. Therefore, when preparing the air quality analysis for the proposed project, it is recommended that the lead agency perform a localized analysis by either using the LSTs developed by the SCAQMD or performing dispersion modeling as necessary. Guidance for performing a localized air quality analysis can be found at: http://www.aqmd.gov/ceqa/handbook/LST/LST.html.

In the event that the proposed project generates or attracts vehicular trips, especially heavy-duty diesel-fueled vehicles, it is recommended that the lead agency perform a mobile source health risk assessment. Guidance for performing a mobile source health risk assessment ("*Health Risk Assessment Guidance for Analyzing Cancer Risk from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis*") can be found at: http://www.aqmd.gov/ceqa/handbook/mobile_toxic/mobile_toxic.html. An analysis of all toxic air contaminant impacts due to the use of equipment potentially generating such air pollutants should also be included.

In addition, guidance on siting incompatible land uses (such as placing homes near freeways) can be found in the California Air Resources Board's *Air Quality and Land Use Handbook: A Community Perspective*, which can be found at the following internet address: http://www.arb.ca.gov/ch/handbook.pdf. CARB's Land Use Handbook is a general reference guide for evaluating and reducing air pollution impacts associated with new projects that go through the land use decision-making process.

Mitigation Measures

In the event that the project generates significant adverse air quality impacts, CEQA requires that all feasible mitigation measures that go beyond what is required by law be utilized during project construction and operation to minimize or eliminate these impacts. Pursuant to state CEQA Guidelines §15126.4 (a)(1)(D), any impacts resulting from mitigation measures must also be discussed. Several resources are available to assist the Lead Agency with identifying possible mitigation measures for the project, including:

- Chapter 11 of the SCAQMD *CEQA Air Quality Handbook*
- SCAQMD's CEQA web pages at: www.aqmd.gov/ceqa/handbook/mitigation/MM_intro.html
- CAPCOA's *Quantifying Greenhouse Gas Mitigation Measures* available here: http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf.
- SCAQMD's Rule 403 – Fugitive Dust, and the Implementation Handbook for controlling construction-related emissions
- Other measures to reduce air quality impacts from land use projects can be found in the SCAQMD's Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning. This document can be found at the following internet address: http://www.aqmd.gov/prdas/aqguide/aqguide.html.

Data Sources

SCAQMD rules and relevant air quality reports and data are available by calling the SCAQMD's Public Information Center at (909) 396-2039. Much of the information available through the Public Information Center is also available via the SCAQMD's webpage (http://www.aqmd.gov).

The SCAQMD staff is available to work with the Lead Agency to ensure that project emissions are accurately evaluated and mitigated where feasible. If you have any questions regarding this letter, please contact me at imacmillan@aqmd.gov or call me at (909) 396-3244.

Sincerely,

Ian V. MacMillan

Ian MacMillan
Program Supervisor, CEQA Inter-Governmental Review
Planning, Rule Development & Area Sources

ORC131108-02
Control Number

DEPARTMENT OF TRANSPORTATION
DISTRICT 12
3347 MICHELSON DRIVE, SUITE 100
IRVINE, CA 92612-8894
PHONE (949) 724-2000
FAX (949) 724-2019
TTY 711
www.dot.ca.gov

Flex your power!
Be energy efficient!

December 6, 2013

Coast Community College District
Mr. Jerry Marchbank
Orange Coast College
1370 Adams Avenue
Costa Mesa, CA. 92626

File: IGR/CEQA
SCH#: 2013111026
Log #: 3540
I-405, SR-55

Dear Mr. Marchbank:

Thank you for the opportunity to review and comment on the **Vision 2020 Facilities Master Plan Notice of Preparation** for Orange Coast College. The Vision 2020 Master Facilities Plan envisions a program of construction of new facilities and renovation/modernization of existing buildings to better meet the college's educational goals and priorities on the Orange Coast College campus. In addition, to new and renovated educational buildings, these upgrades include parking facility improvements, development of a campus loop road, and an upgraded community and campus recycling center, and new opportunities for student housing and mixed use of the campus perimeter.

The Department of Transportation (Department) is a commenting agency on this Project and has the following comments for your consideration.

1. The impact on the State highways or freeways including ramps should be analyzed using the Highway Capacity Manual (HCM) method. The use of HCM is preferred by Caltrans because it is an operational analysis as opposed to the Intersection Capacity Utilization (ICU) method, which is a planning analysis. In the case of projects that have direct impacts on the state's facilities Caltrans recommends that the traffic impact analysis be based on HCM method. All input sheets, assumptions, and volumes on State Facilities including ramps and intersection analysis should be submitted to Caltrans for review and approval. If applicable, appropriate mitigation measures are to be proposed and submitted for our review and comment.

2. Please coordinate with Department to meet requirements for any work within or near State right-of-way. All entities other than the Department working within the Department's right-of-way must obtain an Encroachment Permit prior to commencement of work. Please allow 2 to 4 weeks for a complete submittal to be reviewed and for a permit to be issued.

3. If there is construction on State right-of way a Traffic Management Plan (TMP) for construction vehicles should be submitted to Caltrans in order to minimize the impacts to State highway facilities, particularly I-405 and SR-55. Coordination of this project with other construction activities on I-405 and SR-55 may be needed. Any hauling of materials should not occur during A.M and P.M peak periods of travel on State facilities during demolition and construction of the proposed project. All vehicle loads should be covered so that materials do not blow over or onto the Department's right-of-way.

Please continue to keep us informed of this project and any future developments that could potentially impact State transportation facilities. If you have any questions or need to contact us, please do not hesitate to call Aileen Kennedy at (949) 724-2239.

Sincerely,

Maureen ElHarake

MAUREEN EL HARAKE
Branch Chief, Regional-Community-Transit Planning
District 12

c: Scott Morgan, Office of Planning and Research

State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
South Coast Region
3883 Ruffin Road
San Diego, CA 92123
(858) 467-4201
www.wildlife.ca.gov

EDMUND G. BROWN JR., Governor
CHARLTON H. BONHAM, Director

December 4, 2013

Mr. Jerry Marchbank
Orange Coast College
1370 Adams Avenue
Costa Mesa, CA 92626
jmarchbank@mail.cccd.edu

Subject: Comments on the Notice of Preparation of a Draft Program Environmental Impact Report for the Vision 2020 Facilities Master Plan, Costa Mesa, CA (SCH# 2013111026)

Dear Mr. Marchbank:

The California Department of Fish and Wildlife (Department) has reviewed the above-referenced Notice of Preparation (NOP) for the Vision 2020 Facilities Master Plan Draft Program Environmental Impact Report (PEIR). The following statements and comments have been prepared pursuant to the Department's authority as Trustee Agency with jurisdiction over natural resources affected by the project (California Environmental Quality Act, [CEQA] Guidelines §15386) and pursuant to our authority as a Responsible Agency under CEQA Guidelines section 15381 over those aspects of the proposed project that come under the purview of the California Endangered Species Act (Fish and Game Code §2050 et seq.) and Fish and Game Code section 1600 et seq. The Department also administers the Natural Community Conservation Planning (NCCP) program.

Orange Coast College (OCC) occupies an approximately 160-acre site in the City of Costa Mesa in central Orange County. The project site is surrounded by the Cities of Santa Ana to the north, Fountain Valley and Huntington Beach to the west, Newport Beach to the south, and Irvine to the east. OCC is bounded by Adams Avenue to the north, Fairview Road to the east, Merrimac Way to the south, and Harbor Boulevard to the west. North of the site are high-density residential developments, and low-density residential developments are south of Merrimac Way. Costa Mesa High School and the Orange County Fair and Event Center are located to the east across Fairview Road, and commercial and residential development is located to the west of the campus along Harbor Boulevard.

The Coast Community College District (District) is updating its Facilities Master Plan for OCC. The District plans to construct new, larger buildings housing similar disciplines and replace the smaller and spatially less efficient classroom buildings in the center of the campus in addition to implementing various parking and pedestrian circulation improvements. Habitat types on OCC include Eucalyptus and other non-native ornamental trees, which serve as perching sites for raptors such as Cooper's hawk (*Accipiter cooperii*; Initial Study page 34).

The Department offers the following comments and recommendations to assist the District in avoiding or minimizing potential project impacts on biological resources.

1. The Department considers adverse impacts to a species protected by the California Endangered Species Act (CESA), for the purposes of CEQA, to be significant without mitigation. As to CESA, take of any endangered, threatened, or candidate species that results from the project is prohibited, except as authorized by state law (Fish and Game Code, §§ 2080, 2085.) Consequently, if the Project, Project construction, or any Project-related activity during the life of the Project will result in take of a species designated as endangered or threatened, or a candidate for listing under CESA, the Department recommends that the project proponent seek appropriate take authorization under CESA prior to implementing the project. Appropriate authorization from the Department may include an incidental take permit (ITP) or a consistency determination in certain circumstances, among other options (Fish and Game Code §§ 2080.1, 2081, subs. (b),(c)). Early consultation is encouraged, as significant modification to a project and mitigation measures may be required in order to obtain a CESA Permit. Revisions to the Fish and Game Code, effective January 1998, may require that the Department issue a separate CEQA document for the issuance of an ITP unless the project CEQA document addresses all project impacts to CESA-listed species and specifies a mitigation monitoring and reporting program that will meet the requirements of an ITP. For these reasons, biological mitigation monitoring and reporting proposals should be of sufficient detail and resolution to satisfy the requirements for a CESA ITP.

2. To enable the Department to adequately review and comment on the proposed project from the standpoint of the protection of plants, fish and wildlife, we recommend the following information be included in the PEIR.

   a. A complete discussion of the purpose and need for, and description of, the proposed project, including all staging areas and access routes to the construction and staging areas.

   b. A range of feasible alternatives to ensure that alternatives to the proposed project are fully considered and evaluated; the alternatives should avoid or otherwise minimize impacts to sensitive biological resources. Specific alternative locations should be evaluated in areas with lower resource sensitivity where appropriate.

<u>Biological Resources within the Project's Area of Potential Effect</u>

3. To provide a complete assessment of the flora and fauna within and adjacent to the project area, with particular emphasis upon identifying endangered, threatened, sensitive, and locally unique species and sensitive habitats, the PEIR should include the following information.

   a. Per CEQA Guidelines, section 15125(c), information on the regional setting that is critical to an assessment of environmental impacts, with special emphasis should be placed on resources that are rare or unique to the region.

   b. A thorough assessment of rare plants and rare natural communities, following the Department's *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (see: http://www.wildlife.ca.gov/habcon/plant/) (hard copy available on request).

c. A current inventory of the biological resources associated with each habitat type on site and within the area of potential effect. The Department's California Natural Diversity Data Base in Sacramento should be contacted at (916) 322-2493 or www.wildlife.ca.gov/biogeodata/ to obtain current information on any previously reported sensitive species and habitat, including Significant Natural Areas identified under Chapter 12 of the Fish and Game Code.

d. An inventory of rare, threatened, and endangered, and other sensitive species on site and within the area of potential effect. Species to be addressed should include all those which meet the CEQA definition (see CEQA Guidelines, §15380). This should include sensitive fish, wildlife, reptile, and amphibian species. Seasonal variations in use of the project area should also be addressed. Focused species-specific surveys, conducted at the appropriate time of year and time of day when the sensitive species are active or otherwise identifiable, are required. Acceptable species-specific survey procedures should be developed in consultation with the Department and the U.S. Fish and Wildlife Service.

<u>Analyses of the Potential Project-Related Impacts on the Biological Resources</u>

4. To provide a thorough discussion of direct, indirect, and cumulative impacts expected to adversely affect biological resources, with specific measures to offset such impacts, the following should be addressed in the PEIR.

   a. A discussion of potential adverse impacts from lighting, noise, human activity, exotic species, and drainage should also be included. The latter subject should address: project-related changes on drainage patterns on and downstream of the project site; the volume, velocity, and frequency of existing and post-project surface flows; polluted runoff; soil erosion and/or sedimentation in streams and water bodies; and post-project fate of runoff from the project site. The discussions should also address the proximity of the extraction activities to the water table, whether dewatering would be necessary, and the potential resulting impacts on the habitat, if any, supported by the groundwater. Mitigation measures proposed to alleviate such impacts should be included.

   b. Discussions regarding indirect project impacts on biological resources, including resources in nearby public lands, open space, adjacent natural habitats, riparian ecosystems, and any designated and/or proposed or existing reserve lands (e.g., preserve lands associated with a NCCP). Impacts on, and maintenance of, wildlife corridor/movement areas, including access to undisturbed habitats in adjacent areas, should be fully evaluated in the PEIR.

   c. The zoning of areas for development projects or other uses that are nearby or adjacent to natural areas may inadvertently contribute to wildlife-human interactions. A discussion of possible conflicts and mitigation measures to reduce these conflicts should be included in the environmental document.

   d. A cumulative effects analysis should be developed as described under CEQA Guidelines, section 15130. General and specific plans, as well as past, present, and anticipated future projects, should be analyzed relative to their impacts on similar plant communities and wildlife habitats.

Mitigation for the Project-related Biological Impacts

5. The PEIR should include measures to fully avoid and otherwise protect Rare Natural Communities from project-related impacts. The Department considers these communities as threatened habitats having both regional and local significance.

6. The PEIR should include mitigation measures for adverse project-related impacts to sensitive plants, animals, and habitats. Mitigation measures should emphasize avoidance and reduction of project impacts. For unavoidable impacts, on-site habitat restoration or enhancement should be discussed in detail. If on-site mitigation is not feasible or would not be biologically viable and therefore not adequately mitigate the loss of biological functions and values, off-site mitigation through habitat creation and/or acquisition and preservation in perpetuity should be addressed.

7. For proposed preservation and/or restoration, the PEIR should include measures to perpetually protect the targeted habitat values from direct and indirect negative impacts. The objective should be to offset the project-induced qualitative and quantitative losses of wildlife habitat values. Issues that should be addressed include restrictions on access, proposed land dedications, monitoring and management programs, control of illegal dumping, water pollution, increased human intrusion, etc.

8. The Department recommends that measures be taken to avoid project impacts to nesting birds. Migratory nongame native bird species are protected by international treaty under the Federal Migratory Bird Treaty Act (MBTA) of 1918 (50 C.F.R. Section10.13). Sections 3503, 3503.5, and 3513 of the California Fish and Game Code prohibit take of all birds and their active nests including raptors and other migratory nongame birds (as listed under the Federal MBTA).

   a. If avoidance of the avian breeding season is not feasible, the Department recommends surveys by a qualified biologist with experience in conducting breeding bird surveys to detect protected native birds occurring in suitable nesting habitat that is to be disturbed and (as access to adjacent areas allows) any other such habitat within 300 feet of the disturbance area (within 500 feet for raptors). Project personnel, including all contractors working on site, should be instructed on the sensitivity of the area. Reductions in the nest buffer distance may be appropriate depending on the avian species involved, ambient levels of human activity, screening vegetation, or possibly other factors.

   b. Further avoidance of direct impacts to birds, particularly migratory species, can be achieved through incorporation of 'bird safe' elements in architectural design. Elements such as glazed windows, well-articulated building facades, and minimal nighttime lighting are encouraged to reduce collisions of migratory birds with buildings. Large flat windows, reflective glass, and transparent corners are discouraged. For further guidance on this subject the Department recommends review of the following literature: 1) Standards for Bird-Safe Buildings, San Francisco Planning Department, Adopted July 14, 2011; and 2) Klem Jr., D. 2009. Preventing Bird – Window Collisions. The Wilson Journal of Ornithology 121(2):314-321.

9. The Department generally does not support the use of relocation, salvage, and/or transplantation as mitigation for impacts to rare, threatened, or endangered species. Studies have shown that these efforts are experimental in nature and largely unsuccessful.

10. Plans for restoration and revegetation should be prepared by persons with expertise in southern California ecosystems and native plant revegetation techniques. Each plan should include, at a minimum: (a) the location of the mitigation site; (b) the plant species to be used, container sizes, and seeding rates; (c) a schematic depicting the mitigation area; (d) planting schedule; (e) a description of the irrigation methodology; (f) measures to control exotic vegetation on site; (g) specific success criteria; (h) a detailed monitoring program; (i) contingency measures should the success criteria not be met; and (j) identification of the party responsible for meeting the success criteria and providing for conservation of the mitigation site in perpetuity.

We appreciate the opportunity to comment on the referenced NOP. Questions regarding this letter and further coordination on these issues should be directed to Jennifer Edwards at (858) 467-2717 and via email at jennifer.edwards@wildlife.ca.gov.

Sincerely,

Marilyn Fluharty for

Betty M. Courtney
Environmental Program Manager
South Coast Region

cc: Scott Morgan, State Clearinghouse, Sacramento
Jennifer Edwards, CDFW, San Diego

CITY OF COSTA MESA

P.O. BOX 1200 • 77 FAIR DRIVE • CALIFORNIA 92628-1200

December 5, 2013

Jerry Marchbank
Senior Director, Facilities, Planning and Construction
Coast Community College District
1370 Adams Avenue
Costa Mesa, California 92626

SUBJECT: NOTICE OF PREPARATION – Vision 2020 Facilities Master Plan

Dear Mr. Marchbank:

Thank you for the opportunity to provide comments on the Initial Study/Notice of Preparation related to Orange Coast College Vision 2020 Facilities Master Plan. In response to the available NOP, we have the following comments:

1) Project Description and Program Elements:

The project description refers to the Coast Community College District's vision to increase entrepreneurial activities and attracting visitors to the campus through the development of new facilities and improvement programs. The NOD refers to the following potential facilities to be added to the exiting campus:

- **Mixed-use development at the corner of Fairview Road and Merrimac Way.** This project would consist of commercial/retail uses on the street level and student residential on the upper levels. The District envisions a private partner that has yet to be identified.
- **A student housing project (approximately 1,300 beds) at the corner of Adams Avenue and the campus entry.** The proposed approximately 200,000-square-foot facility would be supported by a private partner.
- **Multifamily residential housing.** The District site adjacent to District headquarters on Pinecreek Lane is identified for multifamily residential development (e.g., senior housing or market-rate housing) in the Facilities Master Plan. A private partner is envisioned that has yet to be identified.
- **New Planetarium.** This proposed 9,300-square-foot facility would be used by the college and the community and is sited to allow for public access from the Merrimac lot.
- **New Student Union/Bookstore/Culinary Arts/Student Success Center.** This project is planned to be developed slightly north of the corner of Fairview Road and Merrimac Way.
- **New Administration Building.** This building may be integrated with the new Student Union.

While the City is pleased that Orange Coast College is expanding and considering addition of mixed use and residential buildings to the campus, the City is concerned about the quality of life impacts to adjacent and nearby residents (i.e., noise, air quality, light and glare) and the City as a whole (i.e., infrastructure, traffic).

In addition, since the District is proposing a comprehensive change to the master plan, the City is requesting that District outreach to the residents and considers their concerns. The City could host a community meeting at a date agreed to with the District at City Hall.

The City would also appreciate the opportunity to be involved in the campus planning and design. We believe that any expansion of the existing plan should consider integrating the college campus with the surrounding community.

2) Traffic Impacts:

The following should be included in the draft EIR:

- Traffic analysis related to all intersections within the City of Costa Mesa where the proposed project potentially increases the peak hour traffic by 50 trips.
- Integration of pedestrian and bike lanes with the City's current and upcoming General Plan update.
- **Other intersections – to be added by Transportation**

We look forward to participating in any additional reviews of the draft EIR and thank you for considering the City's comments.

Sincerely,

Gary Armstrong

Gary Armstrong, AICP
Economic & Development Services Director /
Deputy CEO
(714) 754-5182
gary.armstrong@costamesaca.gov

City of Huntington Beach

2000 MAIN STREET CALIFORNIA 92648

DEPARTMENT OF PLANNING AND BUILDING

www.huntingtonbeachca.gov

Planning Division
714.536.5271

Building Division
714.536.5241

November 18, 2013

Coast Community College District
1370 Adams Avenue
Costa Mesa, CA 92626
ATTN: Jerry Marchbank

Subject: Notice of Preparation of a Draft Program EIR for the Vision 2020 Facilities Master Plan – Orange Coast College

Dear Mr. Marchbank:

Thank you for forwarding the NOP/Initial Study for the subject project. The City of Huntington Beach looks forward to reviewing the draft Program EIR when it becomes available.

Sincerely,

Jennifer Villasenor
Senior Planner

Community Development cityofirvine.org

City of Irvine, One Civic Center Plaza, P.O. Box 19575, Irvine, California 92623-9575 (949) 724-6000

December 3, 2013

Mr. Jerry Marchbank
Coast Community College District
1370 Adams Avenue
Costa Mesa, CA 92626

Sent via USPS and email to: JMarchbank@mail.cccd.edu

Subject: Notice of Preparation of a Draft Program Environmental Impact Report (PEIR)

Dear Mr. Marchbank:

Thank you for the opportunity to comment on the Notice of Preparation of the PEIR for the "Vision 2020 Facilities Master Plan". City staff has reviewed the project and offers the following comment:

> As part of the Draft EIR being prepared for the project, please ensure that the traffic analysis identifies potential significant impacts including both an interim-year analysis as well as a build-out year analysis. Additionally, include the following intersections located within the City of Irvine in the project study area:
>
> - Red Hill Avenue and Main Street
> - Campus Drive and MacArthur Boulevard
> - Jamboree Road and MacArthur Boulevard
> - Campus Drive and University Drive
> - California Avenue and University Drive.

City staff will provide the City of Irvine Transportation Analysis Model (ITAM) traffic data for these locations. Please coordinate with Peter Anderson, Senior Transportation Analyst, at 949-724-7370.

We are interested in reviewing all additional documentation associated with this project; therefore, please forward copies of the pertinent documents for our review.

If you have any questions, please contact me at 949-724-6314 or via e-mail at dlaw@cityofirvine.org

Sincerely,

David R. Law, AICP
Senior Planner

cc: (via email)
Kerwin Lau, Project Development Administrator
Sun-Sun Murillo, Supervising Transportation Analyst
Karen Urman, Senior Transportation Analyst
Peter Anderson, Senior Transportation Analyst
Bill Jacobs, Principal Planner

J Linnert architecture
1980 Continental Avenue
Costa Mesa CA 92627

jwlaia@gmail.com
949.722.8845

RECEIVED
DEC 02 2013
By

11/24/13

Subject: Notice of Preparation of a Draft Program Environmental Impact Report (PEIR)
Project Title: *Vision 2020 Facilities Master Plan Program EIR, Orange Coast College*
Project Location: *Orange Coast College, generally bound by Fairview Road to the east, Harbor Blvd. to the west, Adams Avenue to the north, and Merrimac Way to the south.*

Coast Community College District
Jerry Marchbank,
Senior Director, Facilities, Planning and Construction
1370 Adams Avenue
Costa Mesa CA 92626

Dear Mr Marchbank,

Presently, Orange Coast College is a viable and dynamic academic learning environment. Its origins were commissioned by a committee led by the then new College President, Dr. Basil H. Peterson and Vice-president Dr. James W. Thornton, Jr., over 60 years ago. They are to be commended for their foresight and innovation. Many of the original buildings of the college campus, were designed by Master Architect-Richard Neutra in partnership with Architect-Robert Alexander and leading Modern Landscape-Architect, Garrett Eckbo. These campus buildings have received many awards and commendations and continue to garner the accolades of school administrators and architectural professionals for their excellence in design and planning. It is understood, any actions that may cause a substantial adverse change to the original historic campus should be thoroughly evaluated as required by CEQA.

Another course of action would be to reconsider the proposed Master Plan as well as the Existing Buildings Removal Plan and rehabilitate/restore/repurpose the historic and culturally significant structures, outdoor spaces and landscape/hardscape.

As directed per the above noted Subject, please find following, requested scope and content information to be included in the PEIR.

Documentation should be applied to all existing buildings at Orange Coast College as of the date noted above. In-depth and detailed documentation should be applied to those buildings, outdoor spaces and landscaping/hardscaping designed by Master Architect - Richard Neutra & Robert Alexander and leading Modern Landscape-Architect, Garrett Eckbo. A complete Master Site Plan of Orange Coast College showing all existing buildings, outdoor spaces (e.g. fences, screen walls, paving, seating, outdoor furniture, etc.) landscaping and hardscaping to date and all buildings that have been demolished to date going back to and including the original constructed campus design by Architects Neutra & Alexander and Landscape-Architect Garret Eckbo from the early 1950's. Also, provide a corresponding clear and concise listing noting; Architect(s) of each building, date of construction-completion, date of demolition or prospective date of proposed demolition and name of building.

J Linnert architecture
1980 Continental Avenue
Costa Mesa CA 92627

jwlaia@gmail.com
949.722.8845

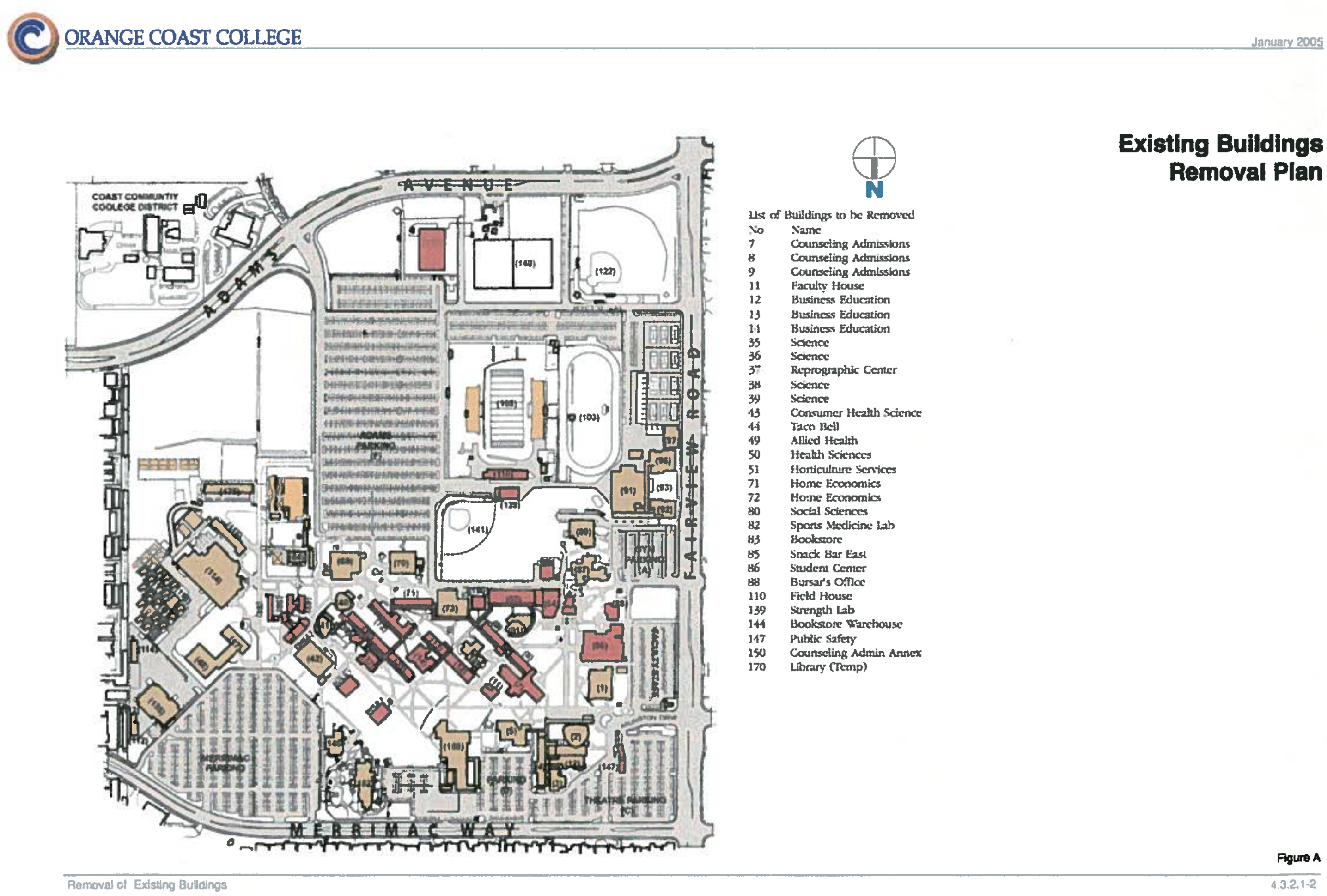
11/24/13

Subject: Notice of Preparation of a Draft Program Environmental Impact Report (PEIR)
Project Title: *Vision 2020 Facilities Master Plan Program EIR, Orange Coast College*
Project Location: *Orange Coast College, generally bound by Fairview Road to the east, Harbor Blvd. to the west, Adams Avenue to the north, and Merrimac Way to the south.*

Continued

It should be noted that per the Coast Community College District website an **Existing Buildings Removal Plan** is provided in the **Orange Coast College Facilities Master Plan - January 2005**. (http://www.cccd.edu/bondprojects/measurec/Documents/OCCMasterPlan.pdf) (images attached) It should also be noted that the recent **Orange Coast College Vision 2020 Facilities Master Plan** (http://www.cccd.edu/aboutus/Documents/Vision2020%20Facilities%20Master%20Plan.pdf) (image attached) seems to be consistent with the Existing Buildings Removal Plan of 2005.

A complete analysis and study detailing the prospective rehabilitation/restoration, re-use and/or repurposing of all proposed removed structures should be provided in the PEIR.



EXISTING BUILDINGS REMOVAL PLAN 2005 (Proposed Removed Buildings, shaded dark brown)

J Linnert architecture
1980 Continental Avenue
Costa Mesa CA 92627

jwlaia@gmail.com
949 . 722 . 8845

11/24/13

Subject: Notice of Preparation of a Draft Program Environmental Impact Report (PEIR)
Project Title: *Vision 2020 Facilities Master Plan Program EIR, Orange Coast College*
Project Location: *Orange Coast College, generally bound by Fairview Road to the east, Harbor Blvd. to the west, Adams Avenue to the north, and Merrimac Way to the south.*

Continued

ORANGE COAST COLLEGE January 2005

4.3.2.1 Removal of Existing Buildings

Review of deferred maintenance costs and the Facilities Assessment Report support the conclusion that many buildings on campus have reached, or are reaching, the end of their usefull lifespans. Due to the condition and age of building systems, and the scale of these buildings, it is not cost effective to undertake the extensive renovation necessary to provide modern, reliable instructional space.

The Master Plan recommends the long term growth and the modern instructional needs of the campus be met in large part through the removal and replacement of outdated and deteriorating buildings with larger buildings which consolidate academic programs. (Figure "A" page 4.3.2.1-2)

Removal of the linear, small-scale, older buildings which densely populate the center of the campus results in a significant increase in open space, (Figure "B" page 4.3.2.1-3) affording the opportunity to clarify the campus plan, simplify pedestrian orientation and movement, and enhance the "sense of community" by creating a hierarchy of public spaces for socialization, study and recreation in harmony with the vision of the college.

Several of the significant Neutral Alexander buildings, the R.B. Moore Theater, Forum, and Science Lecture Hall will remain, providing a sense of history and heritage while enhancing the human scale and adding complexity and visual interest to the campus core.

Dissapointingly, this document does not seem to mention that the building's being proposed for demolition as mentioned, "Removal of the linear, small-scale older buildings which densley populate the center of the campus..." are original campus buildings mostly designed by Master Architect - Richard Neutra & Robert Alexander with noted Landscape Architect, Garrett Eckbo.

[Document from the **ORANGE COAST COLLEGE FACILITIES MASTER PLAN - JANUARY 2005**]

J Linnert architecture
1980 Continental Avenue
Costa Mesa CA 92627

jwlaia@gmail.com
949 . 722 . 8845

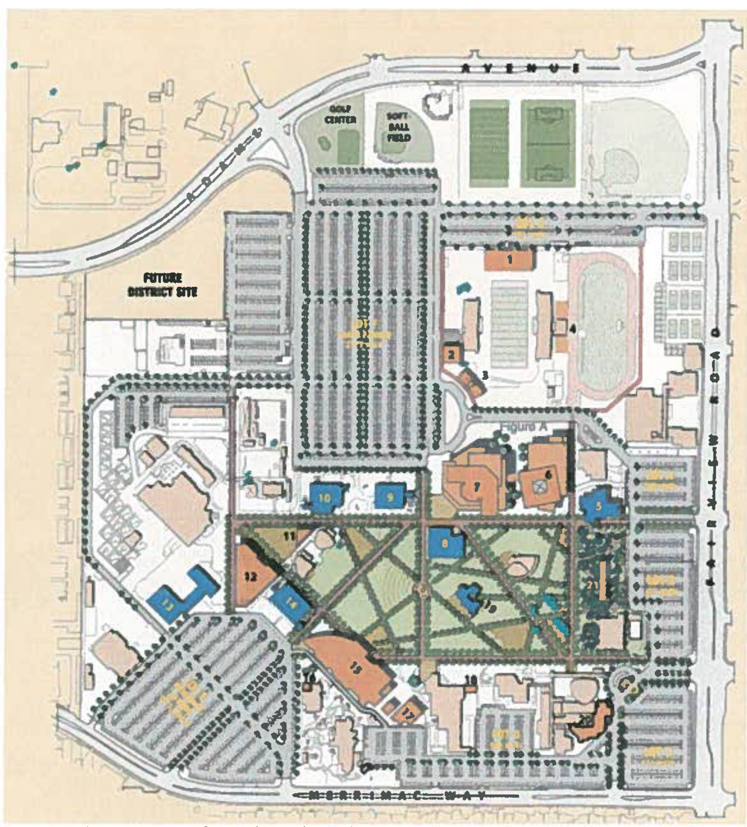
11/24/13

Subject: Notice of Preparation of a Draft Program Environmental Impact Report (PEIR)
Project Title: *Vision 2020 Facilities Master Plan Program EIR, Orange Coast College*
Project Location: *Orange Coast College, generally bound by Fairview Road to the east, Harbor Blvd. to the west, Adams Avenue to the north, and Merrimac Way to the south.*

Continued

ORANGE COAST COLLEGE — January 2005

Master Plan



Note: For Electronic Drawing Refer to Architectural Appendix
OCC-MP.dwg

LEGEND
NEW BUILDINGS

No	Building Name
1	Life Fitness Center
2	Campus Safety Office
3	Stadium Entry
4	Track Bleacher ADA
6	Student Union
7	OCC Hall
11	Snack Bar
12	Consumer Health / Lab Science
15	Library
17	Doyle Arts Pavilion
21	Emeritus Hall
22	Entry Kiosk

BUILDING MODERNIZATION

No	Building Name
5	Watson Hall
8	Success Center
9	Instructional Resource Center
10	Chemistry
13	Skill Center
14	Lewis Hall
19	Faculty House & Conference Center

BUILDING ADDITION

No	Building Name
16	Early Childhood Lab School
18	Arts Center / Video Storage
20	R. B. Moore Music Complex

Figure A

Master Plan Concept — 4.3.2-1

MASTER PLAN
<u>ORANGE COAST COLLEGE FACILITIES MASTER PLAN - JANUARY 2005</u>

J Linnert architecture
1980 Continental Avenue
Costa Mesa CA 92627

jwlaia@gmail.com
949.722.8845

11/24/13

Subject: Notice of Preparation of a Draft Program Environmental Impact Report (PEIR)
Project Title: *Vision 2020 Facilities Master Plan Program EIR, Orange Coast College*
Project Location: *Orange Coast College, generally bound by Fairview Road to the east, Harbor Blvd. to the west, Adams Avenue to the north, and Merrimac Way to the south.*

Continued

<u>ORANGE COAST COLLEGE VISION 2020 FACILITIES MASTER PLAN</u>

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Continued

AERIAL RENDERING
<u>ORANGE COAST COLLEGE VISION 2020 FACILITIES MASTER PLAN</u>

J Linnert architecture
1980 Continental Avenue
Costa Mesa CA 92627

jwlaia@gmail.com
949.722.8845

11/24/13

Subject: Notice of Preparation of a Draft Program Environmental Impact Report (PEIR)
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Continued

Part of the review process should also provide an Historical Resource Assessment for the college campus, designed by Master Architect-Richard Neutra in partnership with Architect-Robert Alexander and leading Modern Landscape-Architect, Garrett Eckbo.
It seems that a collegial and open public discourse along with a thorough and credible evaluation of this significant cultural resource produced by Master Architect-Richard Neutra in partnership with Architect- Robert Alexander and leading Modern Landscape-Architect, Garrett Eckbo is warranted.

Please include the above information and comments as public record for the required Environmental Impact Report (EIR) process.

Sincerely,

John W Linnert AIA
Recipient American Institute of Architects Orange County (AIAOC) Presidents Award 2009

barbara lamprecht, m.arch.
bmlamprecht@gmail.com
Lamprecht ArchiteXtural

550 jackson st. pasadena ca 91104.3621
626.264.7600

12 November 2013

Jerry Marchbank,
Senior Director, Facilities, Planning and Construction
Orange Coast College
Richard Pagel
Vice President Administrative Services
Orange Coast College
Douglas C. Bennett
Executive Director College Advancement
Orange Coast College
Caitlin Munson
Environmental Analyst, Dudek

Re: Cultural and Historic Significance, Orange Coast College Campus

Dear Faculty, Administration, and Ms. Munson,

I am writing on behalf of the cultural and historic significance of the original Orange Coast College campus, an exceptional group of postwar mid-century buildings that appear to comprise a historic district. Commissioned by a committee led by the new College president, Dr. Basil H. Peterson and vice-president Dr. James W. Thornton, Jr., the earliest postwar buildings in this group were designed by the distinguished architect and urban planner Robert E. Alexander, a Fellow of the AIA. For the design of later buildings, especially the Business Education Building, the Speech Arts and Auditorium building, the Pool and Stadium, and the Planetarium, he joined forces with the world-renowned Richard J. Neutra, also a Fellow of the AIA and long acknowledged as one of the most important architects of the twentieth century. The Neutra and Alexander partnership went on to win prestigious commissions including the U.S. Embassy, Karachi, Pakistan, and the Lincoln Memorial Museum (the Cyclorama), Gettysburg.

To realize a unique campus within the larger state system, Neutra and Alexander enlisted Garrett Eckbo, a leading Modern landscape architect who trained at Harvard with Walter Gropius, founder of the Bauhaus; Eckbo later served as the Chair of the Department of Landscape Architecture, UC Berkeley. Along with facilitating architect Richard H. Fleger, together the formidable team realized a campus that was as innovative as it is serene. Despite some reversible impositions, the buildings retain considerable integrity, and while some of Eckbo's plantings are gone, much of his overall scheme remains.

When completed, the Neutra and Alexander buildings immediately garnered worldwide acclaim. They were published in leading publications including *L'Architecture D'Aujourd'hui*, France; *Architectur und Wohnform*, Germany; *Instituto Técnico De La Construcción Y Del Cemento*, Spain; *Kokusai-Kentiku*, Japan, to name only a few. The brilliantly laid out campus, with its crisp low-rise brick structures beautifully engaged with the landscape, quickly won an AIA award. Decades later, it was also the recipient of an AIA Orange County 25-year award, a recognition of its sustained architectural excellence. The award fulfilled the

barbara lamprecht, m.arch.
bmlamprecht@gmail.com
Lamprecht ArchiteXtural

550 jackson st. pasadena ca 91104.3621
626.264.7600

prediction of the Orange County Magazine, Fall 1954, which declared that when completed the Neutra and Alexander buildings would comprise "one of the most beautiful and complete campuses in the state."

Orange Coast College can be proud to possess such a rare example by such important figures. No other American community college or even four-year university possesses such a carefully conceived "landscape for learning."

As you know, any actions that may cause a substantial adverse change to the original historic campus should be thoroughly evaluated as required by CEQA. Another course of action could be to reconsider the proposed master plan. Neutra's reputation has continued to grow over the decades. His work, with its emphasis on human well-being and the vital connection to nature, is the subject of ceaseless conferences, dissertation, and articles. I encourage the College to consider rehabilitating these buildings. Such actions would burnish the institution's image as a prescient, savvy practitioner of sustainability—because preservation and re-use is the first and most fundamental tenet of "building green."

The former Crystal Cathedral may serve as an important example for Orange Coast College. Just this year, the two Neutra buildings on the campus, the Rev. Robert Schuller's famous drive-in church and the Tower of Hope, both handsome mid-century designs, are being beautifully rehabilitated and re-used, generating considerable praise and favorable media attention. (The campus is well worth a visit.)

Please include my comments as part of the public record for the required EIR effort.

Sincerely,

barbara lamprecht

Barbara Lamprecht, M.Arch.
Qualified Architectural Historian

cc: Lee Gordon, John Fawcett, Dennis

RECEIVED
DEC 04 2013
By

12-2-2013

Mr. Jerry Marchbank
1370 Adams Avenue
Costa Mesa, California 92626

Re: Orange Coast College Vision 2020 Facilities Master Plan Study

First let me thank you for inclusion as one of the recipients of the OCC Vision 2020 Facilities Master Plan Initial study. As a long time resident of Costa Mesa, graduate of OCC, and current resident in the adjacent "Mesa Del Mar" subdivision... I hope my comments are relevant.

I note the intent of the reference document is to "provide an overview and analysis of the environmental impacts associated with the project proposed" (Vision 2020 Facilities Master Plan)... as noted on page 2(1.2) of the referenced document. Therefore the majority of my comments will be related to environmental impacts to the surrounding community. However, I have also included suggestions which more directly pertain to instructional scope and facilities layout.

Pages 6-12, reference "Project Objectives" and "Proposed Master Plan Elements". Much verbiage is given to the expansion of the recycling center, however relatively little is detail is given to articulate the merit in expanding the Business, Math, and Computing Center. The college and the community would benefit from adoption of an enhanced STEM program. (As was announced in the August 30th 2012, "Coast District Trustees Approve Local Education Bond" news release). Perhaps, the following comments are "out of scope" however... while on the subject, three other similar concerns come to mind...

The lack of mention regarding Orange Coast College's aviation program. The looming pilot shortage, should necessitate an enhancement and publicizing of OCC's aviation programs/facilities.

The lack of emphasis on medical studies training. As all are aware, the aging of the population will require an increasingly medically trained work force in the future. OCC's medically related programs are heavily impacted currently... The current "scope" should reflect increased emphasis on medical studies.

The need for some level of curricula geared towards manual skills training... a skill set that can't be "off shored". Training in trades that benefit the local community: plumbing, electrical, HVAC... perhaps resurrect the old petroleum technology program.

Of course references to "mixed-use center housing/retail development" on pages 6(3.0) and 7(3.3) and "multifamily residential housing" on page 7(3.3), need to be elaborated in greater detail, before any public comment/impact, can be determined.

Page 9(3.3), (please also see page 58(a)) references using the OC Fairground property as a location for a multilevel parking structure. Of course the concern from a local residents perspective... is traffic. The Arlington/Fairview intersection is heavily trafficked at the present time. The current contributors are the OC Fairgrounds, Pacific Amphitheater, Costa Mesa High School (and the proposed 1000+ seat stadium, collocated on campus), access to TeWinkle Park (Bark Park, Skate Park), cut through for Newport boulevard – Fairview Street traffic. What street enhancements and/or other mitigations are envisioned (page 58 (a,b))? From a practical stand point, locating a parking structure in parking lot F would make more sense... less distance to walk in inclement weather, no need to traverse a heavily trafficked street, provide public parking for the new planetarium page 53(a), provide public parking (and parking revenue) to the underutilized library, and be adjacent to facilities for public sporting events.

Page 26 (6.3.1(c)) references "visual character" of the site and its surroundings. Of course multi-story structures may impact privacy and the scenic vista in some areas of the surrounding neighborhoods. The "Master Plan" does not mention any initiatives to beautify the entranceways or periphery of the campus. More information is required regarding the location and height of the proposed "multi-level" structures.

Page 52 (6.3.12 (c)) references "substantial permanent increase in ambient noise levels..." The surrounding neighborhoods could be adversely impacted unless efforts are made to mitigate excessive noise generation.

Page 55 (6.3.14(a)) fails to reference TeWinkle Park, located .4 miles east of the campus.

John D. Rittenhouse

John Rittenhouse
Mesa Del Mar, HOA
966 Presidio Drive
Costa Mesa, California 92626
johnritt@yahoo.com

STATE OF CALIFORNIA Edmund G. Brown, Jr.Governor

NATIVE AMERICAN HERITAGE COMMISSION
1550 Harbor Boulevard, Suite 100
West Sacramento, CA 95691
(916) 373-3715
Fax (916) 373-5471
Web Site www.nahc.ca.gov
Ds_nahc@pacbell.net
e-mail: ds_nahc@pacbell.net

November 18, 2013

RECEIVED
NOV 20 2013
By

Mr. Jerry Marchbank
Orange Coast College
1370 Adams Avenue
Costa Mesa, CA 92626

RE: SCH#2013111026; CEQA Notice of Preparation (NOP); draft Environmental Impact Report (DEIR) for the **"Vision 2020 Facilities Master Plan;"** of the Orange Coast Community College District, located in central Orange County,, California

Dear Mr. Marchbank:

The Native American Heritage Commission (NAHC) has reviewed the above-referenced environmental document.

The California Environmental Quality Act (CEQA) states that any project which includes archeological resources, is a significant effect requiring the preparation of an EIR (CEQA guidelines 15064.5(b). To adequately comply with this provision and mitigate project-related impacts on archaeological resources, the Commission recommends the following actions be required:

Contact the appropriate Information Center for a record search to determine :If a part or all of the area of project effect (APE) has been previously surveyed for cultural places(s), The NAHC recommends that known traditional cultural resources recorded on or adjacent to the APE be listed in the draft Environmental Impact Report (DEIR).

If an additional archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey. We suggest that this be coordinated with the NAHC, if possible. The final report containing site forms, site significance, and mitigation measurers should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for pubic disclosure pursuant to California Government Code Section 6254.10.

A list of appropriate Native American Contacts for consultation concerning the project site has been provided and is attached to this letter to determine if the proposed active might impinge on any cultural resources. Lack of surface evidence of archeological resources does not preclude their subsurface existence.

Lead agencies should include in their mitigation plan provisions for the identification and evaluation of accidentally discovered archeological resources, pursuant to California Health & Safety Code Section 7050.5 and California Environmental Quality Act (CEQA) §15064.5(f). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American, with knowledge in cultural resources, should monitor all ground-disturbing activities. Also, California Public Resources Code Section 21083.2 require documentation and analysis of archaeological items that meet the standard in Section 15064.5 (a)(b)(f). Lead agencies should consider first, avoidance for sacred and/or historical sites, pursuant to CEQA Guidelines 15370(a). Then if the project goes ahead then, lead agencies include in their mitigation plan provisions for the analysis and disposition of recovered artifacts, pursuant to California Public Resources Code Section 21083.2 in consultation with culturally affiliated Native Americans.

Lead agencies should include provisions for discovery of Native American human remains in their mitigation plan. Health and Safety Code §7050.5, CEQA §15064.5(e), and Public Resources Code §5097.98 mandates the process to be followed in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery.

Sincerely,

Dave Singleton
Program Analyst

CC: State Clearinghouse

Attachment: Native American Contacts list

Native American Contacts
Orange County, California
November 18, 2013

Juaneno Band of Mission Indians Acjachemen Nation
David Belardes, Chairperson
32161 Avenida Los Amigos Juaneno
San Juan Capistrano CA 92675
chiefdavidbelardes@yahoo.
(949) 493-4933 - home
(949) 293-8522

Juaneno Band of Mission Indians Acjachemen Nation
Teresa Romero, Chairwoman
31411-A La Matanza Street Juaneno
San Juan Capistrano CA 92675-2674
(949) 488-3484
(949) 488-3294 - FAX
(530) 354-5876 - cell

Tongva Ancestral Territorial Tribal Nation
John Tommy Rosas, Tribal Admin.
Private Address Gabrielino Tongva
,
tattnlaw@gmail.com
310-570-6567

Gabrielino Tongva Indians of California Tribal Council
Robert F. Dorame, Tribal Chair/Cultural Resources
P.O. Box 490 Gabrielino Tongva
Bellflower , CA 90707
gtongva@verizon.net
562-761-6417 - voice
562-761-6417- fax

Gabrieleno/Tongva San Gabriel Band of Mission
Anthony Morales, Chairperson
PO Box 693 Gabrielino Tongva
San Gabriel , CA 91778
GTTribalcouncil@aol.com
(626) 286-1632
(626) 286-1758 - Home
(626) 286-1262 -FAX

Juaneno Band of Mission Indians
Alfred Cruz, Cultural Resources Coordinator
P.O. Box 25628 Juaneno
Santa Ana , CA 92799
alfredgcruz@sbcglobal.net
714-998-0721
714-998-0721 - FAX
714-321-1944 - cell

Gabrielino /Tongva Nation
Sandonne Goad, Chairperson
P.O. Box 86908 Gabrielino Tongva
Los Angeles , CA 90086
sgoad@gabrielino-tongva.com
951-845-0443

United Coalition to Protect Panhe (UCPP)
Rebecca Robles
119 Avenida San Fernando Juaneno
San Clemente CA 92672
rebrobles1@gmail.com
(949) 573-3138

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

his list s only applicable for contacting local Native Americans with regard to cultural resources for the proposed SCH#2013111026; CEQA Notice of Preparation (NOP); draft Environmental Impact Report (DEIR) for the Vision 2020 Facilities Master Plan (For the Orange Coast College); located in central Orange County, California.

Native American Contacts
Orange County, California
November 18, 2013

Gabrielino-Tongva Tribe
Bernie Acuna, Co-Chairperson
P.O. Box 180 Gabrielino
Bonsall , CA 92003
(619) 294-6660-work
(310) 428-5690 - cell
(760) 636-0854- FAX
bacuna1@gabrielinotribe.org

Gabrielino-Tongva Tribe
Conrad Acuna,
P.O. Box 180 Gabrielino
Bonsall , CA 92003

760-636-0854 - FAX

Juaneno Band of Mission Indians Acjachemen Nation
Joyce Perry, Representing Tribal Chairperson
4955 Paseo Segovia Juaneno
Irvine , CA 92612
kaamalam@gmail.com
949-293-8522

Gabrielino /Tongva Nation
Sam Dunlap, Cultural Resorces Director
P.O. Box 86908 Gabrielino Tongva
Los Angeles , CA 90086
samdunlap@earthlink.net
909-262-9351

Gabrielino-Tongva Tribe
Linda Candelaria, Co-Chairperson
P.O. Box 180 Gabrielino
Bonsall , CA 92003
palmsprings9@yahoo.com
626-676-1184- cell
(760) 636-0854 - FAX

Gabrieleno Band of Mission Indians
Andrew Salas, Chairperson
P.O. Box 393 Gabrielino
Covina , CA 91723
gabrielenoindians@yahoo.
(626) 926-4131

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

his list s only applicable for contacting local Native Americans with regard to cultural resources for the proposed SCH#2013111026; CEQA Notice of Preparation (NOP); draft Environmental Impact Report (DEIR) for the Vision 2020 Facilities Master Plan (For the Orange Coast College); located in central Orange County, California.

APPENDIX B

Air Quality and GHG Emissions Calculations

EXISTING CONDITIONS -2013

Annual, Summer, and Winter Emissions

Orange Coast College Existing Conditions 2013

Orange County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	944.39	1000sqft	21.68	944,394.00	0
Parking Lot	9,832.00	Space	88.49	3,932,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2013
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Vehicle Trips - Modified based on Traffic Impact Analysis

Area Coating - SCAQMD Rule 1113

Energy Use - Modified based on OCC Natural Gas Consumption and Electricity usage from 2011-2012

Water And Wastewater - Modified based on OCC water use from 2011-2012

Solid Waste - Modidifed based on OCC solid waste generation for the year 2012

Water Mitigation - Outdoor Irrigation Recycled Water

Operational Off-Road Equipment - modified

Table Name	Column Name	Default Value	New Value
tblEnergyUse	LightingElect	5.23	4.03
tblEnergyUse	LightingElect	0.88	0.00

tblEnergyUse	NT24E	2.72	2.55
tblEnergyUse	NT24NG	5.21	8.53
tblEnergyUse	T24E	6.10	5.73
tblEnergyUse	T24NG	10.65	17.45
tblProjectCharacteristics	OperationalYear	2014	2013
tblSolidWaste	SolidWasteGenerationRate	1,227.71	200.00
tblVehicleTrips	ST_TR	11.23	11.77
tblVehicleTrips	SU_TR	1.21	1.27
tblVehicleTrips	WD_TR	27.49	28.82
tblWater	IndoorWaterUseRate	46,321,415.80	52,808,052.00
tblWater	OutdoorWaterUseRate	72,451,445.23	30,392,736.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	18.8698	1.4300e-003	0.1455	1.0000e-005		5.4000e-004	5.4000e-004		5.4000e-004	5.4000e-004	0.0000	0.2674	0.2674	8.3000e-004	0.0000	0.2848
Energy	0.1323	1.2027	1.0103	7.2200e-003		0.0914	0.0914		0.0914	0.0914	0.0000	4,636.1304	4,636.1304	0.1780	0.0556	4,657.1182
Mobile	15.6376	39.4165	178.5632	0.3309	24.1701	0.6519	24.8220	6.4563	0.5986	7.0549	0.0000	28,239.2547	28,239.2547	1.3674	0.0000	28,267.9707
Waste						0.0000	0.0000		0.0000	0.0000	40.5982	0.0000	40.5982	2.3993	0.0000	90.9832
Water						0.0000	0.0000		0.0000	0.0000	16.7536	293.4003	310.1539	1.7342	0.0434	360.0334
Total	**34.6397**	**40.6207**	**179.7190**	**0.3382**	**24.1701**	**0.7438**	**24.9139**	**6.4563**	**0.6905**	**7.1468**	**57.3518**	**33,169.0528**	**33,226.4046**	**5.6798**	**0.0991**	**33,376.3903**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	18.8698	1.4300e-003	0.1455	1.0000e-005		5.4000e-004	5.4000e-004		5.4000e-004	5.4000e-004	0.0000	0.2674	0.2674	8.3000e-004	0.0000	0.2848
Energy	0.1323	1.2027	1.0103	7.2200e-003		0.0914	0.0914		0.0914	0.0914	0.0000	4,636.1304	4,636.1304	0.1780	0.0556	4,657.1182
Mobile	15.6376	39.4165	178.5632	0.3309	24.1701	0.6519	24.8220	6.4563	0.5986	7.0549	0.0000	28,239.2547	28,239.2547	1.3674	0.0000	28,267.9707
Waste						0.0000	0.0000		0.0000	0.0000	40.5982	0.0000	40.5982	2.3993	0.0000	90.9832
Water						0.0000	0.0000		0.0000	0.0000	16.7536	281.3718	298.1254	1.7334	0.0432	347.9311
Total	**34.6397**	**40.6207**	**179.7190**	**0.3382**	**24.1701**	**0.7438**	**24.9139**	**6.4563**	**0.6905**	**7.1468**	**57.3518**	**33,157.0243**	**33,214.3761**	**5.6789**	**0.0989**	**33,364.2880**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.04**	**0.04**	**0.02**	**0.18**	**0.04**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Mitigated	15.6376	39.4165	178.5632	0.3309	24.1701	0.6519	24.8220	6.4563	0.5986	7.0549	0.0000	28,239.2547	28,239.2547	1.3674	0.0000	28,267.9707
Unmitigated	15.6376	39.4165	178.5632	0.3309	24.1701	0.6519	24.8220	6.4563	0.5986	7.0549	0.0000	28,239.2547	28,239.2547	1.3674	0.0000	28,267.9707

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	27,217.44	11,115.52	1199.38	64,032,489	64,032,489
Parking Lot	0.00	0.00	0.00		
Total	27,217.44	11,115.52	1,199.38	64,032,489	64,032,489

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.512383	0.057481	0.191072	0.155009	0.040497	0.005877	0.014205	0.012561	0.001412	0.002127	0.004643	0.000518	0.002213

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	3,326.8304	3,326.8304	0.1529	0.0316	3,339.8500
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	3,326.8304	3,326.8304	0.1529	0.0316	3,339.8500
NaturalGas Mitigated	0.1323	1.2027	1.0103	7.2200e-003		0.0914	0.0914		0.0914	0.0914	0.0000	1,309.3000	1,309.3000	0.0251	0.0240	1,317.2682
NaturalGas Unmitigated	0.1323	1.2027	1.0103	7.2200e-003		0.0914	0.0914		0.0914	0.0914	0.0000	1,309.3000	1,309.3000	0.0251	0.0240	1,317.2682

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Junior College (2Yr)	2.45354e+007	0.1323	1.2027	1.0103	7.2200e-003		0.0914	0.0914		0.0914	0.0914	0.0000	1,309.3000	1,309.3000	0.0251	0.0240	1,317.2682
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.1323**	**1.2027**	**1.0103**	**7.2200e-003**		**0.0914**	**0.0914**		**0.0914**	**0.0914**	**0.0000**	**1,309.3000**	**1,309.3000**	**0.0251**	**0.0240**	**1,317.2682**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Junior College (2Yr)	2.45354e+007	0.1323	1.2027	1.0103	7.2200e-003		0.0914	0.0914		0.0914	0.0914	0.0000	1,309.3000	1,309.3000	0.0251	0.0240	1,317.2682
Total		**0.1323**	**1.2027**	**1.0103**	**7.2200e-003**		**0.0914**	**0.0914**		**0.0914**	**0.0914**	**0.0000**	**1,309.3000**	**1,309.3000**	**0.0251**	**0.0240**	**1,317.2682**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	1.16255e+007	3,326.8304	0.1529	0.0316	3,339.8500
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**3,326.8304**	**0.1529**	**0.0316**	**3,339.8500**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	1.16255e+007	3,326.8304	0.1529	0.0316	3,339.8500
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**3,326.8304**	**0.1529**	**0.0316**	**3,339.8500**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	18.8698	1.4300e-003	0.1455	1.0000e-005		5.4000e-004	5.4000e-004		5.4000e-004	5.4000e-004	0.0000	0.2674	0.2674	8.3000e-004	0.0000	0.2848
Unmitigated	18.8698	1.4300e-003	0.1455	1.0000e-005		5.4000e-004	5.4000e-004		5.4000e-004	5.4000e-004	0.0000	0.2674	0.2674	8.3000e-004	0.0000	0.2848

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.2310					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	17.6237					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0150	1.4300e-003	0.1455	1.0000e-005		5.4000e-004	5.4000e-004		5.4000e-004	5.4000e-004	0.0000	0.2674	0.2674	8.3000e-004	0.0000	0.2848
Total	**18.8698**	**1.4300e-003**	**0.1455**	**1.0000e-005**		**5.4000e-004**	**5.4000e-004**		**5.4000e-004**	**5.4000e-004**	**0.0000**	**0.2674**	**0.2674**	**8.3000e-004**	**0.0000**	**0.2848**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.2310					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	17.6237					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Landscaping	0.0150	1.4300e-003	0.1455	1.0000e-005		5.4000e-004	5.4000e-004		5.4000e-004	5.4000e-004	0.0000	0.2674	0.2674	8.3000e-004	0.0000	0.2848
Total	**18.8698**	**1.4300e-003**	**0.1455**	**1.0000e-005**		**5.4000e-004**	**5.4000e-004**		**5.4000e-004**	**5.4000e-004**	**0.0000**	**0.2674**	**0.2674**	**8.3000e-004**	**0.0000**	**0.2848**

7.0 Water Detail

7.1 Mitigation Measures Water

Use Reclaimed Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	298.1254	1.7334	0.0432	347.9311
Unmitigated	310.1539	1.7342	0.0434	360.0334

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	52.8081 / 30.3927	310.1539	1.7342	0.0434	360.0334
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**310.1539**	**1.7342**	**0.0434**	**360.0334**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	52.8081 / 26.6094	298.1254	1.7334	0.0432	347.9311
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**298.1254**	**1.7334**	**0.0432**	**347.9311**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	40.5982	2.3993	0.0000	90.9832
Unmitigated	40.5982	2.3993	0.0000	90.9832

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior College (2Yr)	200	40.5982	2.3993	0.0000	90.9832
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**40.5982**	**2.3993**	**0.0000**	**90.9832**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior College (2Yr)	200	40.5982	2.3993	0.0000	90.9832
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**40.5982**	**2.3993**	**0.0000**	**90.9832**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Orange Coast College Existing Conditions 2013

Orange County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	944.39	1000sqft	21.68	944,394.00	0
Parking Lot	9,832.00	Space	88.49	3,932,800.00	0

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 2.2 **Precipitation Freq (Days)** 30

Climate Zone 8 **Operational Year** 2013

Utility Company Southern California Edison

CO2 Intensity (lb/MWhr) 630.89 **CH4 Intensity (lb/MWhr)** 0.029 **N2O Intensity (lb/MWhr)** 0.006

1.3 User Entered Comments & Non-Default Data

Vehicle Trips - Modified based on Traffic Impact Analysis

Area Coating - SCAQMD Rule 1113

Energy Use - Modified based on OCC Natural Gas Consumption and Electricity usage from 2011-2012

Water And Wastewater - Modified based on OCC water use from 2011-2012

Solid Waste - Modidifed based on OCC solid waste generation for the year 2012

Water Mitigation - Outdoor Irrigation Recycled Water

Table Name	Column Name	Default Value	New Value
tblEnergyUse	LightingElect	5.23	4.03
tblEnergyUse	LightingElect	0.88	0.00
tblEnergyUse	NT24E	2.72	2.55

tblEnergyUse	NT24NG	5.21	8.53
tblEnergyUse	T24E	6.10	5.73
tblEnergyUse	T24NG	10.65	17.45
tblProjectCharacteristics	OperationalYear	2014	2013
tblSolidWaste	SolidWasteGenerationRate	1,227.71	200.00
tblVehicleTrips	ST_TR	11.23	11.77
tblVehicleTrips	SU_TR	1.21	1.27
tblVehicleTrips	WD_TR	27.49	28.82
tblWater	IndoorWaterUseRate	46,321,415.80	52,808,052.00
tblWater	OutdoorWaterUseRate	72,451,445.23	30,392,736.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	103.4342	0.0114	1.1640	8.0000e-005		4.2800e-003	4.2800e-003		4.2800e-003	4.2800e-003		2.3584	2.3584	7.3100e-003		2.5119
Energy	0.7249	6.5902	5.5358	0.0395		0.5009	0.5009		0.5009	0.5009		7,908.2534	7,908.2534	0.1516	0.1450	7,956.3817
Mobile	109.9243	257.8843	1,259.4928	2.4163	173.5630	4.5895	178.1524	46.2957	4.2142	50.5099		227,227.8550	227,227.8550	10.6435		227,451.3685
Total	**214.0833**	**264.4859**	**1,266.1926**	**2.4559**	**173.5630**	**5.0946**	**178.6576**	**46.2957**	**4.7194**	**51.0150**		**235,138.4668**	**235,138.4668**	**10.8024**	**0.1450**	**235,410.2620**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	103.4342	0.0114	1.1640	8.0000e-005		4.2800e-003	4.2800e-003		4.2800e-003	4.2800e-003		2.3584	2.3584	7.3100e-003		2.5119
Energy	0.7249	6.5902	5.5358	0.0395		0.5009	0.5009		0.5009	0.5009		7,908.2534	7,908.2534	0.1516	0.1450	7,956.3817
Mobile	109.9243	257.8843	1,259.4928	2.4163	173.5630	4.5895	178.1524	46.2957	4.2142	50.5099		227,227.8550	227,227.8550	10.6435		227,451.3685
Total	**214.0833**	**264.4859**	**1,266.1926**	**2.4559**	**173.5630**	**5.0946**	**178.6576**	**46.2957**	**4.7194**	**51.0150**		**235,138.4668**	**235,138.4668**	**10.8024**	**0.1450**	**235,410.2620**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	109.9243	257.8843	1,259.4928	2.4163	173.5630	4.5895	178.1524	46.2957	4.2142	50.5099		227,227.8550	227,227.8550	10.6435		227,451.3685
Unmitigated	109.9243	257.8843	1,259.4928	2.4163	173.5630	4.5895	178.1524	46.2957	4.2142	50.5099		227,227.8550	227,227.8550	10.6435		227,451.3685

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	27,217.44	11,115.52	1199.38	64,032,489	64,032,489
Parking Lot	0.00	0.00	0.00		
Total	27,217.44	11,115.52	1,199.38	64,032,489	64,032,489

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.512383	0.057481	0.191072	0.155009	0.040497	0.005877	0.014205	0.012561	0.001412	0.002127	0.004643	0.000518	0.002213

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.7249	6.5902	5.5358	0.0395		0.5009	0.5009		0.5009	0.5009		7,908.2534	7,908.2534	0.1516	0.1450	7,956.3817
NaturalGas Unmitigated	0.7249	6.5902	5.5358	0.0395		0.5009	0.5009		0.5009	0.5009		7,908.2534	7,908.2534	0.1516	0.1450	7,956.3817

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	67220.2	0.7249	6.5902	5.5358	0.0395		0.5009	0.5009		0.5009	0.5009		7,908.2534	7,908.2534	0.1516	0.1450	7,956.3817
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.7249**	**6.5902**	**5.5358**	**0.0395**		**0.5009**	**0.5009**		**0.5009**	**0.5009**		**7,908.2534**	**7,908.2534**	**0.1516**	**0.1450**	**7,956.3817**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	67.2202	0.7249	6.5902	5.5358	0.0395		0.5009	0.5009		0.5009	0.5009		7,908.2534	7,908.2534	0.1516	0.1450	7,956.3817
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.7249**	**6.5902**	**5.5358**	**0.0395**		**0.5009**	**0.5009**		**0.5009**	**0.5009**		**7,908.2534**	**7,908.2534**	**0.1516**	**0.1450**	**7,956.3817**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	103.4342	0.0114	1.1640	8.0000e-005		4.2800e-003	4.2800e-003		4.2800e-003	4.2800e-003		2.3584	2.3584	7.3100e-003		2.5119
Unmitigated	103.4342	0.0114	1.1640	8.0000e-005		4.2800e-003	4.2800e-003		4.2800e-003	4.2800e-003		2.3584	2.3584	7.3100e-003		2.5119

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	6.7454					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	96.5684					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.1203	0.0114	1.1640	8.0000e-005		4.2800e-003	4.2800e-003		4.2800e-003	4.2800e-003		2.3584	2.3584	7.3100e-003		2.5119
Total	**103.4341**	**0.0114**	**1.1640**	**8.0000e-005**		**4.2800e-003**	**4.2800e-003**		**4.2800e-003**	**4.2800e-003**		**2.3584**	**2.3584**	**7.3100e-003**		**2.5119**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	6.7454					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	96.5684					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Landscaping	0.1203	0.0114	1.1640	8.0000e-005		4.2800e-003	4.2800e-003		4.2800e-003	4.2800e-003		2.3584	2.3584	7.3100e-003		2.5119
Total	**103.4341**	**0.0114**	**1.1640**	**8.0000e-005**		**4.2800e-003**	**4.2800e-003**		**4.2800e-003**	**4.2800e-003**		**2.3584**	**2.3584**	**7.3100e-003**		**2.5119**

7.0 Water Detail

7.1 Mitigation Measures Water

Use Reclaimed Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Orange Coast College Existing Conditions 2013

Orange County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	944.39	1000sqft	21.68	944,394.00	0
Parking Lot	9,832.00	Space	88.49	3,932,800.00	0

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 2.2 **Precipitation Freq (Days)** 30

Climate Zone 8 **Operational Year** 2013

Utility Company Southern California Edison

CO2 Intensity (lb/MWhr) 630.89 **CH4 Intensity (lb/MWhr)** 0.029 **N2O Intensity (lb/MWhr)** 0.006

1.3 User Entered Comments & Non-Default Data

Vehicle Trips - Modified based on Traffic Impact Analysis

Area Coating - SCAQMD Rule 1113

Energy Use - Modified based on OCC Natural Gas Consumption and Electricity usage from 2011-2012

Water And Wastewater - Modified based on OCC water use from 2011-2012

Solid Waste - Modidifed based on OCC solid waste generation for the year 2012

Water Mitigation - Outdoor Irrigation Recycled Water

Operational Off-Road Equipment - modified

Table Name	Column Name	Default Value	New Value
tblEnergyUse	LightingElect	5.23	4.03
tblEnergyUse	LightingElect	0.88	0.00

tblEnergyUse	NT24E	2.72	2.55
tblEnergyUse	NT24NG	5.21	8.53
tblEnergyUse	T24E	6.10	5.73
tblEnergyUse	T24NG	10.65	17.45
tblProjectCharacteristics	OperationalYear	2014	2013
tblSolidWaste	SolidWasteGenerationRate	1,227.71	200.00
tblVehicleTrips	ST_TR	11.23	11.77
tblVehicleTrips	SU_TR	1.21	1.27
tblVehicleTrips	WD_TR	27.49	28.82
tblWater	IndoorWaterUseRate	46,321,415.80	52,808,052.00
tblWater	OutdoorWaterUseRate	72,451,445.23	30,392,736.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	103.4342	0.0114	1.1640	8.0000e-005		4.2800e-003	4.2800e-003		4.2800e-003	4.2800e-003		2.3584	2.3584	7.3100e-003		2.5119
Energy	0.7249	6.5902	5.5358	0.0395		0.5009	0.5009		0.5009	0.5009		7,908.2534	7,908.2534	0.1516	0.1450	7,956.3817
Mobile	117.1434	272.7632	1,251.8364	2.3071	173.5630	4.6235	178.1865	46.2957	4.2456	50.5412		217,053.0870	217,053.0870	10.6480		217,276.6938
Total	**221.3025**	**279.3648**	**1,258.5361**	**2.3467**	**173.5630**	**5.1287**	**178.6916**	**46.2957**	**4.7507**	**51.0463**		**224,963.6988**	**224,963.6988**	**10.8068**	**0.1450**	**225,235.5874**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	103.4342	0.0114	1.1640	8.0000e-005		4.2800e-003	4.2800e-003		4.2800e-003	4.2800e-003		2.3584	2.3584	7.3100e-003		2.5119
Energy	0.7249	6.5902	5.5358	0.0395		0.5009	0.5009		0.5009	0.5009		7,908.2534	7,908.2534	0.1516	0.1450	7,956.3817
Mobile	117.1434	272.7632	1,251.8364	2.3071	173.5630	4.6235	178.1865	46.2957	4.2456	50.5412		217,053.0870	217,053.0870	10.6480		217,276.6938
Total	**221.3025**	**279.3648**	**1,258.5361**	**2.3467**	**173.5630**	**5.1287**	**178.6916**	**46.2957**	**4.7507**	**51.0463**		**224,963.6988**	**224,963.6988**	**10.8068**	**0.1450**	**225,235.5874**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	117.1434	272.7632	1,251.8364	2.3071	173.5630	4.6235	178.1865	46.2957	4.2456	50.5412		217,053.0870	217,053.0870	10.6480		217,276.6938
Unmitigated	117.1434	272.7632	1,251.8364	2.3071	173.5630	4.6235	178.1865	46.2957	4.2456	50.5412		217,053.0870	217,053.0870	10.6480		217,276.6938

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	27,217.44	11,115.52	1199.38	64,032,489	64,032,489
Parking Lot	0.00	0.00	0.00		
Total	27,217.44	11,115.52	1,199.38	64,032,489	64,032,489

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.512383	0.057481	0.191072	0.155009	0.040497	0.005877	0.014205	0.012561	0.001412	0.002127	0.004643	0.000518	0.002213

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.7249	6.5902	5.5358	0.0395		0.5009	0.5009		0.5009	0.5009		7,908.2534	7,908.2534	0.1516	0.1450	7,956.3817
NaturalGas Unmitigated	0.7249	6.5902	5.5358	0.0395		0.5009	0.5009		0.5009	0.5009		7,908.2534	7,908.2534	0.1516	0.1450	7,956.3817

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	67220.2	0.7249	6.5902	5.5358	0.0395		0.5009	0.5009		0.5009	0.5009		7,908.2534	7,908.2534	0.1516	0.1450	7,956.3817
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.7249**	**6.5902**	**5.5358**	**0.0395**		**0.5009**	**0.5009**		**0.5009**	**0.5009**		**7,908.2534**	**7,908.2534**	**0.1516**	**0.1450**	**7,956.3817**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	67.2202	0.7249	6.5902	5.5358	0.0395		0.5009	0.5009		0.5009	0.5009		7,908.2534	7,908.2534	0.1516	0.1450	7,956.3817
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.7249**	**6.5902**	**5.5358**	**0.0395**		**0.5009**	**0.5009**		**0.5009**	**0.5009**		**7,908.2534**	**7,908.2534**	**0.1516**	**0.1450**	**7,956.3817**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Mitigated	103.4342	0.0114	1.1640	8.0000e-005		4.2800e-003	4.2800e-003		4.2800e-003	4.2800e-003		2.3584	2.3584	7.3100e-003		2.5119
Unmitigated	103.4342	0.0114	1.1640	8.0000e-005		4.2800e-003	4.2800e-003		4.2800e-003	4.2800e-003		2.3584	2.3584	7.3100e-003		2.5119

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	6.7454					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	96.5684					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.1203	0.0114	1.1640	8.0000e-005		4.2800e-003	4.2800e-003		4.2800e-003	4.2800e-003		2.3584	2.3584	7.3100e-003		2.5119
Total	**103.4341**	**0.0114**	**1.1640**	**8.0000e-005**		**4.2800e-003**	**4.2800e-003**		**4.2800e-003**	**4.2800e-003**		**2.3584**	**2.3584**	**7.3100e-003**		**2.5119**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	6.7454					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	96.5684					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.1203	0.0114	1.1640	8.0000e-005		4.2800e-003	4.2800e-003		4.2800e-003	4.2800e-003		2.3584	2.3584	7.3100e-003		2.5119

Total	**103.4341**	**0.0114**	**1.1640**	**8.0000e-005**		**4.2800e-003**	**4.2800e-003**		**4.2800e-003**	**4.2800e-003**		**2.3584**	**2.3584**	**7.3100e-003**		**2.5119**

7.0 Water Detail

7.1 Mitigation Measures Water

Use Reclaimed Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

PROPOSED PROJECT CONSTRUCTION

Annual, Summer, and Winter Emissions

Phase 3 - Chemistry Building

Orange County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	43.92	1000sqft	0.39	43,916.00	0

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 2.2 **Precipitation Freq (Days)** 30

Climate Zone 8 **Operational Year** 2022

Utility Company Southern California Edison

CO2 Intensity (lb/MWhr) 630.89 **CH4 Intensity (lb/MWhr)** 0.029 **N2O Intensity (lb/MWhr)** 0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Chemistry Building will be multiple stories

Construction Phase - modified

Off-road Equipment - modified

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Demolition -

Architectural Coating - SCAQMD Rule 1113

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value

tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblLandUse	LotAcreage	1.01	0.39
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblProjectCharacteristics	OperationalYear	2014	2022

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0410	0.3962	0.3769	6.6000e-004	0.0233	0.0226	0.0458	4.9800e-003	0.0209	0.0258	0.0000	55.6409	55.6409	0.0131	0.0000	55.9150
2021	0.2211	0.1668	0.1737	3.1000e-004	4.8200e-003	9.0400e-003	0.0139	1.2900e-003	8.3500e-003	9.6400e-003	0.0000	25.7047	25.7047	6.5000e-003	0.0000	25.8412
Total	**0.2621**	**0.5630**	**0.5506**	**9.7000e-004**	**0.0281**	**0.0316**	**0.0597**	**6.2700e-003**	**0.0292**	**0.0355**	**0.0000**	**81.3456**	**81.3456**	**0.0196**	**0.0000**	**81.7562**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					

2020	0.0410	0.3962	0.3769	6.6000e-004	0.0151	0.0226	0.0377	3.5700e-003	0.0209	0.0244	0.0000	55.6409	55.6409	0.0131	0.0000	55.9149
2021	0.2211	0.1668	0.1737	3.1000e-004	4.8200e-003	9.0400e-003	0.0139	1.2900e-003	8.3500e-003	9.6400e-003	0.0000	25.7046	25.7046	6.5000e-003	0.0000	25.8412
Total	**0.2621**	**0.5630**	**0.5506**	**9.7000e-004**	**0.0199**	**0.0316**	**0.0515**	**4.8600e-003**	**0.0292**	**0.0341**	**0.0000**	**81.3455**	**81.3455**	**0.0196**	**0.0000**	**81.7561**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**28.96**	**0.00**	**13.62**	**22.49**	**0.00**	**3.95**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2096	1.0000e-005	5.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0900e-003	1.0900e-003	0.0000	0.0000	1.1500e-003
Energy	3.7600e-003	0.0341	0.0287	2.0000e-004		2.5900e-003	2.5900e-003		2.5900e-003	2.5900e-003	0.0000	213.7389	213.7389	8.8300e-003	2.3600e-003	214.6562
Mobile	0.3979	0.8550	4.2199	0.0149	1.0733	0.0150	1.0883	0.2868	0.0139	0.3007	0.0000	1,006.6175	1,006.6175	0.0347	0.0000	1,007.3465
Waste						0.0000	0.0000		0.0000	0.0000	11.5908	0.0000	11.5908	0.6850	0.0000	25.9757
Water						0.0000	0.0000		0.0000	0.0000	0.6834	18.7396	19.4230	0.0711	1.8400e-003	21.4843
Total	**0.6113**	**0.8891**	**4.2491**	**0.0151**	**1.0733**	**0.0176**	**1.0909**	**0.2868**	**0.0165**	**0.3033**	**12.2742**	**1,239.0971**	**1,251.3713**	**0.7996**	**4.2000e-003**	**1,269.4638**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Area	0.2096	1.0000e-005	5.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0900e-003	1.0900e-003	0.0000	0.0000	1.1500e-003
Energy	3.7600e-003	0.0341	0.0287	2.0000e-004		2.5900e-003	2.5900e-003		2.5900e-003	2.5900e-003	0.0000	213.7389	213.7389	8.8300e-003	2.3600e-003	214.6562
Mobile	0.3979	0.8550	4.2199	0.0149	1.0733	0.0150	1.0883	0.2868	0.0139	0.3007	0.0000	1,006.6175	1,006.6175	0.0347	0.0000	1,007.3465
Waste						0.0000	0.0000		0.0000	0.0000	11.5908	0.0000	11.5908	0.6850	0.0000	25.9757
Water						0.0000	0.0000		0.0000	0.0000	0.6834	18.7396	19.4230	0.0710	1.8300e-003	21.4832
Total	**0.6113**	**0.8891**	**4.2491**	**0.0151**	**1.0733**	**0.0176**	**1.0909**	**0.2868**	**0.0165**	**0.3033**	**12.2742**	**1,239.0971**	**1,251.3713**	**0.7996**	**4.1900e-003**	**1,269.4627**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.24**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2020	9/14/2020	5	10	
2	Site Preparation	Site Preparation	9/15/2020	9/15/2020	5	1	
3	Grading	Grading	9/16/2020	9/17/2020	5	2	
4	Trenching	Trenching	9/18/2020	10/1/2020	5	10	
5	Building Construction	Building Construction	10/2/2020	2/18/2021	5	100	
6	Paving	Paving	2/19/2021	2/25/2021	5	5	
7	Architectural Coating	Architectural Coating	2/26/2021	3/4/2021	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 65,874; Non-Residential Outdoor: 21,958 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Building Construction	Cranes	1	4.00	226	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Paving	Pavers	1	7.00	125	0.42
Paving	Rollers	1	7.00	80	0.38
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Trenching	Plate Compactors	1	8.00	8	0.43
Trenching	Trenchers	1	8.00	80	0.50
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	114.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Architectural Coating	1	4.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	18.00	7.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Clean Paved Roads

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0123	0.0000	0.0123	1.8600e-003	0.0000	1.8600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.2600e-003	0.0386	0.0405	6.0000e-005		2.2800e-003	2.2800e-003		2.1800e-003	2.1800e-003	0.0000	5.2240	5.2240	9.9000e-004	0.0000	5.2448
Total	**4.2600e-003**	**0.0386**	**0.0405**	**6.0000e-005**	**0.0123**	**2.2800e-003**	**0.0146**	**1.8600e-003**	**2.1800e-003**	**4.0400e-003**	**0.0000**	**5.2240**	**5.2240**	**9.9000e-004**	**0.0000**	**5.2448**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.1000e-004	0.0118	0.0111	4.0000e-005	9.8000e-004	2.1000e-004	1.1900e-003	2.7000e-004	1.9000e-004	4.6000e-004	0.0000	3.5683	3.5683	3.0000e-005	0.0000	3.5689
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Worker	1.2000e-004	1.8000e-004	1.9200e-003	1.0000e-005	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4257	0.4257	2.0000e-005	0.0000	0.4261
Total	**1.0300e-003**	**0.0120**	**0.0131**	**5.0000e-005**	**1.5300e-003**	**2.1000e-004**	**1.7400e-003**	**4.2000e-004**	**1.9000e-004**	**6.1000e-004**	**0.0000**	**3.9941**	**3.9941**	**5.0000e-005**	**0.0000**	**3.9951**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					4.8000e-003	0.0000	4.8000e-003	7.3000e-004	0.0000	7.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.2600e-003	0.0386	0.0405	6.0000e-005		2.2800e-003	2.2800e-003		2.1800e-003	2.1800e-003	0.0000	5.2240	5.2240	9.9000e-004	0.0000	5.2448
Total	**4.2600e-003**	**0.0386**	**0.0405**	**6.0000e-005**	**4.8000e-003**	**2.2800e-003**	**7.0800e-003**	**7.3000e-004**	**2.1800e-003**	**2.9100e-003**	**0.0000**	**5.2240**	**5.2240**	**9.9000e-004**	**0.0000**	**5.2448**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.1000e-004	0.0118	0.0111	4.0000e-005	9.8000e-004	2.1000e-004	1.1900e-003	2.7000e-004	1.9000e-004	4.6000e-004	0.0000	3.5683	3.5683	3.0000e-005	0.0000	3.5689
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	1.8000e-004	1.9200e-003	1.0000e-005	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4257	0.4257	2.0000e-005	0.0000	0.4261
Total	**1.0300e-003**	**0.0120**	**0.0131**	**5.0000e-005**	**1.5300e-003**	**2.1000e-004**	**1.7400e-003**	**4.2000e-004**	**1.9000e-004**	**6.1000e-004**	**0.0000**	**3.9941**	**3.9941**	**5.0000e-005**	**0.0000**	**3.9951**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.6000e-004	4.5300e-003	3.4200e-003	0.0000		2.6000e-004	2.6000e-004		2.4000e-004	2.4000e-004	0.0000	0.4093	0.4093	1.3000e-004	0.0000	0.4120
Total	**4.6000e-004**	**4.5300e-003**	**3.4200e-003**	**0.0000**	**2.7000e-004**	**2.6000e-004**	**5.3000e-004**	**3.0000e-005**	**2.4000e-004**	**2.7000e-004**	**0.0000**	**0.4093**	**0.4093**	**1.3000e-004**	**0.0000**	**0.4120**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	1.0000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0213	0.0213	0.0000	0.0000	0.0213
Total	**1.0000e-005**	**1.0000e-005**	**1.0000e-004**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0213**	**0.0213**	**0.0000**	**0.0000**	**0.0213**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					1.0000e-004	0.0000	1.0000e-004	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.6000e-004	4.5300e-003	3.4200e-003	0.0000		2.6000e-004	2.6000e-004		2.4000e-004	2.4000e-004	0.0000	0.4093	0.4093	1.3000e-004	0.0000	0.4120
Total	**4.6000e-004**	**4.5300e-003**	**3.4200e-003**	**0.0000**	**1.0000e-004**	**2.6000e-004**	**3.6000e-004**	**1.0000e-005**	**2.4000e-004**	**2.5000e-004**	**0.0000**	**0.4093**	**0.4093**	**1.3000e-004**	**0.0000**	**0.4120**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	1.0000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0213	0.0213	0.0000	0.0000	0.0213
Total	**1.0000e-005**	**1.0000e-005**	**1.0000e-004**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0213**	**0.0213**	**0.0000**	**0.0000**	**0.0213**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.5000e-004	0.0000	7.5000e-004	4.1000e-004	0.0000	4.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.5000e-004	7.7200e-003	8.1000e-003	1.0000e-005		4.6000e-004	4.6000e-004		4.4000e-004	4.4000e-004	0.0000	1.0448	1.0448	2.0000e-004	0.0000	1.0490
Total	**8.5000e-004**	**7.7200e-003**	**8.1000e-003**	**1.0000e-005**	**7.5000e-004**	**4.6000e-004**	**1.2100e-003**	**4.1000e-004**	**4.4000e-004**	**8.5000e-004**	**0.0000**	**1.0448**	**1.0448**	**2.0000e-004**	**0.0000**	**1.0490**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	4.0000e-005	3.8000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0852	0.0852	0.0000	0.0000	0.0852
Total	**2.0000e-005**	**4.0000e-005**	**3.8000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0852**	**0.0852**	**0.0000**	**0.0000**	**0.0852**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.9000e-004	0.0000	2.9000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.5000e-004	7.7200e-003	8.1000e-003	1.0000e-005		4.6000e-004	4.6000e-004		4.4000e-004	4.4000e-004	0.0000	1.0448	1.0448	2.0000e-004	0.0000	1.0490
Total	**8.5000e-004**	**7.7200e-003**	**8.1000e-003**	**1.0000e-005**	**2.9000e-004**	**4.6000e-004**	**7.5000e-004**	**1.6000e-004**	**4.4000e-004**	**6.0000e-004**	**0.0000**	**1.0448**	**1.0448**	**2.0000e-004**	**0.0000**	**1.0490**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	4.0000e-005	3.8000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0852	0.0852	0.0000	0.0000	0.0852
Total	**2.0000e-005**	**4.0000e-005**	**3.8000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0852**	**0.0852**	**0.0000**	**0.0000**	**0.0852**

3.5 Trenching - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.4100e-003	0.0313	0.0260	4.0000e-005		2.1800e-003	2.1800e-003		2.0100e-003	2.0100e-003	0.0000	3.0431	3.0431	9.5000e-004	0.0000	3.0631
Total	**3.4100e-003**	**0.0313**	**0.0260**	**4.0000e-005**		**2.1800e-003**	**2.1800e-003**		**2.0100e-003**	**2.0100e-003**	**0.0000**	**3.0431**	**3.0431**	**9.5000e-004**	**0.0000**	**3.0631**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-004	1.5000e-004	1.5300e-003	1.0000e-005	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3406	0.3406	2.0000e-005	0.0000	0.3409

Total	**1.0000e-004**	**1.5000e-004**	**1.5300e-003**	**1.0000e-005**	**4.4000e-004**	**0.0000**	**4.4000e-004**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**0.3406**	**0.3406**	**2.0000e-005**	**0.0000**	**0.3409**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.4100e-003	0.0313	0.0260	4.0000e-005		2.1800e-003	2.1800e-003		2.0100e-003	2.0100e-003	0.0000	3.0431	3.0431	9.5000e-004	0.0000	3.0631
Total	**3.4100e-003**	**0.0313**	**0.0260**	**4.0000e-005**		**2.1800e-003**	**2.1800e-003**		**2.0100e-003**	**2.0100e-003**	**0.0000**	**3.0431**	**3.0431**	**9.5000e-004**	**0.0000**	**3.0631**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-004	1.5000e-004	1.5300e-003	1.0000e-005	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3406	0.3406	2.0000e-005	0.0000	0.3409
Total	**1.0000e-004**	**1.5000e-004**	**1.5300e-003**	**1.0000e-005**	**4.4000e-004**	**0.0000**	**4.4000e-004**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**0.3406**	**0.3406**	**2.0000e-005**	**0.0000**	**0.3409**

3.6 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0279	0.2858	0.2394	3.7000e-004		0.0169	0.0169		0.0156	0.0156	0.0000	32.3414	32.3414	0.0105	0.0000	32.5610
Total	**0.0279**	**0.2858**	**0.2394**	**3.7000e-004**		**0.0169**	**0.0169**		**0.0156**	**0.0156**	**0.0000**	**32.3414**	**32.3414**	**0.0105**	**0.0000**	**32.5610**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.5700e-003	0.0139	0.0220	5.0000e-005	1.4000e-003	2.2000e-004	1.6300e-003	4.0000e-004	2.1000e-004	6.1000e-004	0.0000	4.1562	4.1562	3.0000e-005	0.0000	4.1568
Worker	1.4600e-003	2.1200e-003	0.0224	8.0000e-005	6.4200e-003	4.0000e-005	6.4700e-003	1.7100e-003	4.0000e-005	1.7500e-003	0.0000	4.9811	4.9811	2.2000e-004	0.0000	4.9858
Total	**3.0300e-003**	**0.0160**	**0.0445**	**1.3000e-004**	**7.8200e-003**	**2.6000e-004**	**8.1000e-003**	**2.1100e-003**	**2.5000e-004**	**2.3600e-003**	**0.0000**	**9.1372**	**9.1372**	**2.5000e-004**	**0.0000**	**9.1426**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.0279	0.2858	0.2394	3.7000e-004		0.0169	0.0169		0.0156	0.0156	0.0000	32.3413	32.3413	0.0105	0.0000	32.5610
Total	**0.0279**	**0.2858**	**0.2394**	**3.7000e-004**		**0.0169**	**0.0169**		**0.0156**	**0.0156**	**0.0000**	**32.3413**	**32.3413**	**0.0105**	**0.0000**	**32.5610**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.5700e-003	0.0139	0.0220	5.0000e-005	1.4000e-003	2.2000e-004	1.6300e-003	4.0000e-004	2.1000e-004	6.1000e-004	0.0000	4.1562	4.1562	3.0000e-005	0.0000	4.1568
Worker	1.4600e-003	2.1200e-003	0.0224	8.0000e-005	6.4200e-003	4.0000e-005	6.4700e-003	1.7100e-003	4.0000e-005	1.7500e-003	0.0000	4.9811	4.9811	2.2000e-004	0.0000	4.9858
Total	**3.0300e-003**	**0.0160**	**0.0445**	**1.3000e-004**	**7.8200e-003**	**2.6000e-004**	**8.1000e-003**	**2.1100e-003**	**2.5000e-004**	**2.3600e-003**	**0.0000**	**9.1372**	**9.1372**	**2.5000e-004**	**0.0000**	**9.1426**

3.6 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0135	0.1388	0.1267	2.0000e-004		7.7900e-003	7.7900e-003		7.1700e-003	7.1700e-003	0.0000	17.4184	17.4184	5.6300e-003	0.0000	17.5367
Total	**0.0135**	**0.1388**	**0.1267**	**2.0000e-004**		**7.7900e-003**	**7.7900e-003**		**7.1700e-003**	**7.1700e-003**	**0.0000**	**17.4184**	**17.4184**	**5.6300e-003**	**0.0000**	**17.5367**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.2000e-004	6.3300e-003	0.0116	3.0000e-005	7.5000e-004	1.1000e-004	8.6000e-004	2.2000e-004	1.0000e-004	3.2000e-004	0.0000	2.2361	2.2361	2.0000e-005	0.0000	2.2364
Worker	7.5000e-004	1.0700e-003	0.0114	4.0000e-005	3.4600e-003	2.0000e-005	3.4800e-003	9.2000e-004	2.0000e-005	9.4000e-004	0.0000	2.6379	2.6379	1.2000e-004	0.0000	2.6404
Total	**1.5700e-003**	**7.4000e-003**	**0.0230**	**7.0000e-005**	**4.2100e-003**	**1.3000e-004**	**4.3400e-003**	**1.1400e-003**	**1.2000e-004**	**1.2600e-003**	**0.0000**	**4.8740**	**4.8740**	**1.4000e-004**	**0.0000**	**4.8768**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0135	0.1388	0.1267	2.0000e-004		7.7900e-003	7.7900e-003		7.1700e-003	7.1700e-003	0.0000	17.4183	17.4183	5.6300e-003	0.0000	17.5366
Total	**0.0135**	**0.1388**	**0.1267**	**2.0000e-004**		**7.7900e-003**	**7.7900e-003**		**7.1700e-003**	**7.1700e-003**	**0.0000**	**17.4183**	**17.4183**	**5.6300e-003**	**0.0000**	**17.5366**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.2000e-004	6.3300e-003	0.0116	3.0000e-005	7.5000e-004	1.1000e-004	8.6000e-004	2.2000e-004	1.0000e-004	3.2000e-004	0.0000	2.2361	2.2361	2.0000e-005	0.0000	2.2364
Worker	7.5000e-004	1.0700e-003	0.0114	4.0000e-005	3.4600e-003	2.0000e-005	3.4800e-003	9.2000e-004	2.0000e-005	9.4000e-004	0.0000	2.6379	2.6379	1.2000e-004	0.0000	2.6404
Total	**1.5700e-003**	**7.4000e-003**	**0.0230**	**7.0000e-005**	**4.2100e-003**	**1.3000e-004**	**4.3400e-003**	**1.1400e-003**	**1.2000e-004**	**1.2600e-003**	**0.0000**	**4.8740**	**4.8740**	**1.4000e-004**	**0.0000**	**4.8768**

3.7 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.7800e-003	0.0166	0.0175	3.0000e-005		8.7000e-004	8.7000e-004		8.1000e-004	8.1000e-004	0.0000	2.3134	2.3134	6.7000e-004	0.0000	2.3275
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.7800e-003**	**0.0166**	**0.0175**	**3.0000e-005**		**8.7000e-004**	**8.7000e-004**		**8.1000e-004**	**8.1000e-004**	**0.0000**	**2.3134**	**2.3134**	**6.7000e-004**	**0.0000**	**2.3275**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	1.5000e-004	1.6300e-003	1.0000e-005	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3769	0.3769	2.0000e-005	0.0000	0.3772

Total	1.1000e-004	1.5000e-004	1.6300e-003	1.0000e-005	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3769	0.3769	2.0000e-005	0.0000	0.3772

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.7800e-003	0.0166	0.0175	3.0000e-005		8.7000e-004	8.7000e-004		8.1000e-004	8.1000e-004	0.0000	2.3134	2.3134	6.7000e-004	0.0000	2.3275
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.7800e-003**	**0.0166**	**0.0175**	**3.0000e-005**		**8.7000e-004**	**8.7000e-004**		**8.1000e-004**	**8.1000e-004**	**0.0000**	**2.3134**	**2.3134**	**6.7000e-004**	**0.0000**	**2.3275**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	1.5000e-004	1.6300e-003	1.0000e-005	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3769	0.3769	2.0000e-005	0.0000	0.3772
Total	**1.1000e-004**	**1.5000e-004**	**1.6300e-003**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.3769**	**0.3769**	**2.0000e-005**	**0.0000**	**0.3772**

3.8 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2036					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.5000e-004	3.8200e-003	4.5400e-003	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6392
Total	**0.2041**	**3.8200e-003**	**4.5400e-003**	**1.0000e-005**		**2.4000e-004**	**2.4000e-004**		**2.4000e-004**	**2.4000e-004**	**0.0000**	**0.6383**	**0.6383**	**4.0000e-005**	**0.0000**	**0.6392**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	3.0000e-005	3.6000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0837	0.0837	0.0000	0.0000	0.0838
Total	**2.0000e-005**	**3.0000e-005**	**3.6000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0837**	**0.0837**	**0.0000**	**0.0000**	**0.0838**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Archit. Coating	0.2036					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.5000e-004	3.8200e-003	4.5400e-003	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6392
Total	**0.2041**	**3.8200e-003**	**4.5400e-003**	**1.0000e-005**		**2.4000e-004**	**2.4000e-004**		**2.4000e-004**	**2.4000e-004**	**0.0000**	**0.6383**	**0.6383**	**4.0000e-005**	**0.0000**	**0.6392**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	3.0000e-005	3.6000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0837	0.0837	0.0000	0.0000	0.0838
Total	**2.0000e-005**	**3.0000e-005**	**3.6000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0837**	**0.0837**	**0.0000**	**0.0000**	**0.0838**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3979	0.8550	4.2199	0.0149	1.0733	0.0150	1.0883	0.2868	0.0139	0.3007	0.0000	1,006.6175	1,006.6175	0.0347	0.0000	1,007.3465
Unmitigated	0.3979	0.8550	4.2199	0.0149	1.0733	0.0150	1.0883	0.2868	0.0139	0.3007	0.0000	1,006.6175	1,006.6175	0.0347	0.0000	1,007.3465

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	1,207.25	493.18	53.14	2,840,245	2,840,245
Total	1,207.25	493.18	53.14	2,840,245	2,840,245

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.505043	0.056653	0.194832	0.151784	0.042126	0.005989	0.016072	0.016505	0.001461	0.002178	0.004464	0.000494	0.002401

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	176.5706	176.5706	8.1200e-003	1.6800e-003	177.2617
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	176.5706	176.5706	8.1200e-003	1.6800e-003	177.2617
NaturalGas Mitigated	3.7600e-003	0.0341	0.0287	2.0000e-004		2.5900e-003	2.5900e-003		2.5900e-003	2.5900e-003	0.0000	37.1683	37.1683	7.1000e-004	6.8000e-004	37.3945

NaturalGas Unmitigated	3.7600e-003	0.0341	0.0287	2.0000e-004		2.5900e-003	2.5900e-003		2.5900e-003	2.5900e-003	0.0000	37.1683	37.1683	7.1000e-004	6.8000e-004	37.3945

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Junior College (2Yr)	696508	3.7600e-003	0.0341	0.0287	2.0000e-004		2.5900e-003	2.5900e-003		2.5900e-003	2.5900e-003	0.0000	37.1683	37.1683	7.1000e-004	6.8000e-004	37.3945
Total		**3.7600e-003**	**0.0341**	**0.0287**	**2.0000e-004**		**2.5900e-003**	**2.5900e-003**		**2.5900e-003**	**2.5900e-003**	**0.0000**	**37.1683**	**37.1683**	**7.1000e-004**	**6.8000e-004**	**37.3945**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Junior College (2Yr)	696508	3.7600e-003	0.0341	0.0287	2.0000e-004		2.5900e-003	2.5900e-003		2.5900e-003	2.5900e-003	0.0000	37.1683	37.1683	7.1000e-004	6.8000e-004	37.3945
Total		**3.7600e-003**	**0.0341**	**0.0287**	**2.0000e-004**		**2.5900e-003**	**2.5900e-003**		**2.5900e-003**	**2.5900e-003**	**0.0000**	**37.1683**	**37.1683**	**7.1000e-004**	**6.8000e-004**	**37.3945**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	617020	176.5706	8.1200e-003	1.6800e-003	177.2617
Total		**176.5706**	**8.1200e-003**	**1.6800e-003**	**177.2617**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	617020	176.5706	8.1200e-003	1.6800e-003	177.2617
Total		**176.5706**	**8.1200e-003**	**1.6800e-003**	**177.2617**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Mitigated	0.2096	1.0000e-005	5.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0900e-003	1.0900e-003	0.0000	0.0000	1.1500e-003
Unmitigated	0.2096	1.0000e-005	5.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0900e-003	1.0900e-003	0.0000	0.0000	1.1500e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0509					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1587					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.0000e-005	1.0000e-005	5.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0900e-003	1.0900e-003	0.0000	0.0000	1.1500e-003
Total	**0.2096**	**1.0000e-005**	**5.6000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.0900e-003**	**1.0900e-003**	**0.0000**	**0.0000**	**1.1500e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0509					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1587					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.0000e-005	1.0000e-005	5.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0900e-003	1.0900e-003	0.0000	0.0000	1.1500e-003

Total	**0.2096**	**1.0000e-005**	**5.6000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.0900e-003**	**1.0900e-003**	**0.0000**	**0.0000**	**1.1500e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	19.4230	0.0710	1.8300e-003	21.4832
Unmitigated	19.4230	0.0711	1.8400e-003	21.4843

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	2.15423 / 3.36944	19.4230	0.0711	1.8400e-003	21.4843
Total		**19.4230**	**0.0711**	**1.8400e-003**	**21.4843**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	2.15423 / 3.36944	19.4230	0.0710	1.8300e-003	21.4832
Total		**19.4230**	**0.0710**	**1.8300e-003**	**21.4832**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	11.5908	0.6850	0.0000	25.9757
Unmitigated	11.5908	0.6850	0.0000	25.9757

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e

Land Use	tons	MT/yr			
Junior College (2Yr)	57.1	11.5908	0.6850	0.0000	25.9757
Total		**11.5908**	**0.6850**	**0.0000**	**25.9757**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior College (2Yr)	57.1	11.5908	0.6850	0.0000	25.9757
Total		**11.5908**	**0.6850**	**0.0000**	**25.9757**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Phase 3 - Chemistry Building

Orange County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	43.92	1000sqft	0.39	43,916.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Chemistry Building will be multiple stories

Construction Phase - modified

Off-road Equipment - modified

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Demolition -

Architectural Coating - SCAQMD Rule 1113

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value

tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblLandUse	LotAcreage	1.01	0.39
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblProjectCharacteristics	OperationalYear	2014	2022

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	1.0557	10.0019	10.4664	0.0218	2.7713	0.5282	3.2703	0.4567	0.4860	0.9315	0.0000	2,036.8206	2,036.8206	0.3634	0.0000	2,044.4511
2021	81.6489	8.3344	8.4837	0.0153	0.2450	0.4531	0.6980	0.0658	0.4168	0.4826	0.0000	1,411.3989	1,411.3989	0.3631	0.0000	1,419.0247
Total	**82.7046**	**18.3363**	**18.9500**	**0.0371**	**3.0163**	**0.9813**	**3.9683**	**0.5225**	**0.9028**	**1.4142**	**0.0000**	**3,448.2195**	**3,448.2195**	**0.7265**	**0.0000**	**3,463.4758**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					

2020	1.0557	10.0019	10.4664	0.0218	1.2702	0.5282	1.7691	0.2294	0.4860	0.7042	0.0000	2,036.8206	2,036.8206	0.3634	0.0000	2,044.4511
2021	81.6489	8.3344	8.4837	0.0153	0.2450	0.4531	0.6980	0.0658	0.4168	0.4826	0.0000	1,411.3989	1,411.3989	0.3631	0.0000	1,419.0247
Total	**82.7046**	**18.3363**	**18.9500**	**0.0371**	**1.5152**	**0.9813**	**2.4671**	**0.2952**	**0.9028**	**1.1869**	**0.0000**	**3,448.2195**	**3,448.2195**	**0.7265**	**0.0000**	**3,463.4758**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**49.77**	**0.00**	**37.83**	**43.50**	**0.00**	**16.07**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.1488	4.0000e-005	4.4900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.6100e-003	9.6100e-003	3.0000e-005		0.0101
Energy	0.0206	0.1871	0.1572	1.1200e-003		0.0142	0.0142		0.0142	0.0142		224.4989	224.4989	4.3000e-003	4.1200e-003	225.8651
Mobile	2.8237	5.6004	29.7587	0.1089	7.7073	0.1059	7.8131	2.0568	0.0978	2.1546		8,086.9416	8,086.9416	0.2701		8,092.6144
Total	**3.9930**	**5.7875**	**29.9204**	**0.1100**	**7.7073**	**0.1201**	**7.8274**	**2.0568**	**0.1120**	**2.1688**		**8,311.4501**	**8,311.4501**	**0.2745**	**4.1200e-003**	**8,318.4897**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.1488	4.0000e-005	4.4900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.6100e-003	9.6100e-003	3.0000e-005		0.0101

Energy	0.0206	0.1871	0.1572	1.1200e-003		0.0142	0.0142		0.0142	0.0142		224.4989	224.4989	4.3000e-003	4.1200e-003	225.8651
Mobile	2.8237	5.6004	29.7587	0.1089	7.7073	0.1059	7.8131	2.0568	0.0978	2.1546		8,086.9416	8,086.9416	0.2701		8,092.6144
Total	**3.9930**	**5.7875**	**29.9204**	**0.1100**	**7.7073**	**0.1201**	**7.8274**	**2.0568**	**0.1120**	**2.1688**		**8,311.4501**	**8,311.4501**	**0.2745**	**4.1200e-003**	**8,318.4897**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2020	9/14/2020	5	10	
2	Site Preparation	Site Preparation	9/15/2020	9/15/2020	5	1	
3	Grading	Grading	9/16/2020	9/17/2020	5	2	
4	Trenching	Trenching	9/18/2020	10/1/2020	5	10	
5	Building Construction	Building Construction	10/2/2020	2/18/2021	5	100	
6	Paving	Paving	2/19/2021	2/25/2021	5	5	
7	Architectural Coating	Architectural Coating	2/26/2021	3/4/2021	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 65,874; Non-Residential Outdoor: 21,958 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	255	0.40

Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Building Construction	Cranes	1	4.00	226	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Paving	Pavers	1	7.00	125	0.42
Paving	Rollers	1	7.00	80	0.38
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Trenching	Plate Compactors	1	8.00	8	0.43
Trenching	Trenchers	1	8.00	80	0.50
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	114.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	4.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	18.00	7.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Clean Paved Roads

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.4609	0.0000	2.4609	0.3726	0.0000	0.3726			0.0000			0.0000
Off-Road	0.8527	7.7248	8.0981	0.0120		0.4561	0.4561		0.4355	0.4355		1,151.7011	1,151.7011	0.2184		1,156.2863
Total	**0.8527**	**7.7248**	**8.0981**	**0.0120**	**2.4609**	**0.4561**	**2.9170**	**0.3726**	**0.4355**	**0.8081**		**1,151.7011**	**1,151.7011**	**0.2184**		**1,156.2863**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1775	2.2449	1.9662	8.3700e-003	0.1987	0.0421	0.2407	0.0544	0.0387	0.0931		787.4715	787.4715	6.1200e-003		787.6000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0255	0.0321	0.4020	1.3600e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		97.6480	97.6480	4.2000e-003		97.7363
Total	**0.2030**	**2.2771**	**2.3683**	**9.7300e-003**	**0.3105**	**0.0428**	**0.3533**	**0.0841**	**0.0394**	**0.1235**		**885.1196**	**885.1196**	**0.0103**		**885.3363**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.9598	0.0000	0.9598	0.1453	0.0000	0.1453			0.0000			0.0000
Off-Road	0.8527	7.7248	8.0981	0.0120		0.4561	0.4561		0.4355	0.4355	0.0000	1,151.7011	1,151.7011	0.2184		1,156.2863
Total	**0.8527**	**7.7248**	**8.0981**	**0.0120**	**0.9598**	**0.4561**	**1.4158**	**0.1453**	**0.4355**	**0.5808**	**0.0000**	**1,151.7011**	**1,151.7011**	**0.2184**		**1,156.2863**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1775	2.2449	1.9662	8.3700e-003	0.1987	0.0421	0.2407	0.0544	0.0387	0.0931		787.4715	787.4715	6.1200e-003		787.6000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0255	0.0321	0.4020	1.3600e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		97.6480	97.6480	4.2000e-003		97.7363
Total	**0.2030**	**2.2771**	**2.3683**	**9.7300e-003**	**0.3105**	**0.0428**	**0.3533**	**0.0841**	**0.0394**	**0.1235**		**885.1196**	**885.1196**	**0.0103**		**885.3363**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.9225	9.0637	6.8357	9.3100e-003		0.5213	0.5213		0.4796	0.4796		902.2494	902.2494	0.2918		908.3773
Total	**0.9225**	**9.0637**	**6.8357**	**9.3100e-003**	**0.5303**	**0.5213**	**1.0516**	**0.0573**	**0.4796**	**0.5369**		**902.2494**	**902.2494**	**0.2918**		**908.3773**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0128	0.0161	0.2010	6.8000e-004	0.0559	3.8000e-004	0.0563	0.0148	3.5000e-004	0.0152		48.8240	48.8240	2.1000e-003		48.8681
Total	**0.0128**	**0.0161**	**0.2010**	**6.8000e-004**	**0.0559**	**3.8000e-004**	**0.0563**	**0.0148**	**3.5000e-004**	**0.0152**		**48.8240**	**48.8240**	**2.1000e-003**		**48.8681**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2068	0.0000	0.2068	0.0223	0.0000	0.0223			0.0000			0.0000
Off-Road	0.9225	9.0637	6.8357	9.3100e-003		0.5213	0.5213		0.4796	0.4796	0.0000	902.2494	902.2494	0.2918		908.3773
Total	**0.9225**	**9.0637**	**6.8357**	**9.3100e-003**	**0.2068**	**0.5213**	**0.7281**	**0.0223**	**0.4796**	**0.5019**	**0.0000**	**902.2494**	**902.2494**	**0.2918**		**908.3773**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0128	0.0161	0.2010	6.8000e-004	0.0559	3.8000e-004	0.0563	0.0148	3.5000e-004	0.0152		48.8240	48.8240	2.1000e-003		48.8681
Total	**0.0128**	**0.0161**	**0.2010**	**6.8000e-004**	**0.0559**	**3.8000e-004**	**0.0563**	**0.0148**	**3.5000e-004**	**0.0152**		**48.8240**	**48.8240**	**2.1000e-003**		**48.8681**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	0.8527	7.7248	8.0981	0.0120		0.4561	0.4561		0.4355	0.4355		1,151.7011	1,151.7011	0.2184		1,156.2863
Total	**0.8527**	**7.7248**	**8.0981**	**0.0120**	**0.7528**	**0.4561**	**1.2089**	**0.4138**	**0.4355**	**0.8492**		**1,151.7011**	**1,151.7011**	**0.2184**		**1,156.2863**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0255	0.0321	0.4020	1.3600e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		97.6480	97.6480	4.2000e-003		97.7363
Total	**0.0255**	**0.0321**	**0.4020**	**1.3600e-003**	**0.1118**	**7.6000e-004**	**0.1125**	**0.0296**	**7.1000e-004**	**0.0304**		**97.6480**	**97.6480**	**4.2000e-003**		**97.7363**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2936	0.0000	0.2936	0.1614	0.0000	0.1614			0.0000			0.0000
Off-Road	0.8527	7.7248	8.0981	0.0120		0.4561	0.4561		0.4355	0.4355	0.0000	1,151.7011	1,151.7011	0.2184		1,156.2863
Total	**0.8527**	**7.7248**	**8.0981**	**0.0120**	**0.2936**	**0.4561**	**0.7497**	**0.1614**	**0.4355**	**0.5968**	**0.0000**	**1,151.7011**	**1,151.7011**	**0.2184**		**1,156.2863**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0255	0.0321	0.4020	1.3600e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		97.6480	97.6480	4.2000e-003		97.7363

Total	**0.0255**	**0.0321**	**0.4020**	**1.3600e-003**	**0.1118**	**7.6000e-004**	**0.1125**	**0.0296**	**7.1000e-004**	**0.0304**		**97.6480**	**97.6480**	**4.2000e-003**		**97.7363**

3.5 Trenching - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6814	6.2613	5.1984	7.0500e-003		0.4353	0.4353		0.4013	0.4013		670.8964	670.8964	0.2094		675.2940
Total	**0.6814**	**6.2613**	**5.1984**	**7.0500e-003**		**0.4353**	**0.4353**		**0.4013**	**0.4013**		**670.8964**	**670.8964**	**0.2094**		**675.2940**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0204	0.0257	0.3216	1.0900e-003	0.0894	6.1000e-004	0.0900	0.0237	5.7000e-004	0.0243		78.1184	78.1184	3.3600e-003		78.1890
Total	**0.0204**	**0.0257**	**0.3216**	**1.0900e-003**	**0.0894**	**6.1000e-004**	**0.0900**	**0.0237**	**5.7000e-004**	**0.0243**		**78.1184**	**78.1184**	**3.3600e-003**		**78.1890**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6814	6.2613	5.1984	7.0500e-003		0.4353	0.4353		0.4013	0.4013	0.0000	670.8964	670.8964	0.2094		675.2940
Total	**0.6814**	**6.2613**	**5.1984**	**7.0500e-003**		**0.4353**	**0.4353**		**0.4013**	**0.4013**	**0.0000**	**670.8964**	**670.8964**	**0.2094**		**675.2940**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0204	0.0257	0.3216	1.0900e-003	0.0894	6.1000e-004	0.0900	0.0237	5.7000e-004	0.0243		78.1184	78.1184	3.3600e-003		78.1890
Total	**0.0204**	**0.0257**	**0.3216**	**1.0900e-003**	**0.0894**	**6.1000e-004**	**0.0900**	**0.0237**	**5.7000e-004**	**0.0243**		**78.1184**	**78.1184**	**3.3600e-003**		**78.1890**

3.6 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.8568	8.7940	7.3646	0.0113		0.5200	0.5200		0.4784	0.4784		1,096.9306	1,096.9306	0.3548		1,104.3807
Total	**0.8568**	**8.7940**	**7.3646**	**0.0113**		**0.5200**	**0.5200**		**0.4784**	**0.4784**		**1,096.9306**	**1,096.9306**	**0.3548**		**1,104.3807**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0459	0.4095	0.5726	1.5100e-003	0.0438	6.8800e-003	0.0506	0.0125	6.3300e-003	0.0188		141.4703	141.4703	1.0200e-003		141.4918
Worker	0.0459	0.0579	0.7237	2.4500e-003	0.2012	1.3800e-003	0.2026	0.0534	1.2800e-003	0.0546		175.7665	175.7665	7.5600e-003		175.9253
Total	**0.0918**	**0.4674**	**1.2962**	**3.9600e-003**	**0.2450**	**8.2600e-003**	**0.2532**	**0.0658**	**7.6100e-003**	**0.0734**		**317.2367**	**317.2367**	**8.5800e-003**		**317.4171**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8568	8.7940	7.3646	0.0113		0.5200	0.5200		0.4784	0.4784	0.0000	1,096.9306	1,096.9306	0.3548		1,104.3807
Total	**0.8568**	**8.7940**	**7.3646**	**0.0113**		**0.5200**	**0.5200**		**0.4784**	**0.4784**	**0.0000**	**1,096.9306**	**1,096.9306**	**0.3548**		**1,104.3807**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0459	0.4095	0.5726	1.5100e-003	0.0438	6.8800e-003	0.0506	0.0125	6.3300e-003	0.0188		141.4703	141.4703	1.0200e-003		141.4918
Worker	0.0459	0.0579	0.7237	2.4500e-003	0.2012	1.3800e-003	0.2026	0.0534	1.2800e-003	0.0546		175.7665	175.7665	7.5600e-003		175.9253
Total	**0.0918**	**0.4674**	**1.2962**	**3.9600e-003**	**0.2450**	**8.2600e-003**	**0.2532**	**0.0658**	**7.6100e-003**	**0.0734**		**317.2367**	**317.2367**	**8.5800e-003**		**317.4171**

3.6 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7705	7.9325	7.2422	0.0113		0.4454	0.4454		0.4098	0.4098		1,097.1688	1,097.1688	0.3549		1,104.6206
Total	**0.7705**	**7.9325**	**7.2422**	**0.0113**		**0.4454**	**0.4454**		**0.4098**	**0.4098**		**1,097.1688**	**1,097.1688**	**0.3549**		**1,104.6206**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0444	0.3476	0.5577	1.5100e-003	0.0438	6.2500e-003	0.0500	0.0125	5.7500e-003	0.0182		141.3522	141.3522	1.0300e-003		141.3738
Worker	0.0437	0.0544	0.6838	2.4600e-003	0.2012	1.3900e-003	0.2026	0.0534	1.2900e-003	0.0547		172.8779	172.8779	7.2600e-003		173.0302
Total	**0.0881**	**0.4019**	**1.2415**	**3.9700e-003**	**0.2450**	**7.6400e-003**	**0.2526**	**0.0658**	**7.0400e-003**	**0.0729**		**314.2301**	**314.2301**	**8.2900e-003**		**314.4041**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7705	7.9325	7.2422	0.0113		0.4454	0.4454		0.4098	0.4098	0.0000	1,097.1688	1,097.1688	0.3549		1,104.6206
Total	**0.7705**	**7.9325**	**7.2422**	**0.0113**		**0.4454**	**0.4454**		**0.4098**	**0.4098**	**0.0000**	**1,097.1688**	**1,097.1688**	**0.3549**		**1,104.6206**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0444	0.3476	0.5577	1.5100e-003	0.0438	6.2500e-003	0.0500	0.0125	5.7500e-003	0.0182		141.3522	141.3522	1.0300e-003		141.3738
Worker	0.0437	0.0544	0.6838	2.4600e-003	0.2012	1.3900e-003	0.2026	0.0534	1.2900e-003	0.0547		172.8779	172.8779	7.2600e-003		173.0302

Total	0.0881	0.4019	1.2415	3.9700e-003	0.2450	7.6400e-003	0.2526	0.0658	7.0400e-003	0.0729		314.2301	314.2301	8.2900e-003		314.4041

3.7 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7131	6.6304	6.9921	0.0111		0.3492	0.3492		0.3247	0.3247		1,020.0280	1,020.0280	0.2966		1,026.2569
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.7131	6.6304	6.9921	0.0111		0.3492	0.3492		0.3247	0.3247		1,020.0280	1,020.0280	0.2966		1,026.2569

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0437	0.0544	0.6838	2.4600e-003	0.2012	1.3900e-003	0.2026	0.0534	1.2900e-003	0.0547		172.8779	172.8779	7.2600e-003		173.0302
Total	0.0437	0.0544	0.6838	2.4600e-003	0.2012	1.3900e-003	0.2026	0.0534	1.2900e-003	0.0547		172.8779	172.8779	7.2600e-003		173.0302

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7131	6.6304	6.9921	0.0111		0.3492	0.3492		0.3247	0.3247	0.0000	1,020.0280	1,020.0280	0.2966		1,026.2569
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7131**	**6.6304**	**6.9921**	**0.0111**		**0.3492**	**0.3492**		**0.3247**	**0.3247**	**0.0000**	**1,020.0280**	**1,020.0280**	**0.2966**		**1,026.2569**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0437	0.0544	0.6838	2.4600e-003	0.2012	1.3900e-003	0.2026	0.0534	1.2900e-003	0.0547		172.8779	172.8779	7.2600e-003		173.0302
Total	**0.0437**	**0.0544**	**0.6838**	**2.4600e-003**	**0.2012**	**1.3900e-003**	**0.2026**	**0.0534**	**1.2900e-003**	**0.0547**		**172.8779**	**172.8779**	**7.2600e-003**		**173.0302**

3.8 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Archit. Coating	81.4203					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.8537
Total	**81.6392**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.8537**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	9.7100e-003	0.0121	0.1520	5.5000e-004	0.0447	3.1000e-004	0.0450	0.0119	2.9000e-004	0.0121		38.4173	38.4173	1.6100e-003		38.4512
Total	**9.7100e-003**	**0.0121**	**0.1520**	**5.5000e-004**	**0.0447**	**3.1000e-004**	**0.0450**	**0.0119**	**2.9000e-004**	**0.0121**		**38.4173**	**38.4173**	**1.6100e-003**		**38.4512**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	81.4203					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.8537
Total	**81.6392**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.8537**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	9.7100e-003	0.0121	0.1520	5.5000e-004	0.0447	3.1000e-004	0.0450	0.0119	2.9000e-004	0.0121		38.4173	38.4173	1.6100e-003		38.4512
Total	**9.7100e-003**	**0.0121**	**0.1520**	**5.5000e-004**	**0.0447**	**3.1000e-004**	**0.0450**	**0.0119**	**2.9000e-004**	**0.0121**		**38.4173**	**38.4173**	**1.6100e-003**		**38.4512**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.8237	5.6004	29.7587	0.1089	7.7073	0.1059	7.8131	2.0568	0.0978	2.1546		8,086.9416	8,086.9416	0.2701		8,092.6144
Unmitigated	2.8237	5.6004	29.7587	0.1089	7.7073	0.1059	7.8131	2.0568	0.0978	2.1546		8,086.9416	8,086.9416	0.2701		8,092.6144

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT

Junior College (2Yr)	1,207.25	493.18	53.14	2,840,245	2,840,245
Total	1,207.25	493.18	53.14	2,840,245	2,840,245

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.505043	0.056653	0.194832	0.151784	0.042126	0.005989	0.016072	0.016505	0.001461	0.002178	0.004464	0.000494	0.002401

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0206	0.1871	0.1572	1.1200e-003		0.0142	0.0142		0.0142	0.0142		224.4989	224.4989	4.3000e-003	4.1200e-003	225.8651
NaturalGas Unmitigated	0.0206	0.1871	0.1572	1.1200e-003		0.0142	0.0142		0.0142	0.0142		224.4989	224.4989	4.3000e-003	4.1200e-003	225.8651

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	1908.24	0.0206	0.1871	0.1572	1.1200e-003		0.0142	0.0142		0.0142	0.0142		224.4989	224.4989	4.3000e-003	4.1200e-003	225.8651
Total		**0.0206**	**0.1871**	**0.1572**	**1.1200e-003**		**0.0142**	**0.0142**		**0.0142**	**0.0142**		**224.4989**	**224.4989**	**4.3000e-003**	**4.1200e-003**	**225.8651**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	1.90824	0.0206	0.1871	0.1572	1.1200e-003		0.0142	0.0142		0.0142	0.0142		224.4989	224.4989	4.3000e-003	4.1200e-003	225.8651
Total		**0.0206**	**0.1871**	**0.1572**	**1.1200e-003**		**0.0142**	**0.0142**		**0.0142**	**0.0142**		**224.4989**	**224.4989**	**4.3000e-003**	**4.1200e-003**	**225.8651**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.1488	4.0000e-005	4.4900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.6100e-003	9.6100e-003	3.0000e-005		0.0101

Unmitigated	1.1488	4.0000e-005	4.4900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.6100e-003	9.6100e-003	3.0000e-005		0.0101

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2788					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.8695					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.2000e-004	4.0000e-005	4.4900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.6100e-003	9.6100e-003	3.0000e-005		0.0101
Total	**1.1488**	**4.0000e-005**	**4.4900e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**9.6100e-003**	**9.6100e-003**	**3.0000e-005**		**0.0101**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2788					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.8695					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.2000e-004	4.0000e-005	4.4900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.6100e-003	9.6100e-003	3.0000e-005		0.0101
Total	**1.1488**	**4.0000e-005**	**4.4900e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**9.6100e-003**	**9.6100e-003**	**3.0000e-005**		**0.0101**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Phase 3 - Chemistry Building

Orange County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	43.92	1000sqft	0.39	43,916.00	0

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 2.2 **Precipitation Freq (Days)** 30

Climate Zone 8 **Operational Year** 2022

Utility Company Southern California Edison

CO2 Intensity (lb/MWhr) 630.89 **CH4 Intensity (lb/MWhr)** 0.029 **N2O Intensity (lb/MWhr)** 0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Chemistry Building will be multiple stories

Construction Phase - modified

Off-road Equipment - modified

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Demolition -

Architectural Coating - SCAQMD Rule 1113

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value

tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblLandUse	LotAcreage	1.01	0.39
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblProjectCharacteristics	OperationalYear	2014	2022

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	1.0653	10.0812	10.7829	0.0217	2.7713	0.5283	3.2704	0.4567	0.4860	0.9316	0.0000	2,029.7535	2,029.7535	0.3634	0.0000	2,037.3847
2021	81.6493	8.3472	8.5750	0.0152	0.2450	0.4531	0.6981	0.0658	0.4169	0.4827	0.0000	1,401.0025	1,401.0025	0.3632	0.0000	1,408.6291
Total	**82.7146**	**18.4284**	**19.3579**	**0.0368**	**3.0163**	**0.9814**	**3.9684**	**0.5225**	**0.9029**	**1.4143**	**0.0000**	**3,430.7560**	**3,430.7560**	**0.7266**	**0.0000**	**3,446.0138**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					

2020	1.0653	10.0812	10.7829	0.0217	1.2702	0.5283	1.7692	0.2294	0.4860	0.7043	0.0000	2,029.7534	2,029.7534	0.3634	0.0000	2,037.3847
2021	81.6493	8.3472	8.5750	0.0152	0.2450	0.4531	0.6981	0.0658	0.4169	0.4827	0.0000	1,401.0025	1,401.0025	0.3632	0.0000	1,408.6291
Total	**82.7146**	**18.4284**	**19.3579**	**0.0368**	**1.5152**	**0.9814**	**2.4673**	**0.2952**	**0.9029**	**1.1870**	**0.0000**	**3,430.7559**	**3,430.7559**	**0.7266**	**0.0000**	**3,446.0138**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**49.77**	**0.00**	**37.83**	**43.50**	**0.00**	**16.07**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.1488	4.0000e-005	4.4900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.6100e-003	9.6100e-003	3.0000e-005		0.0101
Energy	0.0206	0.1871	0.1572	1.1200e-003		0.0142	0.0142		0.0142	0.0142		224.4989	224.4989	4.3000e-003	4.1200e-003	225.8651
Mobile	2.9754	5.9168	29.6276	0.1040	7.7073	0.1062	7.8134	2.0568	0.0981	2.1548		7,740.8273	7,740.8273	0.2704		7,746.5050
Total	**4.1447**	**6.1039**	**29.7892**	**0.1051**	**7.7073**	**0.1204**	**7.8277**	**2.0568**	**0.1123**	**2.1691**		**7,965.3358**	**7,965.3358**	**0.2747**	**4.1200e-003**	**7,972.3803**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.1488	4.0000e-005	4.4900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.6100e-003	9.6100e-003	3.0000e-005		0.0101

Energy	0.0206	0.1871	0.1572	1.1200e-003		0.0142	0.0142		0.0142	0.0142		224.4989	224.4989	4.3000e-003	4.1200e-003	225.8651
Mobile	2.9754	5.9168	29.6276	0.1040	7.7073	0.1062	7.8134	2.0568	0.0981	2.1548		7,740.8273	7,740.8273	0.2704		7,746.5050
Total	**4.1447**	**6.1039**	**29.7892**	**0.1051**	**7.7073**	**0.1204**	**7.8277**	**2.0568**	**0.1123**	**2.1691**		**7,965.3358**	**7,965.3358**	**0.2747**	**4.1200e-003**	**7,972.3803**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2020	9/14/2020	5	10	
2	Site Preparation	Site Preparation	9/15/2020	9/15/2020	5	1	
3	Grading	Grading	9/16/2020	9/17/2020	5	2	
4	Trenching	Trenching	9/18/2020	10/1/2020	5	10	
5	Building Construction	Building Construction	10/2/2020	2/18/2021	5	100	
6	Paving	Paving	2/19/2021	2/25/2021	5	5	
7	Architectural Coating	Architectural Coating	2/26/2021	3/4/2021	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 65,874; Non-Residential Outdoor: 21,958 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	255	0.40

Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Building Construction	Cranes	1	4.00	226	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Paving	Pavers	1	7.00	125	0.42
Paving	Rollers	1	7.00	80	0.38
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Trenching	Plate Compactors	1	8.00	8	0.43
Trenching	Trenchers	1	8.00	80	0.50
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	114.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	4.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	18.00	7.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Clean Paved Roads

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.4609	0.0000	2.4609	0.3726	0.0000	0.3726			0.0000			0.0000
Off-Road	0.8527	7.7248	8.0981	0.0120		0.4561	0.4561		0.4355	0.4355		1,151.7011	1,151.7011	0.2184		1,156.2863
Total	**0.8527**	**7.7248**	**8.0981**	**0.0120**	**2.4609**	**0.4561**	**2.9170**	**0.3726**	**0.4355**	**0.8081**		**1,151.7011**	**1,151.7011**	**0.2184**		**1,156.2863**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1858	2.3210	2.3100	8.3600e-003	0.1987	0.0422	0.2408	0.0544	0.0388	0.0932		785.5936	785.5936	6.2100e-003		785.7240
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0268	0.0353	0.3748	1.2900e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		92.4588	92.4588	4.2000e-003		92.5470
Total	**0.2126**	**2.3563**	**2.6848**	**9.6500e-003**	**0.3105**	**0.0429**	**0.3534**	**0.0841**	**0.0395**	**0.1235**		**878.0524**	**878.0524**	**0.0104**		**878.2710**

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Fugitive Dust					0.9598	0.0000	0.9598	0.1453	0.0000	0.1453			0.0000			0.0000
Off-Road	0.8527	7.7248	8.0981	0.0120		0.4561	0.4561		0.4355	0.4355	0.0000	1,151.7011	1,151.7011	0.2184		1,156.2863
Total	**0.8527**	**7.7248**	**8.0981**	**0.0120**	**0.9598**	**0.4561**	**1.4158**	**0.1453**	**0.4355**	**0.5808**	**0.0000**	**1,151.7011**	**1,151.7011**	**0.2184**		**1,156.2863**

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Hauling	0.1858	2.3210	2.3100	8.3600e-003	0.1987	0.0422	0.2408	0.0544	0.0388	0.0932		785.5936	785.5936	6.2100e-003		785.7240
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0268	0.0353	0.3748	1.2900e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		92.4588	92.4588	4.2000e-003		92.5470
Total	**0.2126**	**2.3563**	**2.6848**	**9.6500e-003**	**0.3105**	**0.0429**	**0.3534**	**0.0841**	**0.0395**	**0.1235**		**878.0524**	**878.0524**	**0.0104**		**878.2710**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					

Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.9225	9.0637	6.8357	9.3100e-003		0.5213	0.5213		0.4796	0.4796		902.2494	902.2494	0.2918		908.3773
Total	**0.9225**	**9.0637**	**6.8357**	**9.3100e-003**	**0.5303**	**0.5213**	**1.0516**	**0.0573**	**0.4796**	**0.5369**		**902.2494**	**902.2494**	**0.2918**		**908.3773**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0134	0.0177	0.1874	6.4000e-004	0.0559	3.8000e-004	0.0563	0.0148	3.5000e-004	0.0152		46.2294	46.2294	2.1000e-003		46.2735
Total	**0.0134**	**0.0177**	**0.1874**	**6.4000e-004**	**0.0559**	**3.8000e-004**	**0.0563**	**0.0148**	**3.5000e-004**	**0.0152**		**46.2294**	**46.2294**	**2.1000e-003**		**46.2735**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2068	0.0000	0.2068	0.0223	0.0000	0.0223			0.0000			0.0000
Off-Road	0.9225	9.0637	6.8357	9.3100e-003		0.5213	0.5213		0.4796	0.4796	0.0000	902.2494	902.2494	0.2918		908.3773
Total	**0.9225**	**9.0637**	**6.8357**	**9.3100e-003**	**0.2068**	**0.5213**	**0.7281**	**0.0223**	**0.4796**	**0.5019**	**0.0000**	**902.2494**	**902.2494**	**0.2918**		**908.3773**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0134	0.0177	0.1874	6.4000e-004	0.0559	3.8000e-004	0.0563	0.0148	3.5000e-004	0.0152		46.2294	46.2294	2.1000e-003		46.2735
Total	**0.0134**	**0.0177**	**0.1874**	**6.4000e-004**	**0.0559**	**3.8000e-004**	**0.0563**	**0.0148**	**3.5000e-004**	**0.0152**		**46.2294**	**46.2294**	**2.1000e-003**		**46.2735**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	0.8527	7.7248	8.0981	0.0120		0.4561	0.4561		0.4355	0.4355		1,151.7011	1,151.7011	0.2184		1,156.2863
Total	**0.8527**	**7.7248**	**8.0981**	**0.0120**	**0.7528**	**0.4561**	**1.2089**	**0.4138**	**0.4355**	**0.8492**		**1,151.7011**	**1,151.7011**	**0.2184**		**1,156.2863**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0268	0.0353	0.3748	1.2900e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		92.4588	92.4588	4.2000e-003		92.5470
Total	**0.0268**	**0.0353**	**0.3748**	**1.2900e-003**	**0.1118**	**7.6000e-004**	**0.1125**	**0.0296**	**7.1000e-004**	**0.0304**		**92.4588**	**92.4588**	**4.2000e-003**		**92.5470**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2936	0.0000	0.2936	0.1614	0.0000	0.1614			0.0000			0.0000
Off-Road	0.8527	7.7248	8.0981	0.0120		0.4561	0.4561		0.4355	0.4355	0.0000	1,151.7011	1,151.7011	0.2184		1,156.2863
Total	**0.8527**	**7.7248**	**8.0981**	**0.0120**	**0.2936**	**0.4561**	**0.7497**	**0.1614**	**0.4355**	**0.5968**	**0.0000**	**1,151.7011**	**1,151.7011**	**0.2184**		**1,156.2863**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0268	0.0353	0.3748	1.2900e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		92.4588	92.4588	4.2000e-003		92.5470

Total	0.0268	0.0353	0.3748	1.2900e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		92.4588	92.4588	4.2000e-003		92.5470

3.5 Trenching - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6814	6.2613	5.1984	7.0500e-003		0.4353	0.4353		0.4013	0.4013		670.8964	670.8964	0.2094		675.2940
Total	**0.6814**	**6.2613**	**5.1984**	**7.0500e-003**		**0.4353**	**0.4353**		**0.4013**	**0.4013**		**670.8964**	**670.8964**	**0.2094**		**675.2940**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0214	0.0283	0.2999	1.0300e-003	0.0894	6.1000e-004	0.0900	0.0237	5.7000e-004	0.0243		73.9670	73.9670	3.3600e-003		74.0376
Total	**0.0214**	**0.0283**	**0.2999**	**1.0300e-003**	**0.0894**	**6.1000e-004**	**0.0900**	**0.0237**	**5.7000e-004**	**0.0243**		**73.9670**	**73.9670**	**3.3600e-003**		**74.0376**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6814	6.2613	5.1984	7.0500e-003		0.4353	0.4353		0.4013	0.4013	0.0000	670.8964	670.8964	0.2094		675.2940
Total	**0.6814**	**6.2613**	**5.1984**	**7.0500e-003**		**0.4353**	**0.4353**		**0.4013**	**0.4013**	**0.0000**	**670.8964**	**670.8964**	**0.2094**		**675.2940**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0214	0.0283	0.2999	1.0300e-003	0.0894	6.1000e-004	0.0900	0.0237	5.7000e-004	0.0243		73.9670	73.9670	3.3600e-003		74.0376
Total	**0.0214**	**0.0283**	**0.2999**	**1.0300e-003**	**0.0894**	**6.1000e-004**	**0.0900**	**0.0237**	**5.7000e-004**	**0.0243**		**73.9670**	**73.9670**	**3.3600e-003**		**74.0376**

3.6 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Off-Road	0.8568	8.7940	7.3646	0.0113		0.5200	0.5200		0.4784	0.4784		1,096.9306	1,096.9306	0.3548		1,104.3807
Total	**0.8568**	**8.7940**	**7.3646**	**0.0113**		**0.5200**	**0.5200**		**0.4784**	**0.4784**		**1,096.9306**	**1,096.9306**	**0.3548**		**1,104.3807**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0500	0.4182	0.7129	1.5000e-003	0.0438	6.9400e-003	0.0507	0.0125	6.3900e-003	0.0189		140.2693	140.2693	1.0600e-003		140.2916
Worker	0.0482	0.0636	0.6747	2.3200e-003	0.2012	1.3800e-003	0.2026	0.0534	1.2800e-003	0.0546		166.4258	166.4258	7.5600e-003		166.5846
Total	**0.0981**	**0.4818**	**1.3876**	**3.8200e-003**	**0.2450**	**8.3200e-003**	**0.2533**	**0.0658**	**7.6700e-003**	**0.0735**		**306.6951**	**306.6951**	**8.6200e-003**		**306.8762**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8568	8.7940	7.3646	0.0113		0.5200	0.5200		0.4784	0.4784	0.0000	1,096.9306	1,096.9306	0.3548		1,104.3807
Total	**0.8568**	**8.7940**	**7.3646**	**0.0113**		**0.5200**	**0.5200**		**0.4784**	**0.4784**	**0.0000**	**1,096.9306**	**1,096.9306**	**0.3548**		**1,104.3807**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0500	0.4182	0.7129	1.5000e-003	0.0438	6.9400e-003	0.0507	0.0125	6.3900e-003	0.0189		140.2693	140.2693	1.0600e-003		140.2916
Worker	0.0482	0.0636	0.6747	2.3200e-003	0.2012	1.3800e-003	0.2026	0.0534	1.2800e-003	0.0546		166.4258	166.4258	7.5600e-003		166.5846
Total	**0.0981**	**0.4818**	**1.3876**	**3.8200e-003**	**0.2450**	**8.3200e-003**	**0.2533**	**0.0658**	**7.6700e-003**	**0.0735**		**306.6951**	**306.6951**	**8.6200e-003**		**306.8762**

3.6 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7705	7.9325	7.2422	0.0113		0.4454	0.4454		0.4098	0.4098		1,097.1688	1,097.1688	0.3549		1,104.6206
Total	**0.7705**	**7.9325**	**7.2422**	**0.0113**		**0.4454**	**0.4454**		**0.4098**	**0.4098**		**1,097.1688**	**1,097.1688**	**0.3549**		**1,104.6206**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0483	0.3550	0.6963	1.5000e-003	0.0438	6.3000e-003	0.0501	0.0125	5.8000e-003	0.0183		140.1512	140.1512	1.0700e-003		140.1736
Worker	0.0458	0.0597	0.6365	2.3200e-003	0.2012	1.3900e-003	0.2026	0.0534	1.2900e-003	0.0547		163.6825	163.6825	7.2600e-003		163.8349
Total	**0.0941**	**0.4147**	**1.3328**	**3.8200e-003**	**0.2450**	**7.6900e-003**	**0.2527**	**0.0658**	**7.0900e-003**	**0.0729**		**303.8337**	**303.8337**	**8.3300e-003**		**304.0085**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7705	7.9325	7.2422	0.0113		0.4454	0.4454		0.4098	0.4098	0.0000	1,097.1688	1,097.1688	0.3549		1,104.6206
Total	**0.7705**	**7.9325**	**7.2422**	**0.0113**		**0.4454**	**0.4454**		**0.4098**	**0.4098**	**0.0000**	**1,097.1688**	**1,097.1688**	**0.3549**		**1,104.6206**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0483	0.3550	0.6963	1.5000e-003	0.0438	6.3000e-003	0.0501	0.0125	5.8000e-003	0.0183		140.1512	140.1512	1.0700e-003		140.1736
Worker	0.0458	0.0597	0.6365	2.3200e-003	0.2012	1.3900e-003	0.2026	0.0534	1.2900e-003	0.0547		163.6825	163.6825	7.2600e-003		163.8349

Total	0.0941	0.4147	1.3328	3.8200e-003	0.2450	7.6900e-003	0.2527	0.0658	7.0900e-003	0.0729		303.8337	303.8337	8.3300e-003		304.0085

3.7 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7131	6.6304	6.9921	0.0111		0.3492	0.3492		0.3247	0.3247		1,020.0280	1,020.0280	0.2966		1,026.2569
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7131**	**6.6304**	**6.9921**	**0.0111**		**0.3492**	**0.3492**		**0.3247**	**0.3247**		**1,020.0280**	**1,020.0280**	**0.2966**		**1,026.2569**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0458	0.0597	0.6365	2.3200e-003	0.2012	1.3900e-003	0.2026	0.0534	1.2900e-003	0.0547		163.6825	163.6825	7.2600e-003		163.8349
Total	**0.0458**	**0.0597**	**0.6365**	**2.3200e-003**	**0.2012**	**1.3900e-003**	**0.2026**	**0.0534**	**1.2900e-003**	**0.0547**		**163.6825**	**163.6825**	**7.2600e-003**		**163.8349**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7131	6.6304	6.9921	0.0111		0.3492	0.3492		0.3247	0.3247	0.0000	1,020.0280	1,020.0280	0.2966		1,026.2569
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7131**	**6.6304**	**6.9921**	**0.0111**		**0.3492**	**0.3492**		**0.3247**	**0.3247**	**0.0000**	**1,020.0280**	**1,020.0280**	**0.2966**		**1,026.2569**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0458	0.0597	0.6365	2.3200e-003	0.2012	1.3900e-003	0.2026	0.0534	1.2900e-003	0.0547		163.6825	163.6825	7.2600e-003		163.8349
Total	**0.0458**	**0.0597**	**0.6365**	**2.3200e-003**	**0.2012**	**1.3900e-003**	**0.2026**	**0.0534**	**1.2900e-003**	**0.0547**		**163.6825**	**163.6825**	**7.2600e-003**		**163.8349**

3.8 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Archit. Coating	81.4203					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.8537
Total	**81.6392**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.8537**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0102	0.0133	0.1415	5.2000e-004	0.0447	3.1000e-004	0.0450	0.0119	2.9000e-004	0.0121		36.3739	36.3739	1.6100e-003		36.4078
Total	**0.0102**	**0.0133**	**0.1415**	**5.2000e-004**	**0.0447**	**3.1000e-004**	**0.0450**	**0.0119**	**2.9000e-004**	**0.0121**		**36.3739**	**36.3739**	**1.6100e-003**		**36.4078**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	81.4203					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.8537
Total	**81.6392**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.8537**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0102	0.0133	0.1415	5.2000e-004	0.0447	3.1000e-004	0.0450	0.0119	2.9000e-004	0.0121		36.3739	36.3739	1.6100e-003		36.4078
Total	**0.0102**	**0.0133**	**0.1415**	**5.2000e-004**	**0.0447**	**3.1000e-004**	**0.0450**	**0.0119**	**2.9000e-004**	**0.0121**		**36.3739**	**36.3739**	**1.6100e-003**		**36.4078**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.9754	5.9168	29.6276	0.1040	7.7073	0.1062	7.8134	2.0568	0.0981	2.1548		7,740.8273	7,740.8273	0.2704		7,746.5050
Unmitigated	2.9754	5.9168	29.6276	0.1040	7.7073	0.1062	7.8134	2.0568	0.0981	2.1548		7,740.8273	7,740.8273	0.2704		7,746.5050

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT

Junior College (2Yr)	1,207.25	493.18	53.14	2,840,245	2,840,245
Total	1,207.25	493.18	53.14	2,840,245	2,840,245

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.505043	0.056653	0.194832	0.151784	0.042126	0.005989	0.016072	0.016505	0.001461	0.002178	0.004464	0.000494	0.002401

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0206	0.1871	0.1572	1.1200e-003		0.0142	0.0142		0.0142	0.0142		224.4989	224.4989	4.3000e-003	4.1200e-003	225.8651
NaturalGas Unmitigated	0.0206	0.1871	0.1572	1.1200e-003		0.0142	0.0142		0.0142	0.0142		224.4989	224.4989	4.3000e-003	4.1200e-003	225.8651

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	1908.24	0.0206	0.1871	0.1572	1.1200e-003		0.0142	0.0142		0.0142	0.0142		224.4989	224.4989	4.3000e-003	4.1200e-003	225.8651
Total		**0.0206**	**0.1871**	**0.1572**	**1.1200e-003**		**0.0142**	**0.0142**		**0.0142**	**0.0142**		**224.4989**	**224.4989**	**4.3000e-003**	**4.1200e-003**	**225.8651**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	1.90824	0.0206	0.1871	0.1572	1.1200e-003		0.0142	0.0142		0.0142	0.0142		224.4989	224.4989	4.3000e-003	4.1200e-003	225.8651
Total		**0.0206**	**0.1871**	**0.1572**	**1.1200e-003**		**0.0142**	**0.0142**		**0.0142**	**0.0142**		**224.4989**	**224.4989**	**4.3000e-003**	**4.1200e-003**	**225.8651**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.1488	4.0000e-005	4.4900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.6100e-003	9.6100e-003	3.0000e-005		0.0101

Unmitigated	1.1488	4.0000e-005	4.4900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.6100e-003	9.6100e-003	3.0000e-005		0.0101

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2788					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.8695					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.2000e-004	4.0000e-005	4.4900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.6100e-003	9.6100e-003	3.0000e-005		0.0101
Total	**1.1488**	**4.0000e-005**	**4.4900e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**9.6100e-003**	**9.6100e-003**	**3.0000e-005**		**0.0101**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2788					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.8695					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.2000e-004	4.0000e-005	4.4900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.6100e-003	9.6100e-003	3.0000e-005		0.0101
Total	**1.1488**	**4.0000e-005**	**4.4900e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**9.6100e-003**	**9.6100e-003**	**3.0000e-005**		**0.0101**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Phase 3 - Dance Building

Orange County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	32.00	1000sqft	0.73	32,000.00	0

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 2.2 **Precipitation Freq (Days)** 30

Climate Zone 8 **Operational Year** 2022

Utility Company Southern California Edison

CO2 Intensity (lb/MWhr) 630.89 **CH4 Intensity (lb/MWhr)** 0.029 **N2O Intensity (lb/MWhr)** 0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Modified

Off-road Equipment - modified

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Demolition -

Architectural Coating - SCAQMD Rule 1113

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value

tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblProjectCharacteristics	OperationalYear	2014	2022

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0404	0.3945	0.3671	6.4000e-004	0.0244	0.0225	0.0470	4.9300e-003	0.0208	0.0258	0.0000	53.9462	53.9462	0.0130	0.0000	54.2190
2021	0.1654	0.1647	0.1672	2.9000e-004	3.6100e-003	9.0000e-003	0.0126	9.7000e-004	8.3100e-003	9.2800e-003	0.0000	24.3121	24.3121	6.4600e-003	0.0000	24.4478
Total	**0.2058**	**0.5592**	**0.5343**	**9.3000e-004**	**0.0280**	**0.0315**	**0.0596**	**5.9000e-003**	**0.0291**	**0.0350**	**0.0000**	**78.2583**	**78.2583**	**0.0195**	**0.0000**	**78.6668**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0404	0.3945	0.3671	6.4000e-004	0.0144	0.0225	0.0369	3.2300e-003	0.0208	0.0241	0.0000	53.9462	53.9462	0.0130	0.0000	54.2189

2021	0.1654	0.1647	0.1672	2.9000e-004	3.6100e-003	9.0000e-003	0.0126	9.7000e-004	8.3100e-003	9.2800e-003	0.0000	24.3121	24.3121	6.4600e-003	0.0000	24.4478
Total	**0.2058**	**0.5592**	**0.5343**	**9.3000e-004**	**0.0180**	**0.0315**	**0.0495**	**4.2000e-003**	**0.0291**	**0.0333**	**0.0000**	**78.2582**	**78.2582**	**0.0195**	**0.0000**	**78.6667**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**35.76**	**0.00**	**16.84**	**28.81**	**0.00**	**4.85**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1528	0.0000	4.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.9000e-004	7.9000e-004	0.0000	0.0000	8.4000e-004
Energy	2.7400e-003	0.0249	0.0209	1.5000e-004		1.8900e-003	1.8900e-003		1.8900e-003	1.8900e-003	0.0000	155.7438	155.7438	6.4300e-003	1.7200e-003	156.4122
Mobile	0.2899	0.6230	3.0749	0.0109	0.7821	0.0109	0.7930	0.2090	0.0101	0.2191	0.0000	733.4858	733.4858	0.0253	0.0000	734.0169
Waste						0.0000	0.0000		0.0000	0.0000	8.4444	0.0000	8.4444	0.4991	0.0000	18.9245
Water						0.0000	0.0000		0.0000	0.0000	0.4980	13.6536	14.1516	0.0518	1.3400e-003	15.6534
Total	**0.4454**	**0.6479**	**3.0962**	**0.0110**	**0.7821**	**0.0128**	**0.7949**	**0.2090**	**0.0120**	**0.2210**	**8.9424**	**902.8840**	**911.8264**	**0.5825**	**3.0600e-003**	**925.0078**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Area	0.1528	0.0000	4.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.9000e-004	7.9000e-004	0.0000	0.0000	8.4000e-004
Energy	2.7400e-003	0.0249	0.0209	1.5000e-004		1.8900e-003	1.8900e-003		1.8900e-003	1.8900e-003	0.0000	155.7438	155.7438	6.4300e-003	1.7200e-003	156.4122
Mobile	0.2899	0.6230	3.0749	0.0109	0.7821	0.0109	0.7930	0.2090	0.0101	0.2191	0.0000	733.4858	733.4858	0.0253	0.0000	734.0169
Waste						0.0000	0.0000		0.0000	0.0000	8.4444	0.0000	8.4444	0.4991	0.0000	18.9245
Water						0.0000	0.0000		0.0000	0.0000	0.4980	13.6536	14.1516	0.0518	1.3400e-003	15.6526
Total	**0.4454**	**0.6479**	**3.0962**	**0.0110**	**0.7821**	**0.0128**	**0.7949**	**0.2090**	**0.0120**	**0.2210**	**8.9424**	**902.8840**	**911.8264**	**0.5825**	**3.0600e-003**	**925.0070**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2020	9/14/2020	5	10	
2	Site Preparation	Site Preparation	9/15/2020	9/15/2020	5	1	
3	Grading	Grading	9/16/2020	9/17/2020	5	2	
4	Trenching	Trenching	9/18/2020	10/1/2020	5	10	
5	Building Construction	Building Construction	10/2/2020	2/18/2021	5	100	
6	Paving	Paving	2/19/2021	2/25/2021	5	5	
7	Architectural Coating	Architectural Coating	2/26/2021	3/4/2021	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 48,000; Non-Residential Outdoor: 16,000 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	226	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	125	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Trenching	Plate Compactors	1	8.00	8	0.43
Trenching	Trenchers	1	8.00	80	0.50
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	142.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	13.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Architectural Coating	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Clean Paved Roads

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0154	0.0000	0.0154	2.3300e-003	0.0000	2.3300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.2600e-003	0.0386	0.0405	6.0000e-005		2.2800e-003	2.2800e-003		2.1800e-003	2.1800e-003	0.0000	5.2240	5.2240	9.9000e-004	0.0000	5.2448
Total	**4.2600e-003**	**0.0386**	**0.0405**	**6.0000e-005**	**0.0154**	**2.2800e-003**	**0.0177**	**2.3300e-003**	**2.1800e-003**	**4.5100e-003**	**0.0000**	**5.2240**	**5.2240**	**9.9000e-004**	**0.0000**	**5.2448**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.1400e-003	0.0147	0.0139	5.0000e-005	1.2200e-003	2.6000e-004	1.4800e-003	3.3000e-004	2.4000e-004	5.8000e-004	0.0000	4.4448	4.4448	3.0000e-005	0.0000	4.4455
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	1.8000e-004	1.9200e-003	1.0000e-005	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4257	0.4257	2.0000e-005	0.0000	0.4261

Total	**1.2600e-003**	**0.0149**	**0.0158**	**6.0000e-005**	**1.7700e-003**	**2.6000e-004**	**2.0300e-003**	**4.8000e-004**	**2.4000e-004**	**7.3000e-004**	**0.0000**	**4.8705**	**4.8705**	**5.0000e-005**	**0.0000**	**4.8716**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					6.0100e-003	0.0000	6.0100e-003	9.1000e-004	0.0000	9.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.2600e-003	0.0386	0.0405	6.0000e-005		2.2800e-003	2.2800e-003		2.1800e-003	2.1800e-003	0.0000	5.2240	5.2240	9.9000e-004	0.0000	5.2448
Total	**4.2600e-003**	**0.0386**	**0.0405**	**6.0000e-005**	**6.0100e-003**	**2.2800e-003**	**8.2900e-003**	**9.1000e-004**	**2.1800e-003**	**3.0900e-003**	**0.0000**	**5.2240**	**5.2240**	**9.9000e-004**	**0.0000**	**5.2448**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.1400e-003	0.0147	0.0139	5.0000e-005	1.2200e-003	2.6000e-004	1.4800e-003	3.3000e-004	2.4000e-004	5.8000e-004	0.0000	4.4448	4.4448	3.0000e-005	0.0000	4.4455
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	1.8000e-004	1.9200e-003	1.0000e-005	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4257	0.4257	2.0000e-005	0.0000	0.4261
Total	**1.2600e-003**	**0.0149**	**0.0158**	**6.0000e-005**	**1.7700e-003**	**2.6000e-004**	**2.0300e-003**	**4.8000e-004**	**2.4000e-004**	**7.3000e-004**	**0.0000**	**4.8705**	**4.8705**	**5.0000e-005**	**0.0000**	**4.8716**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.6000e-004	4.5300e-003	3.4200e-003	0.0000		2.6000e-004	2.6000e-004		2.4000e-004	2.4000e-004	0.0000	0.4093	0.4093	1.3000e-004	0.0000	0.4120
Total	**4.6000e-004**	**4.5300e-003**	**3.4200e-003**	**0.0000**	**2.7000e-004**	**2.6000e-004**	**5.3000e-004**	**3.0000e-005**	**2.4000e-004**	**2.7000e-004**	**0.0000**	**0.4093**	**0.4093**	**1.3000e-004**	**0.0000**	**0.4120**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	1.0000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0213	0.0213	0.0000	0.0000	0.0213
Total	**1.0000e-005**	**1.0000e-005**	**1.0000e-004**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0213**	**0.0213**	**0.0000**	**0.0000**	**0.0213**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					1.0000e-004	0.0000	1.0000e-004	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.6000e-004	4.5300e-003	3.4200e-003	0.0000		2.6000e-004	2.6000e-004		2.4000e-004	2.4000e-004	0.0000	0.4093	0.4093	1.3000e-004	0.0000	0.4120
Total	**4.6000e-004**	**4.5300e-003**	**3.4200e-003**	**0.0000**	**1.0000e-004**	**2.6000e-004**	**3.6000e-004**	**1.0000e-005**	**2.4000e-004**	**2.5000e-004**	**0.0000**	**0.4093**	**0.4093**	**1.3000e-004**	**0.0000**	**0.4120**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	1.0000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0213	0.0213	0.0000	0.0000	0.0213
Total	**1.0000e-005**	**1.0000e-005**	**1.0000e-004**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0213**	**0.0213**	**0.0000**	**0.0000**	**0.0213**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.5000e-004	0.0000	7.5000e-004	4.1000e-004	0.0000	4.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.5000e-004	7.7200e-003	8.1000e-003	1.0000e-005		4.6000e-004	4.6000e-004		4.4000e-004	4.4000e-004	0.0000	1.0448	1.0448	2.0000e-004	0.0000	1.0490
Total	**8.5000e-004**	**7.7200e-003**	**8.1000e-003**	**1.0000e-005**	**7.5000e-004**	**4.6000e-004**	**1.2100e-003**	**4.1000e-004**	**4.4000e-004**	**8.5000e-004**	**0.0000**	**1.0448**	**1.0448**	**2.0000e-004**	**0.0000**	**1.0490**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	4.0000e-005	3.8000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0852	0.0852	0.0000	0.0000	0.0852
Total	**2.0000e-005**	**4.0000e-005**	**3.8000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0852**	**0.0852**	**0.0000**	**0.0000**	**0.0852**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.9000e-004	0.0000	2.9000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.5000e-004	7.7200e-003	8.1000e-003	1.0000e-005		4.6000e-004	4.6000e-004		4.4000e-004	4.4000e-004	0.0000	1.0448	1.0448	2.0000e-004	0.0000	1.0490
Total	**8.5000e-004**	**7.7200e-003**	**8.1000e-003**	**1.0000e-005**	**2.9000e-004**	**4.6000e-004**	**7.5000e-004**	**1.6000e-004**	**4.4000e-004**	**6.0000e-004**	**0.0000**	**1.0448**	**1.0448**	**2.0000e-004**	**0.0000**	**1.0490**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	4.0000e-005	3.8000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0852	0.0852	0.0000	0.0000	0.0852
Total	**2.0000e-005**	**4.0000e-005**	**3.8000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0852**	**0.0852**	**0.0000**	**0.0000**	**0.0852**

3.5 Trenching - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.4100e-003	0.0313	0.0260	4.0000e-005		2.1800e-003	2.1800e-003		2.0100e-003	2.0100e-003	0.0000	3.0431	3.0431	9.5000e-004	0.0000	3.0631
Total	**3.4100e-003**	**0.0313**	**0.0260**	**4.0000e-005**		**2.1800e-003**	**2.1800e-003**		**2.0100e-003**	**2.0100e-003**	**0.0000**	**3.0431**	**3.0431**	**9.5000e-004**	**0.0000**	**3.0631**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-004	1.5000e-004	1.5300e-003	1.0000e-005	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3406	0.3406	2.0000e-005	0.0000	0.3409

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Total	**1.0000e-004**	**1.5000e-004**	**1.5300e-003**	**1.0000e-005**	**4.4000e-004**	**0.0000**	**4.4000e-004**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**0.3406**	**0.3406**	**2.0000e-005**	**0.0000**	**0.3409**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.4100e-003	0.0313	0.0260	4.0000e-005		2.1800e-003	2.1800e-003		2.0100e-003	2.0100e-003	0.0000	3.0431	3.0431	9.5000e-004	0.0000	3.0631
Total	**3.4100e-003**	**0.0313**	**0.0260**	**4.0000e-005**		**2.1800e-003**	**2.1800e-003**		**2.0100e-003**	**2.0100e-003**	**0.0000**	**3.0431**	**3.0431**	**9.5000e-004**	**0.0000**	**3.0631**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-004	1.5000e-004	1.5300e-003	1.0000e-005	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3406	0.3406	2.0000e-005	0.0000	0.3409
Total	**1.0000e-004**	**1.5000e-004**	**1.5300e-003**	**1.0000e-005**	**4.4000e-004**	**0.0000**	**4.4000e-004**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**0.3406**	**0.3406**	**2.0000e-005**	**0.0000**	**0.3409**

3.6 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0279	0.2858	0.2394	3.7000e-004		0.0169	0.0169		0.0156	0.0156	0.0000	32.3414	32.3414	0.0105	0.0000	32.5610
Total	**0.0279**	**0.2858**	**0.2394**	**3.7000e-004**		**0.0169**	**0.0169**		**0.0156**	**0.0156**	**0.0000**	**32.3414**	**32.3414**	**0.0105**	**0.0000**	**32.5610**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.1200e-003	9.9000e-003	0.0157	3.0000e-005	1.0000e-003	1.6000e-004	1.1600e-003	2.9000e-004	1.5000e-004	4.3000e-004	0.0000	2.9687	2.9687	2.0000e-005	0.0000	2.9692
Worker	1.0600e-003	1.5300e-003	0.0162	6.0000e-005	4.6400e-003	3.0000e-005	4.6700e-003	1.2300e-003	3.0000e-005	1.2600e-003	0.0000	3.5974	3.5974	1.6000e-004	0.0000	3.6008
Total	**2.1800e-003**	**0.0114**	**0.0319**	**9.0000e-005**	**5.6400e-003**	**1.9000e-004**	**5.8300e-003**	**1.5200e-003**	**1.8000e-004**	**1.6900e-003**	**0.0000**	**6.5661**	**6.5661**	**1.8000e-004**	**0.0000**	**6.5700**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.0279	0.2858	0.2394	3.7000e-004		0.0169	0.0169		0.0156	0.0156	0.0000	32.3413	32.3413	0.0105	0.0000	32.5610
Total	**0.0279**	**0.2858**	**0.2394**	**3.7000e-004**		**0.0169**	**0.0169**		**0.0156**	**0.0156**	**0.0000**	**32.3413**	**32.3413**	**0.0105**	**0.0000**	**32.5610**

<u>Mitigated Construction Off-Site</u>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.1200e-003	9.9000e-003	0.0157	3.0000e-005	1.0000e-003	1.6000e-004	1.1600e-003	2.9000e-004	1.5000e-004	4.3000e-004	0.0000	2.9687	2.9687	2.0000e-005	0.0000	2.9692
Worker	1.0600e-003	1.5300e-003	0.0162	6.0000e-005	4.6400e-003	3.0000e-005	4.6700e-003	1.2300e-003	3.0000e-005	1.2600e-003	0.0000	3.5974	3.5974	1.6000e-004	0.0000	3.6008
Total	**2.1800e-003**	**0.0114**	**0.0319**	**9.0000e-005**	**5.6400e-003**	**1.9000e-004**	**5.8300e-003**	**1.5200e-003**	**1.8000e-004**	**1.6900e-003**	**0.0000**	**6.5661**	**6.5661**	**1.8000e-004**	**0.0000**	**6.5700**

3.6 Building Construction - 2021

<u>Unmitigated Construction On-Site</u>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0135	0.1388	0.1267	2.0000e-004		7.7900e-003	7.7900e-003		7.1700e-003	7.1700e-003	0.0000	17.4184	17.4184	5.6300e-003	0.0000	17.5367
Total	**0.0135**	**0.1388**	**0.1267**	**2.0000e-004**		**7.7900e-003**	**7.7900e-003**		**7.1700e-003**	**7.1700e-003**	**0.0000**	**17.4184**	**17.4184**	**5.6300e-003**	**0.0000**	**17.5367**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.8000e-004	4.5200e-003	8.2600e-003	2.0000e-005	5.4000e-004	8.0000e-005	6.2000e-004	1.5000e-004	7.0000e-005	2.3000e-004	0.0000	1.5972	1.5972	1.0000e-005	0.0000	1.5974
Worker	5.4000e-004	7.8000e-004	8.2300e-003	3.0000e-005	2.5000e-003	2.0000e-005	2.5200e-003	6.6000e-004	2.0000e-005	6.8000e-004	0.0000	1.9052	1.9052	8.0000e-005	0.0000	1.9069
Total	**1.1200e-003**	**5.3000e-003**	**0.0165**	**5.0000e-005**	**3.0400e-003**	**1.0000e-004**	**3.1400e-003**	**8.1000e-004**	**9.0000e-005**	**9.1000e-004**	**0.0000**	**3.5024**	**3.5024**	**9.0000e-005**	**0.0000**	**3.5044**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0135	0.1388	0.1267	2.0000e-004		7.7900e-003	7.7900e-003		7.1700e-003	7.1700e-003	0.0000	17.4183	17.4183	5.6300e-003	0.0000	17.5366
Total	**0.0135**	**0.1388**	**0.1267**	**2.0000e-004**		**7.7900e-003**	**7.7900e-003**		**7.1700e-003**	**7.1700e-003**	**0.0000**	**17.4183**	**17.4183**	**5.6300e-003**	**0.0000**	**17.5366**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.8000e-004	4.5200e-003	8.2600e-003	2.0000e-005	5.4000e-004	8.0000e-005	6.2000e-004	1.5000e-004	7.0000e-005	2.3000e-004	0.0000	1.5972	1.5972	1.0000e-005	0.0000	1.5974
Worker	5.4000e-004	7.8000e-004	8.2300e-003	3.0000e-005	2.5000e-003	2.0000e-005	2.5200e-003	6.6000e-004	2.0000e-005	6.8000e-004	0.0000	1.9052	1.9052	8.0000e-005	0.0000	1.9069
Total	**1.1200e-003**	**5.3000e-003**	**0.0165**	**5.0000e-005**	**3.0400e-003**	**1.0000e-004**	**3.1400e-003**	**8.1000e-004**	**9.0000e-005**	**9.1000e-004**	**0.0000**	**3.5024**	**3.5024**	**9.0000e-005**	**0.0000**	**3.5044**

3.7 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.7800e-003	0.0166	0.0175	3.0000e-005		8.7000e-004	8.7000e-004		8.1000e-004	8.1000e-004	0.0000	2.3134	2.3134	6.7000e-004	0.0000	2.3275
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.7800e-003**	**0.0166**	**0.0175**	**3.0000e-005**		**8.7000e-004**	**8.7000e-004**		**8.1000e-004**	**8.1000e-004**	**0.0000**	**2.3134**	**2.3134**	**6.7000e-004**	**0.0000**	**2.3275**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	1.5000e-004	1.6300e-003	1.0000e-005	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3769	0.3769	2.0000e-005	0.0000	0.3772

Total	**1.1000e-004**	**1.5000e-004**	**1.6300e-003**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.3769**	**0.3769**	**2.0000e-005**	**0.0000**	**0.3772**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.7800e-003	0.0166	0.0175	3.0000e-005		8.7000e-004	8.7000e-004		8.1000e-004	8.1000e-004	0.0000	2.3134	2.3134	6.7000e-004	0.0000	2.3275
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.7800e-003**	**0.0166**	**0.0175**	**3.0000e-005**		**8.7000e-004**	**8.7000e-004**		**8.1000e-004**	**8.1000e-004**	**0.0000**	**2.3134**	**2.3134**	**6.7000e-004**	**0.0000**	**2.3275**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	1.5000e-004	1.6300e-003	1.0000e-005	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3769	0.3769	2.0000e-005	0.0000	0.3772
Total	**1.1000e-004**	**1.5000e-004**	**1.6300e-003**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.3769**	**0.3769**	**2.0000e-005**	**0.0000**	**0.3772**

3.8 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1483					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.5000e-004	3.8200e-003	4.5400e-003	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6392
Total	**0.1489**	**3.8200e-003**	**4.5400e-003**	**1.0000e-005**		**2.4000e-004**	**2.4000e-004**		**2.4000e-004**	**2.4000e-004**	**0.0000**	**0.6383**	**0.6383**	**4.0000e-005**	**0.0000**	**0.6392**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	3.0000e-005	2.7000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0628	0.0628	0.0000	0.0000	0.0629
Total	**2.0000e-005**	**3.0000e-005**	**2.7000e-004**	**0.0000**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0628**	**0.0628**	**0.0000**	**0.0000**	**0.0629**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Archit. Coating	0.1483					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.5000e-004	3.8200e-003	4.5400e-003	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6392
Total	**0.1489**	**3.8200e-003**	**4.5400e-003**	**1.0000e-005**		**2.4000e-004**	**2.4000e-004**		**2.4000e-004**	**2.4000e-004**	**0.0000**	**0.6383**	**0.6383**	**4.0000e-005**	**0.0000**	**0.6392**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	3.0000e-005	2.7000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0628	0.0628	0.0000	0.0000	0.0629
Total	**2.0000e-005**	**3.0000e-005**	**2.7000e-004**	**0.0000**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0628**	**0.0628**	**0.0000**	**0.0000**	**0.0629**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2899	0.6230	3.0749	0.0109	0.7821	0.0109	0.7930	0.2090	0.0101	0.2191	0.0000	733.4858	733.4858	0.0253	0.0000	734.0169
Unmitigated	0.2899	0.6230	3.0749	0.0109	0.7821	0.0109	0.7930	0.2090	0.0101	0.2191	0.0000	733.4858	733.4858	0.0253	0.0000	734.0169

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	879.68	359.36	38.72	2,069,584	2,069,584
Total	879.68	359.36	38.72	2,069,584	2,069,584

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.505043	0.056653	0.194832	0.151784	0.042126	0.005989	0.016072	0.016505	0.001461	0.002178	0.004464	0.000494	0.002401

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	128.6606	128.6606	5.9100e-003	1.2200e-003	129.1642
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	128.6606	128.6606	5.9100e-003	1.2200e-003	129.1642
NaturalGas Mitigated	2.7400e-003	0.0249	0.0209	1.5000e-004		1.8900e-003	1.8900e-003		1.8900e-003	1.8900e-003	0.0000	27.0832	27.0832	5.2000e-004	5.0000e-004	27.2480

NaturalGas Unmitigated	2.7400e-003	0.0249	0.0209	1.5000e-004		1.8900e-003	1.8900e-003		1.8900e-003	1.8900e-003	0.0000	27.0832	27.0832	5.2000e-004	5.0000e-004	27.2480

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Junior College (2Yr)	507520	2.7400e-003	0.0249	0.0209	1.5000e-004		1.8900e-003	1.8900e-003		1.8900e-003	1.8900e-003	0.0000	27.0832	27.0832	5.2000e-004	5.0000e-004	27.2480
Total		**2.7400e-003**	**0.0249**	**0.0209**	**1.5000e-004**		**1.8900e-003**	**1.8900e-003**		**1.8900e-003**	**1.8900e-003**	**0.0000**	**27.0832**	**27.0832**	**5.2000e-004**	**5.0000e-004**	**27.2480**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Junior College (2Yr)	507520	2.7400e-003	0.0249	0.0209	1.5000e-004		1.8900e-003	1.8900e-003		1.8900e-003	1.8900e-003	0.0000	27.0832	27.0832	5.2000e-004	5.0000e-004	27.2480
Total		**2.7400e-003**	**0.0249**	**0.0209**	**1.5000e-004**		**1.8900e-003**	**1.8900e-003**		**1.8900e-003**	**1.8900e-003**	**0.0000**	**27.0832**	**27.0832**	**5.2000e-004**	**5.0000e-004**	**27.2480**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	449600	128.6606	5.9100e-003	1.2200e-003	129.1642
Total		**128.6606**	**5.9100e-003**	**1.2200e-003**	**129.1642**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	449600	128.6606	5.9100e-003	1.2200e-003	129.1642
Total		**128.6606**	**5.9100e-003**	**1.2200e-003**	**129.1642**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Mitigated	0.1528	0.0000	4.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.9000e-004	7.9000e-004	0.0000	0.0000	8.4000e-004
Unmitigated	0.1528	0.0000	4.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.9000e-004	7.9000e-004	0.0000	0.0000	8.4000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0371					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1156					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.0000e-005	0.0000	4.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.9000e-004	7.9000e-004	0.0000	0.0000	8.4000e-004
Total	**0.1528**	**0.0000**	**4.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**7.9000e-004**	**7.9000e-004**	**0.0000**	**0.0000**	**8.4000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0371					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1156					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.0000e-005	0.0000	4.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.9000e-004	7.9000e-004	0.0000	0.0000	8.4000e-004

Total	**0.1528**	**0.0000**	**4.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**7.9000e-004**	**7.9000e-004**	**0.0000**	**0.0000**	**8.4000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	14.1516	0.0518	1.3400e-003	15.6526
Unmitigated	14.1516	0.0518	1.3400e-003	15.6534

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	1.56957 / 2.45497	14.1516	0.0518	1.3400e-003	15.6534
Total		**14.1516**	**0.0518**	**1.3400e-003**	**15.6534**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	1.56957 / 2.45497	14.1516	0.0518	1.3400e-003	15.6526
Total		**14.1516**	**0.0518**	**1.3400e-003**	**15.6526**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	8.4444	0.4991	0.0000	18.9245
Unmitigated	8.4444	0.4991	0.0000	18.9245

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e

Land Use	tons	MT/yr			
Junior College (2Yr)	41.6	8.4444	0.4991	0.0000	18.9245
Total		**8.4444**	**0.4991**	**0.0000**	**18.9245**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior College (2Yr)	41.6	8.4444	0.4991	0.0000	18.9245
Total		**8.4444**	**0.4991**	**0.0000**	**18.9245**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Phase 3 - Dance Building

Orange County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	32.00	1000sqft	0.73	32,000.00	0

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 2.2 **Precipitation Freq (Days)** 30

Climate Zone 8 **Operational Year** 2022

Utility Company Southern California Edison

CO2 Intensity (lb/MWhr) 630.89 **CH4 Intensity (lb/MWhr)** 0.029 **N2O Intensity (lb/MWhr)** 0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Modified

Off-road Equipment - modified

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Demolition -

Architectural Coating - SCAQMD Rule 1113

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value

tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblProjectCharacteristics	OperationalYear	2014	2022

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	1.0993	10.5533	10.9493	0.0238	3.4414	0.5259	3.9506	0.5641	0.4844	1.0484	0.0000	2,230.2347	2,230.2347	0.3610	0.0000	2,237.8149
2021	59.5542	8.2200	8.1344	0.0142	0.2012	0.4509	0.6274	0.0534	0.4148	0.4623	0.0000	1,322.9909	1,322.9909	0.3608	0.0000	1,330.5682
Total	**60.6535**	**18.7733**	**19.0837**	**0.0380**	**3.6426**	**0.9767**	**4.5781**	**0.6174**	**0.8992**	**1.5107**	**0.0000**	**3,553.2256**	**3,553.2256**	**0.7218**	**0.0000**	**3,568.3831**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	1.0993	10.5533	10.9493	0.0238	1.5613	0.5259	2.0705	0.2794	0.4844	0.7638	0.0000	2,230.2347	2,230.2347	0.3610	0.0000	2,237.8149

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
2021	59.5542	8.2200	8.1344	0.0142	0.2012	0.4509	0.6274	0.0534	0.4148	0.4623	0.0000	1,322.9909	1,322.9909	0.3608	0.0000	1,330.5682
Total	**60.6535**	**18.7733**	**19.0837**	**0.0380**	**1.7625**	**0.9767**	**2.6980**	**0.3328**	**0.8992**	**1.2260**	**0.0000**	**3,553.2256**	**3,553.2256**	**0.7218**	**0.0000**	**3,568.3831**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**51.61**	**0.00**	**41.07**	**46.10**	**0.00**	**18.84**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.8371	3.0000e-005	3.2700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.0000e-003	7.0000e-003	2.0000e-005		7.3900e-003
Energy	0.0150	0.1363	0.1145	8.2000e-004		0.0104	0.0104		0.0104	0.0104		163.5842	163.5842	3.1400e-003	3.0000e-003	164.5798
Mobile	2.0575	4.0808	21.6841	0.0793	5.6160	0.0772	5.6932	1.4987	0.0713	1.5699		5,892.6617	5,892.6617	0.1968		5,896.7953
Total	**2.9096**	**4.2172**	**21.8019**	**0.0801**	**5.6160**	**0.0875**	**5.7035**	**1.4987**	**0.0816**	**1.5803**		**6,056.2529**	**6,056.2529**	**0.2000**	**3.0000e-003**	**6,061.3824**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.8371	3.0000e-005	3.2700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.0000e-003	7.0000e-003	2.0000e-005		7.3900e-003
Energy	0.0150	0.1363	0.1145	8.2000e-004		0.0104	0.0104		0.0104	0.0104		163.5842	163.5842	3.1400e-003	3.0000e-003	164.5798

Mobile	2.0575	4.0808	21.6841	0.0793	5.6160	0.0772	5.6932	1.4987	0.0713	1.5699		5,892.6617	5,892.6617	0.1968		5,896.7953
Total	**2.9096**	**4.2172**	**21.8019**	**0.0801**	**5.6160**	**0.0875**	**5.7035**	**1.4987**	**0.0816**	**1.5803**		**6,056.2529**	**6,056.2529**	**0.2000**	**3.0000e-003**	**6,061.3824**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2020	9/14/2020	5	10	
2	Site Preparation	Site Preparation	9/15/2020	9/15/2020	5	1	
3	Grading	Grading	9/16/2020	9/17/2020	5	2	
4	Trenching	Trenching	9/18/2020	10/1/2020	5	10	
5	Building Construction	Building Construction	10/2/2020	2/18/2021	5	100	
6	Paving	Paving	2/19/2021	2/25/2021	5	5	
7	Architectural Coating	Architectural Coating	2/26/2021	3/4/2021	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 48,000; Non-Residential Outdoor: 16,000 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37

Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	226	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	125	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Trenching	Plate Compactors	1	8.00	8	0.43
Trenching	Trenchers	1	8.00	80	0.50
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	142.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	13.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Clean Paved Roads

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.0821	0.0000	3.0821	0.4667	0.0000	0.4667			0.0000			0.0000
Off-Road	0.8527	7.7248	8.0981	0.0120		0.4561	0.4561		0.4355	0.4355		1,151.7011	1,151.7011	0.2184		1,156.2863
Total	**0.8527**	**7.7248**	**8.0981**	**0.0120**	**3.0821**	**0.4561**	**3.5382**	**0.4667**	**0.4355**	**0.9021**		**1,151.7011**	**1,151.7011**	**0.2184**		**1,156.2863**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2211	2.7963	2.4492	0.0104	0.2475	0.0524	0.2999	0.0678	0.0482	0.1160		980.8856	980.8856	7.6200e-003		981.0457
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0255	0.0321	0.4020	1.3600e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		97.6480	97.6480	4.2000e-003		97.7363
Total	**0.2466**	**2.8285**	**2.8512**	**0.0118**	**0.3593**	**0.0532**	**0.4124**	**0.0974**	**0.0489**	**0.1463**		**1,078.5336**	**1,078.5336**	**0.0118**		**1,078.7819**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.2020	0.0000	1.2020	0.1820	0.0000	0.1820			0.0000			0.0000
Off-Road	0.8527	7.7248	8.0981	0.0120		0.4561	0.4561		0.4355	0.4355	0.0000	1,151.7011	1,151.7011	0.2184		1,156.2863
Total	**0.8527**	**7.7248**	**8.0981**	**0.0120**	**1.2020**	**0.4561**	**1.6581**	**0.1820**	**0.4355**	**0.6175**	**0.0000**	**1,151.7011**	**1,151.7011**	**0.2184**		**1,156.2863**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2211	2.7963	2.4492	0.0104	0.2475	0.0524	0.2999	0.0678	0.0482	0.1160		980.8856	980.8856	7.6200e-003		981.0457
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0255	0.0321	0.4020	1.3600e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		97.6480	97.6480	4.2000e-003		97.7363
Total	**0.2466**	**2.8285**	**2.8512**	**0.0118**	**0.3593**	**0.0532**	**0.4124**	**0.0974**	**0.0489**	**0.1463**		**1,078.5336**	**1,078.5336**	**0.0118**		**1,078.7819**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.9225	9.0637	6.8357	9.3100e-003		0.5213	0.5213		0.4796	0.4796		902.2494	902.2494	0.2918		908.3773
Total	**0.9225**	**9.0637**	**6.8357**	**9.3100e-003**	**0.5303**	**0.5213**	**1.0516**	**0.0573**	**0.4796**	**0.5369**		**902.2494**	**902.2494**	**0.2918**		**908.3773**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0128	0.0161	0.2010	6.8000e-004	0.0559	3.8000e-004	0.0563	0.0148	3.5000e-004	0.0152		48.8240	48.8240	2.1000e-003		48.8681
Total	**0.0128**	**0.0161**	**0.2010**	**6.8000e-004**	**0.0559**	**3.8000e-004**	**0.0563**	**0.0148**	**3.5000e-004**	**0.0152**		**48.8240**	**48.8240**	**2.1000e-003**		**48.8681**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2068	0.0000	0.2068	0.0223	0.0000	0.0223			0.0000			0.0000
Off-Road	0.9225	9.0637	6.8357	9.3100e-003		0.5213	0.5213		0.4796	0.4796	0.0000	902.2494	902.2494	0.2918		908.3773
Total	**0.9225**	**9.0637**	**6.8357**	**9.3100e-003**	**0.2068**	**0.5213**	**0.7281**	**0.0223**	**0.4796**	**0.5019**	**0.0000**	**902.2494**	**902.2494**	**0.2918**		**908.3773**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0128	0.0161	0.2010	6.8000e-004	0.0559	3.8000e-004	0.0563	0.0148	3.5000e-004	0.0152		48.8240	48.8240	2.1000e-003		48.8681
Total	**0.0128**	**0.0161**	**0.2010**	**6.8000e-004**	**0.0559**	**3.8000e-004**	**0.0563**	**0.0148**	**3.5000e-004**	**0.0152**		**48.8240**	**48.8240**	**2.1000e-003**		**48.8681**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	0.8527	7.7248	8.0981	0.0120		0.4561	0.4561		0.4355	0.4355		1,151.7011	1,151.7011	0.2184		1,156.2863
Total	**0.8527**	**7.7248**	**8.0981**	**0.0120**	**0.7528**	**0.4561**	**1.2089**	**0.4138**	**0.4355**	**0.8492**		**1,151.7011**	**1,151.7011**	**0.2184**		**1,156.2863**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0255	0.0321	0.4020	1.3600e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		97.6480	97.6480	4.2000e-003		97.7363
Total	**0.0255**	**0.0321**	**0.4020**	**1.3600e-003**	**0.1118**	**7.6000e-004**	**0.1125**	**0.0296**	**7.1000e-004**	**0.0304**		**97.6480**	**97.6480**	**4.2000e-003**		**97.7363**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2936	0.0000	0.2936	0.1614	0.0000	0.1614			0.0000			0.0000
Off-Road	0.8527	7.7248	8.0981	0.0120		0.4561	0.4561		0.4355	0.4355	0.0000	1,151.7011	1,151.7011	0.2184		1,156.2863
Total	**0.8527**	**7.7248**	**8.0981**	**0.0120**	**0.2936**	**0.4561**	**0.7497**	**0.1614**	**0.4355**	**0.5968**	**0.0000**	**1,151.7011**	**1,151.7011**	**0.2184**		**1,156.2863**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0255	0.0321	0.4020	1.3600e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		97.6480	97.6480	4.2000e-003		97.7363

Total	0.0255	0.0321	0.4020	1.3600e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		97.6480	97.6480	4.2000e-003		97.7363

3.5 Trenching - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6814	6.2613	5.1984	7.0500e-003		0.4353	0.4353		0.4013	0.4013		670.8964	670.8964	0.2094		675.2940
Total	**0.6814**	**6.2613**	**5.1984**	**7.0500e-003**		**0.4353**	**0.4353**		**0.4013**	**0.4013**		**670.8964**	**670.8964**	**0.2094**		**675.2940**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0204	0.0257	0.3216	1.0900e-003	0.0894	6.1000e-004	0.0900	0.0237	5.7000e-004	0.0243		78.1184	78.1184	3.3600e-003		78.1890
Total	**0.0204**	**0.0257**	**0.3216**	**1.0900e-003**	**0.0894**	**6.1000e-004**	**0.0900**	**0.0237**	**5.7000e-004**	**0.0243**		**78.1184**	**78.1184**	**3.3600e-003**		**78.1890**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6814	6.2613	5.1984	7.0500e-003		0.4353	0.4353		0.4013	0.4013	0.0000	670.8964	670.8964	0.2094		675.2940
Total	**0.6814**	**6.2613**	**5.1984**	**7.0500e-003**		**0.4353**	**0.4353**		**0.4013**	**0.4013**	**0.0000**	**670.8964**	**670.8964**	**0.2094**		**675.2940**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0204	0.0257	0.3216	1.0900e-003	0.0894	6.1000e-004	0.0900	0.0237	5.7000e-004	0.0243		78.1184	78.1184	3.3600e-003		78.1890
Total	**0.0204**	**0.0257**	**0.3216**	**1.0900e-003**	**0.0894**	**6.1000e-004**	**0.0900**	**0.0237**	**5.7000e-004**	**0.0243**		**78.1184**	**78.1184**	**3.3600e-003**		**78.1890**

3.6 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.8568	8.7940	7.3646	0.0113		0.5200	0.5200		0.4784	0.4784		1,096.9306	1,096.9306	0.3548		1,104.3807
Total	**0.8568**	**8.7940**	**7.3646**	**0.0113**		**0.5200**	**0.5200**		**0.4784**	**0.4784**		**1,096.9306**	**1,096.9306**	**0.3548**		**1,104.3807**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0328	0.2925	0.4090	1.0800e-003	0.0313	4.9100e-003	0.0362	8.9000e-003	4.5200e-003	0.0134		101.0502	101.0502	7.3000e-004		101.0655
Worker	0.0332	0.0418	0.5226	1.7700e-003	0.1453	9.9000e-004	0.1463	0.0385	9.2000e-004	0.0395		126.9424	126.9424	5.4600e-003		127.0572
Total	**0.0659**	**0.3343**	**0.9316**	**2.8500e-003**	**0.1766**	**5.9000e-003**	**0.1825**	**0.0474**	**5.4400e-003**	**0.0529**		**227.9926**	**227.9926**	**6.1900e-003**		**228.1227**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8568	8.7940	7.3646	0.0113		0.5200	0.5200		0.4784	0.4784	0.0000	1,096.9306	1,096.9306	0.3548		1,104.3807
Total	**0.8568**	**8.7940**	**7.3646**	**0.0113**		**0.5200**	**0.5200**		**0.4784**	**0.4784**	**0.0000**	**1,096.9306**	**1,096.9306**	**0.3548**		**1,104.3807**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0328	0.2925	0.4090	1.0800e-003	0.0313	4.9100e-003	0.0362	8.9000e-003	4.5200e-003	0.0134		101.0502	101.0502	7.3000e-004		101.0655
Worker	0.0332	0.0418	0.5226	1.7700e-003	0.1453	9.9000e-004	0.1463	0.0385	9.2000e-004	0.0395		126.9424	126.9424	5.4600e-003		127.0572
Total	**0.0659**	**0.3343**	**0.9316**	**2.8500e-003**	**0.1766**	**5.9000e-003**	**0.1825**	**0.0474**	**5.4400e-003**	**0.0529**		**227.9926**	**227.9926**	**6.1900e-003**		**228.1227**

3.6 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7705	7.9325	7.2422	0.0113		0.4454	0.4454		0.4098	0.4098		1,097.1688	1,097.1688	0.3549		1,104.6206
Total	**0.7705**	**7.9325**	**7.2422**	**0.0113**		**0.4454**	**0.4454**		**0.4098**	**0.4098**		**1,097.1688**	**1,097.1688**	**0.3549**		**1,104.6206**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0317	0.2483	0.3983	1.0800e-003	0.0313	4.4700e-003	0.0357	8.9000e-003	4.1100e-003	0.0130		100.9659	100.9659	7.4000e-004		100.9813
Worker	0.0316	0.0393	0.4939	1.7700e-003	0.1453	1.0000e-003	0.1463	0.0385	9.3000e-004	0.0395		124.8562	124.8562	5.2400e-003		124.9663
Total	**0.0633**	**0.2875**	**0.8922**	**2.8500e-003**	**0.1766**	**5.4700e-003**	**0.1820**	**0.0474**	**5.0400e-003**	**0.0525**		**225.8221**	**225.8221**	**5.9800e-003**		**225.9476**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7705	7.9325	7.2422	0.0113		0.4454	0.4454		0.4098	0.4098	0.0000	1,097.1688	1,097.1688	0.3549		1,104.6206
Total	**0.7705**	**7.9325**	**7.2422**	**0.0113**		**0.4454**	**0.4454**		**0.4098**	**0.4098**	**0.0000**	**1,097.1688**	**1,097.1688**	**0.3549**		**1,104.6206**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0317	0.2483	0.3983	1.0800e-003	0.0313	4.4700e-003	0.0357	8.9000e-003	4.1100e-003	0.0130		100.9659	100.9659	7.4000e-004		100.9813
Worker	0.0316	0.0393	0.4939	1.7700e-003	0.1453	1.0000e-003	0.1463	0.0385	9.3000e-004	0.0395		124.8562	124.8562	5.2400e-003		124.9663

Total	**0.0633**	**0.2875**	**0.8922**	**2.8500e-003**	**0.1766**	**5.4700e-003**	**0.1820**	**0.0474**	**5.0400e-003**	**0.0525**		**225.8221**	**225.8221**	**5.9800e-003**		**225.9476**

3.7 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7131	6.6304	6.9921	0.0111		0.3492	0.3492		0.3247	0.3247		1,020.0280	1,020.0280	0.2966		1,026.2569
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7131**	**6.6304**	**6.9921**	**0.0111**		**0.3492**	**0.3492**		**0.3247**	**0.3247**		**1,020.0280**	**1,020.0280**	**0.2966**		**1,026.2569**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0437	0.0544	0.6838	2.4600e-003	0.2012	1.3900e-003	0.2026	0.0534	1.2900e-003	0.0547		172.8779	172.8779	7.2600e-003		173.0302
Total	**0.0437**	**0.0544**	**0.6838**	**2.4600e-003**	**0.2012**	**1.3900e-003**	**0.2026**	**0.0534**	**1.2900e-003**	**0.0547**		**172.8779**	**172.8779**	**7.2600e-003**		**173.0302**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7131	6.6304	6.9921	0.0111		0.3492	0.3492		0.3247	0.3247	0.0000	1,020.0280	1,020.0280	0.2966		1,026.2569
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7131**	**6.6304**	**6.9921**	**0.0111**		**0.3492**	**0.3492**		**0.3247**	**0.3247**	**0.0000**	**1,020.0280**	**1,020.0280**	**0.2966**		**1,026.2569**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0437	0.0544	0.6838	2.4600e-003	0.2012	1.3900e-003	0.2026	0.0534	1.2900e-003	0.0547		172.8779	172.8779	7.2600e-003		173.0302
Total	**0.0437**	**0.0544**	**0.6838**	**2.4600e-003**	**0.2012**	**1.3900e-003**	**0.2026**	**0.0534**	**1.2900e-003**	**0.0547**		**172.8779**	**172.8779**	**7.2600e-003**		**173.0302**

3.8 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Archit. Coating	59.3280					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.8537
Total	**59.5469**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.8537**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	7.2800e-003	9.0600e-003	0.1140	4.1000e-004	0.0335	2.3000e-004	0.0338	8.8900e-003	2.1000e-004	9.1100e-003		28.8130	28.8130	1.2100e-003		28.8384
Total	**7.2800e-003**	**9.0600e-003**	**0.1140**	**4.1000e-004**	**0.0335**	**2.3000e-004**	**0.0338**	**8.8900e-003**	**2.1000e-004**	**9.1100e-003**		**28.8130**	**28.8130**	**1.2100e-003**		**28.8384**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	59.3280					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.8537
Total	**59.5469**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.8537**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	7.2800e-003	9.0600e-003	0.1140	4.1000e-004	0.0335	2.3000e-004	0.0338	8.8900e-003	2.1000e-004	9.1100e-003		28.8130	28.8130	1.2100e-003		28.8384
Total	**7.2800e-003**	**9.0600e-003**	**0.1140**	**4.1000e-004**	**0.0335**	**2.3000e-004**	**0.0338**	**8.8900e-003**	**2.1000e-004**	**9.1100e-003**		**28.8130**	**28.8130**	**1.2100e-003**		**28.8384**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.0575	4.0808	21.6841	0.0793	5.6160	0.0772	5.6932	1.4987	0.0713	1.5699		5,892.6617	5,892.6617	0.1968		5,896.7953
Unmitigated	2.0575	4.0808	21.6841	0.0793	5.6160	0.0772	5.6932	1.4987	0.0713	1.5699		5,892.6617	5,892.6617	0.1968		5,896.7953

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT

Junior College (2Yr)	879.68	359.36	38.72	2,069,584	2,069,584
Total	879.68	359.36	38.72	2,069,584	2,069,584

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.505043	0.056653	0.194832	0.151784	0.042126	0.005989	0.016072	0.016505	0.001461	0.002178	0.004464	0.000494	0.002401

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0150	0.1363	0.1145	8.2000e-004		0.0104	0.0104		0.0104	0.0104		163.5842	163.5842	3.1400e-003	3.0000e-003	164.5798
NaturalGas Unmitigated	0.0150	0.1363	0.1145	8.2000e-004		0.0104	0.0104		0.0104	0.0104		163.5842	163.5842	3.1400e-003	3.0000e-003	164.5798

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	1390.47	0.0150	0.1363	0.1145	8.2000e-004		0.0104	0.0104		0.0104	0.0104		163.5842	163.5842	3.1400e-003	3.0000e-003	164.5798
Total		**0.0150**	**0.1363**	**0.1145**	**8.2000e-004**		**0.0104**	**0.0104**		**0.0104**	**0.0104**		**163.5842**	**163.5842**	**3.1400e-003**	**3.0000e-003**	**164.5798**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	1.39047	0.0150	0.1363	0.1145	8.2000e-004		0.0104	0.0104		0.0104	0.0104		163.5842	163.5842	3.1400e-003	3.0000e-003	164.5798
Total		**0.0150**	**0.1363**	**0.1145**	**8.2000e-004**		**0.0104**	**0.0104**		**0.0104**	**0.0104**		**163.5842**	**163.5842**	**3.1400e-003**	**3.0000e-003**	**164.5798**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.8371	3.0000e-005	3.2700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.0000e-003	7.0000e-003	2.0000e-005		7.3900e-003

Unmitigated	0.8371	3.0000e-005	3.2700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.0000e-003	7.0000e-003	2.0000e-005		7.3900e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2032					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.6336					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.0000e-004	3.0000e-005	3.2700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.0000e-003	7.0000e-003	2.0000e-005		7.3900e-003
Total	**0.8371**	**3.0000e-005**	**3.2700e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**7.0000e-003**	**7.0000e-003**	**2.0000e-005**		**7.3900e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2032					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.6336					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.0000e-004	3.0000e-005	3.2700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.0000e-003	7.0000e-003	2.0000e-005		7.3900e-003
Total	**0.8371**	**3.0000e-005**	**3.2700e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**7.0000e-003**	**7.0000e-003**	**2.0000e-005**		**7.3900e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Phase 3 - Dance Building

Orange County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	32.00	1000sqft	0.73	32,000.00	0

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 2.2 **Precipitation Freq (Days)** 30

Climate Zone 8 **Operational Year** 2022

Utility Company Southern California Edison

CO2 Intensity (lb/MWhr) 630.89 **CH4 Intensity (lb/MWhr)** 0.029 **N2O Intensity (lb/MWhr)** 0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Modified

Off-road Equipment - modified

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Demolition -

Architectural Coating - SCAQMD Rule 1113

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value

tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblProjectCharacteristics	OperationalYear	2014	2022

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	1.1109	10.6512	11.3503	0.0237	3.4414	0.5259	3.9507	0.5641	0.4845	1.0486	0.0000	2,222.7063	2,222.7063	0.3610	0.0000	2,230.2871
2021	59.5545	8.2292	8.1993	0.0141	0.2012	0.4509	0.6275	0.0534	0.4148	0.4623	0.0000	1,315.4920	1,315.4920	0.3609	0.0000	1,323.0698
Total	**60.6655**	**18.8804**	**19.5495**	**0.0378**	**3.6426**	**0.9768**	**4.5782**	**0.6174**	**0.8993**	**1.5108**	**0.0000**	**3,538.1982**	**3,538.1982**	**0.7218**	**0.0000**	**3,553.3568**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	1.1109	10.6512	11.3503	0.0237	1.5613	0.5259	2.0706	0.2794	0.4845	0.7639	0.0000	2,222.7063	2,222.7063	0.3610	0.0000	2,230.2871

2021	59.5545	8.2292	8.1993	0.0141	0.2012	0.4509	0.6275	0.0534	0.4148	0.4623	0.0000	1,315.4920	1,315.4920	0.3609	0.0000	1,323.0698
Total	**60.6655**	**18.8804**	**19.5495**	**0.0378**	**1.7625**	**0.9768**	**2.6981**	**0.3328**	**0.8993**	**1.2262**	**0.0000**	**3,538.1982**	**3,538.1982**	**0.7218**	**0.0000**	**3,553.3568**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**51.61**	**0.00**	**41.07**	**46.10**	**0.00**	**18.84**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.8371	3.0000e-005	3.2700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.0000e-003	7.0000e-003	2.0000e-005		7.3900e-003
Energy	0.0150	0.1363	0.1145	8.2000e-004		0.0104	0.0104		0.0104	0.0104		163.5842	163.5842	3.1400e-003	3.0000e-003	164.5798
Mobile	2.1680	4.3113	21.5885	0.0758	5.6160	0.0774	5.6934	1.4987	0.0715	1.5701		5,640.4607	5,640.4607	0.1970		5,644.5979
Total	**3.0201**	**4.4477**	**21.7063**	**0.0766**	**5.6160**	**0.0877**	**5.7037**	**1.4987**	**0.0818**	**1.5805**		**5,804.0520**	**5,804.0520**	**0.2002**	**3.0000e-003**	**5,809.1850**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.8371	3.0000e-005	3.2700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.0000e-003	7.0000e-003	2.0000e-005		7.3900e-003
Energy	0.0150	0.1363	0.1145	8.2000e-004		0.0104	0.0104		0.0104	0.0104		163.5842	163.5842	3.1400e-003	3.0000e-003	164.5798

Mobile	2.1680	4.3113	21.5885	0.0758	5.6160	0.0774	5.6934	1.4987	0.0715	1.5701		5,640.4607	5,640.4607	0.1970		5,644.5979
Total	**3.0201**	**4.4477**	**21.7063**	**0.0766**	**5.6160**	**0.0877**	**5.7037**	**1.4987**	**0.0818**	**1.5805**		**5,804.0520**	**5,804.0520**	**0.2002**	**3.0000e-003**	**5,809.1850**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2020	9/14/2020	5	10	
2	Site Preparation	Site Preparation	9/15/2020	9/15/2020	5	1	
3	Grading	Grading	9/16/2020	9/17/2020	5	2	
4	Trenching	Trenching	9/18/2020	10/1/2020	5	10	
5	Building Construction	Building Construction	10/2/2020	2/18/2021	5	100	
6	Paving	Paving	2/19/2021	2/25/2021	5	5	
7	Architectural Coating	Architectural Coating	2/26/2021	3/4/2021	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 48,000; Non-Residential Outdoor: 16,000 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37

Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	226	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	125	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Trenching	Plate Compactors	1	8.00	8	0.43
Trenching	Trenchers	1	8.00	80	0.50
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	142.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	13.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Clean Paved Roads

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.0821	0.0000	3.0821	0.4667	0.0000	0.4667			0.0000			0.0000
Off-Road	0.8527	7.7248	8.0981	0.0120		0.4561	0.4561		0.4355	0.4355		1,151.7011	1,151.7011	0.2184		1,156.2863
Total	**0.8527**	**7.7248**	**8.0981**	**0.0120**	**3.0821**	**0.4561**	**3.5382**	**0.4667**	**0.4355**	**0.9021**		**1,151.7011**	**1,151.7011**	**0.2184**		**1,156.2863**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2314	2.8911	2.8774	0.0104	0.2475	0.0525	0.3000	0.0678	0.0483	0.1161		978.5464	978.5464	7.7300e-003		978.7089
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0268	0.0353	0.3748	1.2900e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		92.4588	92.4588	4.2000e-003		92.5470
Total	**0.2582**	**2.9264**	**3.2522**	**0.0117**	**0.3593**	**0.0533**	**0.4125**	**0.0974**	**0.0490**	**0.1464**		**1,071.0052**	**1,071.0052**	**0.0119**		**1,071.2559**

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Fugitive Dust					1.2020	0.0000	1.2020	0.1820	0.0000	0.1820			0.0000			0.0000
Off-Road	0.8527	7.7248	8.0981	0.0120		0.4561	0.4561		0.4355	0.4355	0.0000	1,151.7011	1,151.7011	0.2184		1,156.2863
Total	**0.8527**	**7.7248**	**8.0981**	**0.0120**	**1.2020**	**0.4561**	**1.6581**	**0.1820**	**0.4355**	**0.6175**	**0.0000**	**1,151.7011**	**1,151.7011**	**0.2184**		**1,156.2863**

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Hauling	0.2314	2.8911	2.8774	0.0104	0.2475	0.0525	0.3000	0.0678	0.0483	0.1161		978.5464	978.5464	7.7300e-003		978.7089
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0268	0.0353	0.3748	1.2900e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		92.4588	92.4588	4.2000e-003		92.5470
Total	**0.2582**	**2.9264**	**3.2522**	**0.0117**	**0.3593**	**0.0533**	**0.4125**	**0.0974**	**0.0490**	**0.1464**		**1,071.0052**	**1,071.0052**	**0.0119**		**1,071.2559**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					

Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.9225	9.0637	6.8357	9.3100e-003		0.5213	0.5213		0.4796	0.4796		902.2494	902.2494	0.2918		908.3773
Total	**0.9225**	**9.0637**	**6.8357**	**9.3100e-003**	**0.5303**	**0.5213**	**1.0516**	**0.0573**	**0.4796**	**0.5369**		**902.2494**	**902.2494**	**0.2918**		**908.3773**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0134	0.0177	0.1874	6.4000e-004	0.0559	3.8000e-004	0.0563	0.0148	3.5000e-004	0.0152		46.2294	46.2294	2.1000e-003		46.2735
Total	**0.0134**	**0.0177**	**0.1874**	**6.4000e-004**	**0.0559**	**3.8000e-004**	**0.0563**	**0.0148**	**3.5000e-004**	**0.0152**		**46.2294**	**46.2294**	**2.1000e-003**		**46.2735**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2068	0.0000	0.2068	0.0223	0.0000	0.0223			0.0000			0.0000
Off-Road	0.9225	9.0637	6.8357	9.3100e-003		0.5213	0.5213		0.4796	0.4796	0.0000	902.2494	902.2494	0.2918		908.3773
Total	**0.9225**	**9.0637**	**6.8357**	**9.3100e-003**	**0.2068**	**0.5213**	**0.7281**	**0.0223**	**0.4796**	**0.5019**	**0.0000**	**902.2494**	**902.2494**	**0.2918**		**908.3773**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0134	0.0177	0.1874	6.4000e-004	0.0559	3.8000e-004	0.0563	0.0148	3.5000e-004	0.0152		46.2294	46.2294	2.1000e-003		46.2735
Total	**0.0134**	**0.0177**	**0.1874**	**6.4000e-004**	**0.0559**	**3.8000e-004**	**0.0563**	**0.0148**	**3.5000e-004**	**0.0152**		**46.2294**	**46.2294**	**2.1000e-003**		**46.2735**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	0.8527	7.7248	8.0981	0.0120		0.4561	0.4561		0.4355	0.4355		1,151.7011	1,151.7011	0.2184		1,156.2863
Total	**0.8527**	**7.7248**	**8.0981**	**0.0120**	**0.7528**	**0.4561**	**1.2089**	**0.4138**	**0.4355**	**0.8492**		**1,151.7011**	**1,151.7011**	**0.2184**		**1,156.2863**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0268	0.0353	0.3748	1.2900e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		92.4588	92.4588	4.2000e-003		92.5470
Total	**0.0268**	**0.0353**	**0.3748**	**1.2900e-003**	**0.1118**	**7.6000e-004**	**0.1125**	**0.0296**	**7.1000e-004**	**0.0304**		**92.4588**	**92.4588**	**4.2000e-003**		**92.5470**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2936	0.0000	0.2936	0.1614	0.0000	0.1614			0.0000			0.0000
Off-Road	0.8527	7.7248	8.0981	0.0120		0.4561	0.4561		0.4355	0.4355	0.0000	1,151.7011	1,151.7011	0.2184		1,156.2863
Total	**0.8527**	**7.7248**	**8.0981**	**0.0120**	**0.2936**	**0.4561**	**0.7497**	**0.1614**	**0.4355**	**0.5968**	**0.0000**	**1,151.7011**	**1,151.7011**	**0.2184**		**1,156.2863**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0268	0.0353	0.3748	1.2900e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		92.4588	92.4588	4.2000e-003		92.5470

Total	**0.0268**	**0.0353**	**0.3748**	**1.2900e-003**	**0.1118**	**7.6000e-004**	**0.1125**	**0.0296**	**7.1000e-004**	**0.0304**		**92.4588**	**92.4588**	**4.2000e-003**		**92.5470**

3.5 Trenching - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6814	6.2613	5.1984	7.0500e-003		0.4353	0.4353		0.4013	0.4013		670.8964	670.8964	0.2094		675.2940
Total	**0.6814**	**6.2613**	**5.1984**	**7.0500e-003**		**0.4353**	**0.4353**		**0.4013**	**0.4013**		**670.8964**	**670.8964**	**0.2094**		**675.2940**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0214	0.0283	0.2999	1.0300e-003	0.0894	6.1000e-004	0.0900	0.0237	5.7000e-004	0.0243		73.9670	73.9670	3.3600e-003		74.0376
Total	**0.0214**	**0.0283**	**0.2999**	**1.0300e-003**	**0.0894**	**6.1000e-004**	**0.0900**	**0.0237**	**5.7000e-004**	**0.0243**		**73.9670**	**73.9670**	**3.3600e-003**		**74.0376**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6814	6.2613	5.1984	7.0500e-003		0.4353	0.4353		0.4013	0.4013	0.0000	670.8964	670.8964	0.2094		675.2940
Total	**0.6814**	**6.2613**	**5.1984**	**7.0500e-003**		**0.4353**	**0.4353**		**0.4013**	**0.4013**	**0.0000**	**670.8964**	**670.8964**	**0.2094**		**675.2940**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0214	0.0283	0.2999	1.0300e-003	0.0894	6.1000e-004	0.0900	0.0237	5.7000e-004	0.0243		73.9670	73.9670	3.3600e-003		74.0376
Total	**0.0214**	**0.0283**	**0.2999**	**1.0300e-003**	**0.0894**	**6.1000e-004**	**0.0900**	**0.0237**	**5.7000e-004**	**0.0243**		**73.9670**	**73.9670**	**3.3600e-003**		**74.0376**

3.6 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Off-Road	0.8568	8.7940	7.3646	0.0113		0.5200	0.5200		0.4784	0.4784		1,096.9306	1,096.9306	0.3548		1,104.3807
Total	**0.8568**	**8.7940**	**7.3646**	**0.0113**		**0.5200**	**0.5200**		**0.4784**	**0.4784**		**1,096.9306**	**1,096.9306**	**0.3548**		**1,104.3807**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0357	0.2988	0.5093	1.0700e-003	0.0313	4.9600e-003	0.0362	8.9000e-003	4.5600e-003	0.0135		100.1924	100.1924	7.6000e-004		100.2083
Worker	0.0348	0.0459	0.4873	1.6800e-003	0.1453	9.9000e-004	0.1463	0.0385	9.2000e-004	0.0395		120.1964	120.1964	5.4600e-003		120.3111
Total	**0.0705**	**0.3447**	**0.9965**	**2.7500e-003**	**0.1766**	**5.9500e-003**	**0.1825**	**0.0474**	**5.4800e-003**	**0.0529**		**220.3888**	**220.3888**	**6.2200e-003**		**220.5194**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8568	8.7940	7.3646	0.0113		0.5200	0.5200		0.4784	0.4784	0.0000	1,096.9306	1,096.9306	0.3548		1,104.3807
Total	**0.8568**	**8.7940**	**7.3646**	**0.0113**		**0.5200**	**0.5200**		**0.4784**	**0.4784**	**0.0000**	**1,096.9306**	**1,096.9306**	**0.3548**		**1,104.3807**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0357	0.2988	0.5093	1.0700e-003	0.0313	4.9600e-003	0.0362	8.9000e-003	4.5600e-003	0.0135		100.1924	100.1924	7.6000e-004		100.2083
Worker	0.0348	0.0459	0.4873	1.6800e-003	0.1453	9.9000e-004	0.1463	0.0385	9.2000e-004	0.0395		120.1964	120.1964	5.4600e-003		120.3111
Total	**0.0705**	**0.3447**	**0.9965**	**2.7500e-003**	**0.1766**	**5.9500e-003**	**0.1825**	**0.0474**	**5.4800e-003**	**0.0529**		**220.3888**	**220.3888**	**6.2200e-003**		**220.5194**

3.6 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7705	7.9325	7.2422	0.0113		0.4454	0.4454		0.4098	0.4098		1,097.1688	1,097.1688	0.3549		1,104.6206
Total	**0.7705**	**7.9325**	**7.2422**	**0.0113**		**0.4454**	**0.4454**		**0.4098**	**0.4098**		**1,097.1688**	**1,097.1688**	**0.3549**		**1,104.6206**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0345	0.2536	0.4973	1.0700e-003	0.0313	4.5000e-003	0.0358	8.9000e-003	4.1400e-003	0.0131		100.1080	100.1080	7.6000e-004		100.1240
Worker	0.0331	0.0431	0.4597	1.6800e-003	0.1453	1.0000e-003	0.1463	0.0385	9.3000e-004	0.0395		118.2152	118.2152	5.2400e-003		118.3252
Total	**0.0676**	**0.2967**	**0.9570**	**2.7500e-003**	**0.1766**	**5.5000e-003**	**0.1821**	**0.0474**	**5.0700e-003**	**0.0525**		**218.3231**	**218.3231**	**6.0000e-003**		**218.4492**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7705	7.9325	7.2422	0.0113		0.4454	0.4454		0.4098	0.4098	0.0000	1,097.1688	1,097.1688	0.3549		1,104.6206
Total	**0.7705**	**7.9325**	**7.2422**	**0.0113**		**0.4454**	**0.4454**		**0.4098**	**0.4098**	**0.0000**	**1,097.1688**	**1,097.1688**	**0.3549**		**1,104.6206**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0345	0.2536	0.4973	1.0700e-003	0.0313	4.5000e-003	0.0358	8.9000e-003	4.1400e-003	0.0131		100.1080	100.1080	7.6000e-004		100.1240
Worker	0.0331	0.0431	0.4597	1.6800e-003	0.1453	1.0000e-003	0.1463	0.0385	9.3000e-004	0.0395		118.2152	118.2152	5.2400e-003		118.3252

Total	**0.0676**	**0.2967**	**0.9570**	**2.7500e-003**	**0.1766**	**5.5000e-003**	**0.1821**	**0.0474**	**5.0700e-003**	**0.0525**		**218.3231**	**218.3231**	**6.0000e-003**		**218.4492**

3.7 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7131	6.6304	6.9921	0.0111		0.3492	0.3492		0.3247	0.3247		1,020.0280	1,020.0280	0.2966		1,026.2569
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7131**	**6.6304**	**6.9921**	**0.0111**		**0.3492**	**0.3492**		**0.3247**	**0.3247**		**1,020.0280**	**1,020.0280**	**0.2966**		**1,026.2569**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0458	0.0597	0.6365	2.3200e-003	0.2012	1.3900e-003	0.2026	0.0534	1.2900e-003	0.0547		163.6825	163.6825	7.2600e-003		163.8349
Total	**0.0458**	**0.0597**	**0.6365**	**2.3200e-003**	**0.2012**	**1.3900e-003**	**0.2026**	**0.0534**	**1.2900e-003**	**0.0547**		**163.6825**	**163.6825**	**7.2600e-003**		**163.8349**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7131	6.6304	6.9921	0.0111		0.3492	0.3492		0.3247	0.3247	0.0000	1,020.0280	1,020.0280	0.2966		1,026.2569
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7131**	**6.6304**	**6.9921**	**0.0111**		**0.3492**	**0.3492**		**0.3247**	**0.3247**	**0.0000**	**1,020.0280**	**1,020.0280**	**0.2966**		**1,026.2569**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0458	0.0597	0.6365	2.3200e-003	0.2012	1.3900e-003	0.2026	0.0534	1.2900e-003	0.0547		163.6825	163.6825	7.2600e-003		163.8349
Total	**0.0458**	**0.0597**	**0.6365**	**2.3200e-003**	**0.2012**	**1.3900e-003**	**0.2026**	**0.0534**	**1.2900e-003**	**0.0547**		**163.6825**	**163.6825**	**7.2600e-003**		**163.8349**

3.8 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Archit. Coating	59.3280					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.8537
Total	**59.5469**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.8537**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	7.6300e-003	9.9500e-003	0.1061	3.9000e-004	0.0335	2.3000e-004	0.0338	8.8900e-003	2.1000e-004	9.1100e-003		27.2804	27.2804	1.2100e-003		27.3058
Total	**7.6300e-003**	**9.9500e-003**	**0.1061**	**3.9000e-004**	**0.0335**	**2.3000e-004**	**0.0338**	**8.8900e-003**	**2.1000e-004**	**9.1100e-003**		**27.2804**	**27.2804**	**1.2100e-003**		**27.3058**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	59.3280					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.8537
Total	**59.5469**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.8537**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	7.6300e-003	9.9500e-003	0.1061	3.9000e-004	0.0335	2.3000e-004	0.0338	8.8900e-003	2.1000e-004	9.1100e-003		27.2804	27.2804	1.2100e-003		27.3058
Total	**7.6300e-003**	**9.9500e-003**	**0.1061**	**3.9000e-004**	**0.0335**	**2.3000e-004**	**0.0338**	**8.8900e-003**	**2.1000e-004**	**9.1100e-003**		**27.2804**	**27.2804**	**1.2100e-003**		**27.3058**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.1680	4.3113	21.5885	0.0758	5.6160	0.0774	5.6934	1.4987	0.0715	1.5701		5,640.4607	5,640.4607	0.1970		5,644.5979
Unmitigated	2.1680	4.3113	21.5885	0.0758	5.6160	0.0774	5.6934	1.4987	0.0715	1.5701		5,640.4607	5,640.4607	0.1970		5,644.5979

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT

Junior College (2Yr)	879.68	359.36	38.72	2,069,584	2,069,584
Total	879.68	359.36	38.72	2,069,584	2,069,584

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.505043	0.056653	0.194832	0.151784	0.042126	0.005989	0.016072	0.016505	0.001461	0.002178	0.004464	0.000494	0.002401

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0150	0.1363	0.1145	8.2000e-004		0.0104	0.0104		0.0104	0.0104		163.5842	163.5842	3.1400e-003	3.0000e-003	164.5798
NaturalGas Unmitigated	0.0150	0.1363	0.1145	8.2000e-004		0.0104	0.0104		0.0104	0.0104		163.5842	163.5842	3.1400e-003	3.0000e-003	164.5798

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	1390.47	0.0150	0.1363	0.1145	8.2000e-004		0.0104	0.0104		0.0104	0.0104		163.5842	163.5842	3.1400e-003	3.0000e-003	164.5798
Total		**0.0150**	**0.1363**	**0.1145**	**8.2000e-004**		**0.0104**	**0.0104**		**0.0104**	**0.0104**		**163.5842**	**163.5842**	**3.1400e-003**	**3.0000e-003**	**164.5798**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	1.39047	0.0150	0.1363	0.1145	8.2000e-004		0.0104	0.0104		0.0104	0.0104		163.5842	163.5842	3.1400e-003	3.0000e-003	164.5798
Total		**0.0150**	**0.1363**	**0.1145**	**8.2000e-004**		**0.0104**	**0.0104**		**0.0104**	**0.0104**		**163.5842**	**163.5842**	**3.1400e-003**	**3.0000e-003**	**164.5798**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.8371	3.0000e-005	3.2700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.0000e-003	7.0000e-003	2.0000e-005		7.3900e-003

Unmitigated	0.8371	3.0000e-005	3.2700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.0000e-003	7.0000e-003	2.0000e-005		7.3900e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2032					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.6336					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.0000e-004	3.0000e-005	3.2700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.0000e-003	7.0000e-003	2.0000e-005		7.3900e-003
Total	**0.8371**	**3.0000e-005**	**3.2700e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**7.0000e-003**	**7.0000e-003**	**2.0000e-005**		**7.3900e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2032					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.6336					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.0000e-004	3.0000e-005	3.2700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.0000e-003	7.0000e-003	2.0000e-005		7.3900e-003
Total	**0.8371**	**3.0000e-005**	**3.2700e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**7.0000e-003**	**7.0000e-003**	**2.0000e-005**		**7.3900e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Unscheduled Phase - Demolition

Orange County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	99.67	1000sqft	2.29	99,672.00	0

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 2.2 **Precipitation Freq (Days)** 30

Climate Zone 8 **Operational Year** 2024

Utility Company Southern California Edison

CO2 Intensity (lb/MWhr) 630.89 **CH4 Intensity (lb/MWhr)** 0.029 **N2O Intensity (lb/MWhr)** 0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase -

Demolition -

Architectural Coating - Would only include parking lot striping

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	49,836.00	3,627.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	149,508.00	0.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblProjectCharacteristics	OperationalYear	2014	2024

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.0386	0.2745	0.3441	6.5000e-004	0.0781	0.0124	0.0905	0.0197	0.0115	0.0312	0.0000	55.2471	55.2471	0.0109	0.0000	55.4761
Total	**0.0386**	**0.2745**	**0.3441**	**6.5000e-004**	**0.0781**	**0.0124**	**0.0905**	**0.0197**	**0.0115**	**0.0312**	**0.0000**	**55.2471**	**55.2471**	**0.0109**	**0.0000**	**55.4761**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.0386	0.2745	0.3441	6.5000e-004	0.0348	0.0124	0.0471	8.8400e-003	0.0115	0.0203	0.0000	55.2471	55.2471	0.0109	0.0000	55.4761
Total	**0.0386**	**0.2745**	**0.3441**	**6.5000e-004**	**0.0348**	**0.0124**	**0.0471**	**8.8400e-003**	**0.0115**	**0.0203**	**0.0000**	**55.2471**	**55.2471**	**0.0109**	**0.0000**	**55.4761**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**55.50**	**0.00**	**47.92**	**55.10**	**0.00**	**34.79**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.4758	1.0000e-005	1.2700e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4700e-003	2.4700e-003	1.0000e-005	0.0000	2.6100e-003
Energy	8.5200e-003	0.0775	0.0651	4.6000e-004		5.8900e-003	5.8900e-003		5.8900e-003	5.8900e-003	0.0000	485.1031	485.1031	0.0200	5.3600e-003	487.1848
Mobile	0.8401	1.6945	8.7901	0.0339	2.4365	0.0349	2.4714	0.6512	0.0323	0.6835	0.0000	2,244.3017	2,244.3017	0.0734	0.0000	2,245.8420
Waste						0.0000	0.0000		0.0000	0.0000	26.3015	0.0000	26.3015	1.5544	0.0000	58.9434
Water						0.0000	0.0000		0.0000	0.0000	1.5510	42.5267	44.0777	0.1613	4.1700e-003	48.7554
Total	**1.3244**	**1.7720**	**8.8565**	**0.0344**	**2.4365**	**0.0408**	**2.4773**	**0.6512**	**0.0382**	**0.6894**	**27.8525**	**2,771.9340**	**2,799.7865**	**1.8090**	**9.5300e-003**	**2,840.7283**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.4758	1.0000e-005	1.2700e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4700e-003	2.4700e-003	1.0000e-005	0.0000	2.6100e-003
Energy	8.5200e-003	0.0775	0.0651	4.6000e-004		5.8900e-003	5.8900e-003		5.8900e-003	5.8900e-003	0.0000	485.1031	485.1031	0.0200	5.3600e-003	487.1848
Mobile	0.8401	1.6945	8.7901	0.0339	2.4365	0.0349	2.4714	0.6512	0.0323	0.6835	0.0000	2,244.3017	2,244.3017	0.0734	0.0000	2,245.8420
Waste						0.0000	0.0000		0.0000	0.0000	26.3015	0.0000	26.3015	1.5544	0.0000	58.9434
Water						0.0000	0.0000		0.0000	0.0000	1.5510	42.5267	44.0777	0.1612	4.1600e-003	48.7530

Total	1.3244	1.7720	8.8565	0.0344	2.4365	0.0408	2.4773	0.6512	0.0382	0.6894	27.8525	2,771.934 0	2,799.7865	1.8090	9.5200e-003	2,840.7259

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2024	6/28/2024	5	20	
2	Site Preparation	Site Preparation	6/29/2024	7/3/2024	5	3	
3	Grading	Grading	7/4/2024	7/11/2024	5	6	
4	Paving	Paving	7/12/2024	7/25/2024	5	10	
5	Architectural Coating	Architectural Coating	7/26/2024	8/8/2024	5	10	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 3

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 3,627 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Rubber Tired Dozers	1	8.00	255	0.40

Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	125	0.42
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Grading	Graders	1	8.00	174	0.41
Paving	Paving Equipment	1	8.00	130	0.36
Site Preparation	Scrapers	1	8.00	361	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	453.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Clean Paved Roads

3.2 Demolition - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.0491	0.0000	0.0491	7.4300e-003	0.0000	7.4300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0149	0.1401	0.1658	2.5000e-004		6.3800e-003	6.3800e-003		5.9600e-003	5.9600e-003	0.0000	21.4130	21.4130	5.4400e-003	0.0000	21.5273
Total	**0.0149**	**0.1401**	**0.1658**	**2.5000e-004**	**0.0491**	**6.3800e-003**	**0.0554**	**7.4300e-003**	**5.9600e-003**	**0.0134**	**0.0000**	**21.4130**	**21.4130**	**5.4400e-003**	**0.0000**	**21.5273**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.1700e-003	0.0267	0.0411	1.6000e-004	3.8900e-003	8.3000e-004	4.7200e-003	1.0700e-003	7.7000e-004	1.8300e-003	0.0000	14.0425	14.0425	1.0000e-004	0.0000	14.0446
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7000e-004	3.8000e-004	4.0000e-003	2.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.0401	1.0401	4.0000e-005	0.0000	1.0410
Total	**3.4400e-003**	**0.0270**	**0.0451**	**1.8000e-004**	**5.3200e-003**	**8.4000e-004**	**6.1600e-003**	**1.4500e-003**	**7.8000e-004**	**2.2200e-003**	**0.0000**	**15.0826**	**15.0826**	**1.4000e-004**	**0.0000**	**15.0856**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0191	0.0000	0.0191	2.9000e-003	0.0000	2.9000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0149	0.1401	0.1658	2.5000e-004		6.3800e-003	6.3800e-003		5.9600e-003	5.9600e-003	0.0000	21.4130	21.4130	5.4400e-003	0.0000	21.5273
Total	**0.0149**	**0.1401**	**0.1658**	**2.5000e-004**	**0.0191**	**6.3800e-003**	**0.0255**	**2.9000e-003**	**5.9600e-003**	**8.8600e-003**	**0.0000**	**21.4130**	**21.4130**	**5.4400e-003**	**0.0000**	**21.5273**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.1700e-003	0.0267	0.0411	1.6000e-004	3.8900e-003	8.3000e-004	4.7200e-003	1.0700e-003	7.7000e-004	1.8300e-003	0.0000	14.0425	14.0425	1.0000e-004	0.0000	14.0446
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7000e-004	3.8000e-004	4.0000e-003	2.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.0401	1.0401	4.0000e-005	0.0000	1.0410
Total	**3.4400e-003**	**0.0270**	**0.0451**	**1.8000e-004**	**5.3200e-003**	**8.4000e-004**	**6.1600e-003**	**1.4500e-003**	**7.8000e-004**	**2.2200e-003**	**0.0000**	**15.0826**	**15.0826**	**1.4000e-004**	**0.0000**	**15.0856**

3.3 Site Preparation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.3900e-003	0.0000	2.3900e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0000e-003	0.0193	0.0182	4.0000e-005		8.7000e-004	8.7000e-004		8.0000e-004	8.0000e-004	0.0000	3.1450	3.1450	1.0200e-003	0.0000	3.1664
Total	**2.0000e-003**	**0.0193**	**0.0182**	**4.0000e-005**	**2.3900e-003**	**8.7000e-004**	**3.2600e-003**	**2.6000e-004**	**8.0000e-004**	**1.0600e-003**	**0.0000**	**3.1450**	**3.1450**	**1.0200e-003**	**0.0000**	**3.1664**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	3.0000e-005	3.7000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	4.0000e-005	0.0000	0.0960	0.0960	0.0000	0.0000	0.0961
Total	**2.0000e-005**	**3.0000e-005**	**3.7000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**3.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.0960**	**0.0960**	**0.0000**	**0.0000**	**0.0961**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					9.3000e-004	0.0000	9.3000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0000e-003	0.0193	0.0182	4.0000e-005		8.7000e-004	8.7000e-004		8.0000e-004	8.0000e-004	0.0000	3.1450	3.1450	1.0200e-003	0.0000	3.1664
Total	**2.0000e-003**	**0.0193**	**0.0182**	**4.0000e-005**	**9.3000e-004**	**8.7000e-004**	**1.8000e-003**	**1.0000e-004**	**8.0000e-004**	**9.0000e-004**	**0.0000**	**3.1450**	**3.1450**	**1.0200e-003**	**0.0000**	**3.1664**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	3.0000e-005	3.7000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	4.0000e-005	0.0000	0.0960	0.0960	0.0000	0.0000	0.0961

Total	**2.0000e-005**	**3.0000e-005**	**3.7000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**3.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.0960**	**0.0960**	**0.0000**	**0.0000**	**0.0961**

3.4 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0197	0.0000	0.0197	0.0101	0.0000	0.0101	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.3800e-003	0.0414	0.0434	6.0000e-005		2.0000e-003	2.0000e-003		1.8400e-003	1.8400e-003	0.0000	5.4229	5.4229	1.7500e-003	0.0000	5.4597
Total	**4.3800e-003**	**0.0414**	**0.0434**	**6.0000e-005**	**0.0197**	**2.0000e-003**	**0.0217**	**0.0101**	**1.8400e-003**	**0.0119**	**0.0000**	**5.4229**	**5.4229**	**1.7500e-003**	**0.0000**	**5.4597**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	9.0000e-005	9.2000e-004	0.0000	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2400	0.2400	1.0000e-005	0.0000	0.2402
Total	**6.0000e-005**	**9.0000e-005**	**9.2000e-004**	**0.0000**	**3.3000e-004**	**0.0000**	**3.3000e-004**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.2400**	**0.2400**	**1.0000e-005**	**0.0000**	**0.2402**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.6700e-003	0.0000	7.6700e-003	3.9400e-003	0.0000	3.9400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.3800e-003	0.0414	0.0434	6.0000e-005		2.0000e-003	2.0000e-003		1.8400e-003	1.8400e-003	0.0000	5.4229	5.4229	1.7500e-003	0.0000	5.4597
Total	**4.3800e-003**	**0.0414**	**0.0434**	**6.0000e-005**	**7.6700e-003**	**2.0000e-003**	**9.6700e-003**	**3.9400e-003**	**1.8400e-003**	**5.7800e-003**	**0.0000**	**5.4229**	**5.4229**	**1.7500e-003**	**0.0000**	**5.4597**

<u>Mitigated Construction Off-Site</u>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	9.0000e-005	9.2000e-004	0.0000	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2400	0.2400	1.0000e-005	0.0000	0.2402
Total	**6.0000e-005**	**9.0000e-005**	**9.2000e-004**	**0.0000**	**3.3000e-004**	**0.0000**	**3.3000e-004**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.2400**	**0.2400**	**1.0000e-005**	**0.0000**	**0.2402**

3.5 Paving - 2024

<u>Unmitigated Construction On-Site</u>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Off-Road	4.1600e-003	0.0401	0.0578	9.0000e-005		1.9600e-003	1.9600e-003		1.8100e-003	1.8100e-003	0.0000	7.6508	7.6508	2.4200e-003	0.0000	7.7017
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.1600e-003**	**0.0401**	**0.0578**	**9.0000e-005**		**1.9600e-003**	**1.9600e-003**		**1.8100e-003**	**1.8100e-003**	**0.0000**	**7.6508**	**7.6508**	**2.4200e-003**	**0.0000**	**7.7017**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5000e-004	2.2000e-004	2.3100e-003	1.0000e-005	8.2000e-004	1.0000e-005	8.3000e-004	2.2000e-004	1.0000e-005	2.2000e-004	0.0000	0.6001	0.6001	2.0000e-005	0.0000	0.6006
Total	**1.5000e-004**	**2.2000e-004**	**2.3100e-003**	**1.0000e-005**	**8.2000e-004**	**1.0000e-005**	**8.3000e-004**	**2.2000e-004**	**1.0000e-005**	**2.2000e-004**	**0.0000**	**0.6001**	**0.6001**	**2.0000e-005**	**0.0000**	**0.6006**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.1600e-003	0.0401	0.0578	9.0000e-005		1.9600e-003	1.9600e-003		1.8100e-003	1.8100e-003	0.0000	7.6508	7.6508	2.4200e-003	0.0000	7.7017
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.1600e-003**	**0.0401**	**0.0578**	**9.0000e-005**		**1.9600e-003**	**1.9600e-003**		**1.8100e-003**	**1.8100e-003**	**0.0000**	**7.6508**	**7.6508**	**2.4200e-003**	**0.0000**	**7.7017**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5000e-004	2.2000e-004	2.3100e-003	1.0000e-005	8.2000e-004	1.0000e-005	8.3000e-004	2.2000e-004	1.0000e-005	2.2000e-004	0.0000	0.6001	0.6001	2.0000e-005	0.0000	0.6006
Total	**1.5000e-004**	**2.2000e-004**	**2.3100e-003**	**1.0000e-005**	**8.2000e-004**	**1.0000e-005**	**8.3000e-004**	**2.2000e-004**	**1.0000e-005**	**2.2000e-004**	**0.0000**	**0.6001**	**0.6001**	**2.0000e-005**	**0.0000**	**0.6006**

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	8.4100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.0000e-004	6.0900e-003	9.0500e-003	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	1.2766	1.2766	7.0000e-005	0.0000	1.2781
Total	**9.3100e-003**	**6.0900e-003**	**9.0500e-003**	**1.0000e-005**		**3.0000e-004**	**3.0000e-004**		**3.0000e-004**	**3.0000e-004**	**0.0000**	**1.2766**	**1.2766**	**7.0000e-005**	**0.0000**	**1.2781**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-005	1.2000e-004	1.2300e-003	1.0000e-005	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3200	0.3200	1.0000e-005	0.0000	0.3203
Total	**8.0000e-005**	**1.2000e-004**	**1.2300e-003**	**1.0000e-005**	**4.4000e-004**	**0.0000**	**4.4000e-004**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**0.3200**	**0.3200**	**1.0000e-005**	**0.0000**	**0.3203**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	8.4100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.0000e-004	6.0900e-003	9.0500e-003	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	1.2766	1.2766	7.0000e-005	0.0000	1.2781
Total	**9.3100e-003**	**6.0900e-003**	**9.0500e-003**	**1.0000e-005**		**3.0000e-004**	**3.0000e-004**		**3.0000e-004**	**3.0000e-004**	**0.0000**	**1.2766**	**1.2766**	**7.0000e-005**	**0.0000**	**1.2781**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-005	1.2000e-004	1.2300e-003	1.0000e-005	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3200	0.3200	1.0000e-005	0.0000	0.3203

Total	8.0000e-005	1.2000e-004	1.2300e-003	1.0000e-005	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3200	0.3200	1.0000e-005	0.0000	0.3203

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.8401	1.6945	8.7901	0.0339	2.4365	0.0349	2.4714	0.6512	0.0323	0.6835	0.0000	2,244.3017	2,244.3017	0.0734	0.0000	2,245.8420
Unmitigated	0.8401	1.6945	8.7901	0.0339	2.4365	0.0349	2.4714	0.6512	0.0323	0.6835	0.0000	2,244.3017	2,244.3017	0.0734	0.0000	2,245.8420

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	2,739.98	1,119.32	120.60	6,446,237	6,446,237
Total	2,739.98	1,119.32	120.60	6,446,237	6,446,237

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.501871	0.056875	0.196091	0.152579	0.042282	0.006031	0.016253	0.017122	0.001469	0.002194	0.004230	0.000489	0.002515

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	400.7457	400.7457	0.0184	3.8100e-003	402.3140
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	400.7457	400.7457	0.0184	3.8100e-003	402.3140
NaturalGas Mitigated	8.5200e-003	0.0775	0.0651	4.6000e-004		5.8900e-003	5.8900e-003		5.8900e-003	5.8900e-003	0.0000	84.3574	84.3574	1.6200e-003	1.5500e-003	84.8708
NaturalGas Unmitigated	8.5200e-003	0.0775	0.0651	4.6000e-004		5.8900e-003	5.8900e-003		5.8900e-003	5.8900e-003	0.0000	84.3574	84.3574	1.6200e-003	1.5500e-003	84.8708

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Junior College (2Yr)	1.5808e+006	8.5200e-003	0.0775	0.0651	4.6000e-004		5.8900e-003	5.8900e-003		5.8900e-003	5.8900e-003	0.0000	84.3574	84.3574	1.6200e-003	1.5500e-003	84.8708
Total		**8.5200e-003**	**0.0775**	**0.0651**	**4.6000e-004**		**5.8900e-003**	**5.8900e-003**		**5.8900e-003**	**5.8900e-003**	**0.0000**	**84.3574**	**84.3574**	**1.6200e-003**	**1.5500e-003**	**84.8708**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Junior College (2Yr)	1.5808e+006	8.5200e-003	0.0775	0.0651	4.6000e-004		5.8900e-003	5.8900e-003		5.8900e-003	5.8900e-003	0.0000	84.3574	84.3574	1.6200e-003	1.5500e-003	84.8708
Total		**8.5200e-003**	**0.0775**	**0.0651**	**4.6000e-004**		**5.8900e-003**	**5.8900e-003**		**5.8900e-003**	**5.8900e-003**	**0.0000**	**84.3574**	**84.3574**	**1.6200e-003**	**1.5500e-003**	**84.8708**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	1.40039e+006	400.7457	0.0184	3.8100e-003	402.3140
Total		**400.7457**	**0.0184**	**3.8100e-003**	**402.3140**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e

Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	1.40039e+006	400.7457	0.0184	3.8100e-003	402.3140
Total		**400.7457**	**0.0184**	**3.8100e-003**	**402.3140**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.4758	1.0000e-005	1.2700e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4700e-003	2.4700e-003	1.0000e-005	0.0000	2.6100e-003
Unmitigated	0.4758	1.0000e-005	1.2700e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4700e-003	2.4700e-003	1.0000e-005	0.0000	2.6100e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1155					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3602					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Landscaping	1.2000e-004	1.0000e-005	1.2700e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4700e-003	2.4700e-003	1.0000e-005	0.0000	2.6100e-003
Total	**0.4758**	**1.0000e-005**	**1.2700e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.4700e-003**	**2.4700e-003**	**1.0000e-005**	**0.0000**	**2.6100e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1155					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3602					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.2000e-004	1.0000e-005	1.2700e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4700e-003	2.4700e-003	1.0000e-005	0.0000	2.6100e-003
Total	**0.4758**	**1.0000e-005**	**1.2700e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.4700e-003**	**2.4700e-003**	**1.0000e-005**	**0.0000**	**2.6100e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	44.0777	0.1612	4.1600e-003	48.7530
Unmitigated	44.0777	0.1613	4.1700e-003	48.7554

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	4.88872 / 7.64645	44.0777	0.1613	4.1700e-003	48.7554
Total		**44.0777**	**0.1613**	**4.1700e-003**	**48.7554**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	4.88872 / 7.64645	44.0777	0.1612	4.1600e-003	48.7530
Total		**44.0777**	**0.1612**	**4.1600e-003**	**48.7530**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	26.3015	1.5544	0.0000	58.9434
Unmitigated	26.3015	1.5544	0.0000	58.9434

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior College (2Yr)	129.57	26.3015	1.5544	0.0000	58.9434
Total		**26.3015**	**1.5544**	**0.0000**	**58.9434**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior College (2Yr)	129.57	26.3015	1.5544	0.0000	58.9434
Total		**26.3015**	**1.5544**	**0.0000**	**58.9434**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Unscheduled Phase - Demolition

Orange County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	99.67	1000sqft	2.29	99,672.00	0

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 2.2 **Precipitation Freq (Days)** 30

Climate Zone 8 **Operational Year** 2024

Utility Company Southern California Edison

CO2 Intensity (lb/MWhr) 630.89 **CH4 Intensity (lb/MWhr)** 0.029 **N2O Intensity (lb/MWhr)** 0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase -

Demolition -

Architectural Coating - Would only include parking lot striping

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	49,836.00	3,627.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	149,508.00	0.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblProjectCharacteristics	OperationalYear	2014	2024

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	1.8787	16.5798	20.6160	0.0428	6.6641	0.7221	7.3316	3.3971	0.6732	4.0112	0.0000	4,029.1732	4,029.1732	0.7504	0.0000	4,044.9309
Total	**1.8787**	**16.5798**	**20.6160**	**0.0428**	**6.6641**	**0.7221**	**7.3316**	**3.3971**	**0.6732**	**4.0112**	**0.0000**	**4,029.1732**	**4,029.1732**	**0.7504**	**0.0000**	**4,044.9309**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	1.8787	16.5798	20.6160	0.0428	2.6672	0.7221	3.3347	1.3430	0.6732	1.9571	0.0000	4,029.1732	4,029.1732	0.7504	0.0000	4,044.9309
Total	**1.8787**	**16.5798**	**20.6160**	**0.0428**	**2.6672**	**0.7221**	**3.3347**	**1.3430**	**0.6732**	**1.9571**	**0.0000**	**4,029.1732**	**4,029.1732**	**0.7504**	**0.0000**	**4,044.9309**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**59.98**	**0.00**	**54.52**	**60.47**	**0.00**	**51.21**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.6073	9.0000e-005	0.0102	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0218	0.0218	6.0000e-005		0.0230
Energy	0.0467	0.4246	0.3567	2.5500e-003		0.0323	0.0323		0.0323	0.0323		509.5239	509.5239	9.7700e-003	9.3400e-003	512.6248
Mobile	5.9646	11.0989	61.9800	0.2477	17.4954	0.2465	17.7419	4.6692	0.2277	4.8968		18,026.4751	18,026.4751	0.5708		18,038.4614
Total	**8.6186**	**11.5236**	**62.3468**	**0.2503**	**17.4954**	**0.2788**	**17.7742**	**4.6692**	**0.2600**	**4.9292**		**18,536.0208**	**18,536.0208**	**0.5806**	**9.3400e-003**	**18,551.1092**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.6073	9.0000e-005	0.0102	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0218	0.0218	6.0000e-005		0.0230
Energy	0.0467	0.4246	0.3567	2.5500e-003		0.0323	0.0323		0.0323	0.0323		509.5239	509.5239	9.7700e-003	9.3400e-003	512.6248
Mobile	5.9646	11.0989	61.9800	0.2477	17.4954	0.2465	17.7419	4.6692	0.2277	4.8968		18,026.4751	18,026.4751	0.5708		18,038.4614
Total	**8.6186**	**11.5236**	**62.3468**	**0.2503**	**17.4954**	**0.2788**	**17.7742**	**4.6692**	**0.2600**	**4.9292**		**18,536.0208**	**18,536.0208**	**0.5806**	**9.3400e-003**	**18,551.1092**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2024	6/28/2024	5	20	
2	Site Preparation	Site Preparation	6/29/2024	7/3/2024	5	3	
3	Grading	Grading	7/4/2024	7/11/2024	5	6	
4	Paving	Paving	7/12/2024	7/25/2024	5	10	
5	Architectural Coating	Architectural Coating	7/26/2024	8/8/2024	5	10	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 3

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 3,627 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	125	0.42
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Grading	Graders		1	8.00	174	0.41
Paving	Paving Equipment		1	8.00	130	0.36
Site Preparation	Scrapers		1	8.00	361	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	453.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Clean Paved Roads

3.2 Demolition - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9056	0.0000	4.9056	0.7428	0.0000	0.7428			0.0000			0.0000
Off-Road	1.4940	14.0097	16.5767	0.0245		0.6379	0.6379		0.5957	0.5957		2,360.3808	2,360.3808	0.5999		2,372.9782
Total	**1.4940**	**14.0097**	**16.5767**	**0.0245**	**4.9056**	**0.6379**	**5.5436**	**0.7428**	**0.5957**	**1.3385**		**2,360.3808**	**2,360.3808**	**0.5999**		**2,372.9782**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3084	2.5368	3.6183	0.0165	0.3948	0.0832	0.4780	0.1081	0.0765	0.1847		1,549.4854	1,549.4854	0.0109		1,549.7150
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0274	0.0333	0.4209	1.7700e-003	0.1453	1.0300e-003	0.1463	0.0385	9.5000e-004	0.0395		119.3069	119.3069	4.6900e-003		119.4055
Total	**0.3357**	**2.5701**	**4.0393**	**0.0182**	**0.5401**	**0.0842**	**0.6243**	**0.1467**	**0.0775**	**0.2242**		**1,668.7923**	**1,668.7923**	**0.0156**		**1,669.1204**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.9132	0.0000	1.9132	0.2897	0.0000	0.2897			0.0000			0.0000
Off-Road	1.4940	14.0097	16.5767	0.0245		0.6379	0.6379		0.5957	0.5957	0.0000	2,360.3808	2,360.3808	0.5999		2,372.9782
Total	**1.4940**	**14.0097**	**16.5767**	**0.0245**	**1.9132**	**0.6379**	**2.5511**	**0.2897**	**0.5957**	**0.8854**	**0.0000**	**2,360.3808**	**2,360.3808**	**0.5999**		**2,372.9782**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.3084	2.5368	3.6183	0.0165	0.3948	0.0832	0.4780	0.1081	0.0765	0.1847		1,549.4854	1,549.4854	0.0109		1,549.7150
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0274	0.0333	0.4209	1.7700e-003	0.1453	1.0300e-003	0.1463	0.0385	9.5000e-004	0.0395		119.3069	119.3069	4.6900e-003		119.4055
Total	**0.3357**	**2.5701**	**4.0393**	**0.0182**	**0.5401**	**0.0842**	**0.6243**	**0.1467**	**0.0775**	**0.2242**		**1,668.7923**	**1,668.7923**	**0.0156**		**1,669.1204**

3.3 Site Preparation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	1.3314	12.8662	12.1443	0.0239		0.5798	0.5798		0.5334	0.5334		2,311.1810	2,311.1810	0.7475		2,326.8781
Total	**1.3314**	**12.8662**	**12.1443**	**0.0239**	**1.5908**	**0.5798**	**2.1705**	**0.1718**	**0.5334**	**0.7052**		**2,311.1810**	**2,311.1810**	**0.7475**		**2,326.8781**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0168	0.0205	0.2590	1.0900e-003	0.0894	6.3000e-004	0.0901	0.0237	5.9000e-004	0.0243		73.4196	73.4196	2.8900e-003		73.4803

Total	**0.0168**	**0.0205**	**0.2590**	**1.0900e-003**	**0.0894**	**6.3000e-004**	**0.0901**	**0.0237**	**5.9000e-004**	**0.0243**		**73.4196**	**73.4196**	**2.8900e-003**		**73.4803**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.6204	0.0000	0.6204	0.0670	0.0000	0.0670			0.0000			0.0000
Off-Road	1.3314	12.8662	12.1443	0.0239		0.5798	0.5798		0.5334	0.5334	0.0000	2,311.1810	2,311.1810	0.7475		2,326.8781
Total	**1.3314**	**12.8662**	**12.1443**	**0.0239**	**0.6204**	**0.5798**	**1.2002**	**0.0670**	**0.5334**	**0.6004**	**0.0000**	**2,311.1810**	**2,311.1810**	**0.7475**		**2,326.8781**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0168	0.0205	0.2590	1.0900e-003	0.0894	6.3000e-004	0.0901	0.0237	5.9000e-004	0.0243		73.4196	73.4196	2.8900e-003		73.4803
Total	**0.0168**	**0.0205**	**0.2590**	**1.0900e-003**	**0.0894**	**6.3000e-004**	**0.0901**	**0.0237**	**5.9000e-004**	**0.0243**		**73.4196**	**73.4196**	**2.8900e-003**		**73.4803**

3.4 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	1.4590	13.8142	14.4509	0.0206		0.6667	0.6667		0.6134	0.6134		1,992.5628	1,992.5628	0.6444		2,006.0960
Total	**1.4590**	**13.8142**	**14.4509**	**0.0206**	**6.5523**	**0.6667**	**7.2191**	**3.3675**	**0.6134**	**3.9809**		**1,992.5628**	**1,992.5628**	**0.6444**		**2,006.0960**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0210	0.0256	0.3238	1.3600e-003	0.1118	7.9000e-004	0.1126	0.0296	7.3000e-004	0.0304		91.7745	91.7745	3.6100e-003		91.8504
Total	**0.0210**	**0.0256**	**0.3238**	**1.3600e-003**	**0.1118**	**7.9000e-004**	**0.1126**	**0.0296**	**7.3000e-004**	**0.0304**		**91.7745**	**91.7745**	**3.6100e-003**		**91.8504**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Fugitive Dust					2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000			0.0000
Off-Road	1.4590	13.8142	14.4509	0.0206		0.6667	0.6667		0.6134	0.6134	0.0000	1,992.5628	1,992.5628	0.6444		2,006.0960
Total	**1.4590**	**13.8142**	**14.4509**	**0.0206**	**2.5554**	**0.6667**	**3.2221**	**1.3133**	**0.6134**	**1.9267**	**0.0000**	**1,992.5628**	**1,992.5628**	**0.6444**		**2,006.0960**

<u>**Mitigated Construction Off-Site**</u>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0210	0.0256	0.3238	1.3600e-003	0.1118	7.9000e-004	0.1126	0.0296	7.3000e-004	0.0304		91.7745	91.7745	3.6100e-003		91.8504
Total	**0.0210**	**0.0256**	**0.3238**	**1.3600e-003**	**0.1118**	**7.9000e-004**	**0.1126**	**0.0296**	**7.3000e-004**	**0.0304**		**91.7745**	**91.7745**	**3.6100e-003**		**91.8504**

3.5 Paving - 2024

<u>**Unmitigated Construction On-Site**</u>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8329	8.0134	11.5567	0.0176		0.3915	0.3915		0.3613	0.3613		1,686.7194	1,686.7194	0.5344		1,697.9423
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8329**	**8.0134**	**11.5567**	**0.0176**		**0.3915**	**0.3915**		**0.3613**	**0.3613**		**1,686.7194**	**1,686.7194**	**0.5344**		**1,697.9423**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0316	0.0384	0.4857	2.0500e-003	0.1677	1.1800e-003	0.1689	0.0445	1.1000e-003	0.0456		137.6618	137.6618	5.4200e-003		137.7755
Total	**0.0316**	**0.0384**	**0.4857**	**2.0500e-003**	**0.1677**	**1.1800e-003**	**0.1689**	**0.0445**	**1.1000e-003**	**0.0456**		**137.6618**	**137.6618**	**5.4200e-003**		**137.7755**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8329	8.0134	11.5567	0.0176		0.3915	0.3915		0.3613	0.3613	0.0000	1,686.7194	1,686.7194	0.5344		1,697.9423
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8329**	**8.0134**	**11.5567**	**0.0176**		**0.3915**	**0.3915**		**0.3613**	**0.3613**	**0.0000**	**1,686.7194**	**1,686.7194**	**0.5344**		**1,697.9423**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0316	0.0384	0.4857	2.0500e-003	0.1677	1.1800e-003	0.1689	0.0445	1.1000e-003	0.0456		137.6618	137.6618	5.4200e-003		137.7755
Total	**0.0316**	**0.0384**	**0.4857**	**2.0500e-003**	**0.1677**	**1.1800e-003**	**0.1689**	**0.0445**	**1.1000e-003**	**0.0456**		**137.6618**	**137.6618**	**5.4200e-003**		**137.7755**

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1.6811					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.7809
Total	**1.8619**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.7809**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0168	0.0205	0.2590	1.0900e-003	0.0894	6.3000e-004	0.0901	0.0237	5.9000e-004	0.0243		73.4196	73.4196	2.8900e-003		73.4803

Total	**0.0168**	**0.0205**	**0.2590**	**1.0900e-003**	**0.0894**	**6.3000e-004**	**0.0901**	**0.0237**	**5.9000e-004**	**0.0243**		**73.4196**	**73.4196**	**2.8900e-003**		**73.4803**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1.6811					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.7809
Total	**1.8619**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.7809**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0168	0.0205	0.2590	1.0900e-003	0.0894	6.3000e-004	0.0901	0.0237	5.9000e-004	0.0243		73.4196	73.4196	2.8900e-003		73.4803
Total	**0.0168**	**0.0205**	**0.2590**	**1.0900e-003**	**0.0894**	**6.3000e-004**	**0.0901**	**0.0237**	**5.9000e-004**	**0.0243**		**73.4196**	**73.4196**	**2.8900e-003**		**73.4803**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	5.9646	11.0989	61.9800	0.2477	17.4954	0.2465	17.7419	4.6692	0.2277	4.8968		18,026.4751	18,026.4751	0.5708		18,038.4614
Unmitigated	5.9646	11.0989	61.9800	0.2477	17.4954	0.2465	17.7419	4.6692	0.2277	4.8968		18,026.4751	18,026.4751	0.5708		18,038.4614

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	2,739.98	1,119.32	120.60	6,446,237	6,446,237
Total	2,739.98	1,119.32	120.60	6,446,237	6,446,237

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.501871	0.056875	0.196091	0.152579	0.042282	0.006031	0.016253	0.017122	0.001469	0.002194	0.004230	0.000489	0.002515

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0467	0.4246	0.3567	2.5500e-003		0.0323	0.0323		0.0323	0.0323		509.5239	509.5239	9.7700e-003	9.3400e-003	512.6248
NaturalGas Unmitigated	0.0467	0.4246	0.3567	2.5500e-003		0.0323	0.0323		0.0323	0.0323		509.5239	509.5239	9.7700e-003	9.3400e-003	512.6248

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	4330.95	0.0467	0.4246	0.3567	2.5500e-003		0.0323	0.0323		0.0323	0.0323		509.5239	509.5239	9.7700e-003	9.3400e-003	512.6248
Total		**0.0467**	**0.4246**	**0.3567**	**2.5500e-003**		**0.0323**	**0.0323**		**0.0323**	**0.0323**		**509.5239**	**509.5239**	**9.7700e-003**	**9.3400e-003**	**512.6248**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	4.33095	0.0467	0.4246	0.3567	2.5500e-003		0.0323	0.0323		0.0323	0.0323		509.5239	509.5239	9.7700e-003	9.3400e-003	512.6248

Total		0.0467	0.4246	0.3567	2.5500e-003		0.0323	0.0323		0.0323	0.0323		509.5239	509.5239	9.7700e-003	9.3400e-003	512.6248

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.6073	9.0000e-005	0.0102	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0218	0.0218	6.0000e-005		0.0230
Unmitigated	2.6073	9.0000e-005	0.0102	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0218	0.0218	6.0000e-005		0.0230

6.2 Area by SubCategory

<u>Unmitigated</u>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.6329					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.9735					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	9.4000e-004	9.0000e-005	0.0102	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0218	0.0218	6.0000e-005		0.0230
Total	**2.6073**	**9.0000e-005**	**0.0102**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.0218**	**0.0218**	**6.0000e-005**		**0.0230**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Consumer Products	1.9735					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	9.4000e-004	9.0000e-005	0.0102	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0218	0.0218	6.0000e-005		0.0230
Architectural Coating	0.6329					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.6073**	**9.0000e-005**	**0.0102**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.0218**	**0.0218**	**6.0000e-005**		**0.0230**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Unscheduled Phase - Demolition

Orange County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	99.67	1000sqft	2.29	99,672.00	0

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 2.2 **Precipitation Freq (Days)** 30

Climate Zone 8 **Operational Year** 2024

Utility Company Southern California Edison

CO2 Intensity (lb/MWhr) 630.89 **CH4 Intensity (lb/MWhr)** 0.029 **N2O Intensity (lb/MWhr)** 0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase -

Demolition -

Architectural Coating - Would only include parking lot striping

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	49,836.00	3,627.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	149,508.00	0.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblProjectCharacteristics	OperationalYear	2014	2024

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	1.8795	16.6653	21.2323	0.0426	6.6641	0.7223	7.3316	3.3971	0.6734	4.0112	0.0000	4,019.0781	4,019.0781	0.7504	0.0000	4,034.8359
Total	**1.8795**	**16.6653**	**21.2323**	**0.0426**	**6.6641**	**0.7223**	**7.3316**	**3.3971**	**0.6734**	**4.0112**	**0.0000**	**4,019.0781**	**4,019.0781**	**0.7504**	**0.0000**	**4,034.8359**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	1.8795	16.6653	21.2323	0.0426	2.6672	0.7223	3.3347	1.3430	0.6734	1.9571	0.0000	4,019.0781	4,019.0781	0.7504	0.0000	4,034.8359
Total	**1.8795**	**16.6653**	**21.2323**	**0.0426**	**2.6672**	**0.7223**	**3.3347**	**1.3430**	**0.6734**	**1.9571**	**0.0000**	**4,019.0781**	**4,019.0781**	**0.7504**	**0.0000**	**4,034.8359**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**59.98**	**0.00**	**54.52**	**60.47**	**0.00**	**51.21**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.6073	9.0000e-005	0.0102	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0218	0.0218	6.0000e-005		0.0230
Energy	0.0467	0.4246	0.3567	2.5500e-003		0.0323	0.0323		0.0323	0.0323		509.5239	509.5239	9.7700e-003	9.3400e-003	512.6248
Mobile	6.2878	11.7229	61.7383	0.2366	17.4954	0.2472	17.7426	4.6692	0.2283	4.8975		17,259.6531	17,259.6531	0.5713		17,271.6509
Total	**8.9418**	**12.1476**	**62.1051**	**0.2391**	**17.4954**	**0.2795**	**17.7749**	**4.6692**	**0.2606**	**4.9298**		**17,769.1989**	**17,769.1989**	**0.5812**	**9.3400e-003**	**17,784.2987**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.6073	9.0000e-005	0.0102	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0218	0.0218	6.0000e-005		0.0230
Energy	0.0467	0.4246	0.3567	2.5500e-003		0.0323	0.0323		0.0323	0.0323		509.5239	509.5239	9.7700e-003	9.3400e-003	512.6248
Mobile	6.2878	11.7229	61.7383	0.2366	17.4954	0.2472	17.7426	4.6692	0.2283	4.8975		17,259.6531	17,259.6531	0.5713		17,271.6509
Total	**8.9418**	**12.1476**	**62.1051**	**0.2391**	**17.4954**	**0.2795**	**17.7749**	**4.6692**	**0.2606**	**4.9298**		**17,769.1989**	**17,769.1989**	**0.5812**	**9.3400e-003**	**17,784.2987**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2024	6/28/2024	5	20	
2	Site Preparation	Site Preparation	6/29/2024	7/3/2024	5	3	
3	Grading	Grading	7/4/2024	7/11/2024	5	6	
4	Paving	Paving	7/12/2024	7/25/2024	5	10	
5	Architectural Coating	Architectural Coating	7/26/2024	8/8/2024	5	10	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 3

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 3,627 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	125	0.42
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Grading	Graders		1	8.00	174	0.41
Paving	Paving Equipment		1	8.00	130	0.36
Site Preparation	Scrapers		1	8.00	361	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	453.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Clean Paved Roads

3.2 Demolition - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9056	0.0000	4.9056	0.7428	0.0000	0.7428			0.0000			0.0000
Off-Road	1.4940	14.0097	16.5767	0.0245		0.6379	0.6379		0.5957	0.5957		2,360.3808	2,360.3808	0.5999		2,372.9782
Total	**1.4940**	**14.0097**	**16.5767**	**0.0245**	**4.9056**	**0.6379**	**5.5436**	**0.7428**	**0.5957**	**1.3385**		**2,360.3808**	**2,360.3808**	**0.5999**		**2,372.9782**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3222	2.6191	4.2654	0.0164	0.3948	0.0834	0.4782	0.1081	0.0767	0.1848		1,545.7588	1,545.7588	0.0111		1,545.9924
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0287	0.0366	0.3902	1.6800e-003	0.1453	1.0300e-003	0.1463	0.0385	9.5000e-004	0.0395		112.9385	112.9385	4.6900e-003		113.0371
Total	**0.3509**	**2.6556**	**4.6555**	**0.0181**	**0.5401**	**0.0844**	**0.6245**	**0.1467**	**0.0776**	**0.2243**		**1,658.6973**	**1,658.6973**	**0.0158**		**1,659.0295**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.9132	0.0000	1.9132	0.2897	0.0000	0.2897			0.0000			0.0000
Off-Road	1.4940	14.0097	16.5767	0.0245		0.6379	0.6379		0.5957	0.5957	0.0000	2,360.3808	2,360.3808	0.5999		2,372.9782
Total	**1.4940**	**14.0097**	**16.5767**	**0.0245**	**1.9132**	**0.6379**	**2.5511**	**0.2897**	**0.5957**	**0.8854**	**0.0000**	**2,360.3808**	**2,360.3808**	**0.5999**		**2,372.9782**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.3222	2.6191	4.2654	0.0164	0.3948	0.0834	0.4782	0.1081	0.0767	0.1848		1,545.7588	1,545.7588	0.0111		1,545.9924
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0287	0.0366	0.3902	1.6800e-003	0.1453	1.0300e-003	0.1463	0.0385	9.5000e-004	0.0395		112.9385	112.9385	4.6900e-003		113.0371
Total	**0.3509**	**2.6556**	**4.6555**	**0.0181**	**0.5401**	**0.0844**	**0.6245**	**0.1467**	**0.0776**	**0.2243**		**1,658.6973**	**1,658.6973**	**0.0158**		**1,659.0295**

3.3 Site Preparation - 2024

<u>Unmitigated Construction On-Site</u>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	1.3314	12.8662	12.1443	0.0239		0.5798	0.5798		0.5334	0.5334		2,311.1810	2,311.1810	0.7475		2,326.8781
Total	**1.3314**	**12.8662**	**12.1443**	**0.0239**	**1.5908**	**0.5798**	**2.1705**	**0.1718**	**0.5334**	**0.7052**		**2,311.1810**	**2,311.1810**	**0.7475**		**2,326.8781**

<u>Unmitigated Construction Off-Site</u>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0177	0.0225	0.2401	1.0300e-003	0.0894	6.3000e-004	0.0901	0.0237	5.9000e-004	0.0243		69.5006	69.5006	2.8900e-003		69.5613

Total	**0.0177**	**0.0225**	**0.2401**	**1.0300e-003**	**0.0894**	**6.3000e-004**	**0.0901**	**0.0237**	**5.9000e-004**	**0.0243**		**69.5006**	**69.5006**	**2.8900e-003**		**69.5613**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.6204	0.0000	0.6204	0.0670	0.0000	0.0670			0.0000			0.0000
Off-Road	1.3314	12.8662	12.1443	0.0239		0.5798	0.5798		0.5334	0.5334	0.0000	2,311.1810	2,311.1810	0.7475		2,326.8781
Total	**1.3314**	**12.8662**	**12.1443**	**0.0239**	**0.6204**	**0.5798**	**1.2002**	**0.0670**	**0.5334**	**0.6004**	**0.0000**	**2,311.1810**	**2,311.1810**	**0.7475**		**2,326.8781**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0177	0.0225	0.2401	1.0300e-003	0.0894	6.3000e-004	0.0901	0.0237	5.9000e-004	0.0243		69.5006	69.5006	2.8900e-003		69.5613
Total	**0.0177**	**0.0225**	**0.2401**	**1.0300e-003**	**0.0894**	**6.3000e-004**	**0.0901**	**0.0237**	**5.9000e-004**	**0.0243**		**69.5006**	**69.5006**	**2.8900e-003**		**69.5613**

3.4 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	1.4590	13.8142	14.4509	0.0206		0.6667	0.6667		0.6134	0.6134		1,992.5628	1,992.5628	0.6444		2,006.0960
Total	**1.4590**	**13.8142**	**14.4509**	**0.0206**	**6.5523**	**0.6667**	**7.2191**	**3.3675**	**0.6134**	**3.9809**		**1,992.5628**	**1,992.5628**	**0.6444**		**2,006.0960**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0221	0.0281	0.3001	1.2900e-003	0.1118	7.9000e-004	0.1126	0.0296	7.3000e-004	0.0304		86.8758	86.8758	3.6100e-003		86.9516
Total	**0.0221**	**0.0281**	**0.3001**	**1.2900e-003**	**0.1118**	**7.9000e-004**	**0.1126**	**0.0296**	**7.3000e-004**	**0.0304**		**86.8758**	**86.8758**	**3.6100e-003**		**86.9516**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000			0.0000
Off-Road	1.4590	13.8142	14.4509	0.0206		0.6667	0.6667		0.6134	0.6134	0.0000	1,992.5628	1,992.5628	0.6444		2,006.0960
Total	**1.4590**	**13.8142**	**14.4509**	**0.0206**	**2.5554**	**0.6667**	**3.2221**	**1.3133**	**0.6134**	**1.9267**	**0.0000**	**1,992.5628**	**1,992.5628**	**0.6444**		**2,006.0960**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0221	0.0281	0.3001	1.2900e-003	0.1118	7.9000e-004	0.1126	0.0296	7.3000e-004	0.0304		86.8758	86.8758	3.6100e-003		86.9516
Total	**0.0221**	**0.0281**	**0.3001**	**1.2900e-003**	**0.1118**	**7.9000e-004**	**0.1126**	**0.0296**	**7.3000e-004**	**0.0304**		**86.8758**	**86.8758**	**3.6100e-003**		**86.9516**

3.5 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8329	8.0134	11.5567	0.0176		0.3915	0.3915		0.3613	0.3613		1,686.7194	1,686.7194	0.5344		1,697.9423
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8329**	**8.0134**	**11.5567**	**0.0176**		**0.3915**	**0.3915**		**0.3613**	**0.3613**		**1,686.7194**	**1,686.7194**	**0.5344**		**1,697.9423**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0331	0.0422	0.4502	1.9400e-003	0.1677	1.1800e-003	0.1689	0.0445	1.1000e-003	0.0456		130.3137	130.3137	5.4200e-003		130.4274
Total	**0.0331**	**0.0422**	**0.4502**	**1.9400e-003**	**0.1677**	**1.1800e-003**	**0.1689**	**0.0445**	**1.1000e-003**	**0.0456**		**130.3137**	**130.3137**	**5.4200e-003**		**130.4274**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8329	8.0134	11.5567	0.0176		0.3915	0.3915		0.3613	0.3613	0.0000	1,686.7194	1,686.7194	0.5344		1,697.9423
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8329**	**8.0134**	**11.5567**	**0.0176**		**0.3915**	**0.3915**		**0.3613**	**0.3613**	**0.0000**	**1,686.7194**	**1,686.7194**	**0.5344**		**1,697.9423**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0331	0.0422	0.4502	1.9400e-003	0.1677	1.1800e-003	0.1689	0.0445	1.1000e-003	0.0456		130.3137	130.3137	5.4200e-003		130.4274
Total	**0.0331**	**0.0422**	**0.4502**	**1.9400e-003**	**0.1677**	**1.1800e-003**	**0.1689**	**0.0445**	**1.1000e-003**	**0.0456**		**130.3137**	**130.3137**	**5.4200e-003**		**130.4274**

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1.6811					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.7809
Total	**1.8619**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.7809**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0177	0.0225	0.2401	1.0300e-003	0.0894	6.3000e-004	0.0901	0.0237	5.9000e-004	0.0243		69.5006	69.5006	2.8900e-003		69.5613

Total	**0.0177**	**0.0225**	**0.2401**	**1.0300e-003**	**0.0894**	**6.3000e-004**	**0.0901**	**0.0237**	**5.9000e-004**	**0.0243**		**69.5006**	**69.5006**	**2.8900e-003**		**69.5613**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1.6811					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.7809
Total	**1.8619**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.7809**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0177	0.0225	0.2401	1.0300e-003	0.0894	6.3000e-004	0.0901	0.0237	5.9000e-004	0.0243		69.5006	69.5006	2.8900e-003		69.5613
Total	**0.0177**	**0.0225**	**0.2401**	**1.0300e-003**	**0.0894**	**6.3000e-004**	**0.0901**	**0.0237**	**5.9000e-004**	**0.0243**		**69.5006**	**69.5006**	**2.8900e-003**		**69.5613**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	6.2878	11.7229	61.7383	0.2366	17.4954	0.2472	17.7426	4.6692	0.2283	4.8975		17,259.6531	17,259.6531	0.5713		17,271.6509
Unmitigated	6.2878	11.7229	61.7383	0.2366	17.4954	0.2472	17.7426	4.6692	0.2283	4.8975		17,259.6531	17,259.6531	0.5713		17,271.6509

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	2,739.98	1,119.32	120.60	6,446,237	6,446,237
Total	2,739.98	1,119.32	120.60	6,446,237	6,446,237

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.501871	0.056875	0.196091	0.152579	0.042282	0.006031	0.016253	0.017122	0.001469	0.002194	0.004230	0.000489	0.002515

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0467	0.4246	0.3567	2.5500e-003		0.0323	0.0323		0.0323	0.0323		509.5239	509.5239	9.7700e-003	9.3400e-003	512.6248
NaturalGas Unmitigated	0.0467	0.4246	0.3567	2.5500e-003		0.0323	0.0323		0.0323	0.0323		509.5239	509.5239	9.7700e-003	9.3400e-003	512.6248

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	4330.95	0.0467	0.4246	0.3567	2.5500e-003		0.0323	0.0323		0.0323	0.0323		509.5239	509.5239	9.7700e-003	9.3400e-003	512.6248
Total		**0.0467**	**0.4246**	**0.3567**	**2.5500e-003**		**0.0323**	**0.0323**		**0.0323**	**0.0323**		**509.5239**	**509.5239**	**9.7700e-003**	**9.3400e-003**	**512.6248**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	4.33095	0.0467	0.4246	0.3567	2.5500e-003		0.0323	0.0323		0.0323	0.0323		509.5239	509.5239	9.7700e-003	9.3400e-003	512.6248

Total		**0.0467**	**0.4246**	**0.3567**	**2.5500e-003**		**0.0323**	**0.0323**		**0.0323**	**0.0323**		**509.5239**	**509.5239**	**9.7700e-003**	**9.3400e-003**	**512.6248**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.6073	9.0000e-005	0.0102	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0218	0.0218	6.0000e-005		0.0230
Unmitigated	2.6073	9.0000e-005	0.0102	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0218	0.0218	6.0000e-005		0.0230

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.6329					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.9735					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	9.4000e-004	9.0000e-005	0.0102	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0218	0.0218	6.0000e-005		0.0230
Total	**2.6073**	**9.0000e-005**	**0.0102**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.0218**	**0.0218**	**6.0000e-005**		**0.0230**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Consumer Products	1.9735					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	9.4000e-004	9.0000e-005	0.0102	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0218	0.0218	6.0000e-005		0.0230
Architectural Coating	0.6329					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.6073**	**9.0000e-005**	**0.0102**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.0218**	**0.0218**	**6.0000e-005**		**0.0230**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Phase 3 - Language Arts

Orange County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	107.76	1000sqft	0.83	107,760.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - modified

Construction Phase - modified

Off-road Equipment -

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Demolition - Demolition of Social and Behavioral Sciences, Virgil D Sessions Lit and Lang Bldg, Writer's Row, Journalism, and 150 Annex

Grading - modified

Architectural Coating - scaqmd rule 1113

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblConstructionPhase	NumDays	10.00	20.00
tblLandUse	LotAcreage	2.47	0.83
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblProjectCharacteristics	OperationalYear	2014	2022
tblTripsAndVMT	HaulingTripNumber	287.00	331.00
tblTripsAndVMT	VendorTripNumber	0.00	18.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.5739	0.6863	0.7334	1.4400e-003	0.0697	0.0365	0.1062	0.0153	0.0338	0.0490	0.0000	117.4771	117.4771	0.0213	0.0000	117.9234
Total	**0.5739**	**0.6863**	**0.7334**	**1.4400e-003**	**0.0697**	**0.0365**	**0.1062**	**0.0153**	**0.0338**	**0.0490**	**0.0000**	**117.4771**	**117.4771**	**0.0213**	**0.0000**	**117.9234**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.5739	0.6863	0.7334	1.4400e-003	0.0502	0.0365	0.0866	0.0121	0.0338	0.0459	0.0000	117.4771	117.4771	0.0213	0.0000	117.9233
Total	**0.5739**	**0.6863**	**0.7334**	**1.4400e-003**	**0.0502**	**0.0365**	**0.0866**	**0.0121**	**0.0338**	**0.0459**	**0.0000**	**117.4771**	**117.4771**	**0.0213**	**0.0000**	**117.9233**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**28.05**	**0.00**	**18.41**	**20.51**	**0.00**	**6.38**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5144	1.0000e-005	1.3800e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.6700e-003	2.6700e-003	1.0000e-005	0.0000	2.8200e-003
Energy	9.2200e-003	0.0838	0.0704	5.0000e-004		6.3700e-003	6.3700e-003		6.3700e-003	6.3700e-003	0.0000	524.4674	524.4674	0.0217	5.7900e-003	526.7180
Mobile	0.9764	2.0979	10.3546	0.0366	2.6337	0.0368	2.6706	0.7039	0.0340	0.7379	0.0000	2,470.0133	2,470.0133	0.0852	0.0000	2,471.8020
Waste						0.0000	0.0000		0.0000	0.0000	28.4370	0.0000	28.4370	1.6806	0.0000	63.7292
Water						0.0000	0.0000		0.0000	0.0000	1.6769	45.9785	47.6554	0.1743	4.5000e-003	52.7128
Total	**1.5000**	**2.1817**	**10.4264**	**0.0371**	**2.6337**	**0.0432**	**2.6769**	**0.7039**	**0.0404**	**0.7442**	**30.1139**	**3,040.4618**	**3,070.5757**	**1.9618**	**0.0103**	**3,114.9647**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5144	1.0000e-005	1.3800e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.6700e-003	2.6700e-003	1.0000e-005	0.0000	2.8200e-003
Energy	9.2200e-003	0.0838	0.0704	5.0000e-004		6.3700e-003	6.3700e-003		6.3700e-003	6.3700e-003	0.0000	524.4674	524.4674	0.0217	5.7900e-003	526.7180
Mobile	0.9764	2.0979	10.3546	0.0366	2.6337	0.0368	2.6706	0.7039	0.0340	0.7379	0.0000	2,470.0133	2,470.0133	0.0852	0.0000	2,471.8020
Waste						0.0000	0.0000		0.0000	0.0000	28.4370	0.0000	28.4370	1.6806	0.0000	63.7292
Water						0.0000	0.0000		0.0000	0.0000	1.6769	45.9785	47.6554	0.1743	4.5000e-003	52.7101
Total	**1.5000**	**2.1817**	**10.4264**	**0.0371**	**2.6337**	**0.0432**	**2.6769**	**0.7039**	**0.0404**	**0.7442**	**30.1139**	**3,040.4618**	**3,070.5757**	**1.9617**	**0.0103**	**3,114.9621**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2020	1/28/2020	5	20	
2	Site Preparation	Site Preparation	1/29/2020	1/29/2020	5	1	
3	Grading	Grading	1/30/2020	1/31/2020	5	2	
4	Trenching	Trenching	2/1/2020	2/14/2020	5	10	
5	Building Construction	Building Construction	2/15/2020	7/3/2020	5	100	
6	Paving	Paving	7/4/2020	7/10/2020	5	5	
7	Architectural Coating	Architectural Coating	7/11/2020	7/17/2020	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 161,640; Non-Residential Outdoor: 53,880 (Architectural Coating –

<u>OffRoad Equipment</u>

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Trenching	Cranes	0	4.00	226	0.29
Trenching	Forklifts	0	6.00	89	0.20
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Building Construction	Cranes	1	4.00	226	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Paving	Pavers	1	7.00	125	0.42
Paving	Rollers	1	7.00	80	0.38
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Trenching	Plate Compactors	1	8.00	8	0.43
Trenching	Trenchers	1	8.00	80	0.50

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	331.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	3	8.00	18.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	9.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	45.00	18.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0310	0.0000	0.0310	4.7000e-003	0.0000	4.7000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.5300e-003	0.0773	0.0810	1.2000e-004		4.5600e-003	4.5600e-003		4.3500e-003	4.3500e-003	0.0000	10.4481	10.4481	1.9800e-003	0.0000	10.4897
Total	**8.5300e-003**	**0.0773**	**0.0810**	**1.2000e-004**	**0.0310**	**4.5600e-003**	**0.0356**	**4.7000e-003**	**4.3500e-003**	**9.0500e-003**	**0.0000**	**10.4481**	**10.4481**	**1.9800e-003**	**0.0000**	**10.4897**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.6600e-003	0.0343	0.0324	1.2000e-004	2.8400e-003	6.1000e-004	3.4500e-003	7.8000e-004	5.6000e-004	1.3400e-003	0.0000	10.3607	10.3607	8.0000e-005	0.0000	10.3624
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5000e-004	3.6000e-004	3.8300e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1100e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	0.8515	0.8515	4.0000e-005	0.0000	0.8523
Total	**2.9100e-003**	**0.0346**	**0.0362**	**1.3000e-004**	**3.9400e-003**	**6.2000e-004**	**4.5600e-003**	**1.0700e-003**	**5.7000e-004**	**1.6400e-003**	**0.0000**	**11.2122**	**11.2122**	**1.2000e-004**	**0.0000**	**11.2147**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0121	0.0000	0.0121	1.8300e-003	0.0000	1.8300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.5300e-003	0.0773	0.0810	1.2000e-004		4.5600e-003	4.5600e-003		4.3500e-003	4.3500e-003	0.0000	10.4480	10.4480	1.9800e-003	0.0000	10.4896
Total	**8.5300e-003**	**0.0773**	**0.0810**	**1.2000e-004**	**0.0121**	**4.5600e-003**	**0.0167**	**1.8300e-003**	**4.3500e-003**	**6.1800e-003**	**0.0000**	**10.4480**	**10.4480**	**1.9800e-003**	**0.0000**	**10.4896**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Hauling	2.6600e-003	0.0343	0.0324	1.2000e-004	2.8400e-003	6.1000e-004	3.4500e-003	7.8000e-004	5.6000e-004	1.3400e-003	0.0000	10.3607	10.3607	8.0000e-005	0.0000	10.3624
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5000e-004	3.6000e-004	3.8300e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1100e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	0.8515	0.8515	4.0000e-005	0.0000	0.8523
Total	**2.9100e-003**	**0.0346**	**0.0362**	**1.3000e-004**	**3.9400e-003**	**6.2000e-004**	**4.5600e-003**	**1.0700e-003**	**5.7000e-004**	**1.6400e-003**	**0.0000**	**11.2122**	**11.2122**	**1.2000e-004**	**0.0000**	**11.2147**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.6000e-004	4.5300e-003	3.4200e-003	0.0000		2.6000e-004	2.6000e-004		2.4000e-004	2.4000e-004	0.0000	0.4093	0.4093	1.3000e-004	0.0000	0.4120
Total	**4.6000e-004**	**4.5300e-003**	**3.4200e-003**	**0.0000**	**2.7000e-004**	**2.6000e-004**	**5.3000e-004**	**3.0000e-005**	**2.4000e-004**	**2.7000e-004**	**0.0000**	**0.4093**	**0.4093**	**1.3000e-004**	**0.0000**	**0.4120**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	1.0000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0213	0.0213	0.0000	0.0000	0.0213
Total	**1.0000e-005**	**1.0000e-005**	**1.0000e-004**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0213**	**0.0213**	**0.0000**	**0.0000**	**0.0213**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.0000e-004	0.0000	1.0000e-004	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.6000e-004	4.5300e-003	3.4200e-003	0.0000		2.6000e-004	2.6000e-004		2.4000e-004	2.4000e-004	0.0000	0.4093	0.4093	1.3000e-004	0.0000	0.4120
Total	**4.6000e-004**	**4.5300e-003**	**3.4200e-003**	**0.0000**	**1.0000e-004**	**2.6000e-004**	**3.6000e-004**	**1.0000e-005**	**2.4000e-004**	**2.5000e-004**	**0.0000**	**0.4093**	**0.4093**	**1.3000e-004**	**0.0000**	**0.4120**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	1.0000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0213	0.0213	0.0000	0.0000	0.0213
Total	**1.0000e-005**	**1.0000e-005**	**1.0000e-004**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0213**	**0.0213**	**0.0000**	**0.0000**	**0.0213**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.5000e-004	0.0000	7.5000e-004	4.1000e-004	0.0000	4.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.5000e-004	7.7200e-003	8.1000e-003	1.0000e-005		4.6000e-004	4.6000e-004		4.4000e-004	4.4000e-004	0.0000	1.0448	1.0448	2.0000e-004	0.0000	1.0490
Total	**8.5000e-004**	**7.7200e-003**	**8.1000e-003**	**1.0000e-005**	**7.5000e-004**	**4.6000e-004**	**1.2100e-003**	**4.1000e-004**	**4.4000e-004**	**8.5000e-004**	**0.0000**	**1.0448**	**1.0448**	**2.0000e-004**	**0.0000**	**1.0490**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	4.0000e-005	3.8000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0852	0.0852	0.0000	0.0000	0.0852
Total	**2.0000e-005**	**4.0000e-005**	**3.8000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0852**	**0.0852**	**0.0000**	**0.0000**	**0.0852**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.9000e-004	0.0000	2.9000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Off-Road	8.5000e-004	7.7200e-003	8.1000e-003	1.0000e-005		4.6000e-004	4.6000e-004		4.4000e-004	4.4000e-004	0.0000	1.0448	1.0448	2.0000e-004	0.0000	1.0490
Total	**8.5000e-004**	**7.7200e-003**	**8.1000e-003**	**1.0000e-005**	**2.9000e-004**	**4.6000e-004**	**7.5000e-004**	**1.6000e-004**	**4.4000e-004**	**6.0000e-004**	**0.0000**	**1.0448**	**1.0448**	**2.0000e-004**	**0.0000**	**1.0490**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	4.0000e-005	3.8000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0852	0.0852	0.0000	0.0000	0.0852
Total	**2.0000e-005**	**4.0000e-005**	**3.8000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0852**	**0.0852**	**0.0000**	**0.0000**	**0.0852**

3.5 Trenching - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.4100e-003	0.0314	0.0260	4.0000e-005		2.1800e-003	2.1800e-003		2.0100e-003	2.0100e-003	0.0000	3.0487	3.0487	9.5000e-004	0.0000	3.0687
Total	**3.4100e-003**	**0.0314**	**0.0260**	**4.0000e-005**		**2.1800e-003**	**2.1800e-003**		**2.0100e-003**	**2.0100e-003**	**0.0000**	**3.0487**	**3.0487**	**9.5000e-004**	**0.0000**	**3.0687**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.2000e-004	5.4800e-003	8.7200e-003	2.0000e-005	9.6000e-004	9.0000e-005	1.0500e-003	2.6000e-004	8.0000e-005	3.4000e-004	0.0000	1.6442	1.6442	1.0000e-005	0.0000	1.6445
Worker	2.0000e-004	2.9000e-004	3.0700e-003	1.0000e-005	1.6400e-003	1.0000e-005	1.6500e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	0.6812	0.6812	3.0000e-005	0.0000	0.6818
Total	**8.2000e-004**	**5.7700e-003**	**0.0118**	**3.0000e-005**	**2.6000e-003**	**1.0000e-004**	**2.7000e-003**	**6.8000e-004**	**9.0000e-005**	**7.7000e-004**	**0.0000**	**2.3254**	**2.3254**	**4.0000e-005**	**0.0000**	**2.3263**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.4100e-003	0.0314	0.0260	4.0000e-005		2.1800e-003	2.1800e-003		2.0100e-003	2.0100e-003	0.0000	3.0487	3.0487	9.5000e-004	0.0000	3.0687
Total	**3.4100e-003**	**0.0314**	**0.0260**	**4.0000e-005**		**2.1800e-003**	**2.1800e-003**		**2.0100e-003**	**2.0100e-003**	**0.0000**	**3.0487**	**3.0487**	**9.5000e-004**	**0.0000**	**3.0687**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.2000e-004	5.4800e-003	8.7200e-003	2.0000e-005	9.6000e-004	9.0000e-005	1.0500e-003	2.6000e-004	8.0000e-005	3.4000e-004	0.0000	1.6442	1.6442	1.0000e-005	0.0000	1.6445
Worker	2.0000e-004	2.9000e-004	3.0700e-003	1.0000e-005	1.6400e-003	1.0000e-005	1.6500e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	0.6812	0.6812	3.0000e-005	0.0000	0.6818
Total	**8.2000e-004**	**5.7700e-003**	**0.0118**	**3.0000e-005**	**2.6000e-003**	**1.0000e-004**	**2.7000e-003**	**6.8000e-004**	**9.0000e-005**	**7.7000e-004**	**0.0000**	**2.3254**	**2.3254**	**4.0000e-005**	**0.0000**	**2.3263**

3.6 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0428	0.4397	0.3682	5.7000e-004		0.0260	0.0260		0.0239	0.0239	0.0000	49.7559	49.7559	0.0161	0.0000	50.0939
Total	**0.0428**	**0.4397**	**0.3682**	**5.7000e-004**		**0.0260**	**0.0260**		**0.0239**	**0.0239**	**0.0000**	**49.7559**	**49.7559**	**0.0161**	**0.0000**	**50.0939**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.2300e-003	0.0548	0.0872	1.9000e-004	5.5400e-003	8.9000e-004	6.4300e-003	1.5800e-003	8.2000e-004	2.4000e-003	0.0000	16.4420	16.4420	1.2000e-004	0.0000	16.4445
Worker	5.6200e-003	8.1700e-003	0.0863	2.9000e-004	0.0247	1.7000e-004	0.0249	6.5600e-003	1.6000e-004	6.7200e-003	0.0000	19.1579	19.1579	8.6000e-004	0.0000	19.1760
Total	**0.0119**	**0.0630**	**0.1735**	**4.8000e-004**	**0.0302**	**1.0600e-003**	**0.0313**	**8.1400e-003**	**9.8000e-004**	**9.1200e-003**	**0.0000**	**35.5999**	**35.5999**	**9.8000e-004**	**0.0000**	**35.6205**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0428	0.4397	0.3682	5.7000e-004		0.0260	0.0260		0.0239	0.0239	0.0000	49.7559	49.7559	0.0161	0.0000	50.0938
Total	**0.0428**	**0.4397**	**0.3682**	**5.7000e-004**		**0.0260**	**0.0260**		**0.0239**	**0.0239**	**0.0000**	**49.7559**	**49.7559**	**0.0161**	**0.0000**	**50.0938**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.2300e-003	0.0548	0.0872	1.9000e-004	5.5400e-003	8.9000e-004	6.4300e-003	1.5800e-003	8.2000e-004	2.4000e-003	0.0000	16.4420	16.4420	1.2000e-004	0.0000	16.4445
Worker	5.6200e-003	8.1700e-003	0.0863	2.9000e-004	0.0247	1.7000e-004	0.0249	6.5600e-003	1.6000e-004	6.7200e-003	0.0000	19.1579	19.1579	8.6000e-004	0.0000	19.1760
Total	**0.0119**	**0.0630**	**0.1735**	**4.8000e-004**	**0.0302**	**1.0600e-003**	**0.0313**	**8.1400e-003**	**9.8000e-004**	**9.1200e-003**	**0.0000**	**35.5999**	**35.5999**	**9.8000e-004**	**0.0000**	**35.6205**

3.7 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.9100e-003	0.0178	0.0175	3.0000e-005		9.8000e-004	9.8000e-004		9.1000e-004	9.1000e-004	0.0000	2.3135	2.3135	6.7000e-004	0.0000	2.3276
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.9100e-003**	**0.0178**	**0.0175**	**3.0000e-005**		**9.8000e-004**	**9.8000e-004**		**9.1000e-004**	**9.1000e-004**	**0.0000**	**2.3135**	**2.3135**	**6.7000e-004**	**0.0000**	**2.3276**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	1.6000e-004	1.7300e-003	1.0000e-005	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3832	0.3832	2.0000e-005	0.0000	0.3835
Total	**1.1000e-004**	**1.6000e-004**	**1.7300e-003**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.3832**	**0.3832**	**2.0000e-005**	**0.0000**	**0.3835**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.9100e-003	0.0178	0.0175	3.0000e-005		9.8000e-004	9.8000e-004		9.1000e-004	9.1000e-004	0.0000	2.3135	2.3135	6.7000e-004	0.0000	2.3276

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.9100e-003**	**0.0178**	**0.0175**	**3.0000e-005**		**9.8000e-004**	**9.8000e-004**		**9.1000e-004**	**9.1000e-004**	**0.0000**	**2.3135**	**2.3135**	**6.7000e-004**	**0.0000**	**2.3276**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	1.6000e-004	1.7300e-003	1.0000e-005	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3832	0.3832	2.0000e-005	0.0000	0.3835
Total	**1.1000e-004**	**1.6000e-004**	**1.7300e-003**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.3832**	**0.3832**	**2.0000e-005**	**0.0000**	**0.3835**

3.8 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4995					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.1000e-004	4.2100e-003	4.5800e-003	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	0.6383	0.6383	5.0000e-005	0.0000	0.6394
Total	**0.5001**	**4.2100e-003**	**4.5800e-003**	**1.0000e-005**		**2.8000e-004**	**2.8000e-004**		**2.8000e-004**	**2.8000e-004**	**0.0000**	**0.6383**	**0.6383**	**5.0000e-005**	**0.0000**	**0.6394**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	8.0000e-005	8.6000e-004	0.0000	2.5000e-004	0.0000	2.5000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.1916	0.1916	1.0000e-005	0.0000	0.1918
Total	**6.0000e-005**	**8.0000e-005**	**8.6000e-004**	**0.0000**	**2.5000e-004**	**0.0000**	**2.5000e-004**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.1916**	**0.1916**	**1.0000e-005**	**0.0000**	**0.1918**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4995					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.1000e-004	4.2100e-003	4.5800e-003	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	0.6383	0.6383	5.0000e-005	0.0000	0.6394
Total	**0.5001**	**4.2100e-003**	**4.5800e-003**	**1.0000e-005**		**2.8000e-004**	**2.8000e-004**		**2.8000e-004**	**2.8000e-004**	**0.0000**	**0.6383**	**0.6383**	**5.0000e-005**	**0.0000**	**0.6394**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	8.0000e-005	8.6000e-004	0.0000	2.5000e-004	0.0000	2.5000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.1916	0.1916	1.0000e-005	0.0000	0.1918
Total	**6.0000e-005**	**8.0000e-005**	**8.6000e-004**	**0.0000**	**2.5000e-004**	**0.0000**	**2.5000e-004**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.1916**	**0.1916**	**1.0000e-005**	**0.0000**	**0.1918**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.9764	2.0979	10.3546	0.0366	2.6337	0.0368	2.6706	0.7039	0.0340	0.7379	0.0000	2,470.0133	2,470.0133	0.0852	0.0000	2,471.8020
Unmitigated	0.9764	2.0979	10.3546	0.0366	2.6337	0.0368	2.6706	0.7039	0.0340	0.7379	0.0000	2,470.0133	2,470.0133	0.0852	0.0000	2,471.8020

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	2,962.32	1,210.14	130.39	6,969,324	6,969,324
Total	2,962.32	1,210.14	130.39	6,969,324	6,969,324

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.505043	0.056653	0.194832	0.151784	0.042126	0.005989	0.016072	0.016505	0.001461	0.002178	0.004464	0.000494	0.002401

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	433.2647	433.2647	0.0199	4.1200e-003	434.9603
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	433.2647	433.2647	0.0199	4.1200e-003	434.9603
NaturalGas Mitigated	9.2200e-003	0.0838	0.0704	5.0000e-004		6.3700e-003	6.3700e-003		6.3700e-003	6.3700e-003	0.0000	91.2027	91.2027	1.7500e-003	1.6700e-003	91.7577
NaturalGas Unmitigated	9.2200e-003	0.0838	0.0704	5.0000e-004		6.3700e-003	6.3700e-003		6.3700e-003	6.3700e-003	0.0000	91.2027	91.2027	1.7500e-003	1.6700e-003	91.7577

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Junior College (2Yr)	1.70907e+006	9.2200e-003	0.0838	0.0704	5.0000e-004		6.3700e-003	6.3700e-003		6.3700e-003	6.3700e-003	0.0000	91.2027	91.2027	1.7500e-003	1.6700e-003	91.7577

Total		9.2200e-003	0.0838	0.0704	5.0000e-004		6.3700e-003	6.3700e-003		6.3700e-003	6.3700e-003	0.0000	91.2027	91.2027	1.7500e-003	1.6700e-003	91.7577

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Junior College (2Yr)	1.70907e+006	9.2200e-003	0.0838	0.0704	5.0000e-004		6.3700e-003	6.3700e-003		6.3700e-003	6.3700e-003	0.0000	91.2027	91.2027	1.7500e-003	1.6700e-003	91.7577
Total		**9.2200e-003**	**0.0838**	**0.0704**	**5.0000e-004**		**6.3700e-003**	**6.3700e-003**		**6.3700e-003**	**6.3700e-003**	**0.0000**	**91.2027**	**91.2027**	**1.7500e-003**	**1.6700e-003**	**91.7577**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	1.51403e+006	433.2647	0.0199	4.1200e-003	434.9603
Total		**433.2647**	**0.0199**	**4.1200e-003**	**434.9603**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	1.51403e+006	433.2647	0.0199	4.1200e-003	434.9603
Total		**433.2647**	**0.0199**	**4.1200e-003**	**434.9603**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.5144	1.0000e-005	1.3800e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.6700e-003	2.6700e-003	1.0000e-005	0.0000	2.8200e-003
Unmitigated	0.5144	1.0000e-005	1.3800e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.6700e-003	2.6700e-003	1.0000e-005	0.0000	2.8200e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					

Architectural Coating	0.1249					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3894					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.3000e-004	1.0000e-005	1.3800e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.6700e-003	2.6700e-003	1.0000e-005	0.0000	2.8200e-003
Total	**0.5144**	**1.0000e-005**	**1.3800e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.6700e-003**	**2.6700e-003**	**1.0000e-005**	**0.0000**	**2.8200e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1249					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3894					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.3000e-004	1.0000e-005	1.3800e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.6700e-003	2.6700e-003	1.0000e-005	0.0000	2.8200e-003
Total	**0.5144**	**1.0000e-005**	**1.3800e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.6700e-003**	**2.6700e-003**	**1.0000e-005**	**0.0000**	**2.8200e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	47.6554	0.1743	4.5000e-003	52.7101
Unmitigated	47.6554	0.1743	4.5000e-003	52.7128

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	5.28552 / 8.2671	47.6554	0.1743	4.5000e-003	52.7128
Total		**47.6554**	**0.1743**	**4.5000e-003**	**52.7128**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	5.28552 / 8.2671	47.6554	0.1743	4.5000e-003	52.7101
Total		**47.6554**	**0.1743**	**4.5000e-003**	**52.7101**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	28.4370	1.6806	0.0000	63.7292
Unmitigated	28.4370	1.6806	0.0000	63.7292

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior College (2Yr)	140.09	28.4370	1.6806	0.0000	63.7292
Total		**28.4370**	**1.6806**	**0.0000**	**63.7292**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			

Junior College (2Yr)	140.09	28.4370	1.6806	0.0000	63.7292
Total		**28.4370**	**1.6806**	**0.0000**	**63.7292**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Phase 3 - Language Arts

Orange County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	107.76	1000sqft	0.83	107,760.00	0

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 2.2 **Precipitation Freq (Days)** 30

Climate Zone 8 **Operational Year** 2022

Utility Company Southern California Edison

CO2 Intensity (lb/MWhr) 630.89 **CH4 Intensity (lb/MWhr)** 0.029 **N2O Intensity (lb/MWhr)** 0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - modified

Construction Phase - modified

Off-road Equipment -

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Demolition - Demolition of Social and Behavioral Sciences, Virgil D Sessions Lit and Lang Bldg, Writer's Row, Journalism, and 150 Annex

Grading - modified

Architectural Coating - scaqmd rule 1113

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblConstructionPhase	NumDays	10.00	20.00
tblLandUse	LotAcreage	2.47	0.83
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblProjectCharacteristics	OperationalYear	2014	2022
tblTripsAndVMT	HaulingTripNumber	287.00	331.00
tblTripsAndVMT	VendorTripNumber	0.00	18.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	200.0522	11.0160	11.3546	0.0256	3.5028	0.5411	4.0208	0.5784	0.4978	1.0708	0.0000	2,392.5643	2,392.5643	0.3763	0.0000	2,400.4669
Total	**200.0522**	**11.0160**	**11.3546**	**0.0256**	**3.5028**	**0.5411**	**4.0208**	**0.5784**	**0.4978**	**1.0708**	**0.0000**	**2,392.5643**	**2,392.5643**	**0.3763**	**0.0000**	**2,400.4669**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	200.0522	11.0160	11.3546	0.0256	1.6102	0.5411	2.1282	0.2918	0.4978	0.7842	0.0000	2,392.5643	2,392.5643	0.3763	0.0000	2,400.4669
Total	**200.0522**	**11.0160**	**11.3546**	**0.0256**	**1.6102**	**0.5411**	**2.1282**	**0.2918**	**0.4978**	**0.7842**	**0.0000**	**2,392.5643**	**2,392.5643**	**0.3763**	**0.0000**	**2,400.4669**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**54.03**	**0.00**	**47.07**	**49.54**	**0.00**	**26.76**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.8189	1.0000e-004	0.0110	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0236	0.0236	6.0000e-005		0.0249
Energy	0.0505	0.4591	0.3856	2.7500e-003		0.0349	0.0349		0.0349	0.0349		550.8698	550.8698	0.0106	0.0101	554.2223
Mobile	6.9286	13.7421	73.0213	0.2671	18.9119	0.2598	19.1717	5.0468	0.2400	5.2868		19,843.5383	19,843.5383	0.6629		19,857.4582
Total	**9.7980**	**14.2013**	**73.4179**	**0.2699**	**18.9119**	**0.2947**	**19.2066**	**5.0468**	**0.2749**	**5.3217**		**20,394.4317**	**20,394.4317**	**0.6735**	**0.0101**	**20,411.7054**

Mitigated Operational

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Area	2.8189	1.0000e-004	0.0110	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0236	0.0236	6.0000e-005		0.0249
Energy	0.0505	0.4591	0.3856	2.7500e-003		0.0349	0.0349		0.0349	0.0349		550.8698	550.8698	0.0106	0.0101	554.2223
Mobile	6.9286	13.7421	73.0213	0.2671	18.9119	0.2598	19.1717	5.0468	0.2400	5.2868		19,843.5383	19,843.5383	0.6629		19,857.4582
Total	**9.7980**	**14.2013**	**73.4179**	**0.2699**	**18.9119**	**0.2947**	**19.2066**	**5.0468**	**0.2749**	**5.3217**		**20,394.4317**	**20,394.4317**	**0.6735**	**0.0101**	**20,411.7054**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2020	1/28/2020	5	20	
2	Site Preparation	Site Preparation	1/29/2020	1/29/2020	5	1	
3	Grading	Grading	1/30/2020	1/31/2020	5	2	
4	Trenching	Trenching	2/1/2020	2/14/2020	5	10	
5	Building Construction	Building Construction	2/15/2020	7/3/2020	5	100	
6	Paving	Paving	7/4/2020	7/10/2020	5	5	
7	Architectural Coating	Architectural Coating	7/11/2020	7/17/2020	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 161,640; Non-Residential Outdoor: 53,880 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Trenching	Cranes	0	4.00	226	0.29
Trenching	Forklifts	0	6.00	89	0.20
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Building Construction	Cranes	1	4.00	226	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Paving	Pavers	1	7.00	125	0.42
Paving	Rollers	1	7.00	80	0.38
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Trenching	Plate Compactors	1	8.00	8	0.43
Trenching	Trenchers	1	8.00	80	0.50

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class

Demolition	4	10.00	0.00	331.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	3	8.00	18.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	9.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	45.00	18.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.1026	0.0000	3.1026	0.4698	0.0000	0.4698			0.0000			0.0000
Off-Road	0.8527	7.7248	8.0981	0.0120		0.4561	0.4561		0.4355	0.4355		1,151.7011	1,151.7011	0.2184		1,156.2863
Total	**0.8527**	**7.7248**	**8.0981**	**0.0120**	**3.1026**	**0.4561**	**3.5587**	**0.4698**	**0.4355**	**0.9052**		**1,151.7011**	**1,151.7011**	**0.2184**		**1,156.2863**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.2576	3.2591	2.8545	0.0122	0.2884	0.0611	0.3495	0.0790	0.0562	0.1352		1,143.2153	1,143.2153	8.8800e-003		1,143.4018
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0255	0.0321	0.4020	1.3600e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		97.6480	97.6480	4.2000e-003		97.7363
Total	**0.2832**	**3.2912**	**3.2565**	**0.0135**	**0.4002**	**0.0618**	**0.4620**	**0.1086**	**0.0569**	**0.1655**		**1,240.8633**	**1,240.8633**	**0.0131**		**1,241.1381**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.2100	0.0000	1.2100	0.1832	0.0000	0.1832			0.0000			0.0000
Off-Road	0.8527	7.7248	8.0981	0.0120		0.4561	0.4561		0.4355	0.4355	0.0000	1,151.7011	1,151.7011	0.2184		1,156.2863
Total	**0.8527**	**7.7248**	**8.0981**	**0.0120**	**1.2100**	**0.4561**	**1.6661**	**0.1832**	**0.4355**	**0.6187**	**0.0000**	**1,151.7011**	**1,151.7011**	**0.2184**		**1,156.2863**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2576	3.2591	2.8545	0.0122	0.2884	0.0611	0.3495	0.0790	0.0562	0.1352		1,143.2153	1,143.2153	8.8800e-003		1,143.4018
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0255	0.0321	0.4020	1.3600e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		97.6480	97.6480	4.2000e-003		97.7363

Total	0.2832	3.2912	3.2565	0.0135	0.4002	0.0618	0.4620	0.1086	0.0569	0.1655		1,240.8633	1,240.8633	0.0131		1,241.1381

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.9225	9.0637	6.8357	9.3100e-003		0.5213	0.5213		0.4796	0.4796		902.2494	902.2494	0.2918		908.3773
Total	**0.9225**	**9.0637**	**6.8357**	**9.3100e-003**	**0.5303**	**0.5213**	**1.0516**	**0.0573**	**0.4796**	**0.5369**		**902.2494**	**902.2494**	**0.2918**		**908.3773**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0128	0.0161	0.2010	6.8000e-004	0.0559	3.8000e-004	0.0563	0.0148	3.5000e-004	0.0152		48.8240	48.8240	2.1000e-003		48.8681
Total	**0.0128**	**0.0161**	**0.2010**	**6.8000e-004**	**0.0559**	**3.8000e-004**	**0.0563**	**0.0148**	**3.5000e-004**	**0.0152**		**48.8240**	**48.8240**	**2.1000e-003**		**48.8681**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2068	0.0000	0.2068	0.0223	0.0000	0.0223			0.0000			0.0000
Off-Road	0.9225	9.0637	6.8357	9.3100e-003		0.5213	0.5213		0.4796	0.4796	0.0000	902.2494	902.2494	0.2918		908.3773
Total	**0.9225**	**9.0637**	**6.8357**	**9.3100e-003**	**0.2068**	**0.5213**	**0.7281**	**0.0223**	**0.4796**	**0.5019**	**0.0000**	**902.2494**	**902.2494**	**0.2918**		**908.3773**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0128	0.0161	0.2010	6.8000e-004	0.0559	3.8000e-004	0.0563	0.0148	3.5000e-004	0.0152		48.8240	48.8240	2.1000e-003		48.8681
Total	**0.0128**	**0.0161**	**0.2010**	**6.8000e-004**	**0.0559**	**3.8000e-004**	**0.0563**	**0.0148**	**3.5000e-004**	**0.0152**		**48.8240**	**48.8240**	**2.1000e-003**		**48.8681**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	0.8527	7.7248	8.0981	0.0120		0.4561	0.4561		0.4355	0.4355		1,151.7011	1,151.7011	0.2184		1,156.2863
Total	**0.8527**	**7.7248**	**8.0981**	**0.0120**	**0.7528**	**0.4561**	**1.2089**	**0.4138**	**0.4355**	**0.8492**		**1,151.7011**	**1,151.7011**	**0.2184**		**1,156.2863**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0255	0.0321	0.4020	1.3600e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		97.6480	97.6480	4.2000e-003		97.7363
Total	**0.0255**	**0.0321**	**0.4020**	**1.3600e-003**	**0.1118**	**7.6000e-004**	**0.1125**	**0.0296**	**7.1000e-004**	**0.0304**		**97.6480**	**97.6480**	**4.2000e-003**		**97.7363**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2936	0.0000	0.2936	0.1614	0.0000	0.1614			0.0000			0.0000
Off-Road	0.8527	7.7248	8.0981	0.0120		0.4561	0.4561		0.4355	0.4355	0.0000	1,151.7011	1,151.7011	0.2184		1,156.2863
Total	**0.8527**	**7.7248**	**8.0981**	**0.0120**	**0.2936**	**0.4561**	**0.7497**	**0.1614**	**0.4355**	**0.5968**	**0.0000**	**1,151.7011**	**1,151.7011**	**0.2184**		**1,156.2863**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0255	0.0321	0.4020	1.3600e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		97.6480	97.6480	4.2000e-003		97.7363
Total	**0.0255**	**0.0321**	**0.4020**	**1.3600e-003**	**0.1118**	**7.6000e-004**	**0.1125**	**0.0296**	**7.1000e-004**	**0.0304**		**97.6480**	**97.6480**	**4.2000e-003**		**97.7363**

3.5 Trenching - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6823	6.2698	5.2076	7.0600e-003		0.4359	0.4359		0.4018	0.4018		672.1157	672.1157	0.2098		676.5216
Total	**0.6823**	**6.2698**	**5.2076**	**7.0600e-003**		**0.4359**	**0.4359**		**0.4018**	**0.4018**		**672.1157**	**672.1157**	**0.2098**		**676.5216**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1179	1.0530	1.4723	3.8800e-003	0.1946	0.0177	0.2123	0.0522	0.0163	0.0685		363.7806	363.7806	2.6300e-003		363.8360
Worker	0.0408	0.0514	0.6432	2.1800e-003	0.3343	1.2200e-003	0.3356	0.0856	1.1300e-003	0.0867		156.2368	156.2368	6.7200e-003		156.3780
Total	**0.1588**	**1.1044**	**2.1156**	**6.0600e-003**	**0.5290**	**0.0189**	**0.5479**	**0.1378**	**0.0174**	**0.1552**		**520.0175**	**520.0175**	**9.3500e-003**		**520.2140**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6823	6.2698	5.2076	7.0600e-003		0.4359	0.4359		0.4018	0.4018	0.0000	672.1157	672.1157	0.2098		676.5216
Total	**0.6823**	**6.2698**	**5.2076**	**7.0600e-003**		**0.4359**	**0.4359**		**0.4018**	**0.4018**	**0.0000**	**672.1157**	**672.1157**	**0.2098**		**676.5216**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1179	1.0530	1.4723	3.8800e-003	0.1946	0.0177	0.2123	0.0522	0.0163	0.0685		363.7806	363.7806	2.6300e-003		363.8360
Worker	0.0408	0.0514	0.6432	2.1800e-003	0.3343	1.2200e-003	0.3356	0.0856	1.1300e-003	0.0867		156.2368	156.2368	6.7200e-003		156.3780

Total	**0.1588**	**1.1044**	**2.1156**	**6.0600e-003**	**0.5290**	**0.0189**	**0.5479**	**0.1378**	**0.0174**	**0.1552**		**520.0175**	**520.0175**	**9.3500e-003**		**520.2140**

3.6 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8568	8.7940	7.3646	0.0113		0.5200	0.5200		0.4784	0.4784		1,096.9306	1,096.9306	0.3548		1,104.3807
Total	**0.8568**	**8.7940**	**7.3646**	**0.0113**		**0.5200**	**0.5200**		**0.4784**	**0.4784**		**1,096.9306**	**1,096.9306**	**0.3548**		**1,104.3807**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1179	1.0530	1.4723	3.8800e-003	0.1125	0.0177	0.1302	0.0321	0.0163	0.0483		363.7806	363.7806	2.6300e-003		363.8360
Worker	0.1149	0.1446	1.8091	6.1300e-003	0.5030	3.4400e-003	0.5064	0.1334	3.1900e-003	0.1366		439.4161	439.4161	0.0189		439.8132
Total	**0.2328**	**1.1976**	**3.2815**	**0.0100**	**0.6155**	**0.0211**	**0.6367**	**0.1655**	**0.0195**	**0.1849**		**803.1968**	**803.1968**	**0.0215**		**803.6492**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8568	8.7940	7.3646	0.0113		0.5200	0.5200		0.4784	0.4784	0.0000	1,096.9306	1,096.9306	0.3548		1,104.3807
Total	**0.8568**	**8.7940**	**7.3646**	**0.0113**		**0.5200**	**0.5200**		**0.4784**	**0.4784**	**0.0000**	**1,096.9306**	**1,096.9306**	**0.3548**		**1,104.3807**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1179	1.0530	1.4723	3.8800e-003	0.1125	0.0177	0.1302	0.0321	0.0163	0.0483		363.7806	363.7806	2.6300e-003		363.8360
Worker	0.1149	0.1446	1.8091	6.1300e-003	0.5030	3.4400e-003	0.5064	0.1334	3.1900e-003	0.1366		439.4161	439.4161	0.0189		439.8132
Total	**0.2328**	**1.1976**	**3.2815**	**0.0100**	**0.6155**	**0.0211**	**0.6367**	**0.1655**	**0.0195**	**0.1849**		**803.1968**	**803.1968**	**0.0215**		**803.6492**

3.7 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Off-Road	0.7627	7.1320	7.0153	0.0111		0.3905	0.3905		0.3626	0.3626		1,020.0710	1,020.0710	0.2966		1,026.3002
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7627**	**7.1320**	**7.0153**	**0.0111**		**0.3905**	**0.3905**		**0.3626**	**0.3626**		**1,020.0710**	**1,020.0710**	**0.2966**		**1,026.3002**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0459	0.0579	0.7237	2.4500e-003	0.2012	1.3800e-003	0.2026	0.0534	1.2800e-003	0.0546		175.7665	175.7665	7.5600e-003		175.9253
Total	**0.0459**	**0.0579**	**0.7237**	**2.4500e-003**	**0.2012**	**1.3800e-003**	**0.2026**	**0.0534**	**1.2800e-003**	**0.0546**		**175.7665**	**175.7665**	**7.5600e-003**		**175.9253**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7627	7.1320	7.0153	0.0111		0.3905	0.3905		0.3626	0.3626	0.0000	1,020.0710	1,020.0710	0.2966		1,026.3002
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7627**	**7.1320**	**7.0153**	**0.0111**		**0.3905**	**0.3905**		**0.3626**	**0.3626**	**0.0000**	**1,020.0710**	**1,020.0710**	**0.2966**		**1,026.3002**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0459	0.0579	0.7237	2.4500e-003	0.2012	1.3800e-003	0.2026	0.0534	1.2800e-003	0.0546		175.7665	175.7665	7.5600e-003		175.9253
Total	**0.0459**	**0.0579**	**0.7237**	**2.4500e-003**	**0.2012**	**1.3800e-003**	**0.2026**	**0.0534**	**1.2800e-003**	**0.0546**		**175.7665**	**175.7665**	**7.5600e-003**		**175.9253**

3.8 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	199.7870					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9057
Total	**200.0292**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9057**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0230	0.0289	0.3618	1.2300e-003	0.1006	6.9000e-004	0.1013	0.0267	6.4000e-004	0.0273		87.8832	87.8832	3.7800e-003		87.9627
Total	**0.0230**	**0.0289**	**0.3618**	**1.2300e-003**	**0.1006**	**6.9000e-004**	**0.1013**	**0.0267**	**6.4000e-004**	**0.0273**		**87.8832**	**87.8832**	**3.7800e-003**		**87.9627**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	199.7870					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9057
Total	**200.0292**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9057**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0230	0.0289	0.3618	1.2300e-003	0.1006	6.9000e-004	0.1013	0.0267	6.4000e-004	0.0273		87.8832	87.8832	3.7800e-003		87.9627

Total	**0.0230**	**0.0289**	**0.3618**	**1.2300e-003**	**0.1006**	**6.9000e-004**	**0.1013**	**0.0267**	**6.4000e-004**	**0.0273**		**87.8832**	**87.8832**	**3.7800e-003**		**87.9627**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	6.9286	13.7421	73.0213	0.2671	18.9119	0.2598	19.1717	5.0468	0.2400	5.2868		19,843.5383	19,843.5383	0.6629		19,857.4582
Unmitigated	6.9286	13.7421	73.0213	0.2671	18.9119	0.2598	19.1717	5.0468	0.2400	5.2868		19,843.5383	19,843.5383	0.6629		19,857.4582

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	2,962.32	1,210.14	130.39	6,969,324	6,969,324
Total	2,962.32	1,210.14	130.39	6,969,324	6,969,324

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.505043	0.056653	0.194832	0.151784	0.042126	0.005989	0.016072	0.016505	0.001461	0.002178	0.004464	0.000494	0.002401

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0505	0.4591	0.3856	2.7500e-003		0.0349	0.0349		0.0349	0.0349		550.8698	550.8698	0.0106	0.0101	554.2223
NaturalGas Unmitigated	0.0505	0.4591	0.3856	2.7500e-003		0.0349	0.0349		0.0349	0.0349		550.8698	550.8698	0.0106	0.0101	554.2223

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	4682.39	0.0505	0.4591	0.3856	2.7500e-003		0.0349	0.0349		0.0349	0.0349		550.8698	550.8698	0.0106	0.0101	554.2223
Total		**0.0505**	**0.4591**	**0.3856**	**2.7500e-003**		**0.0349**	**0.0349**		**0.0349**	**0.0349**		**550.8698**	**550.8698**	**0.0106**	**0.0101**	**554.2223**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	4.68239	0.0505	0.4591	0.3856	2.7500e-003		0.0349	0.0349		0.0349	0.0349		550.8698	550.8698	0.0106	0.0101	554.2223
Total		**0.0505**	**0.4591**	**0.3856**	**2.7500e-003**		**0.0349**	**0.0349**		**0.0349**	**0.0349**		**550.8698**	**550.8698**	**0.0106**	**0.0101**	**554.2223**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.8189	1.0000e-004	0.0110	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0236	0.0236	6.0000e-005		0.0249
Unmitigated	2.8189	1.0000e-004	0.0110	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0236	0.0236	6.0000e-005		0.0249

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					

Architectural Coating	0.6842					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.1337					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0200e-003	1.0000e-004	0.0110	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0236	0.0236	6.0000e-005		0.0249
Total	**2.8189**	**1.0000e-004**	**0.0110**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.0236**	**0.0236**	**6.0000e-005**		**0.0249**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.6842					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.1337					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0200e-003	1.0000e-004	0.0110	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0236	0.0236	6.0000e-005		0.0249
Total	**2.8189**	**1.0000e-004**	**0.0110**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.0236**	**0.0236**	**6.0000e-005**		**0.0249**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Phase 3 - Language Arts

Orange County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	107.76	1000sqft	0.83	107,760.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - modified

Construction Phase - modified

Off-road Equipment -

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Demolition - Demolition of Social and Behavioral Sciences, Virgil D Sessions Lit and Lang Bldg, Writer's Row, Journalism, and 150 Annex

Grading - modified

Architectural Coating - scaqmd rule 1113

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblConstructionPhase	NumDays	10.00	20.00
tblLandUse	LotAcreage	2.47	0.83
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblProjectCharacteristics	OperationalYear	2014	2022
tblTripsAndVMT	HaulingTripNumber	287.00	331.00
tblTripsAndVMT	VendorTripNumber	0.00	18.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	200.0533	11.1297	11.8265	0.0255	3.5028	0.5413	4.0209	0.5784	0.4980	1.0709	0.0000	2,384.6488	2,384.6488	0.3764	0.0000	2,392.5533
Total	**200.0533**	**11.1297**	**11.8265**	**0.0255**	**3.5028**	**0.5413**	**4.0209**	**0.5784**	**0.4980**	**1.0709**	**0.0000**	**2,384.6488**	**2,384.6488**	**0.3764**	**0.0000**	**2,392.5533**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	200.0533	11.1297	11.8265	0.0255	1.6102	0.5413	2.1283	0.2918	0.4980	0.7843	0.0000	2,384.6488	2,384.6488	0.3764	0.0000	2,392.5533
Total	**200.0533**	**11.1297**	**11.8265**	**0.0255**	**1.6102**	**0.5413**	**2.1283**	**0.2918**	**0.4980**	**0.7843**	**0.0000**	**2,384.6488**	**2,384.6488**	**0.3764**	**0.0000**	**2,392.5533**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**54.03**	**0.00**	**47.07**	**49.54**	**0.00**	**26.76**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.8189	1.0000e-004	0.0110	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0236	0.0236	6.0000e-005		0.0249
Energy	0.0505	0.4591	0.3856	2.7500e-003		0.0349	0.0349		0.0349	0.0349		550.8698	550.8698	0.0106	0.0101	554.2223
Mobile	7.3009	14.5185	72.6994	0.2551	18.9119	0.2606	19.1724	5.0468	0.2406	5.2875		18,994.2515	18,994.2515	0.6634		19,008.1833
Total	**10.1703**	**14.9776**	**73.0960**	**0.2579**	**18.9119**	**0.2955**	**19.2073**	**5.0468**	**0.2756**	**5.3224**		**19,545.1449**	**19,545.1449**	**0.6740**	**0.0101**	**19,562.4305**

Mitigated Operational

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Area	2.8189	1.0000e-004	0.0110	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0236	0.0236	6.0000e-005		0.0249
Energy	0.0505	0.4591	0.3856	2.7500e-003		0.0349	0.0349		0.0349	0.0349		550.8698	550.8698	0.0106	0.0101	554.2223
Mobile	7.3009	14.5185	72.6994	0.2551	18.9119	0.2606	19.1724	5.0468	0.2406	5.2875		18,994.2515	18,994.2515	0.6634		19,008.1833
Total	**10.1703**	**14.9776**	**73.0960**	**0.2579**	**18.9119**	**0.2955**	**19.2073**	**5.0468**	**0.2756**	**5.3224**		**19,545.1449**	**19,545.1449**	**0.6740**	**0.0101**	**19,562.4305**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2020	1/28/2020	5	20	
2	Site Preparation	Site Preparation	1/29/2020	1/29/2020	5	1	
3	Grading	Grading	1/30/2020	1/31/2020	5	2	
4	Trenching	Trenching	2/1/2020	2/14/2020	5	10	
5	Building Construction	Building Construction	2/15/2020	7/3/2020	5	100	
6	Paving	Paving	7/4/2020	7/10/2020	5	5	
7	Architectural Coating	Architectural Coating	7/11/2020	7/17/2020	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 161,640; Non-Residential Outdoor: 53,880 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Trenching	Cranes	0	4.00	226	0.29
Trenching	Forklifts	0	6.00	89	0.20
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Building Construction	Cranes	1	4.00	226	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Paving	Pavers	1	7.00	125	0.42
Paving	Rollers	1	7.00	80	0.38
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Trenching	Plate Compactors	1	8.00	8	0.43
Trenching	Trenchers	1	8.00	80	0.50

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class

Demolition	4	10.00	0.00	331.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	3	8.00	18.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	9.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	45.00	18.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.1026	0.0000	3.1026	0.4698	0.0000	0.4698			0.0000			0.0000
Off-Road	0.8527	7.7248	8.0981	0.0120		0.4561	0.4561		0.4355	0.4355		1,151.7011	1,151.7011	0.2184		1,156.2863
Total	**0.8527**	**7.7248**	**8.0981**	**0.0120**	**3.1026**	**0.4561**	**3.5587**	**0.4698**	**0.4355**	**0.9052**		**1,151.7011**	**1,151.7011**	**0.2184**		**1,156.2863**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.2698	3.3695	3.3536	0.0121	0.2884	0.0612	0.3496	0.0790	0.0563	0.1353		1,140.4890	1,140.4890	9.0100e-003		1,140.6783
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0268	0.0353	0.3748	1.2900e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		92.4588	92.4588	4.2000e-003		92.5470
Total	**0.2965**	**3.4049**	**3.7284**	**0.0134**	**0.4002**	**0.0620**	**0.4622**	**0.1086**	**0.0570**	**0.1656**		**1,232.9478**	**1,232.9478**	**0.0132**		**1,233.2253**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.2100	0.0000	1.2100	0.1832	0.0000	0.1832			0.0000			0.0000
Off-Road	0.8527	7.7248	8.0981	0.0120		0.4561	0.4561		0.4355	0.4355	0.0000	1,151.7011	1,151.7011	0.2184		1,156.2863
Total	**0.8527**	**7.7248**	**8.0981**	**0.0120**	**1.2100**	**0.4561**	**1.6661**	**0.1832**	**0.4355**	**0.6187**	**0.0000**	**1,151.7011**	**1,151.7011**	**0.2184**		**1,156.2863**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2698	3.3695	3.3536	0.0121	0.2884	0.0612	0.3496	0.0790	0.0563	0.1353		1,140.4890	1,140.4890	9.0100e-003		1,140.6783
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0268	0.0353	0.3748	1.2900e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		92.4588	92.4588	4.2000e-003		92.5470

Total	0.2965	3.4049	3.7284	0.0134	0.4002	0.0620	0.4622	0.1086	0.0570	0.1656		1,232.9478	1,232.9478	0.0132		1,233.2253

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/day									lb/day		
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.9225	9.0637	6.8357	9.3100e-003		0.5213	0.5213		0.4796	0.4796		902.2494	902.2494	0.2918		908.3773
Total	**0.9225**	**9.0637**	**6.8357**	**9.3100e-003**	**0.5303**	**0.5213**	**1.0516**	**0.0573**	**0.4796**	**0.5369**		**902.2494**	**902.2494**	**0.2918**		**908.3773**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/day									lb/day		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0134	0.0177	0.1874	6.4000e-004	0.0559	3.8000e-004	0.0563	0.0148	3.5000e-004	0.0152		46.2294	46.2294	2.1000e-003		46.2735
Total	**0.0134**	**0.0177**	**0.1874**	**6.4000e-004**	**0.0559**	**3.8000e-004**	**0.0563**	**0.0148**	**3.5000e-004**	**0.0152**		**46.2294**	**46.2294**	**2.1000e-003**		**46.2735**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2068	0.0000	0.2068	0.0223	0.0000	0.0223			0.0000			0.0000
Off-Road	0.9225	9.0637	6.8357	9.3100e-003		0.5213	0.5213		0.4796	0.4796	0.0000	902.2494	902.2494	0.2918		908.3773
Total	**0.9225**	**9.0637**	**6.8357**	**9.3100e-003**	**0.2068**	**0.5213**	**0.7281**	**0.0223**	**0.4796**	**0.5019**	**0.0000**	**902.2494**	**902.2494**	**0.2918**		**908.3773**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0134	0.0177	0.1874	6.4000e-004	0.0559	3.8000e-004	0.0563	0.0148	3.5000e-004	0.0152		46.2294	46.2294	2.1000e-003		46.2735
Total	**0.0134**	**0.0177**	**0.1874**	**6.4000e-004**	**0.0559**	**3.8000e-004**	**0.0563**	**0.0148**	**3.5000e-004**	**0.0152**		**46.2294**	**46.2294**	**2.1000e-003**		**46.2735**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	0.8527	7.7248	8.0981	0.0120		0.4561	0.4561		0.4355	0.4355		1,151.7011	1,151.7011	0.2184		1,156.2863
Total	**0.8527**	**7.7248**	**8.0981**	**0.0120**	**0.7528**	**0.4561**	**1.2089**	**0.4138**	**0.4355**	**0.8492**		**1,151.7011**	**1,151.7011**	**0.2184**		**1,156.2863**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0268	0.0353	0.3748	1.2900e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		92.4588	92.4588	4.2000e-003		92.5470
Total	**0.0268**	**0.0353**	**0.3748**	**1.2900e-003**	**0.1118**	**7.6000e-004**	**0.1125**	**0.0296**	**7.1000e-004**	**0.0304**		**92.4588**	**92.4588**	**4.2000e-003**		**92.5470**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2936	0.0000	0.2936	0.1614	0.0000	0.1614			0.0000			0.0000
Off-Road	0.8527	7.7248	8.0981	0.0120		0.4561	0.4561		0.4355	0.4355	0.0000	1,151.7011	1,151.7011	0.2184		1,156.2863
Total	**0.8527**	**7.7248**	**8.0981**	**0.0120**	**0.2936**	**0.4561**	**0.7497**	**0.1614**	**0.4355**	**0.5968**	**0.0000**	**1,151.7011**	**1,151.7011**	**0.2184**		**1,156.2863**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0268	0.0353	0.3748	1.2900e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		92.4588	92.4588	4.2000e-003		92.5470
Total	**0.0268**	**0.0353**	**0.3748**	**1.2900e-003**	**0.1118**	**7.6000e-004**	**0.1125**	**0.0296**	**7.1000e-004**	**0.0304**		**92.4588**	**92.4588**	**4.2000e-003**		**92.5470**

3.5 Trenching - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6823	6.2698	5.2076	7.0600e-003		0.4359	0.4359		0.4018	0.4018		672.1157	672.1157	0.2098		676.5216
Total	**0.6823**	**6.2698**	**5.2076**	**7.0600e-003**		**0.4359**	**0.4359**		**0.4018**	**0.4018**		**672.1157**	**672.1157**	**0.2098**		**676.5216**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1285	1.0755	1.8333	3.8600e-003	0.1946	0.0179	0.2125	0.0522	0.0164	0.0686		360.6926	360.6926	2.7300e-003		360.7498
Worker	0.0428	0.0565	0.5997	2.0600e-003	0.3343	1.2200e-003	0.3356	0.0856	1.1300e-003	0.0867		147.9340	147.9340	6.7200e-003		148.0752
Total	**0.1713**	**1.1320**	**2.4330**	**5.9200e-003**	**0.5290**	**0.0191**	**0.5480**	**0.1378**	**0.0176**	**0.1554**		**508.6266**	**508.6266**	**9.4500e-003**		**508.8251**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6823	6.2698	5.2076	7.0600e-003		0.4359	0.4359		0.4018	0.4018	0.0000	672.1157	672.1157	0.2098		676.5216
Total	**0.6823**	**6.2698**	**5.2076**	**7.0600e-003**		**0.4359**	**0.4359**		**0.4018**	**0.4018**	**0.0000**	**672.1157**	**672.1157**	**0.2098**		**676.5216**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1285	1.0755	1.8333	3.8600e-003	0.1946	0.0179	0.2125	0.0522	0.0164	0.0686		360.6926	360.6926	2.7300e-003		360.7498
Worker	0.0428	0.0565	0.5997	2.0600e-003	0.3343	1.2200e-003	0.3356	0.0856	1.1300e-003	0.0867		147.9340	147.9340	6.7200e-003		148.0752

Total	**0.1713**	**1.1320**	**2.4330**	**5.9200e-003**	**0.5290**	**0.0191**	**0.5480**	**0.1378**	**0.0176**	**0.1554**		**508.6266**	**508.6266**	**9.4500e-003**		**508.8251**

3.6 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8568	8.7940	7.3646	0.0113		0.5200	0.5200		0.4784	0.4784		1,096.9306	1,096.9306	0.3548		1,104.3807
Total	**0.8568**	**8.7940**	**7.3646**	**0.0113**		**0.5200**	**0.5200**		**0.4784**	**0.4784**		**1,096.9306**	**1,096.9306**	**0.3548**		**1,104.3807**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1285	1.0755	1.8333	3.8600e-003	0.1125	0.0179	0.1304	0.0321	0.0164	0.0485		360.6926	360.6926	2.7300e-003		360.7498
Worker	0.1204	0.1590	1.6867	5.8000e-003	0.5030	3.4400e-003	0.5064	0.1334	3.1900e-003	0.1366		416.0645	416.0645	0.0189		416.4616
Total	**0.2489**	**1.2345**	**3.5199**	**9.6600e-003**	**0.6155**	**0.0213**	**0.6368**	**0.1655**	**0.0196**	**0.1851**		**776.7571**	**776.7571**	**0.0216**		**777.2114**

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Off-Road	0.8568	8.7940	7.3646	0.0113		0.5200	0.5200		0.4784	0.4784	0.0000	1,096.9306	1,096.9306	0.3548		1,104.3807
Total	**0.8568**	**8.7940**	**7.3646**	**0.0113**		**0.5200**	**0.5200**		**0.4784**	**0.4784**	**0.0000**	**1,096.9306**	**1,096.9306**	**0.3548**		**1,104.3807**

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1285	1.0755	1.8333	3.8600e-003	0.1125	0.0179	0.1304	0.0321	0.0164	0.0485		360.6926	360.6926	2.7300e-003		360.7498
Worker	0.1204	0.1590	1.6867	5.8000e-003	0.5030	3.4400e-003	0.5064	0.1334	3.1900e-003	0.1366		416.0645	416.0645	0.0189		416.4616
Total	**0.2489**	**1.2345**	**3.5199**	**9.6600e-003**	**0.6155**	**0.0213**	**0.6368**	**0.1655**	**0.0196**	**0.1851**		**776.7571**	**776.7571**	**0.0216**		**777.2114**

3.7 Paving - 2020

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.7627	7.1320	7.0153	0.0111		0.3905	0.3905		0.3626	0.3626		1,020.0710	1,020.0710	0.2966		1,026.3002
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7627**	**7.1320**	**7.0153**	**0.0111**		**0.3905**	**0.3905**		**0.3626**	**0.3626**		**1,020.0710**	**1,020.0710**	**0.2966**		**1,026.3002**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0482	0.0636	0.6747	2.3200e-003	0.2012	1.3800e-003	0.2026	0.0534	1.2800e-003	0.0546		166.4258	166.4258	7.5600e-003		166.5846
Total	**0.0482**	**0.0636**	**0.6747**	**2.3200e-003**	**0.2012**	**1.3800e-003**	**0.2026**	**0.0534**	**1.2800e-003**	**0.0546**		**166.4258**	**166.4258**	**7.5600e-003**		**166.5846**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7627	7.1320	7.0153	0.0111		0.3905	0.3905		0.3626	0.3626	0.0000	1,020.0710	1,020.0710	0.2966		1,026.3002
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7627**	**7.1320**	**7.0153**	**0.0111**		**0.3905**	**0.3905**		**0.3626**	**0.3626**	**0.0000**	**1,020.0710**	**1,020.0710**	**0.2966**		**1,026.3002**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0482	0.0636	0.6747	2.3200e-003	0.2012	1.3800e-003	0.2026	0.0534	1.2800e-003	0.0546		166.4258	166.4258	7.5600e-003		166.5846
Total	**0.0482**	**0.0636**	**0.6747**	**2.3200e-003**	**0.2012**	**1.3800e-003**	**0.2026**	**0.0534**	**1.2800e-003**	**0.0546**		**166.4258**	**166.4258**	**7.5600e-003**		**166.5846**

3.8 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	199.7870					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9057
Total	**200.0292**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9057**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0241	0.0318	0.3373	1.1600e-003	0.1006	6.9000e-004	0.1013	0.0267	6.4000e-004	0.0273		83.2129	83.2129	3.7800e-003		83.2923
Total	**0.0241**	**0.0318**	**0.3373**	**1.1600e-003**	**0.1006**	**6.9000e-004**	**0.1013**	**0.0267**	**6.4000e-004**	**0.0273**		**83.2129**	**83.2129**	**3.7800e-003**		**83.2923**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	199.7870					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9057
Total	**200.0292**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9057**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0241	0.0318	0.3373	1.1600e-003	0.1006	6.9000e-004	0.1013	0.0267	6.4000e-004	0.0273		83.2129	83.2129	3.7800e-003		83.2923

Total	**0.0241**	**0.0318**	**0.3373**	**1.1600e-003**	**0.1006**	**6.9000e-004**	**0.1013**	**0.0267**	**6.4000e-004**	**0.0273**		**83.2129**	**83.2129**	**3.7800e-003**		**83.2923**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	7.3009	14.5185	72.6994	0.2551	18.9119	0.2606	19.1724	5.0468	0.2406	5.2875		18,994.2515	18,994.2515	0.6634		19,008.1833
Unmitigated	7.3009	14.5185	72.6994	0.2551	18.9119	0.2606	19.1724	5.0468	0.2406	5.2875		18,994.2515	18,994.2515	0.6634		19,008.1833

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	2,962.32	1,210.14	130.39	6,969,324	6,969,324
Total	2,962.32	1,210.14	130.39	6,969,324	6,969,324

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.505043	0.056653	0.194832	0.151784	0.042126	0.005989	0.016072	0.016505	0.001461	0.002178	0.004464	0.000494	0.002401

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
NaturalGas Mitigated	0.0505	0.4591	0.3856	2.7500e-003		0.0349	0.0349		0.0349	0.0349		550.8698	550.8698	0.0106	0.0101	554.2223
NaturalGas Unmitigated	0.0505	0.4591	0.3856	2.7500e-003		0.0349	0.0349		0.0349	0.0349		550.8698	550.8698	0.0106	0.0101	554.2223

5.2 Energy by Land Use - NaturalGas

Unmitigated

Land Use	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	4682.39	0.0505	0.4591	0.3856	2.7500e-003		0.0349	0.0349		0.0349	0.0349		550.8698	550.8698	0.0106	0.0101	554.2223
Total		**0.0505**	**0.4591**	**0.3856**	**2.7500e-003**		**0.0349**	**0.0349**		**0.0349**	**0.0349**		**550.8698**	**550.8698**	**0.0106**	**0.0101**	**554.2223**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	4.68239	0.0505	0.4591	0.3856	2.7500e-003		0.0349	0.0349		0.0349	0.0349		550.8698	550.8698	0.0106	0.0101	554.2223
Total		**0.0505**	**0.4591**	**0.3856**	**2.7500e-003**		**0.0349**	**0.0349**		**0.0349**	**0.0349**		**550.8698**	**550.8698**	**0.0106**	**0.0101**	**554.2223**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.8189	1.0000e-004	0.0110	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0236	0.0236	6.0000e-005		0.0249
Unmitigated	2.8189	1.0000e-004	0.0110	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0236	0.0236	6.0000e-005		0.0249

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					

Architectural Coating	0.6842					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.1337					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0200e-003	1.0000e-004	0.0110	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0236	0.0236	6.0000e-005		0.0249
Total	**2.8189**	**1.0000e-004**	**0.0110**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.0236**	**0.0236**	**6.0000e-005**		**0.0249**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.6842					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.1337					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0200e-003	1.0000e-004	0.0110	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0236	0.0236	6.0000e-005		0.0249
Total	**2.8189**	**1.0000e-004**	**0.0110**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.0236**	**0.0236**	**6.0000e-005**		**0.0249**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Unscheduled - Multidisciplinary Building

Orange County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	25.00	1000sqft	0.29	25,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Multidisciplinary Building will be multiple stories

Construction Phase - modified

Off-road Equipment - modified

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Demolition -

Architectural Coating - Modifed

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value

tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblLandUse	LotAcreage	0.57	0.29
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblProjectCharacteristics	OperationalYear	2014	2023

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.1691	0.5186	0.5202	9.0000e-004	0.0278	0.0284	0.0562	5.7000e-003	0.0262	0.0319	0.0000	76.7599	76.7599	0.0194	0.0000	77.1670
Total	**0.1691**	**0.5186**	**0.5202**	**9.0000e-004**	**0.0278**	**0.0284**	**0.0562**	**5.7000e-003**	**0.0262**	**0.0319**	**0.0000**	**76.7599**	**76.7599**	**0.0194**	**0.0000**	**77.1670**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					

2021	0.1691	0.5186	0.5202	9.0000e-004	0.0171	0.0284	0.0455	3.9100e-003	0.0262	0.0302	0.0000	76.7598	76.7598	0.0194	0.0000	77.1670
Total	**0.1691**	**0.5186**	**0.5202**	**9.0000e-004**	**0.0171**	**0.0284**	**0.0455**	**3.9100e-003**	**0.0262**	**0.0302**	**0.0000**	**76.7598**	**76.7598**	**0.0194**	**0.0000**	**77.1670**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**38.49**	**0.00**	**19.06**	**31.40**	**0.00**	**5.60**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1193	0.0000	3.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.2000e-004	6.2000e-004	0.0000	0.0000	6.5000e-004
Energy	2.1400e-003	0.0194	0.0163	1.2000e-004		1.4800e-003	1.4800e-003		1.4800e-003	1.4800e-003	0.0000	121.6749	121.6749	5.0300e-003	1.3400e-003	122.1970
Mobile	0.2177	0.4372	2.2976	8.5000e-003	0.6111	8.6000e-003	0.6197	0.1633	7.9400e-003	0.1713	0.0000	567.5030	567.5030	0.0190	0.0000	567.9026
Waste						0.0000	0.0000		0.0000	0.0000	6.5972	0.0000	6.5972	0.3899	0.0000	14.7848
Water						0.0000	0.0000		0.0000	0.0000	0.3890	10.6669	11.0559	0.0405	1.0400e-003	12.2292
Total	**0.3391**	**0.4567**	**2.3142**	**8.6200e-003**	**0.6111**	**0.0101**	**0.6212**	**0.1633**	**9.4200e-003**	**0.1727**	**6.9862**	**699.8454**	**706.8316**	**0.4544**	**2.3800e-003**	**717.1142**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Area	0.1193	0.0000	3.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.2000e-004	6.2000e-004	0.0000	0.0000	6.5000e-004
Energy	2.1400e-003	0.0194	0.0163	1.2000e-004		1.4800e-003	1.4800e-003		1.4800e-003	1.4800e-003	0.0000	121.6749	121.6749	5.0300e-003	1.3400e-003	122.1970
Mobile	0.2177	0.4372	2.2976	8.5000e-003	0.6111	8.6000e-003	0.6197	0.1633	7.9400e-003	0.1713	0.0000	567.5030	567.5030	0.0190	0.0000	567.9026
Waste						0.0000	0.0000		0.0000	0.0000	6.5972	0.0000	6.5972	0.3899	0.0000	14.7848
Water						0.0000	0.0000		0.0000	0.0000	0.3890	10.6669	11.0559	0.0404	1.0400e-003	12.2286
Total	**0.3391**	**0.4567**	**2.3142**	**8.6200e-003**	**0.6111**	**0.0101**	**0.6212**	**0.1633**	**9.4200e-003**	**0.1727**	**6.9862**	**699.8454**	**706.8316**	**0.4544**	**2.3800e-003**	**717.1136**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	5/1/2021	5/14/2021	5	10	
2	Site Preparation	Site Preparation	5/15/2021	5/17/2021	5	1	
3	Grading	Grading	5/18/2021	5/19/2021	5	2	
4	Trenching	Trenching	5/20/2021	6/2/2021	5	10	
5	Building Construction	Building Construction	6/3/2021	10/20/2021	5	100	
6	Paving	Paving	10/21/2021	10/27/2021	5	5	
7	Architectural Coating	Architectural Coating	10/28/2021	11/3/2021	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 37,500; Non-Residential Outdoor: 12,500 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	1	4.00	226	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Site Preparation	Graders	1	8.00	174	0.41
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	125	0.42
Demolition	Rubber Tired Dozers	1	1.00	255	0.40
Grading	Rubber Tired Dozers	1	1.00	255	0.40
Paving	Rollers	1	7.00	80	0.38
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Trenching	Plate Compactors	1	8.00	8	0.43
Trenching	Trenchers	1	8.00	80	0.50
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	153.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Building Construction	5	11.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	2.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Clean Paved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0165	0.0000	0.0165	2.5000e-003	0.0000	2.5000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.8800e-003	0.0351	0.0399	6.0000e-005		1.9600e-003	1.9600e-003		1.8800e-003	1.8800e-003	0.0000	5.2241	5.2241	9.8000e-004	0.0000	5.2446
Total	**3.8800e-003**	**0.0351**	**0.0399**	**6.0000e-005**	**0.0165**	**1.9600e-003**	**0.0185**	**2.5000e-003**	**1.8800e-003**	**4.3800e-003**	**0.0000**	**5.2241**	**5.2241**	**9.8000e-004**	**0.0000**	**5.2446**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.2200e-003	0.0139	0.0148	6.0000e-005	1.3100e-003	2.8000e-004	1.5900e-003	3.6000e-004	2.6000e-004	6.2000e-004	0.0000	4.7849	4.7849	4.0000e-005	0.0000	4.7857
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Worker	1.2000e-004	1.7000e-004	1.8100e-003	1.0000e-005	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4187	0.4187	2.0000e-005	0.0000	0.4191
Total	**1.3400e-003**	**0.0140**	**0.0166**	**7.0000e-005**	**1.8600e-003**	**2.8000e-004**	**2.1400e-003**	**5.1000e-004**	**2.6000e-004**	**7.7000e-004**	**0.0000**	**5.2036**	**5.2036**	**6.0000e-005**	**0.0000**	**5.2048**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					6.4500e-003	0.0000	6.4500e-003	9.8000e-004	0.0000	9.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.8800e-003	0.0351	0.0399	6.0000e-005		1.9600e-003	1.9600e-003		1.8800e-003	1.8800e-003	0.0000	5.2241	5.2241	9.8000e-004	0.0000	5.2446
Total	**3.8800e-003**	**0.0351**	**0.0399**	**6.0000e-005**	**6.4500e-003**	**1.9600e-003**	**8.4100e-003**	**9.8000e-004**	**1.8800e-003**	**2.8600e-003**	**0.0000**	**5.2241**	**5.2241**	**9.8000e-004**	**0.0000**	**5.2446**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.2200e-003	0.0139	0.0148	6.0000e-005	1.3100e-003	2.8000e-004	1.5900e-003	3.6000e-004	2.6000e-004	6.2000e-004	0.0000	4.7849	4.7849	4.0000e-005	0.0000	4.7857
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	1.7000e-004	1.8100e-003	1.0000e-005	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4187	0.4187	2.0000e-005	0.0000	0.4191
Total	**1.3400e-003**	**0.0140**	**0.0166**	**7.0000e-005**	**1.8600e-003**	**2.8000e-004**	**2.1400e-003**	**5.1000e-004**	**2.6000e-004**	**7.7000e-004**	**0.0000**	**5.2036**	**5.2036**	**6.0000e-005**	**0.0000**	**5.2048**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.1000e-004	3.9900e-003	3.3700e-003	0.0000		2.3000e-004	2.3000e-004		2.1000e-004	2.1000e-004	0.0000	0.4096	0.4096	1.3000e-004	0.0000	0.4124
Total	**4.1000e-004**	**3.9900e-003**	**3.3700e-003**	**0.0000**	**2.7000e-004**	**2.3000e-004**	**5.0000e-004**	**3.0000e-005**	**2.1000e-004**	**2.4000e-004**	**0.0000**	**0.4096**	**0.4096**	**1.3000e-004**	**0.0000**	**0.4124**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	9.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0209	0.0209	0.0000	0.0000	0.0210
Total	**1.0000e-005**	**1.0000e-005**	**9.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0209**	**0.0209**	**0.0000**	**0.0000**	**0.0210**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Fugitive Dust					1.0000e-004	0.0000	1.0000e-004	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.1000e-004	3.9900e-003	3.3700e-003	0.0000		2.3000e-004	2.3000e-004		2.1000e-004	2.1000e-004	0.0000	0.4096	0.4096	1.3000e-004	0.0000	0.4124
Total	**4.1000e-004**	**3.9900e-003**	**3.3700e-003**	**0.0000**	**1.0000e-004**	**2.3000e-004**	**3.3000e-004**	**1.0000e-005**	**2.1000e-004**	**2.2000e-004**	**0.0000**	**0.4096**	**0.4096**	**1.3000e-004**	**0.0000**	**0.4124**

<u>Mitigated Construction Off-Site</u>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	9.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0209	0.0209	0.0000	0.0000	0.0210
Total	**1.0000e-005**	**1.0000e-005**	**9.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0209**	**0.0209**	**0.0000**	**0.0000**	**0.0210**

3.4 Grading - 2021

<u>Unmitigated Construction On-Site</u>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.5000e-004	0.0000	7.5000e-004	4.1000e-004	0.0000	4.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.8000e-004	7.0200e-003	7.9700e-003	1.0000e-005		3.9000e-004	3.9000e-004		3.8000e-004	3.8000e-004	0.0000	1.0448	1.0448	2.0000e-004	0.0000	1.0489
Total	**7.8000e-004**	**7.0200e-003**	**7.9700e-003**	**1.0000e-005**	**7.5000e-004**	**3.9000e-004**	**1.1400e-003**	**4.1000e-004**	**3.8000e-004**	**7.9000e-004**	**0.0000**	**1.0448**	**1.0448**	**2.0000e-004**	**0.0000**	**1.0489**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	3.0000e-005	3.6000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0837	0.0837	0.0000	0.0000	0.0838
Total	**2.0000e-005**	**3.0000e-005**	**3.6000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0837**	**0.0837**	**0.0000**	**0.0000**	**0.0838**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.9000e-004	0.0000	2.9000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.8000e-004	7.0200e-003	7.9700e-003	1.0000e-005		3.9000e-004	3.9000e-004		3.8000e-004	3.8000e-004	0.0000	1.0448	1.0448	2.0000e-004	0.0000	1.0489
Total	**7.8000e-004**	**7.0200e-003**	**7.9700e-003**	**1.0000e-005**	**2.9000e-004**	**3.9000e-004**	**6.8000e-004**	**1.6000e-004**	**3.8000e-004**	**5.4000e-004**	**0.0000**	**1.0448**	**1.0448**	**2.0000e-004**	**0.0000**	**1.0489**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	3.0000e-005	3.6000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0837	0.0837	0.0000	0.0000	0.0838
Total	**2.0000e-005**	**3.0000e-005**	**3.6000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0837**	**0.0837**	**0.0000**	**0.0000**	**0.0838**

3.5 Trenching - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.1000e-003	0.0288	0.0257	4.0000e-005		1.9200e-003	1.9200e-003		1.7700e-003	1.7700e-003	0.0000	3.0443	3.0443	9.5000e-004	0.0000	3.0642
Total	**3.1000e-003**	**0.0288**	**0.0257**	**4.0000e-005**		**1.9200e-003**	**1.9200e-003**		**1.7700e-003**	**1.7700e-003**	**0.0000**	**3.0443**	**3.0443**	**9.5000e-004**	**0.0000**	**3.0642**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e-005	1.4000e-004	1.4500e-003	1.0000e-005	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3350	0.3350	1.0000e-005	0.0000	0.3353

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Total	**9.0000e-005**	**1.4000e-004**	**1.4500e-003**	**1.0000e-005**	**4.4000e-004**	**0.0000**	**4.4000e-004**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**0.3350**	**0.3350**	**1.0000e-005**	**0.0000**	**0.3353**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.1000e-003	0.0288	0.0257	4.0000e-005		1.9200e-003	1.9200e-003		1.7700e-003	1.7700e-003	0.0000	3.0442	3.0442	9.5000e-004	0.0000	3.0642
Total	**3.1000e-003**	**0.0288**	**0.0257**	**4.0000e-005**		**1.9200e-003**	**1.9200e-003**		**1.7700e-003**	**1.7700e-003**	**0.0000**	**3.0442**	**3.0442**	**9.5000e-004**	**0.0000**	**3.0642**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e-005	1.4000e-004	1.4500e-003	1.0000e-005	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3350	0.3350	1.0000e-005	0.0000	0.3353
Total	**9.0000e-005**	**1.4000e-004**	**1.4500e-003**	**1.0000e-005**	**4.4000e-004**	**0.0000**	**4.4000e-004**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**0.3350**	**0.3350**	**1.0000e-005**	**0.0000**	**0.3353**

3.6 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0385	0.3966	0.3621	5.7000e-004		0.0223	0.0223		0.0205	0.0205	0.0000	49.7667	49.7667	0.0161	0.0000	50.1048
Total	**0.0385**	**0.3966**	**0.3621**	**5.7000e-004**		**0.0223**	**0.0223**		**0.0205**	**0.0205**	**0.0000**	**49.7667**	**49.7667**	**0.0161**	**0.0000**	**50.1048**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.3400e-003	0.0103	0.0189	4.0000e-005	1.2300e-003	1.8000e-004	1.4100e-003	3.5000e-004	1.6000e-004	5.2000e-004	0.0000	3.6507	3.6507	3.0000e-005	0.0000	3.6513
Worker	1.3100e-003	1.8800e-003	0.0199	7.0000e-005	6.0400e-003	4.0000e-005	6.0800e-003	1.6000e-003	4.0000e-005	1.6400e-003	0.0000	4.6059	4.6059	2.0000e-004	0.0000	4.6102
Total	**2.6500e-003**	**0.0122**	**0.0388**	**1.1000e-004**	**7.2700e-003**	**2.2000e-004**	**7.4900e-003**	**1.9500e-003**	**2.0000e-004**	**2.1600e-003**	**0.0000**	**8.2566**	**8.2566**	**2.3000e-004**	**0.0000**	**8.2614**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Off-Road	0.0385	0.3966	0.3621	5.7000e-004		0.0223	0.0223		0.0205	0.0205	0.0000	49.7667	49.7667	0.0161	0.0000	50.1047
Total	**0.0385**	**0.3966**	**0.3621**	**5.7000e-004**		**0.0223**	**0.0223**		**0.0205**	**0.0205**	**0.0000**	**49.7667**	**49.7667**	**0.0161**	**0.0000**	**50.1047**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.3400e-003	0.0103	0.0189	4.0000e-005	1.2300e-003	1.8000e-004	1.4100e-003	3.5000e-004	1.6000e-004	5.2000e-004	0.0000	3.6507	3.6507	3.0000e-005	0.0000	3.6513
Worker	1.3100e-003	1.8800e-003	0.0199	7.0000e-005	6.0400e-003	4.0000e-005	6.0800e-003	1.6000e-003	4.0000e-005	1.6400e-003	0.0000	4.6059	4.6059	2.0000e-004	0.0000	4.6102
Total	**2.6500e-003**	**0.0122**	**0.0388**	**1.1000e-004**	**7.2700e-003**	**2.2000e-004**	**7.4900e-003**	**1.9500e-003**	**2.0000e-004**	**2.1600e-003**	**0.0000**	**8.2566**	**8.2566**	**2.3000e-004**	**0.0000**	**8.2614**

3.7 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.7800e-003	0.0166	0.0175	3.0000e-005		8.7000e-004	8.7000e-004		8.1000e-004	8.1000e-004	0.0000	2.3134	2.3134	6.7000e-004	0.0000	2.3275
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.7800e-003**	**0.0166**	**0.0175**	**3.0000e-005**		**8.7000e-004**	**8.7000e-004**		**8.1000e-004**	**8.1000e-004**	**0.0000**	**2.3134**	**2.3134**	**6.7000e-004**	**0.0000**	**2.3275**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	1.5000e-004	1.6300e-003	1.0000e-005	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3769	0.3769	2.0000e-005	0.0000	0.3772
Total	**1.1000e-004**	**1.5000e-004**	**1.6300e-003**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.3769**	**0.3769**	**2.0000e-005**	**0.0000**	**0.3772**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.7800e-003	0.0166	0.0175	3.0000e-005		8.7000e-004	8.7000e-004		8.1000e-004	8.1000e-004	0.0000	2.3134	2.3134	6.7000e-004	0.0000	2.3275
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.7800e-003**	**0.0166**	**0.0175**	**3.0000e-005**		**8.7000e-004**	**8.7000e-004**		**8.1000e-004**	**8.1000e-004**	**0.0000**	**2.3134**	**2.3134**	**6.7000e-004**	**0.0000**	**2.3275**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	1.5000e-004	1.6300e-003	1.0000e-005	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3769	0.3769	2.0000e-005	0.0000	0.3772
Total	**1.1000e-004**	**1.5000e-004**	**1.6300e-003**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.3769**	**0.3769**	**2.0000e-005**	**0.0000**	**0.3772**

3.8 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1159					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.5000e-004	3.8200e-003	4.5400e-003	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6392
Total	**0.1164**	**3.8200e-003**	**4.5400e-003**	**1.0000e-005**		**2.4000e-004**	**2.4000e-004**		**2.4000e-004**	**2.4000e-004**	**0.0000**	**0.6383**	**0.6383**	**4.0000e-005**	**0.0000**	**0.6392**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	2.0000e-005	1.8000e-004	0.0000	5.0000e-005	0.0000	6.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0419	0.0419	0.0000	0.0000	0.0419

Total	**1.0000e-005**	**2.0000e-005**	**1.8000e-004**	**0.0000**	**5.0000e-005**	**0.0000**	**6.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0419**	**0.0419**	**0.0000**	**0.0000**	**0.0419**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1159					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.5000e-004	3.8200e-003	4.5400e-003	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6392
Total	**0.1164**	**3.8200e-003**	**4.5400e-003**	**1.0000e-005**		**2.4000e-004**	**2.4000e-004**		**2.4000e-004**	**2.4000e-004**	**0.0000**	**0.6383**	**0.6383**	**4.0000e-005**	**0.0000**	**0.6392**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	2.0000e-005	1.8000e-004	0.0000	5.0000e-005	0.0000	6.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0419	0.0419	0.0000	0.0000	0.0419
Total	**1.0000e-005**	**2.0000e-005**	**1.8000e-004**	**0.0000**	**5.0000e-005**	**0.0000**	**6.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0419**	**0.0419**	**0.0000**	**0.0000**	**0.0419**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2177	0.4372	2.2976	8.5000e-003	0.6111	8.6000e-003	0.6197	0.1633	7.9400e-003	0.1713	0.0000	567.5030	567.5030	0.0190	0.0000	567.9026
Unmitigated	0.2177	0.4372	2.2976	8.5000e-003	0.6111	8.6000e-003	0.6197	0.1633	7.9400e-003	0.1713	0.0000	567.5030	567.5030	0.0190	0.0000	567.9026

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	687.25	280.75	30.25	1,616,862	1,616,862
Total	687.25	280.75	30.25	1,616,862	1,616,862

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.503435	0.056741	0.195441	0.152143	0.042270	0.006027	0.016168	0.016833	0.001466	0.002186	0.004340	0.000491	0.002459

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	100.5161	100.5161	4.6200e-003	9.6000e-004	100.9095
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	100.5161	100.5161	4.6200e-003	9.6000e-004	100.9095
NaturalGas Mitigated	2.1400e-003	0.0194	0.0163	1.2000e-004		1.4800e-003	1.4800e-003		1.4800e-003	1.4800e-003	0.0000	21.1588	21.1588	4.1000e-004	3.9000e-004	21.2875
NaturalGas Unmitigated	2.1400e-003	0.0194	0.0163	1.2000e-004		1.4800e-003	1.4800e-003		1.4800e-003	1.4800e-003	0.0000	21.1588	21.1588	4.1000e-004	3.9000e-004	21.2875

5.2 Energy by Land Use - NaturalGas

Unmitigated

Land Use	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	kBTU/yr	tons/yr										MT/yr					
Junior College (2Yr)	396500	2.1400e-003	0.0194	0.0163	1.2000e-004		1.4800e-003	1.4800e-003		1.4800e-003	1.4800e-003	0.0000	21.1588	21.1588	4.1000e-004	3.9000e-004	21.2875
Total		**2.1400e-003**	**0.0194**	**0.0163**	**1.2000e-004**		**1.4800e-003**	**1.4800e-003**		**1.4800e-003**	**1.4800e-003**	**0.0000**	**21.1588**	**21.1588**	**4.1000e-004**	**3.9000e-004**	**21.2875**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Land Use	kBTU/yr	tons/yr										MT/yr					
Junior College (2Yr)	396500	2.1400e-003	0.0194	0.0163	1.2000e-004		1.4800e-003	1.4800e-003		1.4800e-003	1.4800e-003	0.0000	21.1588	21.1588	4.1000e-004	3.9000e-004	21.2875
Total		**2.1400e-003**	**0.0194**	**0.0163**	**1.2000e-004**		**1.4800e-003**	**1.4800e-003**		**1.4800e-003**	**1.4800e-003**	**0.0000**	**21.1588**	**21.1588**	**4.1000e-004**	**3.9000e-004**	**21.2875**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	351250	100.5161	4.6200e-003	9.6000e-004	100.9095
Total		**100.5161**	**4.6200e-003**	**9.6000e-004**	**100.9095**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	351250	100.5161	4.6200e-003	9.6000e-004	100.9095
Total		**100.5161**	**4.6200e-003**	**9.6000e-004**	**100.9095**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1193	0.0000	3.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.2000e-004	6.2000e-004	0.0000	0.0000	6.5000e-004
Unmitigated	0.1193	0.0000	3.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.2000e-004	6.2000e-004	0.0000	0.0000	6.5000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0290					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0903					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	3.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.2000e-004	6.2000e-004	0.0000	0.0000	6.5000e-004
Total	**0.1193**	**0.0000**	**3.2000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**6.2000e-004**	**6.2000e-004**	**0.0000**	**0.0000**	**6.5000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0290					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0903					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	3.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.2000e-004	6.2000e-004	0.0000	0.0000	6.5000e-004
Total	**0.1193**	**0.0000**	**3.2000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**6.2000e-004**	**6.2000e-004**	**0.0000**	**0.0000**	**6.5000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	11.0559	0.0404	1.0400e-003	12.2286
Unmitigated	11.0559	0.0405	1.0400e-003	12.2292

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	1.22623 / 1.91794	11.0559	0.0405	1.0400e-003	12.2292

Total		11.0559	0.0405	1.0400e-003	12.2292

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	1.22623 / 1.91794	11.0559	0.0404	1.0400e-003	12.2286
Total		**11.0559**	**0.0404**	**1.0400e-003**	**12.2286**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	6.5972	0.3899	0.0000	14.7848
Unmitigated	6.5972	0.3899	0.0000	14.7848

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior College (2Yr)	32.5	6.5972	0.3899	0.0000	14.7848
Total		**6.5972**	**0.3899**	**0.0000**	**14.7848**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior College (2Yr)	32.5	6.5972	0.3899	0.0000	14.7848
Total		**6.5972**	**0.3899**	**0.0000**	**14.7848**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Unscheduled - Multidisciplinary Building

Orange County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	25.00	1000sqft	0.29	25,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Multidiscipliary Building will be multiple stories

Construction Phase - modified

Off-road Equipment - modified

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Demolition -

Architectural Coating - Modifed

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value

tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblLandUse	LotAcreage	0.57	0.29
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblProjectCharacteristics	OperationalYear	2014	2023

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	46.5738	9.6925	10.9714	0.0246	3.6839	0.4519	4.1335	0.6031	0.4275	1.0306	0.0000	2,303.7154	2,303.7154	0.3599	0.0000	2,311.2727
Total	**46.5738**	**9.6925**	**10.9714**	**0.0246**	**3.6839**	**0.4519**	**4.1335**	**0.6031**	**0.4275**	**1.0306**	**0.0000**	**2,303.7154**	**2,303.7154**	**0.3599**	**0.0000**	**2,311.2727**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					

2021	46.5738	9.6925	10.9714	0.0246	1.6676	0.4519	2.1171	0.2979	0.4275	0.7253	0.0000	2,303.7154	2,303.7154	0.3599	0.0000	2,311.2727
Total	**46.5738**	**9.6925**	**10.9714**	**0.0246**	**1.6676**	**0.4519**	**2.1171**	**0.2979**	**0.4275**	**0.7253**	**0.0000**	**2,303.7154**	**2,303.7154**	**0.3599**	**0.0000**	**2,311.2727**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**54.73**	**0.00**	**48.78**	**50.62**	**0.00**	**29.62**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.6540	2.0000e-005	2.5500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.4700e-003	5.4700e-003	1.0000e-005		5.7700e-003
Energy	0.0117	0.1065	0.0895	6.4000e-004		8.0900e-003	8.0900e-003		8.0900e-003	8.0900e-003		127.8002	127.8002	2.4500e-003	2.3400e-003	128.5779
Mobile	1.5451	2.8615	16.2049	0.0620	4.3879	0.0607	4.4486	1.1710	0.0560	1.2270		4,558.6838	4,558.6838	0.1481		4,561.7932
Total	**2.2108**	**2.9680**	**16.2969**	**0.0627**	**4.3879**	**0.0688**	**4.4567**	**1.1710**	**0.0641**	**1.2351**		**4,686.4894**	**4,686.4894**	**0.1505**	**2.3400e-003**	**4,690.3769**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.6540	2.0000e-005	2.5500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.4700e-003	5.4700e-003	1.0000e-005		5.7700e-003

Energy	0.0117	0.1065	0.0895	6.4000e-004		8.0900e-003	8.0900e-003		8.0900e-003	8.0900e-003		127.8002	127.8002	2.4500e-003	2.3400e-003	128.5779
Mobile	1.5451	2.8615	16.2049	0.0620	4.3879	0.0607	4.4486	1.1710	0.0560	1.2270		4,558.6838	4,558.6838	0.1481		4,561.7932
Total	**2.2108**	**2.9680**	**16.2969**	**0.0627**	**4.3879**	**0.0688**	**4.4567**	**1.1710**	**0.0641**	**1.2351**		**4,686.4894**	**4,686.4894**	**0.1505**	**2.3400e-003**	**4,690.3769**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	5/1/2021	5/14/2021	5	10	
2	Site Preparation	Site Preparation	5/15/2021	5/17/2021	5	1	
3	Grading	Grading	5/18/2021	5/19/2021	5	2	
4	Trenching	Trenching	5/20/2021	6/2/2021	5	10	
5	Building Construction	Building Construction	6/3/2021	10/20/2021	5	100	
6	Paving	Paving	10/21/2021	10/27/2021	5	5	
7	Architectural Coating	Architectural Coating	10/28/2021	11/3/2021	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 37,500; Non-Residential Outdoor: 12,500 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	1	4.00	226	0.29
Building Construction	Forklifts	2	6.00	89	0.20

Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Site Preparation	Graders	1	8.00	174	0.41
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	125	0.42
Demolition	Rubber Tired Dozers	1	1.00	255	0.40
Grading	Rubber Tired Dozers	1	1.00	255	0.40
Paving	Rollers	1	7.00	80	0.38
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Trenching	Plate Compactors	1	8.00	8	0.43
Trenching	Trenchers	1	8.00	80	0.50
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	153.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	11.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	2.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Clean Paved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3055	0.0000	3.3055	0.5005	0.0000	0.5005			0.0000			0.0000
Off-Road	0.7764	7.0242	7.9731	0.0120		0.3930	0.3930		0.3754	0.3754		1,151.7252	1,151.7252	0.2152		1,156.2450
Total	**0.7764**	**7.0242**	**7.9731**	**0.0120**	**3.3055**	**0.3930**	**3.6984**	**0.5005**	**0.3754**	**0.8759**		**1,151.7252**	**1,151.7252**	**0.2152**		**1,156.2450**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2369	2.6381	2.6184	0.0112	0.2667	0.0558	0.3225	0.0730	0.0514	0.1244		1,055.9469	1,055.9469	8.3500e-003		1,056.1223
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0243	0.0302	0.3799	1.3600e-003	0.1118	7.7000e-004	0.1126	0.0296	7.2000e-004	0.0304		96.0433	96.0433	4.0300e-003		96.1279
Total	**0.2612**	**2.6683**	**2.9983**	**0.0126**	**0.3784**	**0.0566**	**0.4350**	**0.1027**	**0.0521**	**0.1548**		**1,151.9902**	**1,151.9902**	**0.0124**		**1,152.2502**

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Fugitive Dust					1.2891	0.0000	1.2891	0.1952	0.0000	0.1952			0.0000			0.0000
Off-Road	0.7764	7.0242	7.9731	0.0120		0.3930	0.3930		0.3754	0.3754	0.0000	1,151.7252	1,151.7252	0.2152		1,156.2450
Total	**0.7764**	**7.0242**	**7.9731**	**0.0120**	**1.2891**	**0.3930**	**1.6821**	**0.1952**	**0.3754**	**0.5706**	**0.0000**	**1,151.7252**	**1,151.7252**	**0.2152**		**1,156.2450**

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Hauling	0.2369	2.6381	2.6184	0.0112	0.2667	0.0558	0.3225	0.0730	0.0514	0.1244		1,055.9469	1,055.9469	8.3500e-003		1,056.1223
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0243	0.0302	0.3799	1.3600e-003	0.1118	7.7000e-004	0.1126	0.0296	7.2000e-004	0.0304		96.0433	96.0433	4.0300e-003		96.1279
Total	**0.2612**	**2.6683**	**2.9983**	**0.0126**	**0.3784**	**0.0566**	**0.4350**	**0.1027**	**0.0521**	**0.1548**		**1,151.9902**	**1,151.9902**	**0.0124**		**1,152.2502**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					

Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.8231	7.9849	6.7382	9.3200e-003		0.4515	0.4515		0.4154	0.4154		902.9958	902.9958	0.2921		909.1288
Total	**0.8231**	**7.9849**	**6.7382**	**9.3200e-003**	**0.5303**	**0.4515**	**0.9817**	**0.0573**	**0.4154**	**0.4726**		**902.9958**	**902.9958**	**0.2921**		**909.1288**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0121	0.0151	0.1899	6.8000e-004	0.0559	3.9000e-004	0.0563	0.0148	3.6000e-004	0.0152		48.0216	48.0216	2.0200e-003		48.0640
Total	**0.0121**	**0.0151**	**0.1899**	**6.8000e-004**	**0.0559**	**3.9000e-004**	**0.0563**	**0.0148**	**3.6000e-004**	**0.0152**		**48.0216**	**48.0216**	**2.0200e-003**		**48.0640**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2068	0.0000	0.2068	0.0223	0.0000	0.0223			0.0000			0.0000
Off-Road	0.8231	7.9849	6.7382	9.3200e-003		0.4515	0.4515		0.4154	0.4154	0.0000	902.9958	902.9958	0.2921		909.1288
Total	**0.8231**	**7.9849**	**6.7382**	**9.3200e-003**	**0.2068**	**0.4515**	**0.6583**	**0.0223**	**0.4154**	**0.4377**	**0.0000**	**902.9958**	**902.9958**	**0.2921**		**909.1288**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0121	0.0151	0.1899	6.8000e-004	0.0559	3.9000e-004	0.0563	0.0148	3.6000e-004	0.0152		48.0216	48.0216	2.0200e-003		48.0640
Total	**0.0121**	**0.0151**	**0.1899**	**6.8000e-004**	**0.0559**	**3.9000e-004**	**0.0563**	**0.0148**	**3.6000e-004**	**0.0152**		**48.0216**	**48.0216**	**2.0200e-003**		**48.0640**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	0.7764	7.0242	7.9731	0.0120		0.3930	0.3930		0.3754	0.3754		1,151.7252	1,151.7252	0.2152		1,156.2450
Total	**0.7764**	**7.0242**	**7.9731**	**0.0120**	**0.7528**	**0.3930**	**1.1457**	**0.4138**	**0.3754**	**0.7892**		**1,151.7252**	**1,151.7252**	**0.2152**		**1,156.2450**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0243	0.0302	0.3799	1.3600e-003	0.1118	7.7000e-004	0.1126	0.0296	7.2000e-004	0.0304		96.0433	96.0433	4.0300e-003		96.1279
Total	**0.0243**	**0.0302**	**0.3799**	**1.3600e-003**	**0.1118**	**7.7000e-004**	**0.1126**	**0.0296**	**7.2000e-004**	**0.0304**		**96.0433**	**96.0433**	**4.0300e-003**		**96.1279**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2936	0.0000	0.2936	0.1614	0.0000	0.1614			0.0000			0.0000
Off-Road	0.7764	7.0242	7.9731	0.0120		0.3930	0.3930		0.3754	0.3754	0.0000	1,151.7252	1,151.7252	0.2152		1,156.2450
Total	**0.7764**	**7.0242**	**7.9731**	**0.0120**	**0.2936**	**0.3930**	**0.6865**	**0.1614**	**0.3754**	**0.5368**	**0.0000**	**1,151.7252**	**1,151.7252**	**0.2152**		**1,156.2450**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0243	0.0302	0.3799	1.3600e-003	0.1118	7.7000e-004	0.1126	0.0296	7.2000e-004	0.0304		96.0433	96.0433	4.0300e-003		96.1279

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Total	**0.0243**	**0.0302**	**0.3799**	**1.3600e-003**	**0.1118**	**7.7000e-004**	**0.1126**	**0.0296**	**7.2000e-004**	**0.0304**		**96.0433**	**96.0433**	**4.0300e-003**		**96.1279**

3.5 Trenching - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6209	5.7596	5.1481	7.0600e-003		0.3840	0.3840		0.3540	0.3540		671.1413	671.1413	0.2095		675.5405
Total	**0.6209**	**5.7596**	**5.1481**	**7.0600e-003**		**0.3840**	**0.3840**		**0.3540**	**0.3540**		**671.1413**	**671.1413**	**0.2095**		**675.5405**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0194	0.0242	0.3039	1.0900e-003	0.0894	6.2000e-004	0.0900	0.0237	5.7000e-004	0.0243		76.8346	76.8346	3.2300e-003		76.9023
Total	**0.0194**	**0.0242**	**0.3039**	**1.0900e-003**	**0.0894**	**6.2000e-004**	**0.0900**	**0.0237**	**5.7000e-004**	**0.0243**		**76.8346**	**76.8346**	**3.2300e-003**		**76.9023**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6209	5.7596	5.1481	7.0600e-003		0.3840	0.3840		0.3540	0.3540	0.0000	671.1413	671.1413	0.2095		675.5405
Total	**0.6209**	**5.7596**	**5.1481**	**7.0600e-003**		**0.3840**	**0.3840**		**0.3540**	**0.3540**	**0.0000**	**671.1413**	**671.1413**	**0.2095**		**675.5405**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0194	0.0242	0.3039	1.0900e-003	0.0894	6.2000e-004	0.0900	0.0237	5.7000e-004	0.0243		76.8346	76.8346	3.2300e-003		76.9023
Total	**0.0194**	**0.0242**	**0.3039**	**1.0900e-003**	**0.0894**	**6.2000e-004**	**0.0900**	**0.0237**	**5.7000e-004**	**0.0243**		**76.8346**	**76.8346**	**3.2300e-003**		**76.9023**

3.6 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.7705	7.9325	7.2422	0.0113		0.4454	0.4454		0.4098	0.4098		1,097.1688	1,097.1688	0.3549		1,104.6206
Total	**0.7705**	**7.9325**	**7.2422**	**0.0113**		**0.4454**	**0.4454**		**0.4098**	**0.4098**		**1,097.1688**	**1,097.1688**	**0.3549**		**1,104.6206**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0254	0.1986	0.3187	8.6000e-004	0.0250	3.5700e-003	0.0286	7.1200e-003	3.2900e-003	0.0104		80.7727	80.7727	5.9000e-004		80.7851
Worker	0.0267	0.0332	0.4179	1.5000e-003	0.1230	8.5000e-004	0.1238	0.0326	7.9000e-004	0.0334		105.6476	105.6476	4.4300e-003		105.7407
Total	**0.0521**	**0.2318**	**0.7365**	**2.3600e-003**	**0.1480**	**4.4200e-003**	**0.1524**	**0.0397**	**4.0800e-003**	**0.0438**		**186.4203**	**186.4203**	**5.0200e-003**		**186.5258**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7705	7.9325	7.2422	0.0113		0.4454	0.4454		0.4098	0.4098	0.0000	1,097.1688	1,097.1688	0.3549		1,104.6206
Total	**0.7705**	**7.9325**	**7.2422**	**0.0113**		**0.4454**	**0.4454**		**0.4098**	**0.4098**	**0.0000**	**1,097.1688**	**1,097.1688**	**0.3549**		**1,104.6206**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0254	0.1986	0.3187	8.6000e-004	0.0250	3.5700e-003	0.0286	7.1200e-003	3.2900e-003	0.0104		80.7727	80.7727	5.9000e-004		80.7851
Worker	0.0267	0.0332	0.4179	1.5000e-003	0.1230	8.5000e-004	0.1238	0.0326	7.9000e-004	0.0334		105.6476	105.6476	4.4300e-003		105.7407
Total	**0.0521**	**0.2318**	**0.7365**	**2.3600e-003**	**0.1480**	**4.4200e-003**	**0.1524**	**0.0397**	**4.0800e-003**	**0.0438**		**186.4203**	**186.4203**	**5.0200e-003**		**186.5258**

3.7 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7131	6.6304	6.9921	0.0111		0.3492	0.3492		0.3247	0.3247		1,020.0280	1,020.0280	0.2966		1,026.2569
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7131**	**6.6304**	**6.9921**	**0.0111**		**0.3492**	**0.3492**		**0.3247**	**0.3247**		**1,020.0280**	**1,020.0280**	**0.2966**		**1,026.2569**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0437	0.0544	0.6838	2.4600e-003	0.2012	1.3900e-003	0.2026	0.0534	1.2900e-003	0.0547		172.8779	172.8779	7.2600e-003		173.0302
Total	**0.0437**	**0.0544**	**0.6838**	**2.4600e-003**	**0.2012**	**1.3900e-003**	**0.2026**	**0.0534**	**1.2900e-003**	**0.0547**		**172.8779**	**172.8779**	**7.2600e-003**		**173.0302**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7131	6.6304	6.9921	0.0111		0.3492	0.3492		0.3247	0.3247	0.0000	1,020.0280	1,020.0280	0.2966		1,026.2569
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7131**	**6.6304**	**6.9921**	**0.0111**		**0.3492**	**0.3492**		**0.3247**	**0.3247**	**0.0000**	**1,020.0280**	**1,020.0280**	**0.2966**		**1,026.2569**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0437	0.0544	0.6838	2.4600e-003	0.2012	1.3900e-003	0.2026	0.0534	1.2900e-003	0.0547		172.8779	172.8779	7.2600e-003		173.0302

Total	**0.0437**	**0.0544**	**0.6838**	**2.4600e-003**	**0.2012**	**1.3900e-003**	**0.2026**	**0.0534**	**1.2900e-003**	**0.0547**		**172.8779**	**172.8779**	**7.2600e-003**		**173.0302**

3.8 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	46.3500					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.8537
Total	**46.5689**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.8537**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	4.8600e-003	6.0400e-003	0.0760	2.7000e-004	0.0224	1.5000e-004	0.0225	5.9300e-003	1.4000e-004	6.0700e-003		19.2087	19.2087	8.1000e-004		19.2256
Total	**4.8600e-003**	**6.0400e-003**	**0.0760**	**2.7000e-004**	**0.0224**	**1.5000e-004**	**0.0225**	**5.9300e-003**	**1.4000e-004**	**6.0700e-003**		**19.2087**	**19.2087**	**8.1000e-004**		**19.2256**

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Archit. Coating	46.3500					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.8537
Total	**46.5689**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.8537**

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	4.8600e-003	6.0400e-003	0.0760	2.7000e-004	0.0224	1.5000e-004	0.0225	5.9300e-003	1.4000e-004	6.0700e-003		19.2087	19.2087	8.1000e-004		19.2256
Total	**4.8600e-003**	**6.0400e-003**	**0.0760**	**2.7000e-004**	**0.0224**	**1.5000e-004**	**0.0225**	**5.9300e-003**	**1.4000e-004**	**6.0700e-003**		**19.2087**	**19.2087**	**8.1000e-004**		**19.2256**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.5451	2.8615	16.2049	0.0620	4.3879	0.0607	4.4486	1.1710	0.0560	1.2270		4,558.6838	4,558.6838	0.1481		4,561.7932
Unmitigated	1.5451	2.8615	16.2049	0.0620	4.3879	0.0607	4.4486	1.1710	0.0560	1.2270		4,558.6838	4,558.6838	0.1481		4,561.7932

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	687.25	280.75	30.25	1,616,862	1,616,862
Total	687.25	280.75	30.25	1,616,862	1,616,862

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.503435	0.056741	0.195441	0.152143	0.042270	0.006027	0.016168	0.016833	0.001466	0.002186	0.004340	0.000491	0.002459

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
NaturalGas Mitigated	0.0117	0.1065	0.0895	6.4000e-004		8.0900e-003	8.0900e-003		8.0900e-003	8.0900e-003		127.8002	127.8002	2.4500e-003	2.3400e-003	128.5779
NaturalGas Unmitigated	0.0117	0.1065	0.0895	6.4000e-004		8.0900e-003	8.0900e-003		8.0900e-003	8.0900e-003		127.8002	127.8002	2.4500e-003	2.3400e-003	128.5779

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	1086.3	0.0117	0.1065	0.0895	6.4000e-004		8.0900e-003	8.0900e-003		8.0900e-003	8.0900e-003		127.8002	127.8002	2.4500e-003	2.3400e-003	128.5779
Total		**0.0117**	**0.1065**	**0.0895**	**6.4000e-004**		**8.0900e-003**	**8.0900e-003**		**8.0900e-003**	**8.0900e-003**		**127.8002**	**127.8002**	**2.4500e-003**	**2.3400e-003**	**128.5779**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	1.0863	0.0117	0.1065	0.0895	6.4000e-004		8.0900e-003	8.0900e-003		8.0900e-003	8.0900e-003		127.8002	127.8002	2.4500e-003	2.3400e-003	128.5779
Total		**0.0117**	**0.1065**	**0.0895**	**6.4000e-004**		**8.0900e-003**	**8.0900e-003**		**8.0900e-003**	**8.0900e-003**		**127.8002**	**127.8002**	**2.4500e-003**	**2.3400e-003**	**128.5779**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.6540	2.0000e-005	2.5500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.4700e-003	5.4700e-003	1.0000e-005		5.7700e-003
Unmitigated	0.6540	2.0000e-005	2.5500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.4700e-003	5.4700e-003	1.0000e-005		5.7700e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1587					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.4950					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.4000e-004	2.0000e-005	2.5500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.4700e-003	5.4700e-003	1.0000e-005		5.7700e-003
Total	**0.6540**	**2.0000e-005**	**2.5500e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**5.4700e-003**	**5.4700e-003**	**1.0000e-005**		**5.7700e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1587					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.4950					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.4000e-004	2.0000e-005	2.5500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.4700e-003	5.4700e-003	1.0000e-005		5.7700e-003
Total	**0.6540**	**2.0000e-005**	**2.5500e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**5.4700e-003**	**5.4700e-003**	**1.0000e-005**		**5.7700e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Unscheduled - Multidisciplinary Building

Orange County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	25.00	1000sqft	0.29	25,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Multidisciplinary Building will be multiple stories

Construction Phase - modified

Off-road Equipment - modified

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Demolition -

Architectural Coating - Modifed

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value

tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblLandUse	LotAcreage	0.57	0.29
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblProjectCharacteristics	OperationalYear	2014	2023

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	46.5740	9.7846	11.4029	0.0245	3.6839	0.4519	4.1336	0.6031	0.4276	1.0307	0.0000	2,296.0878	2,296.0878	0.3599	0.0000	2,303.6455
Total	**46.5740**	**9.7846**	**11.4029**	**0.0245**	**3.6839**	**0.4519**	**4.1336**	**0.6031**	**0.4276**	**1.0307**	**0.0000**	**2,296.0878**	**2,296.0878**	**0.3599**	**0.0000**	**2,303.6455**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					

2021	46.5740	9.7846	11.4029	0.0245	1.6676	0.4519	2.1173	0.2979	0.4276	0.7254	0.0000	2,296.0878	2,296.0878	0.3599	0.0000	2,303.6455
Total	**46.5740**	**9.7846**	**11.4029**	**0.0245**	**1.6676**	**0.4519**	**2.1173**	**0.2979**	**0.4276**	**0.7254**	**0.0000**	**2,296.0878**	**2,296.0878**	**0.3599**	**0.0000**	**2,303.6455**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**54.73**	**0.00**	**48.78**	**50.62**	**0.00**	**29.62**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.6540	2.0000e-005	2.5500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.4700e-003	5.4700e-003	1.0000e-005		5.7700e-003
Energy	0.0117	0.1065	0.0895	6.4000e-004		8.0900e-003	8.0900e-003		8.0900e-003	8.0900e-003		127.8002	127.8002	2.4500e-003	2.3400e-003	128.5779
Mobile	1.6286	3.0250	16.1332	0.0593	4.3879	0.0608	4.4487	1.1710	0.0562	1.2272		4,364.2139	4,364.2139	0.1482		4,367.3262
Total	**2.2943**	**3.1315**	**16.2252**	**0.0599**	**4.3879**	**0.0689**	**4.4568**	**1.1710**	**0.0643**	**1.2353**		**4,492.0196**	**4,492.0196**	**0.1507**	**2.3400e-003**	**4,495.9099**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.6540	2.0000e-005	2.5500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.4700e-003	5.4700e-003	1.0000e-005		5.7700e-003

Energy	0.0117	0.1065	0.0895	6.4000e-004		8.0900e-003	8.0900e-003		8.0900e-003	8.0900e-003		127.8002	127.8002	2.4500e-003	2.3400e-003	128.5779
Mobile	1.6286	3.0250	16.1332	0.0593	4.3879	0.0608	4.4487	1.1710	0.0562	1.2272		4,364.2139	4,364.2139	0.1482		4,367.3262
Total	**2.2943**	**3.1315**	**16.2252**	**0.0599**	**4.3879**	**0.0689**	**4.4568**	**1.1710**	**0.0643**	**1.2353**		**4,492.0196**	**4,492.0196**	**0.1507**	**2.3400e-003**	**4,495.9099**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	5/1/2021	5/14/2021	5	10	
2	Site Preparation	Site Preparation	5/15/2021	5/17/2021	5	1	
3	Grading	Grading	5/18/2021	5/19/2021	5	2	
4	Trenching	Trenching	5/20/2021	6/2/2021	5	10	
5	Building Construction	Building Construction	6/3/2021	10/20/2021	5	100	
6	Paving	Paving	10/21/2021	10/27/2021	5	5	
7	Architectural Coating	Architectural Coating	10/28/2021	11/3/2021	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 37,500; Non-Residential Outdoor: 12,500 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	1	4.00	226	0.29
Building Construction	Forklifts	2	6.00	89	0.20

Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Site Preparation	Graders	1	8.00	174	0.41
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	125	0.42
Demolition	Rubber Tired Dozers	1	1.00	255	0.40
Grading	Rubber Tired Dozers	1	1.00	255	0.40
Paving	Rollers	1	7.00	80	0.38
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Trenching	Plate Compactors	1	8.00	8	0.43
Trenching	Trenchers	1	8.00	80	0.50
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	153.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	11.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	2.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Clean Paved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3055	0.0000	3.3055	0.5005	0.0000	0.5005			0.0000			0.0000
Off-Road	0.7764	7.0242	7.9731	0.0120		0.3930	0.3930		0.3754	0.3754		1,151.7252	1,151.7252	0.2152		1,156.2450
Total	**0.7764**	**7.0242**	**7.9731**	**0.0120**	**3.3055**	**0.3930**	**3.6984**	**0.5005**	**0.3754**	**0.8759**		**1,151.7252**	**1,151.7252**	**0.2152**		**1,156.2450**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2474	2.7273	3.0761	0.0112	0.2667	0.0560	0.3226	0.0730	0.0515	0.1245		1,053.4279	1,053.4279	8.4800e-003		1,053.6059
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0255	0.0332	0.3536	1.2900e-003	0.1118	7.7000e-004	0.1126	0.0296	7.2000e-004	0.0304		90.9347	90.9347	4.0300e-003		91.0194
Total	**0.2729**	**2.7605**	**3.4298**	**0.0125**	**0.3784**	**0.0567**	**0.4352**	**0.1027**	**0.0522**	**0.1549**		**1,144.3626**	**1,144.3626**	**0.0125**		**1,144.6252**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.2891	0.0000	1.2891	0.1952	0.0000	0.1952			0.0000			0.0000
Off-Road	0.7764	7.0242	7.9731	0.0120		0.3930	0.3930		0.3754	0.3754	0.0000	1,151.7252	1,151.7252	0.2152		1,156.2450
Total	**0.7764**	**7.0242**	**7.9731**	**0.0120**	**1.2891**	**0.3930**	**1.6821**	**0.1952**	**0.3754**	**0.5706**	**0.0000**	**1,151.7252**	**1,151.7252**	**0.2152**		**1,156.2450**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2474	2.7273	3.0761	0.0112	0.2667	0.0560	0.3226	0.0730	0.0515	0.1245		1,053.4279	1,053.4279	8.4800e-003		1,053.6059
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0255	0.0332	0.3536	1.2900e-003	0.1118	7.7000e-004	0.1126	0.0296	7.2000e-004	0.0304		90.9347	90.9347	4.0300e-003		91.0194
Total	**0.2729**	**2.7605**	**3.4298**	**0.0125**	**0.3784**	**0.0567**	**0.4352**	**0.1027**	**0.0522**	**0.1549**		**1,144.3626**	**1,144.3626**	**0.0125**		**1,144.6252**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.8231	7.9849	6.7382	9.3200e-003		0.4515	0.4515		0.4154	0.4154		902.9958	902.9958	0.2921		909.1288
Total	**0.8231**	**7.9849**	**6.7382**	**9.3200e-003**	**0.5303**	**0.4515**	**0.9817**	**0.0573**	**0.4154**	**0.4726**		**902.9958**	**902.9958**	**0.2921**		**909.1288**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0127	0.0166	0.1768	6.5000e-004	0.0559	3.9000e-004	0.0563	0.0148	3.6000e-004	0.0152		45.4674	45.4674	2.0200e-003		45.5097
Total	**0.0127**	**0.0166**	**0.1768**	**6.5000e-004**	**0.0559**	**3.9000e-004**	**0.0563**	**0.0148**	**3.6000e-004**	**0.0152**		**45.4674**	**45.4674**	**2.0200e-003**		**45.5097**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2068	0.0000	0.2068	0.0223	0.0000	0.0223			0.0000			0.0000
Off-Road	0.8231	7.9849	6.7382	9.3200e-003		0.4515	0.4515		0.4154	0.4154	0.0000	902.9958	902.9958	0.2921		909.1288
Total	**0.8231**	**7.9849**	**6.7382**	**9.3200e-003**	**0.2068**	**0.4515**	**0.6583**	**0.0223**	**0.4154**	**0.4377**	**0.0000**	**902.9958**	**902.9958**	**0.2921**		**909.1288**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0127	0.0166	0.1768	6.5000e-004	0.0559	3.9000e-004	0.0563	0.0148	3.6000e-004	0.0152		45.4674	45.4674	2.0200e-003		45.5097
Total	**0.0127**	**0.0166**	**0.1768**	**6.5000e-004**	**0.0559**	**3.9000e-004**	**0.0563**	**0.0148**	**3.6000e-004**	**0.0152**		**45.4674**	**45.4674**	**2.0200e-003**		**45.5097**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	0.7764	7.0242	7.9731	0.0120		0.3930	0.3930		0.3754	0.3754		1,151.7252	1,151.7252	0.2152		1,156.2450
Total	**0.7764**	**7.0242**	**7.9731**	**0.0120**	**0.7528**	**0.3930**	**1.1457**	**0.4138**	**0.3754**	**0.7892**		**1,151.7252**	**1,151.7252**	**0.2152**		**1,156.2450**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category																
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0255	0.0332	0.3536	1.2900e-003	0.1118	7.7000e-004	0.1126	0.0296	7.2000e-004	0.0304		90.9347	90.9347	4.0300e-003		91.0194
Total	**0.0255**	**0.0332**	**0.3536**	**1.2900e-003**	**0.1118**	**7.7000e-004**	**0.1126**	**0.0296**	**7.2000e-004**	**0.0304**		**90.9347**	**90.9347**	**4.0300e-003**		**91.0194**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2936	0.0000	0.2936	0.1614	0.0000	0.1614			0.0000			0.0000
Off-Road	0.7764	7.0242	7.9731	0.0120		0.3930	0.3930		0.3754	0.3754	0.0000	1,151.7252	1,151.7252	0.2152		1,156.2450
Total	**0.7764**	**7.0242**	**7.9731**	**0.0120**	**0.2936**	**0.3930**	**0.6865**	**0.1614**	**0.3754**	**0.5368**	**0.0000**	**1,151.7252**	**1,151.7252**	**0.2152**		**1,156.2450**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0255	0.0332	0.3536	1.2900e-003	0.1118	7.7000e-004	0.1126	0.0296	7.2000e-004	0.0304		90.9347	90.9347	4.0300e-003		91.0194

Total	**0.0255**	**0.0332**	**0.3536**	**1.2900e-003**	**0.1118**	**7.7000e-004**	**0.1126**	**0.0296**	**7.2000e-004**	**0.0304**		**90.9347**	**90.9347**	**4.0300e-003**		**91.0194**

3.5 Trenching - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6209	5.7596	5.1481	7.0600e-003		0.3840	0.3840		0.3540	0.3540		671.1413	671.1413	0.2095		675.5405
Total	**0.6209**	**5.7596**	**5.1481**	**7.0600e-003**		**0.3840**	**0.3840**		**0.3540**	**0.3540**		**671.1413**	**671.1413**	**0.2095**		**675.5405**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0204	0.0266	0.2829	1.0300e-003	0.0894	6.2000e-004	0.0900	0.0237	5.7000e-004	0.0243		72.7478	72.7478	3.2300e-003		72.8155
Total	**0.0204**	**0.0266**	**0.2829**	**1.0300e-003**	**0.0894**	**6.2000e-004**	**0.0900**	**0.0237**	**5.7000e-004**	**0.0243**		**72.7478**	**72.7478**	**3.2300e-003**		**72.8155**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6209	5.7596	5.1481	7.0600e-003		0.3840	0.3840		0.3540	0.3540	0.0000	671.1413	671.1413	0.2095		675.5405
Total	**0.6209**	**5.7596**	**5.1481**	**7.0600e-003**		**0.3840**	**0.3840**		**0.3540**	**0.3540**	**0.0000**	**671.1413**	**671.1413**	**0.2095**		**675.5405**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0204	0.0266	0.2829	1.0300e-003	0.0894	6.2000e-004	0.0900	0.0237	5.7000e-004	0.0243		72.7478	72.7478	3.2300e-003		72.8155
Total	**0.0204**	**0.0266**	**0.2829**	**1.0300e-003**	**0.0894**	**6.2000e-004**	**0.0900**	**0.0237**	**5.7000e-004**	**0.0243**		**72.7478**	**72.7478**	**3.2300e-003**		**72.8155**

3.6 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Off-Road	0.7705	7.9325	7.2422	0.0113		0.4454	0.4454		0.4098	0.4098		1,097.1688	1,097.1688	0.3549		1,104.6206
Total	**0.7705**	**7.9325**	**7.2422**	**0.0113**		**0.4454**	**0.4454**		**0.4098**	**0.4098**		**1,097.1688**	**1,097.1688**	**0.3549**		**1,104.6206**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0276	0.2029	0.3979	8.6000e-004	0.0250	3.6000e-003	0.0286	7.1200e-003	3.3100e-003	0.0104		80.0864	80.0864	6.1000e-004		80.0992
Worker	0.0280	0.0365	0.3890	1.4200e-003	0.1230	8.5000e-004	0.1238	0.0326	7.9000e-004	0.0334		100.0282	100.0282	4.4300e-003		100.1213
Total	**0.0556**	**0.2394**	**0.7869**	**2.2800e-003**	**0.1480**	**4.4500e-003**	**0.1524**	**0.0397**	**4.1000e-003**	**0.0438**		**180.1146**	**180.1146**	**5.0400e-003**		**180.2205**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7705	7.9325	7.2422	0.0113		0.4454	0.4454		0.4098	0.4098	0.0000	1,097.1688	1,097.1688	0.3549		1,104.6206
Total	**0.7705**	**7.9325**	**7.2422**	**0.0113**		**0.4454**	**0.4454**		**0.4098**	**0.4098**	**0.0000**	**1,097.1688**	**1,097.1688**	**0.3549**		**1,104.6206**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0276	0.2029	0.3979	8.6000e-004	0.0250	3.6000e-003	0.0286	7.1200e-003	3.3100e-003	0.0104		80.0864	80.0864	6.1000e-004		80.0992
Worker	0.0280	0.0365	0.3890	1.4200e-003	0.1230	8.5000e-004	0.1238	0.0326	7.9000e-004	0.0334		100.0282	100.0282	4.4300e-003		100.1213
Total	**0.0556**	**0.2394**	**0.7869**	**2.2800e-003**	**0.1480**	**4.4500e-003**	**0.1524**	**0.0397**	**4.1000e-003**	**0.0438**		**180.1146**	**180.1146**	**5.0400e-003**		**180.2205**

3.7 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7131	6.6304	6.9921	0.0111		0.3492	0.3492		0.3247	0.3247		1,020.0280	1,020.0280	0.2966		1,026.2569
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7131**	**6.6304**	**6.9921**	**0.0111**		**0.3492**	**0.3492**		**0.3247**	**0.3247**		**1,020.0280**	**1,020.0280**	**0.2966**		**1,026.2569**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0458	0.0597	0.6365	2.3200e-003	0.2012	1.3900e-003	0.2026	0.0534	1.2900e-003	0.0547		163.6825	163.6825	7.2600e-003		163.8349
Total	**0.0458**	**0.0597**	**0.6365**	**2.3200e-003**	**0.2012**	**1.3900e-003**	**0.2026**	**0.0534**	**1.2900e-003**	**0.0547**		**163.6825**	**163.6825**	**7.2600e-003**		**163.8349**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7131	6.6304	6.9921	0.0111		0.3492	0.3492		0.3247	0.3247	0.0000	1,020.0280	1,020.0280	0.2966		1,026.2569
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7131**	**6.6304**	**6.9921**	**0.0111**		**0.3492**	**0.3492**		**0.3247**	**0.3247**	**0.0000**	**1,020.0280**	**1,020.0280**	**0.2966**		**1,026.2569**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0458	0.0597	0.6365	2.3200e-003	0.2012	1.3900e-003	0.2026	0.0534	1.2900e-003	0.0547		163.6825	163.6825	7.2600e-003		163.8349

Total	**0.0458**	**0.0597**	**0.6365**	**2.3200e-003**	**0.2012**	**1.3900e-003**	**0.2026**	**0.0534**	**1.2900e-003**	**0.0547**		**163.6825**	**163.6825**	**7.2600e-003**		**163.8349**

3.8 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	46.3500					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.8537
Total	**46.5689**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.8537**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	5.0900e-003	6.6400e-003	0.0707	2.6000e-004	0.0224	1.5000e-004	0.0225	5.9300e-003	1.4000e-004	6.0700e-003		18.1870	18.1870	8.1000e-004		18.2039
Total	**5.0900e-003**	**6.6400e-003**	**0.0707**	**2.6000e-004**	**0.0224**	**1.5000e-004**	**0.0225**	**5.9300e-003**	**1.4000e-004**	**6.0700e-003**		**18.1870**	**18.1870**	**8.1000e-004**		**18.2039**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	46.3500					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.8537
Total	**46.5689**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.8537**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	5.0900e-003	6.6400e-003	0.0707	2.6000e-004	0.0224	1.5000e-004	0.0225	5.9300e-003	1.4000e-004	6.0700e-003		18.1870	18.1870	8.1000e-004		18.2039
Total	**5.0900e-003**	**6.6400e-003**	**0.0707**	**2.6000e-004**	**0.0224**	**1.5000e-004**	**0.0225**	**5.9300e-003**	**1.4000e-004**	**6.0700e-003**		**18.1870**	**18.1870**	**8.1000e-004**		**18.2039**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.6286	3.0250	16.1332	0.0593	4.3879	0.0608	4.4487	1.1710	0.0562	1.2272		4,364.2139	4,364.2139	0.1482		4,367.3262
Unmitigated	1.6286	3.0250	16.1332	0.0593	4.3879	0.0608	4.4487	1.1710	0.0562	1.2272		4,364.2139	4,364.2139	0.1482		4,367.3262

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	687.25	280.75	30.25	1,616,862	1,616,862
Total	687.25	280.75	30.25	1,616,862	1,616,862

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.503435	0.056741	0.195441	0.152143	0.042270	0.006027	0.016168	0.016833	0.001466	0.002186	0.004340	0.000491	0.002459

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
NaturalGas Mitigated	0.0117	0.1065	0.0895	6.4000e-004		8.0900e-003	8.0900e-003		8.0900e-003	8.0900e-003		127.8002	127.8002	2.4500e-003	2.3400e-003	128.5779
NaturalGas Unmitigated	0.0117	0.1065	0.0895	6.4000e-004		8.0900e-003	8.0900e-003		8.0900e-003	8.0900e-003		127.8002	127.8002	2.4500e-003	2.3400e-003	128.5779

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	1086.3	0.0117	0.1065	0.0895	6.4000e-004		8.0900e-003	8.0900e-003		8.0900e-003	8.0900e-003		127.8002	127.8002	2.4500e-003	2.3400e-003	128.5779
Total		**0.0117**	**0.1065**	**0.0895**	**6.4000e-004**		**8.0900e-003**	**8.0900e-003**		**8.0900e-003**	**8.0900e-003**		**127.8002**	**127.8002**	**2.4500e-003**	**2.3400e-003**	**128.5779**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	1.0863	0.0117	0.1065	0.0895	6.4000e-004		8.0900e-003	8.0900e-003		8.0900e-003	8.0900e-003		127.8002	127.8002	2.4500e-003	2.3400e-003	128.5779
Total		**0.0117**	**0.1065**	**0.0895**	**6.4000e-004**		**8.0900e-003**	**8.0900e-003**		**8.0900e-003**	**8.0900e-003**		**127.8002**	**127.8002**	**2.4500e-003**	**2.3400e-003**	**128.5779**

6.0 Area Detail

6.1 Mitigation Measures Area

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Mitigated	0.6540	2.0000e-005	2.5500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.4700e-003	5.4700e-003	1.0000e-005		5.7700e-003
Unmitigated	0.6540	2.0000e-005	2.5500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.4700e-003	5.4700e-003	1.0000e-005		5.7700e-003

6.2 Area by SubCategory

Unmitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Architectural Coating	0.1587					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.4950					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.4000e-004	2.0000e-005	2.5500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.4700e-003	5.4700e-003	1.0000e-005		5.7700e-003
Total	**0.6540**	**2.0000e-005**	**2.5500e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**5.4700e-003**	**5.4700e-003**	**1.0000e-005**		**5.7700e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1587					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.4950					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.4000e-004	2.0000e-005	2.5500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.4700e-003	5.4700e-003	1.0000e-005		5.7700e-003
Total	**0.6540**	**2.0000e-005**	**2.5500e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**5.4700e-003**	**5.4700e-003**	**1.0000e-005**		**5.7700e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Phase 1 - Planetarium

Orange County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	13.36	1000sqft	1.28	13,359.00	0

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 2.2 **Precipitation Freq (Days)** 30

Climate Zone 8 **Operational Year** 2017

Utility Company Southern California Edison

CO2 Intensity (lb/MWhr) 630.89 **CH4 Intensity (lb/MWhr)** 0.029 **N2O Intensity (lb/MWhr)** 0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - modified

Construction Phase - modified

Off-road Equipment -

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - Modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Demolition -

Grading - modified

Architectural Coating - scaqmd rule 1113, Non residential interior=flat coatings= 50g/L

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblLandUse	LandUseSquareFeet	13,360.00	13,359.00
tblLandUse	LotAcreage	0.31	1.28
tblProjectCharacteristics	OperationalYear	2014	2017

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	0.4409	2.5229	1.8683	2.7700e-003	0.0419	0.1633	0.2052	0.0135	0.1567	0.1702	0.0000	236.7607	236.7607	0.0503	0.0000	237.8167
Total	**0.4409**	**2.5229**	**1.8683**	**2.7700e-003**	**0.0419**	**0.1633**	**0.2052**	**0.0135**	**0.1567**	**0.1702**	**0.0000**	**236.7607**	**236.7607**	**0.0503**	**0.0000**	**237.8167**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					

2016	0.4409	2.5229	1.8683	2.7700e-003	0.0244	0.1633	0.1877	7.4200e-003	0.1567	0.1641	0.0000	236.7605	236.7605	0.0503	0.0000	237.8164
Total	**0.4409**	**2.5229**	**1.8683**	**2.7700e-003**	**0.0244**	**0.1633**	**0.1877**	**7.4200e-003**	**0.1567**	**0.1641**	**0.0000**	**236.7605**	**236.7605**	**0.0503**	**0.0000**	**237.8164**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**41.70**	**0.00**	**8.51**	**45.04**	**0.00**	**3.58**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0638	0.0000	1.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.3000e-004	3.3000e-004	0.0000	0.0000	3.5000e-004
Energy	1.1400e-003	0.0104	8.7200e-003	6.0000e-005		7.9000e-004	7.9000e-004		7.9000e-004	7.9000e-004	0.0000	65.0182	65.0182	2.6900e-003	7.2000e-004	65.2972
Mobile	0.1543	0.3831	1.7204	4.4900e-003	0.3264	5.0700e-003	0.3315	0.0872	4.6700e-003	0.0919	0.0000	342.7183	342.7183	0.0134	0.0000	343.0003
Waste						0.0000	0.0000		0.0000	0.0000	3.5260	0.0000	3.5260	0.2084	0.0000	7.9019
Water						0.0000	0.0000		0.0000	0.0000	0.2079	5.7004	5.9083	0.0216	5.6000e-004	6.5353
Total	**0.2192**	**0.3935**	**1.7293**	**4.5500e-003**	**0.3264**	**5.8600e-003**	**0.3322**	**0.0872**	**5.4600e-003**	**0.0927**	**3.7338**	**413.4372**	**417.1710**	**0.2461**	**1.2800e-003**	**422.7351**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Area	0.0638	0.0000	1.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.3000e-004	3.3000e-004	0.0000	0.0000	3.5000e-004
Energy	1.1400e-003	0.0104	8.7200e-003	6.0000e-005		7.9000e-004	7.9000e-004		7.9000e-004	7.9000e-004	0.0000	65.0182	65.0182	2.6900e-003	7.2000e-004	65.2972
Mobile	0.1543	0.3831	1.7204	4.4900e-003	0.3264	5.0700e-003	0.3315	0.0872	4.6700e-003	0.0919	0.0000	342.7183	342.7183	0.0134	0.0000	343.0003
Waste						0.0000	0.0000		0.0000	0.0000	3.5260	0.0000	3.5260	0.2084	0.0000	7.9019
Water						0.0000	0.0000		0.0000	0.0000	0.2079	5.7004	5.9083	0.0216	5.6000e-004	6.5350
Total	**0.2192**	**0.3935**	**1.7293**	**4.5500e-003**	**0.3264**	**5.8600e-003**	**0.3322**	**0.0872**	**5.4600e-003**	**0.0927**	**3.7338**	**413.4372**	**417.1710**	**0.2461**	**1.2800e-003**	**422.7347**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2016	1/28/2016	5	20	
2	Site Preparation	Site Preparation	1/29/2016	2/1/2016	5	2	
3	Grading	Grading	2/2/2016	2/5/2016	5	4	
4	Building Construction	Building Construction	2/6/2016	11/11/2016	5	200	
5	Paving	Paving	11/12/2016	11/25/2016	5	10	
6	Architectural Coating	Architectural Coating	11/26/2016	12/9/2016	5	10	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 20,039; Non-Residential Outdoor: 6,680 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	174	0.41
Grading	Rubber Tired Dozers	1	6.00	255	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Building Construction	Cranes	1	6.00	226	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Air Compressors	0	6.00	78	0.48
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	120.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	6.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	1.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0130	0.0000	0.0130	1.9700e-003	0.0000	1.9700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0291	0.2826	0.2150	2.4000e-004		0.0175	0.0175		0.0163	0.0163	0.0000	22.5629	22.5629	5.7000e-003	0.0000	22.6827
Total	**0.0291**	**0.2826**	**0.2150**	**2.4000e-004**	**0.0130**	**0.0175**	**0.0304**	**1.9700e-003**	**0.0163**	**0.0183**	**0.0000**	**22.5629**	**22.5629**	**5.7000e-003**	**0.0000**	**22.6827**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.1500e-003	0.0174	0.0134	4.0000e-005	1.0300e-003	2.5000e-004	1.2800e-003	2.8000e-004	2.3000e-004	5.1000e-004	0.0000	4.0312	4.0312	3.0000e-005	0.0000	4.0318
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Worker	4.4000e-004	6.6000e-004	6.8600e-003	2.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.2864	1.2864	6.0000e-005	0.0000	1.2877
Total	**1.5900e-003**	**0.0181**	**0.0202**	**6.0000e-005**	**2.4600e-003**	**2.6000e-004**	**2.7200e-003**	**6.6000e-004**	**2.4000e-004**	**9.0000e-004**	**0.0000**	**5.3175**	**5.3175**	**9.0000e-005**	**0.0000**	**5.3195**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.0600e-003	0.0000	5.0600e-003	7.7000e-004	0.0000	7.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0291	0.2826	0.2150	2.4000e-004		0.0175	0.0175		0.0163	0.0163	0.0000	22.5628	22.5628	5.7000e-003	0.0000	22.6826
Total	**0.0291**	**0.2826**	**0.2150**	**2.4000e-004**	**5.0600e-003**	**0.0175**	**0.0225**	**7.7000e-004**	**0.0163**	**0.0171**	**0.0000**	**22.5628**	**22.5628**	**5.7000e-003**	**0.0000**	**22.6826**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.1500e-003	0.0174	0.0134	4.0000e-005	1.0300e-003	2.5000e-004	1.2800e-003	2.8000e-004	2.3000e-004	5.1000e-004	0.0000	4.0312	4.0312	3.0000e-005	0.0000	4.0318
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.4000e-004	6.6000e-004	6.8600e-003	2.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.2864	1.2864	6.0000e-005	0.0000	1.2877
Total	**1.5900e-003**	**0.0181**	**0.0202**	**6.0000e-005**	**2.4600e-003**	**2.6000e-004**	**2.7200e-003**	**6.6000e-004**	**2.4000e-004**	**9.0000e-004**	**0.0000**	**5.3175**	**5.3175**	**9.0000e-005**	**0.0000**	**5.3195**

3.3 Site Preparation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.8000e-003	0.0000	5.8000e-003	2.9500e-003	0.0000	2.9500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.4400e-003	0.0258	0.0165	2.0000e-005		1.4000e-003	1.4000e-003		1.2900e-003	1.2900e-003	0.0000	1.6158	1.6158	4.9000e-004	0.0000	1.6260
Total	**2.4400e-003**	**0.0258**	**0.0165**	**2.0000e-005**	**5.8000e-003**	**1.4000e-003**	**7.2000e-003**	**2.9500e-003**	**1.2900e-003**	**4.2400e-003**	**0.0000**	**1.6158**	**1.6158**	**4.9000e-004**	**0.0000**	**1.6260**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	4.0000e-005	4.2000e-004	0.0000	9.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0792	0.0792	0.0000	0.0000	0.0792
Total	**3.0000e-005**	**4.0000e-005**	**4.2000e-004**	**0.0000**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0792**	**0.0792**	**0.0000**	**0.0000**	**0.0792**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					2.2600e-003	0.0000	2.2600e-003	1.1500e-003	0.0000	1.1500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.4400e-003	0.0258	0.0165	2.0000e-005		1.4000e-003	1.4000e-003		1.2900e-003	1.2900e-003	0.0000	1.6158	1.6158	4.9000e-004	0.0000	1.6260
Total	**2.4400e-003**	**0.0258**	**0.0165**	**2.0000e-005**	**2.2600e-003**	**1.4000e-003**	**3.6600e-003**	**1.1500e-003**	**1.2900e-003**	**2.4400e-003**	**0.0000**	**1.6158**	**1.6158**	**4.9000e-004**	**0.0000**	**1.6260**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	4.0000e-005	4.2000e-004	0.0000	9.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0792	0.0792	0.0000	0.0000	0.0792
Total	**3.0000e-005**	**4.0000e-005**	**4.2000e-004**	**0.0000**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0792**	**0.0792**	**0.0000**	**0.0000**	**0.0792**

3.4 Grading - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					9.8300e-003	0.0000	9.8300e-003	5.0500e-003	0.0000	5.0500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.9800e-003	0.0421	0.0273	3.0000e-005		2.2800e-003	2.2800e-003		2.1000e-003	2.1000e-003	0.0000	2.6541	2.6541	8.0000e-004	0.0000	2.6710
Total	**3.9800e-003**	**0.0421**	**0.0273**	**3.0000e-005**	**9.8300e-003**	**2.2800e-003**	**0.0121**	**5.0500e-003**	**2.1000e-003**	**7.1500e-003**	**0.0000**	**2.6541**	**2.6541**	**8.0000e-004**	**0.0000**	**2.6710**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	8.0000e-005	8.4000e-004	0.0000	1.8000e-004	0.0000	1.8000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1583	0.1583	1.0000e-005	0.0000	0.1585
Total	**5.0000e-005**	**8.0000e-005**	**8.4000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**1.8000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.1583**	**0.1583**	**1.0000e-005**	**0.0000**	**0.1585**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.8300e-003	0.0000	3.8300e-003	1.9700e-003	0.0000	1.9700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.9800e-003	0.0421	0.0273	3.0000e-005		2.2800e-003	2.2800e-003		2.1000e-003	2.1000e-003	0.0000	2.6541	2.6541	8.0000e-004	0.0000	2.6710
Total	**3.9800e-003**	**0.0421**	**0.0273**	**3.0000e-005**	**3.8300e-003**	**2.2800e-003**	**6.1100e-003**	**1.9700e-003**	**2.1000e-003**	**4.0700e-003**	**0.0000**	**2.6541**	**2.6541**	**8.0000e-004**	**0.0000**	**2.6710**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	8.0000e-005	8.4000e-004	0.0000	1.8000e-004	0.0000	1.8000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1583	0.1583	1.0000e-005	0.0000	0.1585
Total	**5.0000e-005**	**8.0000e-005**	**8.4000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**1.8000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.1583**	**0.1583**	**1.0000e-005**	**0.0000**	**0.1585**

3.5 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3292	2.0546	1.4707	2.2000e-003		0.1366	0.1366		0.1318	0.1318	0.0000	185.6956	185.6956	0.0408	0.0000	186.5527
Total	**0.3292**	**2.0546**	**1.4707**	**2.2000e-003**		**0.1366**	**0.1366**		**0.1318**	**0.1318**	**0.0000**	**185.6956**	**185.6956**	**0.0408**	**0.0000**	**186.5527**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.8700e-003	0.0181	0.0236	4.0000e-005	1.2300e-003	2.8000e-004	1.5100e-003	3.5000e-004	2.5000e-004	6.0000e-004	0.0000	3.9207	3.9207	3.0000e-005	0.0000	3.9213
Worker	2.0500e-003	3.0400e-003	0.0317	8.0000e-005	6.5900e-003	5.0000e-005	6.6300e-003	1.7500e-003	4.0000e-005	1.7900e-003	0.0000	5.9371	5.9371	2.9000e-004	0.0000	5.9432

Total	**3.9200e-003**	**0.0211**	**0.0553**	**1.2000e-004**	**7.8200e-003**	**3.3000e-004**	**8.1400e-003**	**2.1000e-003**	**2.9000e-004**	**2.3900e-003**	**0.0000**	**9.8578**	**9.8578**	**3.2000e-004**	**0.0000**	**9.8645**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3292	2.0546	1.4707	2.2000e-003		0.1366	0.1366		0.1318	0.1318	0.0000	185.6954	185.6954	0.0408	0.0000	186.5525
Total	**0.3292**	**2.0546**	**1.4707**	**2.2000e-003**		**0.1366**	**0.1366**		**0.1318**	**0.1318**	**0.0000**	**185.6954**	**185.6954**	**0.0408**	**0.0000**	**186.5525**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.8700e-003	0.0181	0.0236	4.0000e-005	1.2300e-003	2.8000e-004	1.5100e-003	3.5000e-004	2.5000e-004	6.0000e-004	0.0000	3.9207	3.9207	3.0000e-005	0.0000	3.9213
Worker	2.0500e-003	3.0400e-003	0.0317	8.0000e-005	6.5900e-003	5.0000e-005	6.6300e-003	1.7500e-003	4.0000e-005	1.7900e-003	0.0000	5.9371	5.9371	2.9000e-004	0.0000	5.9432
Total	**3.9200e-003**	**0.0211**	**0.0553**	**1.2000e-004**	**7.8200e-003**	**3.3000e-004**	**8.1400e-003**	**2.1000e-003**	**2.9000e-004**	**2.3900e-003**	**0.0000**	**9.8578**	**9.8578**	**3.2000e-004**	**0.0000**	**9.8645**

3.6 Paving - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.4400e-003	0.0660	0.0454	7.0000e-005		4.0400e-003	4.0400e-003		3.7200e-003	3.7200e-003	0.0000	6.2071	6.2071	1.8400e-003	0.0000	6.2457
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.4400e-003**	**0.0660**	**0.0454**	**7.0000e-005**		**4.0400e-003**	**4.0400e-003**		**3.7200e-003**	**3.7200e-003**	**0.0000**	**6.2071**	**6.2071**	**1.8400e-003**	**0.0000**	**6.2457**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.4000e-004	6.6000e-004	6.8600e-003	2.0000e-005	2.6600e-003	1.0000e-005	2.6700e-003	6.8000e-004	1.0000e-005	6.9000e-004	0.0000	1.2864	1.2864	6.0000e-005	0.0000	1.2877
Total	**4.4000e-004**	**6.6000e-004**	**6.8600e-003**	**2.0000e-005**	**2.6600e-003**	**1.0000e-005**	**2.6700e-003**	**6.8000e-004**	**1.0000e-005**	**6.9000e-004**	**0.0000**	**1.2864**	**1.2864**	**6.0000e-005**	**0.0000**	**1.2877**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Off-Road	6.4400e-003	0.0660	0.0454	7.0000e-005		4.0400e-003	4.0400e-003		3.7200e-003	3.7200e-003	0.0000	6.2071	6.2071	1.8400e-003	0.0000	6.2457
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.4400e-003**	**0.0660**	**0.0454**	**7.0000e-005**		**4.0400e-003**	**4.0400e-003**		**3.7200e-003**	**3.7200e-003**	**0.0000**	**6.2071**	**6.2071**	**1.8400e-003**	**0.0000**	**6.2457**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.4000e-004	6.6000e-004	6.8600e-003	2.0000e-005	2.6600e-003	1.0000e-005	2.6700e-003	6.8000e-004	1.0000e-005	6.9000e-004	0.0000	1.2864	1.2864	6.0000e-005	0.0000	1.2877
Total	**4.4000e-004**	**6.6000e-004**	**6.8600e-003**	**2.0000e-005**	**2.6600e-003**	**1.0000e-005**	**2.6700e-003**	**6.8000e-004**	**1.0000e-005**	**6.9000e-004**	**0.0000**	**1.2864**	**1.2864**	**6.0000e-005**	**0.0000**	**1.2877**

3.7 Architectural Coating - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0619					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.8400e-003	0.0119	9.4200e-003	1.0000e-005		9.8000e-004	9.8000e-004		9.8000e-004	9.8000e-004	0.0000	1.2766	1.2766	1.5000e-004	0.0000	1.2798
Total	**0.0638**	**0.0119**	**9.4200e-003**	**1.0000e-005**		**9.8000e-004**	**9.8000e-004**		**9.8000e-004**	**9.8000e-004**	**0.0000**	**1.2766**	**1.2766**	**1.5000e-004**	**0.0000**	**1.2798**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	3.0000e-005	2.6000e-004	0.0000	5.0000e-005	0.0000	6.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0495	0.0495	0.0000	0.0000	0.0495
Total	**2.0000e-005**	**3.0000e-005**	**2.6000e-004**	**0.0000**	**5.0000e-005**	**0.0000**	**6.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0495**	**0.0495**	**0.0000**	**0.0000**	**0.0495**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0619					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.8400e-003	0.0119	9.4200e-003	1.0000e-005		9.8000e-004	9.8000e-004		9.8000e-004	9.8000e-004	0.0000	1.2766	1.2766	1.5000e-004	0.0000	1.2798
Total	**0.0638**	**0.0119**	**9.4200e-003**	**1.0000e-005**		**9.8000e-004**	**9.8000e-004**		**9.8000e-004**	**9.8000e-004**	**0.0000**	**1.2766**	**1.2766**	**1.5000e-004**	**0.0000**	**1.2798**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	3.0000e-005	2.6000e-004	0.0000	5.0000e-005	0.0000	6.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0495	0.0495	0.0000	0.0000	0.0495
Total	**2.0000e-005**	**3.0000e-005**	**2.6000e-004**	**0.0000**	**5.0000e-005**	**0.0000**	**6.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0495**	**0.0495**	**0.0000**	**0.0000**	**0.0495**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1543	0.3831	1.7204	4.4900e-003	0.3264	5.0700e-003	0.3315	0.0872	4.6700e-003	0.0919	0.0000	342.7183	342.7183	0.0134	0.0000	343.0003
Unmitigated	0.1543	0.3831	1.7204	4.4900e-003	0.3264	5.0700e-003	0.3315	0.0872	4.6700e-003	0.0919	0.0000	342.7183	342.7183	0.0134	0.0000	343.0003

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	367.27	150.03	16.17	864,051	864,051
Total	367.27	150.03	16.17	864,051	864,051

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by

Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.510449	0.057012	0.191854	0.151889	0.041459	0.005887	0.015572	0.014818	0.001440	0.002145	0.004716	0.000509	0.002251

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	53.7118	53.7118	2.4700e-003	5.1000e-004	53.9220
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	53.7118	53.7118	2.4700e-003	5.1000e-004	53.9220
NaturalGas Mitigated	1.1400e-003	0.0104	8.7200e-003	6.0000e-005		7.9000e-004	7.9000e-004		7.9000e-004	7.9000e-004	0.0000	11.3064	11.3064	2.2000e-004	2.1000e-004	11.3752
NaturalGas Unmitigated	1.1400e-003	0.0104	8.7200e-003	6.0000e-005		7.9000e-004	7.9000e-004		7.9000e-004	7.9000e-004	0.0000	11.3064	11.3064	2.2000e-004	2.1000e-004	11.3752

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					

Junior College (2Yr)	211874	1.1400e-003	0.0104	8.7200e-003	6.0000e-005		7.9000e-004	7.9000e-004		7.9000e-004	7.9000e-004	0.0000	11.3064	11.3064	2.2000e-004	2.1000e-004	11.3752
Total		**1.1400e-003**	**0.0104**	**8.7200e-003**	**6.0000e-005**		**7.9000e-004**	**7.9000e-004**		**7.9000e-004**	**7.9000e-004**	**0.0000**	**11.3064**	**11.3064**	**2.2000e-004**	**2.1000e-004**	**11.3752**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Junior College (2Yr)	211874	1.1400e-003	0.0104	8.7200e-003	6.0000e-005		7.9000e-004	7.9000e-004		7.9000e-004	7.9000e-004	0.0000	11.3064	11.3064	2.2000e-004	2.1000e-004	11.3752
Total		**1.1400e-003**	**0.0104**	**8.7200e-003**	**6.0000e-005**		**7.9000e-004**	**7.9000e-004**		**7.9000e-004**	**7.9000e-004**	**0.0000**	**11.3064**	**11.3064**	**2.2000e-004**	**2.1000e-004**	**11.3752**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	187694	53.7118	2.4700e-003	5.1000e-004	53.9220
Total		**53.7118**	**2.4700e-003**	**5.1000e-004**	**53.9220**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	187694	53.7118	2.4700e-003	5.1000e-004	53.9220
Total		**53.7118**	**2.4700e-003**	**5.1000e-004**	**53.9220**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0638	0.0000	1.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.3000e-004	3.3000e-004	0.0000	0.0000	3.5000e-004
Unmitigated	0.0638	0.0000	1.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.3000e-004	3.3000e-004	0.0000	0.0000	3.5000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0155					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0483					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-005	0.0000	1.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.3000e-004	3.3000e-004	0.0000	0.0000	3.5000e-004
Total	**0.0638**	**0.0000**	**1.7000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**3.3000e-004**	**3.3000e-004**	**0.0000**	**0.0000**	**3.5000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Consumer Products	0.0483					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-005	0.0000	1.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.3000e-004	3.3000e-004	0.0000	0.0000	3.5000e-004
Architectural Coating	0.0155					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0638**	**0.0000**	**1.7000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**3.3000e-004**	**3.3000e-004**	**0.0000**	**0.0000**	**3.5000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	5.9083	0.0216	5.6000e-004	6.5350

Unmitigated	5.9083	0.0216	5.6000e-004	6.5353

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	0.655295 / 1.02495	5.9083	0.0216	5.6000e-004	6.5353
Total		**5.9083**	**0.0216**	**5.6000e-004**	**6.5353**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	0.655295 / 1.02495	5.9083	0.0216	5.6000e-004	6.5350
Total		**5.9083**	**0.0216**	**5.6000e-004**	**6.5350**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	3.5260	0.2084	0.0000	7.9019
Unmitigated	3.5260	0.2084	0.0000	7.9019

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior College (2Yr)	17.37	3.5260	0.2084	0.0000	7.9019
Total		**3.5260**	**0.2084**	**0.0000**	**7.9019**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			

Junior College (2Yr)	17.37	3.5260	0.2084	0.0000	7.9019
Total		**3.5260**	**0.2084**	**0.0000**	**7.9019**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Phase 1 - Planetarium

Orange County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	13.36	1000sqft	1.28	13,359.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2017
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - modified

Construction Phase - modified

Off-road Equipment -

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - Modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Demolition -

Grading - modified

Architectural Coating - scaqmd rule 1113, Non residential interior=flat coatings= 50g/L

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblLandUse	LandUseSquareFeet	13,360.00	13,359.00
tblLandUse	LotAcreage	0.31	1.28
tblProjectCharacteristics	OperationalYear	2014	2017

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	12.7564	29.9695	23.4116	0.0307	5.8890	1.7704	7.2881	2.9774	1.6566	4.2646	0.0000	3,079.4315	3,079.4315	0.6389	0.0000	3,092.8483
Total	**12.7564**	**29.9695**	**23.4116**	**0.0307**	**5.8890**	**1.7704**	**7.2881**	**2.9774**	**1.6566**	**4.2646**	**0.0000**	**3,079.4315**	**3,079.4315**	**0.6389**	**0.0000**	**3,092.8483**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					

2016	12.7564	29.9695	23.4116	0.0307	2.3513	1.7704	3.7504	1.1757	1.6566	2.4628	0.0000	3,079.4315	3,079.4315	0.6389	0.0000	3,092.8483
Total	**12.7564**	**29.9695**	**23.4116**	**0.0307**	**2.3513**	**1.7704**	**3.7504**	**1.1757**	**1.6566**	**2.4628**	**0.0000**	**3,079.4315**	**3,079.4315**	**0.6389**	**0.0000**	**3,092.8483**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**60.07**	**0.00**	**48.54**	**60.51**	**0.00**	**42.25**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.3495	1.0000e-005	1.3900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		2.9200e-003	2.9200e-003	1.0000e-005		3.0900e-003
Energy	6.2600e-003	0.0569	0.0478	3.4000e-004		4.3300e-003	4.3300e-003		4.3300e-003	4.3300e-003		68.2913	68.2913	1.3100e-003	1.2500e-003	68.7069
Mobile	1.0901	2.5116	12.1282	0.0328	2.3437	0.0357	2.3794	0.6253	0.0329	0.6582		2,755.1463	2,755.1463	0.1045		2,757.3416
Total	**1.4458**	**2.5686**	**12.1774**	**0.0331**	**2.3437**	**0.0401**	**2.3837**	**0.6253**	**0.0372**	**0.6626**		**2,823.4405**	**2,823.4405**	**0.1059**	**1.2500e-003**	**2,826.0516**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.3495	1.0000e-005	1.3900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		2.9200e-003	2.9200e-003	1.0000e-005		3.0900e-003

Energy	6.2600e-003	0.0569	0.0478	3.4000e-004		4.3300e-003	4.3300e-003		4.3300e-003	4.3300e-003		68.2913	68.2913	1.3100e-003	1.2500e-003	68.7069
Mobile	1.0901	2.5116	12.1282	0.0328	2.3437	0.0357	2.3794	0.6253	0.0329	0.6582		2,755.1463	2,755.1463	0.1045		2,757.3416
Total	**1.4458**	**2.5686**	**12.1774**	**0.0331**	**2.3437**	**0.0401**	**2.3837**	**0.6253**	**0.0372**	**0.6626**		**2,823.4405**	**2,823.4405**	**0.1059**	**1.2500e-003**	**2,826.0516**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2016	1/28/2016	5	20	
2	Site Preparation	Site Preparation	1/29/2016	2/1/2016	5	2	
3	Grading	Grading	2/2/2016	2/5/2016	5	4	
4	Building Construction	Building Construction	2/6/2016	11/11/2016	5	200	
5	Paving	Paving	11/12/2016	11/25/2016	5	10	
6	Architectural Coating	Architectural Coating	11/26/2016	12/9/2016	5	10	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 20,039; Non-Residential Outdoor: 6,680 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37

Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	174	0.41
Grading	Rubber Tired Dozers	1	6.00	255	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Building Construction	Cranes	1	6.00	226	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Air Compressors	0	6.00	78	0.48
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	120.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	6.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	1.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2016

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Fugitive Dust					1.2982	0.0000	1.2982	0.1966	0.0000	0.1966			0.0000			0.0000
Off-Road	2.9066	28.2579	21.4980	0.0245		1.7445	1.7445		1.6328	1.6328		2,487.1296	2,487.1296	0.6288		2,500.3343
Total	**2.9066**	**28.2579**	**21.4980**	**0.0245**	**1.2982**	**1.7445**	**3.0427**	**0.1966**	**1.6328**	**1.8293**		**2,487.1296**	**2,487.1296**	**0.6288**		**2,500.3343**

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Hauling	0.1096	1.6533	1.1999	4.4100e-003	0.1045	0.0249	0.1294	0.0286	0.0229	0.0515		444.8037	444.8037	3.1600e-003		444.8701
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0451	0.0583	0.7137	1.7600e-003	0.1453	1.0200e-003	0.1463	0.0385	9.4000e-004	0.0395		147.4982	147.4982	6.9400e-003		147.6439
Total	**0.1547**	**1.7116**	**1.9136**	**6.1700e-003**	**0.2498**	**0.0259**	**0.2757**	**0.0672**	**0.0238**	**0.0910**		**592.3019**	**592.3019**	**0.0101**		**592.5140**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5063	0.0000	0.5063	0.0767	0.0000	0.0767			0.0000			0.0000
Off-Road	2.9066	28.2579	21.4980	0.0245		1.7445	1.7445		1.6328	1.6328	0.0000	2,487.1296	2,487.1296	0.6288		2,500.3343
Total	**2.9066**	**28.2579**	**21.4980**	**0.0245**	**0.5063**	**1.7445**	**2.2508**	**0.0767**	**1.6328**	**1.7094**	**0.0000**	**2,487.1296**	**2,487.1296**	**0.6288**		**2,500.3343**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1096	1.6533	1.1999	4.4100e-003	0.1045	0.0249	0.1294	0.0286	0.0229	0.0515		444.8037	444.8037	3.1600e-003		444.8701
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0451	0.0583	0.7137	1.7600e-003	0.1453	1.0200e-003	0.1463	0.0385	9.4000e-004	0.0395		147.4982	147.4982	6.9400e-003		147.6439
Total	**0.1547**	**1.7116**	**1.9136**	**6.1700e-003**	**0.2498**	**0.0259**	**0.2757**	**0.0672**	**0.0238**	**0.0910**		**592.3019**	**592.3019**	**0.0101**		**592.5140**

3.3 Site Preparation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Fugitive Dust					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	2.4428	25.7718	16.5144	0.0171		1.3985	1.3985		1.2866	1.2866		1,781.0872	1,781.0872	0.5372		1,792.3693
Total	**2.4428**	**25.7718**	**16.5144**	**0.0171**	**5.7996**	**1.3985**	**7.1981**	**2.9537**	**1.2866**	**4.2403**		**1,781.0872**	**1,781.0872**	**0.5372**		**1,792.3693**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0278	0.0359	0.4392	1.0900e-003	0.0894	6.2000e-004	0.0901	0.0237	5.8000e-004	0.0243		90.7681	90.7681	4.2700e-003		90.8578
Total	**0.0278**	**0.0359**	**0.4392**	**1.0900e-003**	**0.0894**	**6.2000e-004**	**0.0901**	**0.0237**	**5.8000e-004**	**0.0243**		**90.7681**	**90.7681**	**4.2700e-003**		**90.8578**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.2618	0.0000	2.2618	1.1519	0.0000	1.1519			0.0000			0.0000
Off-Road	2.4428	25.7718	16.5144	0.0171		1.3985	1.3985		1.2866	1.2866	0.0000	1,781.0872	1,781.0872	0.5372		1,792.3693
Total	**2.4428**	**25.7718**	**16.5144**	**0.0171**	**2.2618**	**1.3985**	**3.6603**	**1.1519**	**1.2866**	**2.4385**	**0.0000**	**1,781.0872**	**1,781.0872**	**0.5372**		**1,792.3693**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0278	0.0359	0.4392	1.0900e-003	0.0894	6.2000e-004	0.0901	0.0237	5.8000e-004	0.0243		90.7681	90.7681	4.2700e-003		90.8578
Total	**0.0278**	**0.0359**	**0.4392**	**1.0900e-003**	**0.0894**	**6.2000e-004**	**0.0901**	**0.0237**	**5.8000e-004**	**0.0243**		**90.7681**	**90.7681**	**4.2700e-003**		**90.8578**

3.4 Grading - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9143	0.0000	4.9143	2.5256	0.0000	2.5256			0.0000			0.0000
Off-Road	1.9908	21.0361	13.6704	0.0141		1.1407	1.1407		1.0494	1.0494		1,462.8468	1,462.8468	0.4413		1,472.1130
Total	**1.9908**	**21.0361**	**13.6704**	**0.0141**	**4.9143**	**1.1407**	**6.0549**	**2.5256**	**1.0494**	**3.5750**		**1,462.8468**	**1,462.8468**	**0.4413**		**1,472.1130**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0278	0.0359	0.4392	1.0900e-003	0.0894	6.2000e-004	0.0901	0.0237	5.8000e-004	0.0243		90.7681	90.7681	4.2700e-003		90.8578
Total	**0.0278**	**0.0359**	**0.4392**	**1.0900e-003**	**0.0894**	**6.2000e-004**	**0.0901**	**0.0237**	**5.8000e-004**	**0.0243**		**90.7681**	**90.7681**	**4.2700e-003**		**90.8578**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.9166	0.0000	1.9166	0.9850	0.0000	0.9850			0.0000			0.0000
Off-Road	1.9908	21.0361	13.6704	0.0141		1.1407	1.1407		1.0494	1.0494	0.0000	1,462.8468	1,462.8468	0.4413		1,472.1130
Total	**1.9908**	**21.0361**	**13.6704**	**0.0141**	**1.9166**	**1.1407**	**3.0573**	**0.9850**	**1.0494**	**2.0344**	**0.0000**	**1,462.8468**	**1,462.8468**	**0.4413**		**1,472.1130**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0278	0.0359	0.4392	1.0900e-003	0.0894	6.2000e-004	0.0901	0.0237	5.8000e-004	0.0243		90.7681	90.7681	4.2700e-003		90.8578

Total	**0.0278**	**0.0359**	**0.4392**	**1.0900e-003**	**0.0894**	**6.2000e-004**	**0.0901**	**0.0237**	**5.8000e-004**	**0.0243**		**90.7681**	**90.7681**	**4.2700e-003**		**90.8578**

3.5 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.2915	20.5459	14.7074	0.0220		1.3656	1.3656		1.3176	1.3176		2,046.9432	2,046.9432	0.4499		2,056.3913
Total	**3.2915**	**20.5459**	**14.7074**	**0.0220**		**1.3656**	**1.3656**		**1.3176**	**1.3176**		**2,046.9432**	**2,046.9432**	**0.4499**		**2,056.3913**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0175	0.1730	0.2044	4.3000e-004	0.0125	2.7400e-003	0.0152	3.5600e-003	2.5200e-003	6.0800e-003		43.3718	43.3718	3.1000e-004		43.3782
Worker	0.0208	0.0269	0.3294	8.1000e-004	0.0671	4.7000e-004	0.0675	0.0178	4.3000e-004	0.0182		68.0761	68.0761	3.2000e-003		68.1433
Total	**0.0383**	**0.1999**	**0.5338**	**1.2400e-003**	**0.0796**	**3.2100e-003**	**0.0828**	**0.0214**	**2.9500e-003**	**0.0243**		**111.4479**	**111.4479**	**3.5100e-003**		**111.5216**

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Off-Road	3.2915	20.5459	14.7074	0.0220		1.3656	1.3656		1.3176	1.3176	0.0000	2,046.9432	2,046.9432	0.4499		2,056.3913
Total	**3.2915**	**20.5459**	**14.7074**	**0.0220**		**1.3656**	**1.3656**		**1.3176**	**1.3176**	**0.0000**	**2,046.9432**	**2,046.9432**	**0.4499**		**2,056.3913**

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0175	0.1730	0.2044	4.3000e-004	0.0125	2.7400e-003	0.0152	3.5600e-003	2.5200e-003	6.0800e-003		43.3718	43.3718	3.1000e-004		43.3782
Worker	0.0208	0.0269	0.3294	8.1000e-004	0.0671	4.7000e-004	0.0675	0.0178	4.3000e-004	0.0182		68.0761	68.0761	3.2000e-003		68.1433
Total	**0.0383**	**0.1999**	**0.5338**	**1.2400e-003**	**0.0796**	**3.2100e-003**	**0.0828**	**0.0214**	**2.9500e-003**	**0.0243**		**111.4479**	**111.4479**	**3.5100e-003**		**111.5216**

3.6 Paving - 2016

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					

Off-Road	1.2872	13.2076	9.0880	0.0133		0.8075	0.8075		0.7438	0.7438		1,368.4366	1,368.4366	0.4053		1,376.9473
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2872**	**13.2076**	**9.0880**	**0.0133**		**0.8075**	**0.8075**		**0.7438**	**0.7438**		**1,368.4366**	**1,368.4366**	**0.4053**		**1,376.9473**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0902	0.1165	1.4273	3.5300e-003	0.5433	2.0300e-003	0.5453	0.1391	1.8700e-003	0.1410		294.9964	294.9964	0.0139		295.2877
Total	**0.0902**	**0.1165**	**1.4273**	**3.5300e-003**	**0.5433**	**2.0300e-003**	**0.5453**	**0.1391**	**1.8700e-003**	**0.1410**		**294.9964**	**294.9964**	**0.0139**		**295.2877**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2872	13.2076	9.0880	0.0133		0.8075	0.8075		0.7438	0.7438	0.0000	1,368.4366	1,368.4366	0.4053		1,376.9473
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2872**	**13.2076**	**9.0880**	**0.0133**		**0.8075**	**0.8075**		**0.7438**	**0.7438**	**0.0000**	**1,368.4366**	**1,368.4366**	**0.4053**		**1,376.9473**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0902	0.1165	1.4273	3.5300e-003	0.5433	2.0300e-003	0.5453	0.1391	1.8700e-003	0.1410		294.9964	294.9964	0.0139		295.2877
Total	**0.0902**	**0.1165**	**1.4273**	**3.5300e-003**	**0.5433**	**2.0300e-003**	**0.5453**	**0.1391**	**1.8700e-003**	**0.1410**		**294.9964**	**294.9964**	**0.0139**		**295.2877**

3.7 Architectural Coating - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	12.3845					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3685	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966		281.4481	281.4481	0.0332		282.1449
Total	**12.7530**	**2.3722**	**1.8839**	**2.9700e-003**		**0.1966**	**0.1966**		**0.1966**	**0.1966**		**281.4481**	**281.4481**	**0.0332**		**282.1449**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	3.4700e-003	4.4800e-003	0.0549	1.4000e-004	0.0112	8.0000e-005	0.0113	2.9600e-003	7.0000e-005	3.0400e-003		11.3460	11.3460	5.3000e-004		11.3572
Total	**3.4700e-003**	**4.4800e-003**	**0.0549**	**1.4000e-004**	**0.0112**	**8.0000e-005**	**0.0113**	**2.9600e-003**	**7.0000e-005**	**3.0400e-003**		**11.3460**	**11.3460**	**5.3000e-004**		**11.3572**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	12.3845					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3685	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966	0.0000	281.4481	281.4481	0.0332		282.1449
Total	**12.7530**	**2.3722**	**1.8839**	**2.9700e-003**		**0.1966**	**0.1966**		**0.1966**	**0.1966**	**0.0000**	**281.4481**	**281.4481**	**0.0332**		**282.1449**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	3.4700e-003	4.4800e-003	0.0549	1.4000e-004	0.0112	8.0000e-005	0.0113	2.9600e-003	7.0000e-005	3.0400e-003		11.3460	11.3460	5.3000e-004		11.3572

Total	3.4700e-003	4.4800e-003	0.0549	1.4000e-004	0.0112	8.0000e-005	0.0113	2.9600e-003	7.0000e-005	3.0400e-003		11.3460	11.3460	5.3000e-004		11.3572

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.0901	2.5116	12.1282	0.0328	2.3437	0.0357	2.3794	0.6253	0.0329	0.6582		2,755.1463	2,755.1463	0.1045		2,757.3416
Unmitigated	1.0901	2.5116	12.1282	0.0328	2.3437	0.0357	2.3794	0.6253	0.0329	0.6582		2,755.1463	2,755.1463	0.1045		2,757.3416

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	367.27	150.03	16.17	864,051	864,051
Total	367.27	150.03	16.17	864,051	864,051

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.510449	0.057012	0.191854	0.151889	0.041459	0.005887	0.015572	0.014818	0.001440	0.002145	0.004716	0.000509	0.002251

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	6.2600e-003	0.0569	0.0478	3.4000e-004		4.3300e-003	4.3300e-003		4.3300e-003	4.3300e-003		68.2913	68.2913	1.3100e-003	1.2500e-003	68.7069
NaturalGas Unmitigated	6.2600e-003	0.0569	0.0478	3.4000e-004		4.3300e-003	4.3300e-003		4.3300e-003	4.3300e-003		68.2913	68.2913	1.3100e-003	1.2500e-003	68.7069

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	580.476	6.2600e-003	0.0569	0.0478	3.4000e-004		4.3300e-003	4.3300e-003		4.3300e-003	4.3300e-003		68.2913	68.2913	1.3100e-003	1.2500e-003	68.7069
Total		**6.2600e-003**	**0.0569**	**0.0478**	**3.4000e-004**		**4.3300e-003**	**4.3300e-003**		**4.3300e-003**	**4.3300e-003**		**68.2913**	**68.2913**	**1.3100e-003**	**1.2500e-003**	**68.7069**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	0.580476	6.2600e-003	0.0569	0.0478	3.4000e-004		4.3300e-003	4.3300e-003		4.3300e-003	4.3300e-003		68.2913	68.2913	1.3100e-003	1.2500e-003	68.7069
Total		**6.2600e-003**	**0.0569**	**0.0478**	**3.4000e-004**		**4.3300e-003**	**4.3300e-003**		**4.3300e-003**	**4.3300e-003**		**68.2913**	**68.2913**	**1.3100e-003**	**1.2500e-003**	**68.7069**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.3495	1.0000e-005	1.3900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		2.9200e-003	2.9200e-003	1.0000e-005		3.0900e-003
Unmitigated	0.3495	1.0000e-005	1.3900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		2.9200e-003	2.9200e-003	1.0000e-005		3.0900e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					

Consumer Products	0.2645					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.3000e-004	1.0000e-005	1.3900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		2.9200e-003	2.9200e-003	1.0000e-005		3.0900e-003
Architectural Coating	0.0848					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.3495**	**1.0000e-005**	**1.3900e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**2.9200e-003**	**2.9200e-003**	**1.0000e-005**		**3.0900e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Consumer Products	0.2645					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.3000e-004	1.0000e-005	1.3900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		2.9200e-003	2.9200e-003	1.0000e-005		3.0900e-003
Architectural Coating	0.0848					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.3495**	**1.0000e-005**	**1.3900e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**2.9200e-003**	**2.9200e-003**	**1.0000e-005**		**3.0900e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Phase 1 - Planetarium

Orange County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	13.36	1000sqft	1.28	13,359.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2017
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - modified

Construction Phase - modified

Off-road Equipment -

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - Modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Demolition -

Grading - modified

Architectural Coating - scaqmd rule 1113, Non residential interior=flat coatings= 50g/L

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblLandUse	LandUseSquareFeet	13,360.00	13,359.00
tblLandUse	LotAcreage	0.31	1.28
tblProjectCharacteristics	OperationalYear	2014	2017

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	12.7566	30.0320	23.5474	0.0306	5.8890	1.7705	7.2881	2.9774	1.6566	4.2646	0.0000	3,070.5669	3,070.5669	0.6389	0.0000	3,083.9845
Total	**12.7566**	**30.0320**	**23.5474**	**0.0306**	**5.8890**	**1.7705**	**7.2881**	**2.9774**	**1.6566**	**4.2646**	**0.0000**	**3,070.5669**	**3,070.5669**	**0.6389**	**0.0000**	**3,083.9845**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					

2016	12.7566	30.0320	23.5474	0.0306	2.3513	1.7705	3.7504	1.1757	1.6566	2.4628	0.0000	3,070.5669	3,070.5669	0.6389	0.0000	3,083.9845
Total	**12.7566**	**30.0320**	**23.5474**	**0.0306**	**2.3513**	**1.7705**	**3.7504**	**1.1757**	**1.6566**	**2.4628**	**0.0000**	**3,070.5669**	**3,070.5669**	**0.6389**	**0.0000**	**3,083.9845**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**60.07**	**0.00**	**48.54**	**60.51**	**0.00**	**42.25**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.3495	1.0000e-005	1.3900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		2.9200e-003	2.9200e-003	1.0000e-005		3.0900e-003
Energy	6.2600e-003	0.0569	0.0478	3.4000e-004		4.3300e-003	4.3300e-003		4.3300e-003	4.3300e-003		68.2913	68.2913	1.3100e-003	1.2500e-003	68.7069
Mobile	1.1539	2.6513	12.0672	0.0313	2.3437	0.0359	2.3795	0.6253	0.0330	0.6584		2,634.9365	2,634.9365	0.1046		2,637.1329
Total	**1.5096**	**2.7082**	**12.1164**	**0.0316**	**2.3437**	**0.0402**	**2.3839**	**0.6253**	**0.0374**	**0.6627**		**2,703.2307**	**2,703.2307**	**0.1059**	**1.2500e-003**	**2,705.8429**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.3495	1.0000e-005	1.3900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		2.9200e-003	2.9200e-003	1.0000e-005		3.0900e-003

Energy	6.2600e-003	0.0569	0.0478	3.4000e-004		4.3300e-003	4.3300e-003		4.3300e-003	4.3300e-003		68.2913	68.2913	1.3100e-003	1.2500e-003	68.7069
Mobile	1.1539	2.6513	12.0672	0.0313	2.3437	0.0359	2.3795	0.6253	0.0330	0.6584		2,634.9365	2,634.9365	0.1046		2,637.1329
Total	**1.5096**	**2.7082**	**12.1164**	**0.0316**	**2.3437**	**0.0402**	**2.3839**	**0.6253**	**0.0374**	**0.6627**		**2,703.2307**	**2,703.2307**	**0.1059**	**1.2500e-003**	**2,705.8429**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2016	1/28/2016	5	20	
2	Site Preparation	Site Preparation	1/29/2016	2/1/2016	5	2	
3	Grading	Grading	2/2/2016	2/5/2016	5	4	
4	Building Construction	Building Construction	2/6/2016	11/11/2016	5	200	
5	Paving	Paving	11/12/2016	11/25/2016	5	10	
6	Architectural Coating	Architectural Coating	11/26/2016	12/9/2016	5	10	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 20,039; Non-Residential Outdoor: 6,680 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37

Site Preparation	Graders		1	8.00	174	0.41
Site Preparation	Rubber Tired Dozers		1	7.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes		1	8.00	97	0.37
Grading	Graders		1	6.00	174	0.41
Grading	Rubber Tired Dozers		1	6.00	255	0.40
Grading	Tractors/Loaders/Backhoes		1	7.00	97	0.37
Paving	Cement and Mortar Mixers		1	6.00	9	0.56
Paving	Pavers		1	6.00	125	0.42
Paving	Paving Equipment		1	8.00	130	0.36
Building Construction	Cranes		1	6.00	226	0.29
Building Construction	Forklifts		1	6.00	89	0.20
Building Construction	Generator Sets		1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes		1	6.00	97	0.37
Building Construction	Welders		3	8.00	46	0.45
Paving	Air Compressors		0	6.00	78	0.48
Paving	Rollers		1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes		1	8.00	97	0.37
Architectural Coating	Air Compressors		1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	120.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	6.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	1.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2016

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Fugitive Dust					1.2982	0.0000	1.2982	0.1966	0.0000	0.1966			0.0000			0.0000
Off-Road	2.9066	28.2579	21.4980	0.0245		1.7445	1.7445		1.6328	1.6328		2,487.1296	2,487.1296	0.6288		2,500.3343
Total	**2.9066**	**28.2579**	**21.4980**	**0.0245**	**1.2982**	**1.7445**	**3.0427**	**0.1966**	**1.6328**	**1.8293**		**2,487.1296**	**2,487.1296**	**0.6288**		**2,500.3343**

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Hauling	0.1172	1.7100	1.3772	4.4100e-003	0.1045	0.0249	0.1294	0.0286	0.0229	0.0515		443.7435	443.7435	3.2000e-003		443.8108
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0475	0.0641	0.6722	1.6700e-003	0.1453	1.0200e-003	0.1463	0.0385	9.4000e-004	0.0395		139.6938	139.6938	6.9400e-003		139.8395
Total	**0.1647**	**1.7741**	**2.0494**	**6.0800e-003**	**0.2498**	**0.0259**	**0.2758**	**0.0672**	**0.0239**	**0.0910**		**583.4373**	**583.4373**	**0.0101**		**583.6503**

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Fugitive Dust					0.5063	0.0000	0.5063	0.0767	0.0000	0.0767			0.0000			0.0000
Off-Road	2.9066	28.2579	21.4980	0.0245		1.7445	1.7445		1.6328	1.6328	0.0000	2,487.1296	2,487.1296	0.6288		2,500.3343
Total	**2.9066**	**28.2579**	**21.4980**	**0.0245**	**0.5063**	**1.7445**	**2.2508**	**0.0767**	**1.6328**	**1.7094**	**0.0000**	**2,487.1296**	**2,487.1296**	**0.6288**		**2,500.3343**

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Hauling	0.1172	1.7100	1.3772	4.4100e-003	0.1045	0.0249	0.1294	0.0286	0.0229	0.0515		443.7435	443.7435	3.2000e-003		443.8108
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0475	0.0641	0.6722	1.6700e-003	0.1453	1.0200e-003	0.1463	0.0385	9.4000e-004	0.0395		139.6938	139.6938	6.9400e-003		139.8395
Total	**0.1647**	**1.7741**	**2.0494**	**6.0800e-003**	**0.2498**	**0.0259**	**0.2758**	**0.0672**	**0.0239**	**0.0910**		**583.4373**	**583.4373**	**0.0101**		**583.6503**

3.3 Site Preparation - 2016

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	2.4428	25.7718	16.5144	0.0171		1.3985	1.3985		1.2866	1.2866		1,781.0872	1,781.0872	0.5372		1,792.3693
Total	**2.4428**	**25.7718**	**16.5144**	**0.0171**	**5.7996**	**1.3985**	**7.1981**	**2.9537**	**1.2866**	**4.2403**		**1,781.0872**	**1,781.0872**	**0.5372**		**1,792.3693**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0292	0.0394	0.4137	1.0300e-003	0.0894	6.2000e-004	0.0901	0.0237	5.8000e-004	0.0243		85.9654	85.9654	4.2700e-003		86.0551
Total	**0.0292**	**0.0394**	**0.4137**	**1.0300e-003**	**0.0894**	**6.2000e-004**	**0.0901**	**0.0237**	**5.8000e-004**	**0.0243**		**85.9654**	**85.9654**	**4.2700e-003**		**86.0551**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.2618	0.0000	2.2618	1.1519	0.0000	1.1519			0.0000			0.0000
Off-Road	2.4428	25.7718	16.5144	0.0171		1.3985	1.3985		1.2866	1.2866	0.0000	1,781.0872	1,781.0872	0.5372		1,792.3693
Total	**2.4428**	**25.7718**	**16.5144**	**0.0171**	**2.2618**	**1.3985**	**3.6603**	**1.1519**	**1.2866**	**2.4385**	**0.0000**	**1,781.0872**	**1,781.0872**	**0.5372**		**1,792.3693**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0292	0.0394	0.4137	1.0300e-003	0.0894	6.2000e-004	0.0901	0.0237	5.8000e-004	0.0243		85.9654	85.9654	4.2700e-003		86.0551
Total	**0.0292**	**0.0394**	**0.4137**	**1.0300e-003**	**0.0894**	**6.2000e-004**	**0.0901**	**0.0237**	**5.8000e-004**	**0.0243**		**85.9654**	**85.9654**	**4.2700e-003**		**86.0551**

3.4 Grading - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9143	0.0000	4.9143	2.5256	0.0000	2.5256			0.0000			0.0000
Off-Road	1.9908	21.0361	13.6704	0.0141		1.1407	1.1407		1.0494	1.0494		1,462.8468	1,462.8468	0.4413		1,472.1130
Total	**1.9908**	**21.0361**	**13.6704**	**0.0141**	**4.9143**	**1.1407**	**6.0549**	**2.5256**	**1.0494**	**3.5750**		**1,462.8468**	**1,462.8468**	**0.4413**		**1,472.1130**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0292	0.0394	0.4137	1.0300e-003	0.0894	6.2000e-004	0.0901	0.0237	5.8000e-004	0.0243		85.9654	85.9654	4.2700e-003		86.0551
Total	**0.0292**	**0.0394**	**0.4137**	**1.0300e-003**	**0.0894**	**6.2000e-004**	**0.0901**	**0.0237**	**5.8000e-004**	**0.0243**		**85.9654**	**85.9654**	**4.2700e-003**		**86.0551**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.9166	0.0000	1.9166	0.9850	0.0000	0.9850			0.0000			0.0000
Off-Road	1.9908	21.0361	13.6704	0.0141		1.1407	1.1407		1.0494	1.0494	0.0000	1,462.8468	1,462.8468	0.4413		1,472.1130
Total	**1.9908**	**21.0361**	**13.6704**	**0.0141**	**1.9166**	**1.1407**	**3.0573**	**0.9850**	**1.0494**	**2.0344**	**0.0000**	**1,462.8468**	**1,462.8468**	**0.4413**		**1,472.1130**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0292	0.0394	0.4137	1.0300e-003	0.0894	6.2000e-004	0.0901	0.0237	5.8000e-004	0.0243		85.9654	85.9654	4.2700e-003		86.0551

Total	0.0292	0.0394	0.4137	1.0300e-003	0.0894	6.2000e-004	0.0901	0.0237	5.8000e-004	0.0243		85.9654	85.9654	4.2700e-003		86.0551

3.5 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.2915	20.5459	14.7074	0.0220		1.3656	1.3656		1.3176	1.3176		2,046.9432	2,046.9432	0.4499		2,056.3913
Total	**3.2915**	**20.5459**	**14.7074**	**0.0220**		**1.3656**	**1.3656**		**1.3176**	**1.3176**		**2,046.9432**	**2,046.9432**	**0.4499**		**2,056.3913**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0194	0.1771	0.2457	4.3000e-004	0.0125	2.7700e-003	0.0153	3.5600e-003	2.5500e-003	6.1100e-003		43.0061	43.0061	3.2000e-004		43.0127
Worker	0.0219	0.0296	0.3103	7.7000e-004	0.0671	4.7000e-004	0.0675	0.0178	4.3000e-004	0.0182		64.4741	64.4741	3.2000e-003		64.5413
Total	**0.0413**	**0.2067**	**0.5559**	**1.2000e-003**	**0.0796**	**3.2400e-003**	**0.0828**	**0.0214**	**2.9800e-003**	**0.0243**		**107.4801**	**107.4801**	**3.5200e-003**		**107.5540**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.2915	20.5459	14.7074	0.0220		1.3656	1.3656		1.3176	1.3176	0.0000	2,046.9432	2,046.9432	0.4499		2,056.3913
Total	**3.2915**	**20.5459**	**14.7074**	**0.0220**		**1.3656**	**1.3656**		**1.3176**	**1.3176**	**0.0000**	**2,046.9432**	**2,046.9432**	**0.4499**		**2,056.3913**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0194	0.1771	0.2457	4.3000e-004	0.0125	2.7700e-003	0.0153	3.5600e-003	2.5500e-003	6.1100e-003		43.0061	43.0061	3.2000e-004		43.0127
Worker	0.0219	0.0296	0.3103	7.7000e-004	0.0671	4.7000e-004	0.0675	0.0178	4.3000e-004	0.0182		64.4741	64.4741	3.2000e-003		64.5413
Total	**0.0413**	**0.2067**	**0.5559**	**1.2000e-003**	**0.0796**	**3.2400e-003**	**0.0828**	**0.0214**	**2.9800e-003**	**0.0243**		**107.4801**	**107.4801**	**3.5200e-003**		**107.5540**

3.6 Paving - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Off-Road	1.2872	13.2076	9.0880	0.0133		0.8075	0.8075		0.7438	0.7438		1,368.4366	1,368.4366	0.4053		1,376.9473
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2872**	**13.2076**	**9.0880**	**0.0133**		**0.8075**	**0.8075**		**0.7438**	**0.7438**		**1,368.4366**	**1,368.4366**	**0.4053**		**1,376.9473**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0950	0.1282	1.3445	3.3400e-003	0.5433	2.0300e-003	0.5453	0.1391	1.8700e-003	0.1410		279.3876	279.3876	0.0139		279.6790
Total	**0.0950**	**0.1282**	**1.3445**	**3.3400e-003**	**0.5433**	**2.0300e-003**	**0.5453**	**0.1391**	**1.8700e-003**	**0.1410**		**279.3876**	**279.3876**	**0.0139**		**279.6790**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2872	13.2076	9.0880	0.0133		0.8075	0.8075		0.7438	0.7438	0.0000	1,368.4366	1,368.4366	0.4053		1,376.9473
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2872**	**13.2076**	**9.0880**	**0.0133**		**0.8075**	**0.8075**		**0.7438**	**0.7438**	**0.0000**	**1,368.4366**	**1,368.4366**	**0.4053**		**1,376.9473**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0950	0.1282	1.3445	3.3400e-003	0.5433	2.0300e-003	0.5453	0.1391	1.8700e-003	0.1410		279.3876	279.3876	0.0139		279.6790
Total	**0.0950**	**0.1282**	**1.3445**	**3.3400e-003**	**0.5433**	**2.0300e-003**	**0.5453**	**0.1391**	**1.8700e-003**	**0.1410**		**279.3876**	**279.3876**	**0.0139**		**279.6790**

3.7 Architectural Coating - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	12.3845					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3685	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966		281.4481	281.4481	0.0332		282.1449
Total	**12.7530**	**2.3722**	**1.8839**	**2.9700e-003**		**0.1966**	**0.1966**		**0.1966**	**0.1966**		**281.4481**	**281.4481**	**0.0332**		**282.1449**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	3.6500e-003	4.9300e-003	0.0517	1.3000e-004	0.0112	8.0000e-005	0.0113	2.9600e-003	7.0000e-005	3.0400e-003		10.7457	10.7457	5.3000e-004		10.7569
Total	**3.6500e-003**	**4.9300e-003**	**0.0517**	**1.3000e-004**	**0.0112**	**8.0000e-005**	**0.0113**	**2.9600e-003**	**7.0000e-005**	**3.0400e-003**		**10.7457**	**10.7457**	**5.3000e-004**		**10.7569**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	12.3845					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3685	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966	0.0000	281.4481	281.4481	0.0332		282.1449
Total	**12.7530**	**2.3722**	**1.8839**	**2.9700e-003**		**0.1966**	**0.1966**		**0.1966**	**0.1966**	**0.0000**	**281.4481**	**281.4481**	**0.0332**		**282.1449**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	3.6500e-003	4.9300e-003	0.0517	1.3000e-004	0.0112	8.0000e-005	0.0113	2.9600e-003	7.0000e-005	3.0400e-003		10.7457	10.7457	5.3000e-004		10.7569

Total	**3.6500e-003**	**4.9300e-003**	**0.0517**	**1.3000e-004**	**0.0112**	**8.0000e-005**	**0.0113**	**2.9600e-003**	**7.0000e-005**	**3.0400e-003**		**10.7457**	**10.7457**	**5.3000e-004**		**10.7569**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.1539	2.6513	12.0672	0.0313	2.3437	0.0359	2.3795	0.6253	0.0330	0.6584		2,634.9365	2,634.9365	0.1046		2,637.1329
Unmitigated	1.1539	2.6513	12.0672	0.0313	2.3437	0.0359	2.3795	0.6253	0.0330	0.6584		2,634.9365	2,634.9365	0.1046		2,637.1329

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	367.27	150.03	16.17	864,051	864,051
Total	367.27	150.03	16.17	864,051	864,051

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.510449	0.057012	0.191854	0.151889	0.041459	0.005887	0.015572	0.014818	0.001440	0.002145	0.004716	0.000509	0.002251

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	6.2600e-003	0.0569	0.0478	3.4000e-004		4.3300e-003	4.3300e-003		4.3300e-003	4.3300e-003		68.2913	68.2913	1.3100e-003	1.2500e-003	68.7069
NaturalGas Unmitigated	6.2600e-003	0.0569	0.0478	3.4000e-004		4.3300e-003	4.3300e-003		4.3300e-003	4.3300e-003		68.2913	68.2913	1.3100e-003	1.2500e-003	68.7069

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	580.476	6.2600e-003	0.0569	0.0478	3.4000e-004		4.3300e-003	4.3300e-003		4.3300e-003	4.3300e-003		68.2913	68.2913	1.3100e-003	1.2500e-003	68.7069
Total		**6.2600e-003**	**0.0569**	**0.0478**	**3.4000e-004**		**4.3300e-003**	**4.3300e-003**		**4.3300e-003**	**4.3300e-003**		**68.2913**	**68.2913**	**1.3100e-003**	**1.2500e-003**	**68.7069**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	0.580476	6.2600e-003	0.0569	0.0478	3.4000e-004		4.3300e-003	4.3300e-003		4.3300e-003	4.3300e-003		68.2913	68.2913	1.3100e-003	1.2500e-003	68.7069
Total		**6.2600e-003**	**0.0569**	**0.0478**	**3.4000e-004**		**4.3300e-003**	**4.3300e-003**		**4.3300e-003**	**4.3300e-003**		**68.2913**	**68.2913**	**1.3100e-003**	**1.2500e-003**	**68.7069**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.3495	1.0000e-005	1.3900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		2.9200e-003	2.9200e-003	1.0000e-005		3.0900e-003
Unmitigated	0.3495	1.0000e-005	1.3900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		2.9200e-003	2.9200e-003	1.0000e-005		3.0900e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					

Consumer Products	0.2645					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.3000e-004	1.0000e-005	1.3900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		2.9200e-003	2.9200e-003	1.0000e-005		3.0900e-003
Architectural Coating	0.0848					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.3495**	**1.0000e-005**	**1.3900e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**2.9200e-003**	**2.9200e-003**	**1.0000e-005**		**3.0900e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Consumer Products	0.2645					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.3000e-004	1.0000e-005	1.3900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		2.9200e-003	2.9200e-003	1.0000e-005		3.0900e-003
Architectural Coating	0.0848					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.3495**	**1.0000e-005**	**1.3900e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**2.9200e-003**	**2.9200e-003**	**1.0000e-005**		**3.0900e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Phase 1 - Recycling Center

Orange County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	7.77	1000sqft	0.18	7,771.00	0
Parking Lot	173.80	1000sqft	4.00	173,804.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2017
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - modified

Construction Phase - Modified to reflect construction of 7,771 GSF structure

Off-road Equipment -

Off-road Equipment - Modified to reflect construction of 7,771 SF building

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Demolition -

Architectural Coating - modified based on SCAQMD rule 1113 (VOC content of 50 g/L and composite factor of 141 based on requirement of 100g/L for parking lot paints and 250 g/l for non-residential exterior)

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	6,493.00	14,314.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	19,478.00	11,657.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	141.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblConstructionPhase	NumDays	230.00	100.00
tblConstructionPhase	NumDays	20.00	5.00
tblLandUse	LandUseSquareFeet	7,770.00	7,771.00
tblLandUse	LandUseSquareFeet	173,800.00	173,804.00
tblLandUse	LotAcreage	3.99	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	OperationalYear	2014	2017

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Year	tons/yr										MT/yr					
2015	0.0463	0.4785	0.3480	3.8000e-004	0.0736	0.0272	0.1009	0.0389	0.0251	0.0640	0.0000	36.0645	36.0645	9.9800e-003	0.0000	36.2742
2016	0.1878	1.0782	0.9703	1.6700e-003	0.0549	0.0650	0.1199	0.0148	0.0599	0.0747	0.0000	145.8466	145.8466	0.0244	0.0000	146.3581
Total	**0.2341**	**1.5567**	**1.3183**	**2.0500e-003**	**0.1285**	**0.0922**	**0.2207**	**0.0536**	**0.0850**	**0.1387**	**0.0000**	**181.9111**	**181.9111**	**0.0343**	**0.0000**	**182.6323**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2015	0.0463	0.4785	0.3480	3.8000e-004	0.0300	0.0272	0.0572	0.0155	0.0251	0.0406	0.0000	36.0645	36.0645	9.9800e-003	0.0000	36.2742
2016	0.1878	1.0782	0.9703	1.6700e-003	0.0549	0.0650	0.1199	0.0148	0.0599	0.0747	0.0000	145.8465	145.8465	0.0244	0.0000	146.3580
Total	**0.2341**	**1.5567**	**1.3183**	**2.0500e-003**	**0.0849**	**0.0922**	**0.1771**	**0.0303**	**0.0850**	**0.1153**	**0.0000**	**181.9110**	**181.9110**	**0.0343**	**0.0000**	**182.6321**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**33.96**	**0.00**	**19.78**	**43.59**	**0.00**	**16.86**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6714	2.0000e-005	2.3600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.5100e-003	4.5100e-003	1.0000e-005	0.0000	4.7700e-003

Energy	6.6000e-004	6.0400e-003	5.0700e-003	4.0000e-005		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004	0.0000	81.5899	81.5899	3.5700e-003	8.3000e-004	81.9235
Mobile	0.0898	0.2228	1.0006	2.6100e-003	0.1898	2.9500e-003	0.1928	0.0507	2.7100e-003	0.0534	0.0000	199.3204	199.3204	7.8100e-003	0.0000	199.4845
Waste						0.0000	0.0000		0.0000	0.0000	2.0502	0.0000	2.0502	0.1212	0.0000	4.5947
Water						0.0000	0.0000		0.0000	0.0000	0.1209	3.3153	3.4362	0.0126	3.2000e-004	3.8008
Total	**0.7618**	**0.2289**	**1.0080**	**2.6500e-003**	**0.1898**	**3.4200e-003**	**0.1932**	**0.0507**	**3.1800e-003**	**0.0539**	**2.1711**	**284.2302**	**286.4013**	**0.1451**	**1.1500e-003**	**289.8083**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6714	2.0000e-005	2.3600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.5100e-003	4.5100e-003	1.0000e-005	0.0000	4.7700e-003
Energy	6.6000e-004	6.0400e-003	5.0700e-003	4.0000e-005		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004	0.0000	81.5899	81.5899	3.5700e-003	8.3000e-004	81.9235
Mobile	0.0898	0.2228	1.0006	2.6100e-003	0.1898	2.9500e-003	0.1928	0.0507	2.7100e-003	0.0534	0.0000	199.3204	199.3204	7.8100e-003	0.0000	199.4845
Waste						0.0000	0.0000		0.0000	0.0000	2.0502	0.0000	2.0502	0.1212	0.0000	4.5947
Water						0.0000	0.0000		0.0000	0.0000	0.1209	3.3153	3.4362	0.0126	3.2000e-004	3.8007
Total	**0.7618**	**0.2289**	**1.0080**	**2.6500e-003**	**0.1898**	**3.4200e-003**	**0.1932**	**0.0507**	**3.1800e-003**	**0.0539**	**2.1711**	**284.2302**	**286.4013**	**0.1451**	**1.1500e-003**	**289.8081**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	12/1/2015	12/7/2015	5	5	
2	Site Preparation	Site Preparation	12/8/2015	12/14/2015	5	5	
3	Grading	Grading	12/15/2015	12/24/2015	5	8	
4	Trenching	Trenching	12/25/2015	1/7/2016	5	10	
5	Building Construction	Building Construction	1/8/2016	5/26/2016	5	100	
6	Paving	Paving	5/27/2016	6/21/2016	5	18	
7	Architectural Coating	Architectural Coating	6/22/2016	7/15/2016	5	18	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 11,657; Non-Residential Outdoor: 14,314 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Trenching	Plate Compactors	2	8.00	8	0.43
Trenching	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Trenching	Trenchers	2	8.00	80	0.50
Building Construction	Cranes	1	4.00	226	0.29
Building Construction	Forklifts	2	6.00	89	0.20

Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Welders	0	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	125	0.42
Paving	Paving Equipment	2	6.00	130	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	2.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	76.00	30.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Fugitive Dust					1.8000e-004	0.0000	1.8000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0113	0.1209	0.0902	1.0000e-004		6.1300e-003	6.1300e-003		5.7100e-003	5.7100e-003	0.0000	9.3603	9.3603	2.5400e-003	0.0000	9.4136
Total	**0.0113**	**0.1209**	**0.0902**	**1.0000e-004**	**1.8000e-004**	**6.1300e-003**	**6.3100e-003**	**3.0000e-005**	**5.7100e-003**	**5.7400e-003**	**0.0000**	**9.3603**	**9.3603**	**2.5400e-003**	**0.0000**	**9.4136**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-005	3.3000e-004	2.4000e-004	0.0000	2.0000e-005	1.0000e-005	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0679	0.0679	0.0000	0.0000	0.0679
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	2.1000e-004	2.1800e-003	0.0000	4.1000e-004	0.0000	4.1000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3846	0.3846	2.0000e-005	0.0000	0.3850
Total	**1.6000e-004**	**5.4000e-004**	**2.4200e-003**	**0.0000**	**4.3000e-004**	**1.0000e-005**	**4.3000e-004**	**1.1000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**0.4525**	**0.4525**	**2.0000e-005**	**0.0000**	**0.4529**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.0000e-005	0.0000	7.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0113	0.1209	0.0902	1.0000e-004		6.1300e-003	6.1300e-003		5.7100e-003	5.7100e-003	0.0000	9.3603	9.3603	2.5400e-003	0.0000	9.4136

Total	**0.0113**	**0.1209**	**0.0902**	**1.0000e-004**	**7.0000e-005**	**6.1300e-003**	**6.2000e-003**	**1.0000e-005**	**5.7100e-003**	**5.7200e-003**	**0.0000**	**9.3603**	**9.3603**	**2.5400e-003**	**0.0000**	**9.4136**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-005	3.3000e-004	2.4000e-004	0.0000	2.0000e-005	1.0000e-005	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0679	0.0679	0.0000	0.0000	0.0679
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	2.1000e-004	2.1800e-003	0.0000	4.1000e-004	0.0000	4.1000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3846	0.3846	2.0000e-005	0.0000	0.3850
Total	**1.6000e-004**	**5.4000e-004**	**2.4200e-003**	**0.0000**	**4.3000e-004**	**1.0000e-005**	**4.3000e-004**	**1.1000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**0.4525**	**0.4525**	**2.0000e-005**	**0.0000**	**0.4529**

3.3 Site Preparation - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0452	0.0000	0.0452	0.0248	0.0000	0.0248	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0132	0.1422	0.1066	1.0000e-004		7.7200e-003	7.7200e-003		7.1000e-003	7.1000e-003	0.0000	9.3253	9.3253	2.7800e-003	0.0000	9.3837
Total	**0.0132**	**0.1422**	**0.1066**	**1.0000e-004**	**0.0452**	**7.7200e-003**	**0.0529**	**0.0248**	**7.1000e-003**	**0.0319**	**0.0000**	**9.3253**	**9.3253**	**2.7800e-003**	**0.0000**	**9.3837**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	2.5000e-004	2.6200e-003	1.0000e-005	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4615	0.4615	2.0000e-005	0.0000	0.4620
Total	**1.7000e-004**	**2.5000e-004**	**2.6200e-003**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.4615**	**0.4615**	**2.0000e-005**	**0.0000**	**0.4620**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0176	0.0000	0.0176	9.6800e-003	0.0000	9.6800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0132	0.1422	0.1066	1.0000e-004		7.7200e-003	7.7200e-003		7.1000e-003	7.1000e-003	0.0000	9.3253	9.3253	2.7800e-003	0.0000	9.3837
Total	**0.0132**	**0.1422**	**0.1066**	**1.0000e-004**	**0.0176**	**7.7200e-003**	**0.0253**	**9.6800e-003**	**7.1000e-003**	**0.0168**	**0.0000**	**9.3253**	**9.3253**	**2.7800e-003**	**0.0000**	**9.3837**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	2.5000e-004	2.6200e-003	1.0000e-005	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4615	0.4615	2.0000e-005	0.0000	0.4620
Total	**1.7000e-004**	**2.5000e-004**	**2.6200e-003**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.4615**	**0.4615**	**2.0000e-005**	**0.0000**	**0.4620**

3.4 Grading - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0262	0.0000	0.0262	0.0135	0.0000	0.0135	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0153	0.1617	0.1067	1.2000e-004		9.3100e-003	9.3100e-003		8.5700e-003	8.5700e-003	0.0000	11.3544	11.3544	3.3900e-003	0.0000	11.4256
Total	**0.0153**	**0.1617**	**0.1067**	**1.2000e-004**	**0.0262**	**9.3100e-003**	**0.0355**	**0.0135**	**8.5700e-003**	**0.0220**	**0.0000**	**11.3544**	**11.3544**	**3.3900e-003**	**0.0000**	**11.4256**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3000e-004	3.4000e-004	3.4900e-003	1.0000e-005	6.6000e-004	0.0000	6.6000e-004	1.7000e-004	0.0000	1.8000e-004	0.0000	0.6153	0.6153	3.0000e-005	0.0000	0.6160
Total	**2.3000e-004**	**3.4000e-004**	**3.4900e-003**	**1.0000e-005**	**6.6000e-004**	**0.0000**	**6.6000e-004**	**1.7000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**0.6153**	**0.6153**	**3.0000e-005**	**0.0000**	**0.6160**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0102	0.0000	0.0102	5.2500e-003	0.0000	5.2500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0153	0.1617	0.1067	1.2000e-004		9.3100e-003	9.3100e-003		8.5700e-003	8.5700e-003	0.0000	11.3544	11.3544	3.3900e-003	0.0000	11.4256
Total	**0.0153**	**0.1617**	**0.1067**	**1.2000e-004**	**0.0102**	**9.3100e-003**	**0.0195**	**5.2500e-003**	**8.5700e-003**	**0.0138**	**0.0000**	**11.3544**	**11.3544**	**3.3900e-003**	**0.0000**	**11.4256**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3000e-004	3.4000e-004	3.4900e-003	1.0000e-005	6.6000e-004	0.0000	6.6000e-004	1.7000e-004	0.0000	1.8000e-004	0.0000	0.6153	0.6153	3.0000e-005	0.0000	0.6160
Total	**2.3000e-004**	**3.4000e-004**	**3.4900e-003**	**1.0000e-005**	**6.6000e-004**	**0.0000**	**6.6000e-004**	**1.7000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**0.6153**	**0.6153**	**3.0000e-005**	**0.0000**	**0.6160**

3.5 Trenching - 2015

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Off-Road	5.7900e-003	0.0523	0.0334	4.0000e-005		4.0400e-003	4.0400e-003		3.7200e-003	3.7200e-003	0.0000	4.0339	4.0339	1.1700e-003	0.0000	4.0585
Total	**5.7900e-003**	**0.0523**	**0.0334**	**4.0000e-005**		**4.0400e-003**	**4.0400e-003**		**3.7200e-003**	**3.7200e-003**	**0.0000**	**4.0339**	**4.0339**	**1.1700e-003**	**0.0000**	**4.0585**

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	2.5000e-004	2.6200e-003	1.0000e-005	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4615	0.4615	2.0000e-005	0.0000	0.4620
Total	**1.7000e-004**	**2.5000e-004**	**2.6200e-003**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.4615**	**0.4615**	**2.0000e-005**	**0.0000**	**0.4620**

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Off-Road	5.7900e-003	0.0523	0.0334	4.0000e-005		4.0400e-003	4.0400e-003		3.7200e-003	3.7200e-003	0.0000	4.0339	4.0339	1.1700e-003	0.0000	4.0585

Total	5.7900e-003	0.0523	0.0334	4.0000e-005		4.0400e-003	4.0400e-003		3.7200e-003	3.7200e-003	0.0000	4.0339	4.0339	1.1700e-003	0.0000	4.0585

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	2.5000e-004	2.6200e-003	1.0000e-005	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4615	0.4615	2.0000e-005	0.0000	0.4620
Total	**1.7000e-004**	**2.5000e-004**	**2.6200e-003**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.4615**	**0.4615**	**2.0000e-005**	**0.0000**	**0.4620**

3.5 Trenching - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.5300e-003	0.0500	0.0332	4.0000e-005		3.8400e-003	3.8400e-003		3.5300e-003	3.5300e-003	0.0000	3.9904	3.9904	1.1700e-003	0.0000	4.0150
Total	**5.5300e-003**	**0.0500**	**0.0332**	**4.0000e-005**		**3.8400e-003**	**3.8400e-003**		**3.5300e-003**	**3.5300e-003**	**0.0000**	**3.9904**	**3.9904**	**1.1700e-003**	**0.0000**	**4.0150**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5000e-004	2.3000e-004	2.3800e-003	1.0000e-005	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4453	0.4453	2.0000e-005	0.0000	0.4457
Total	**1.5000e-004**	**2.3000e-004**	**2.3800e-003**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.4453**	**0.4453**	**2.0000e-005**	**0.0000**	**0.4457**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.5300e-003	0.0500	0.0332	4.0000e-005		3.8400e-003	3.8400e-003		3.5300e-003	3.5300e-003	0.0000	3.9903	3.9903	1.1700e-003	0.0000	4.0150
Total	**5.5300e-003**	**0.0500**	**0.0332**	**4.0000e-005**		**3.8400e-003**	**3.8400e-003**		**3.5300e-003**	**3.5300e-003**	**0.0000**	**3.9903**	**3.9903**	**1.1700e-003**	**0.0000**	**4.0150**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5000e-004	2.3000e-004	2.3800e-003	1.0000e-005	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4453	0.4453	2.0000e-005	0.0000	0.4457
Total	**1.5000e-004**	**2.3000e-004**	**2.3800e-003**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.4453**	**0.4453**	**2.0000e-005**	**0.0000**	**0.4457**

3.6 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0691	0.6853	0.4106	5.7000e-004		0.0470	0.0470		0.0432	0.0432	0.0000	53.4584	53.4584	0.0161	0.0000	53.7970
Total	**0.0691**	**0.6853**	**0.4106**	**5.7000e-004**		**0.0470**	**0.0470**		**0.0432**	**0.0432**	**0.0000**	**53.4584**	**53.4584**	**0.0161**	**0.0000**	**53.7970**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0140	0.1354	0.1769	3.2000e-004	9.2300e-003	2.0700e-003	0.0113	2.6400e-003	1.9000e-003	4.5300e-003	0.0000	29.4052	29.4052	2.1000e-004	0.0000	29.4096
Worker	0.0130	0.0192	0.2006	5.0000e-004	0.0417	3.0000e-004	0.0420	0.0111	2.7000e-004	0.0114	0.0000	37.6015	37.6015	1.8400e-003	0.0000	37.6402
Total	**0.0270**	**0.1546**	**0.3774**	**8.2000e-004**	**0.0510**	**2.3700e-003**	**0.0533**	**0.0137**	**2.1700e-003**	**0.0159**	**0.0000**	**67.0067**	**67.0067**	**2.0500e-003**	**0.0000**	**67.0498**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0691	0.6853	0.4106	5.7000e-004		0.0470	0.0470		0.0432	0.0432	0.0000	53.4583	53.4583	0.0161	0.0000	53.7969
Total	**0.0691**	**0.6853**	**0.4106**	**5.7000e-004**		**0.0470**	**0.0470**		**0.0432**	**0.0432**	**0.0000**	**53.4583**	**53.4583**	**0.0161**	**0.0000**	**53.7969**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0140	0.1354	0.1769	3.2000e-004	9.2300e-003	2.0700e-003	0.0113	2.6400e-003	1.9000e-003	4.5300e-003	0.0000	29.4052	29.4052	2.1000e-004	0.0000	29.4096
Worker	0.0130	0.0192	0.2006	5.0000e-004	0.0417	3.0000e-004	0.0420	0.0111	2.7000e-004	0.0114	0.0000	37.6015	37.6015	1.8400e-003	0.0000	37.6402
Total	**0.0270**	**0.1546**	**0.3774**	**8.2000e-004**	**0.0510**	**2.3700e-003**	**0.0533**	**0.0137**	**2.1700e-003**	**0.0159**	**0.0000**	**67.0067**	**67.0067**	**2.0500e-003**	**0.0000**	**67.0498**

3.7 Paving - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0162	0.1651	0.1131	1.7000e-004		9.9600e-003	9.9600e-003		9.1800e-003	9.1800e-003	0.0000	15.5310	15.5310	4.5600e-003	0.0000	15.6268
Paving	5.2400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0214**	**0.1651**	**0.1131**	**1.7000e-004**		**9.9600e-003**	**9.9600e-003**		**9.1800e-003**	**9.1800e-003**	**0.0000**	**15.5310**	**15.5310**	**4.5600e-003**	**0.0000**	**15.6268**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.2000e-004	9.1000e-004	9.5000e-003	2.0000e-005	1.9800e-003	1.0000e-005	1.9900e-003	5.2000e-004	1.0000e-005	5.4000e-004	0.0000	1.7811	1.7811	9.0000e-005	0.0000	1.7830
Total	**6.2000e-004**	**9.1000e-004**	**9.5000e-003**	**2.0000e-005**	**1.9800e-003**	**1.0000e-005**	**1.9900e-003**	**5.2000e-004**	**1.0000e-005**	**5.4000e-004**	**0.0000**	**1.7811**	**1.7811**	**9.0000e-005**	**0.0000**	**1.7830**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0162	0.1651	0.1131	1.7000e-004		9.9600e-003	9.9600e-003		9.1800e-003	9.1800e-003	0.0000	15.5310	15.5310	4.5600e-003	0.0000	15.6268

Paving	5.2400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0214**	**0.1651**	**0.1131**	**1.7000e-004**		**9.9600e-003**	**9.9600e-003**		**9.1800e-003**	**9.1800e-003**	**0.0000**	**15.5310**	**15.5310**	**4.5600e-003**	**0.0000**	**15.6268**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.2000e-004	9.1000e-004	9.5000e-003	2.0000e-005	1.9800e-003	1.0000e-005	1.9900e-003	5.2000e-004	1.0000e-005	5.4000e-004	0.0000	1.7811	1.7811	9.0000e-005	0.0000	1.7830
Total	**6.2000e-004**	**9.1000e-004**	**9.5000e-003**	**2.0000e-005**	**1.9800e-003**	**1.0000e-005**	**1.9900e-003**	**5.2000e-004**	**1.0000e-005**	**5.4000e-004**	**0.0000**	**1.7811**	**1.7811**	**9.0000e-005**	**0.0000**	**1.7830**

3.8 Architectural Coating - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0603					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.3200e-003	0.0214	0.0170	3.0000e-005		1.7700e-003	1.7700e-003		1.7700e-003	1.7700e-003	0.0000	2.2979	2.2979	2.7000e-004	0.0000	2.3036
Total	**0.0636**	**0.0214**	**0.0170**	**3.0000e-005**		**1.7700e-003**	**1.7700e-003**		**1.7700e-003**	**1.7700e-003**	**0.0000**	**2.2979**	**2.2979**	**2.7000e-004**	**0.0000**	**2.3036**

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.6000e-004	6.8000e-004	7.1300e-003	2.0000e-005	1.4800e-003	1.0000e-005	1.4900e-003	3.9000e-004	1.0000e-005	4.0000e-004	0.0000	1.3358	1.3358	7.0000e-005	0.0000	1.3372
Total	**4.6000e-004**	**6.8000e-004**	**7.1300e-003**	**2.0000e-005**	**1.4800e-003**	**1.0000e-005**	**1.4900e-003**	**3.9000e-004**	**1.0000e-005**	**4.0000e-004**	**0.0000**	**1.3358**	**1.3358**	**7.0000e-005**	**0.0000**	**1.3372**

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Archit. Coating	0.0603					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.3200e-003	0.0214	0.0170	3.0000e-005		1.7700e-003	1.7700e-003		1.7700e-003	1.7700e-003	0.0000	2.2979	2.2979	2.7000e-004	0.0000	2.3036
Total	**0.0636**	**0.0214**	**0.0170**	**3.0000e-005**		**1.7700e-003**	**1.7700e-003**		**1.7700e-003**	**1.7700e-003**	**0.0000**	**2.2979**	**2.2979**	**2.7000e-004**	**0.0000**	**2.3036**

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.6000e-004	6.8000e-004	7.1300e-003	2.0000e-005	1.4800e-003	1.0000e-005	1.4900e-003	3.9000e-004	1.0000e-005	4.0000e-004	0.0000	1.3358	1.3358	7.0000e-005	0.0000	1.3372
Total	**4.6000e-004**	**6.8000e-004**	**7.1300e-003**	**2.0000e-005**	**1.4800e-003**	**1.0000e-005**	**1.4900e-003**	**3.9000e-004**	**1.0000e-005**	**4.0000e-004**	**0.0000**	**1.3358**	**1.3358**	**7.0000e-005**	**0.0000**	**1.3372**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0898	0.2228	1.0006	2.6100e-003	0.1898	2.9500e-003	0.1928	0.0507	2.7100e-003	0.0534	0.0000	199.3204	199.3204	7.8100e-003	0.0000	199.4845
Unmitigated	0.0898	0.2228	1.0006	2.6100e-003	0.1898	2.9500e-003	0.1928	0.0507	2.7100e-003	0.0534	0.0000	199.3204	199.3204	7.8100e-003	0.0000	199.4845

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	213.60	87.26	9.40	502,521	502,521
Parking Lot	0.00	0.00	0.00		
Total	213.60	87.26	9.40	502,521	502,521

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1

Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.510449	0.057012	0.191854	0.151889	0.041459	0.005887	0.015572	0.014818	0.001440	0.002145	0.004716	0.000509	0.002251

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	75.0130	75.0130	3.4500e-003	7.1000e-004	75.3065
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	75.0130	75.0130	3.4500e-003	7.1000e-004	75.3065
NaturalGas Mitigated	6.6000e-004	6.0400e-003	5.0700e-003	4.0000e-005		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004	0.0000	6.5770	6.5770	1.3000e-004	1.2000e-004	6.6170
NaturalGas Unmitigated	6.6000e-004	6.0400e-003	5.0700e-003	4.0000e-005		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004	0.0000	6.5770	6.5770	1.3000e-004	1.2000e-004	6.6170

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					

Junior College (2Yr)	123248	6.6000e-004	6.0400e-003	5.0700e-003	4.0000e-005		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004	0.0000	6.5770	6.5770	1.3000e-004	1.2000e-004	6.6170
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**6.6000e-004**	**6.0400e-003**	**5.0700e-003**	**4.0000e-005**		**4.6000e-004**	**4.6000e-004**		**4.6000e-004**	**4.6000e-004**	**0.0000**	**6.5770**	**6.5770**	**1.3000e-004**	**1.2000e-004**	**6.6170**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Junior College (2Yr)	123248	6.6000e-004	6.0400e-003	5.0700e-003	4.0000e-005		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004	0.0000	6.5770	6.5770	1.3000e-004	1.2000e-004	6.6170
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**6.6000e-004**	**6.0400e-003**	**5.0700e-003**	**4.0000e-005**		**4.6000e-004**	**4.6000e-004**		**4.6000e-004**	**4.6000e-004**	**0.0000**	**6.5770**	**6.5770**	**1.3000e-004**	**1.2000e-004**	**6.6170**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	109183	31.2444	1.4400e-003	3.0000e-004	31.3667
Parking Lot	152948	43.7685	2.0100e-003	4.2000e-004	43.9398
Total		**75.0130**	**3.4500e-003**	**7.2000e-004**	**75.3065**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	109183	31.2444	1.4400e-003	3.0000e-004	31.3667
Parking Lot	152948	43.7685	2.0100e-003	4.2000e-004	43.9398
Total		**75.0130**	**3.4500e-003**	**7.2000e-004**	**75.3065**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.6714	2.0000e-005	2.3600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.5100e-003	4.5100e-003	1.0000e-005	0.0000	4.7700e-003
Unmitigated	0.6714	2.0000e-005	2.3600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.5100e-003	4.5100e-003	1.0000e-005	0.0000	4.7700e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0151					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6561					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.3000e-004	2.0000e-005	2.3600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.5100e-003	4.5100e-003	1.0000e-005	0.0000	4.7700e-003
Total	**0.6714**	**2.0000e-005**	**2.3600e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**4.5100e-003**	**4.5100e-003**	**1.0000e-005**	**0.0000**	**4.7700e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0151					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6561					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.3000e-004	2.0000e-005	2.3600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.5100e-003	4.5100e-003	1.0000e-005	0.0000	4.7700e-003
Total	**0.6714**	**2.0000e-005**	**2.3600e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**4.5100e-003**	**4.5100e-003**	**1.0000e-005**	**0.0000**	**4.7700e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	3.4362	0.0126	3.2000e-004	3.8007

Unmitigated	3.4362	0.0126	3.2000e-004	3.8008

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	0.381111 / 0.596097	3.4362	0.0126	3.2000e-004	3.8008
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**3.4362**	**0.0126**	**3.2000e-004**	**3.8008**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	0.381111 / 0.596097	3.4362	0.0126	3.2000e-004	3.8007
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**3.4362**	**0.0126**	**3.2000e-004**	**3.8007**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	2.0502	0.1212	0.0000	4.5947
Unmitigated	2.0502	0.1212	0.0000	4.5947

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior College (2Yr)	10.1	2.0502	0.1212	0.0000	4.5947
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**2.0502**	**0.1212**	**0.0000**	**4.5947**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			

Junior College (2Yr)	10.1	2.0502	0.1212	0.0000	4.5947
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**2.0502**	**0.1212**	**0.0000**	**4.5947**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Phase 1 - Recycling Center

Orange County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	7.77	1000sqft	0.18	7,771.00	0
Parking Lot	173.80	1000sqft	4.00	173,804.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2017
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - modified

Construction Phase - Modified to reflect construction of 7,771 GSF structure

Off-road Equipment -

Off-road Equipment - Modified to reflect construction of 7,771 SF building

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Demolition -

Architectural Coating - modified based on SCAQMD rule 1113 (VOC content of 50 g/L and composite factor of 141 based on requirement of 100g/L for parking lot paints and 250 g/l for non-residential exterior)

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	6,493.00	14,314.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	19,478.00	11,657.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	141.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblConstructionPhase	NumDays	230.00	100.00
tblConstructionPhase	NumDays	20.00	5.00
tblLandUse	LandUseSquareFeet	7,770.00	7,771.00
tblLandUse	LandUseSquareFeet	173,800.00	173,804.00
tblLandUse	LotAcreage	3.99	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	OperationalYear	2014	2017

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Year	lb/day										lb/day					
2015	5.3296	56.9789	43.7182	0.0422	18.2675	3.0897	21.3572	9.9840	2.8426	12.8266	0.0000	4,333.5504	4,333.5504	1.2379	0.0000	4,359.5469
2016	7.1184	20.0872	15.4508	0.0281	1.0370	1.5366	2.0238	0.2787	1.4153	1.4686	0.0000	2,691.4286	2,691.4286	0.5695	0.0000	2,703.3873
Total	**12.4480**	**77.0660**	**59.1690**	**0.0704**	**19.3044**	**4.6264**	**23.3810**	**10.2627**	**4.2578**	**14.2952**	**0.0000**	**7,024.9791**	**7,024.9791**	**1.8074**	**0.0000**	**7,062.9342**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2015	5.3296	56.9789	43.7182	0.0422	7.2470	3.0897	10.3368	3.9263	2.8426	6.7689	0.0000	4,333.5504	4,333.5504	1.2379	0.0000	4,359.5469
2016	7.1184	20.0872	15.4508	0.0281	1.0370	1.5366	2.0238	0.2787	1.4153	1.4686	0.0000	2,691.4286	2,691.4286	0.5695	0.0000	2,703.3873
Total	**12.4480**	**77.0660**	**59.1690**	**0.0704**	**8.2840**	**4.6264**	**12.3606**	**4.2050**	**4.2578**	**8.2375**	**0.0000**	**7,024.9791**	**7,024.9791**	**1.8074**	**0.0000**	**7,062.9342**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**57.09**	**0.00**	**47.13**	**59.03**	**0.00**	**42.38**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.6795	1.8000e-004	0.0189	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0397	0.0397	1.1000e-004		0.0421

Energy	3.6400e-003	0.0331	0.0278	2.0000e-004		2.5200e-003	2.5200e-003		2.5200e-003	2.5200e-003		39.7254	39.7254	7.6000e-004	7.3000e-004	39.9672
Mobile	0.6340	1.4607	7.0536	0.0191	1.3631	0.0208	1.3838	0.3637	0.0191	0.3828		1,602.3568	1,602.3568	0.0608		1,603.6335
Total	**4.3171**	**1.4940**	**7.1003**	**0.0193**	**1.3631**	**0.0234**	**1.3864**	**0.3637**	**0.0217**	**0.3854**		**1,642.1219**	**1,642.1219**	**0.0617**	**7.3000e-004**	**1,643.6428**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.6795	1.8000e-004	0.0189	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0397	0.0397	1.1000e-004		0.0421
Energy	3.6400e-003	0.0331	0.0278	2.0000e-004		2.5200e-003	2.5200e-003		2.5200e-003	2.5200e-003		39.7254	39.7254	7.6000e-004	7.3000e-004	39.9672
Mobile	0.6340	1.4607	7.0536	0.0191	1.3631	0.0208	1.3838	0.3637	0.0191	0.3828		1,602.3568	1,602.3568	0.0608		1,603.6335
Total	**4.3171**	**1.4940**	**7.1003**	**0.0193**	**1.3631**	**0.0234**	**1.3864**	**0.3637**	**0.0217**	**0.3854**		**1,642.1219**	**1,642.1219**	**0.0617**	**7.3000e-004**	**1,643.6428**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	12/1/2015	12/7/2015	5	5	
2	Site Preparation	Site Preparation	12/8/2015	12/14/2015	5	5	
3	Grading	Grading	12/15/2015	12/24/2015	5	8	
4	Trenching	Trenching	12/25/2015	1/7/2016	5	10	

5	Building Construction	Building Construction	1/8/2016	5/26/2016	5	100	
6	Paving	Paving	5/27/2016	6/21/2016	5	18	
7	Architectural Coating	Architectural Coating	6/22/2016	7/15/2016	5	18	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 11,657; Non-Residential Outdoor: 14,314 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Trenching	Plate Compactors	2	8.00	8	0.43
Trenching	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Trenching	Trenchers	2	8.00	80	0.50
Building Construction	Cranes	1	4.00	226	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Welders	0	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	125	0.42

Paving	Paving Equipment	2	6.00	130	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	2.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	76.00	30.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0730	0.0000	0.0730	0.0111	0.0000	0.0111			0.0000			0.0000
Off-Road	4.5083	48.3629	36.0738	0.0399		2.4508	2.4508		2.2858	2.2858		4,127.1934	4,127.1934	1.1188		4,150.6886
Total	**4.5083**	**48.3629**	**36.0738**	**0.0399**	**0.0730**	**2.4508**	**2.5239**	**0.0111**	**2.2858**	**2.2968**		**4,127.1934**	**4,127.1934**	**1.1188**		**4,150.6886**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.0800e-003	0.1249	0.0850	2.9000e-004	6.9700e-003	2.0700e-003	9.0400e-003	1.9100e-003	1.9000e-003	3.8100e-003		29.9832	29.9832	2.3000e-004		29.9881
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0572	0.0743	0.9054	2.0400e-003	0.1677	1.2200e-003	0.1689	0.0445	1.1200e-003	0.0456		176.3739	176.3739	8.6700e-003		176.5558
Total	**0.0653**	**0.1992**	**0.9904**	**2.3300e-003**	**0.1746**	**3.2900e-003**	**0.1779**	**0.0464**	**3.0200e-003**	**0.0494**		**206.3570**	**206.3570**	**8.9000e-003**		**206.5439**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0285	0.0000	0.0285	4.3100e-003	0.0000	4.3100e-003			0.0000			0.0000
Off-Road	4.5083	48.3629	36.0738	0.0399		2.4508	2.4508		2.2858	2.2858	0.0000	4,127.1934	4,127.1934	1.1188		4,150.6886
Total	**4.5083**	**48.3629**	**36.0738**	**0.0399**	**0.0285**	**2.4508**	**2.4793**	**4.3100e-003**	**2.2858**	**2.2901**	**0.0000**	**4,127.1934**	**4,127.1934**	**1.1188**		**4,150.6886**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.0800e-003	0.1249	0.0850	2.9000e-004	6.9700e-003	2.0700e-003	9.0400e-003	1.9100e-003	1.9000e-003	3.8100e-003		29.9832	29.9832	2.3000e-004		29.9881
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0572	0.0743	0.9054	2.0400e-003	0.1677	1.2200e-003	0.1689	0.0445	1.1200e-003	0.0456		176.3739	176.3739	8.6700e-003		176.5558
Total	**0.0653**	**0.1992**	**0.9904**	**2.3300e-003**	**0.1746**	**3.2900e-003**	**0.1779**	**0.0464**	**3.0200e-003**	**0.0494**		**206.3570**	**206.3570**	**8.9000e-003**		**206.5439**

3.3 Site Preparation - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	5.2609	56.8897	42.6318	0.0391		3.0883	3.0883		2.8412	2.8412		4,111.7444	4,111.7444	1.2275		4,137.5225
Total	**5.2609**	**56.8897**	**42.6318**	**0.0391**	**18.0663**	**3.0883**	**21.1545**	**9.9307**	**2.8412**	**12.7719**		**4,111.7444**	**4,111.7444**	**1.2275**		**4,137.5225**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0687	0.0892	1.0865	2.4400e-003	0.2012	1.4600e-003	0.2027	0.0534	1.3400e-003	0.0547		211.6486	211.6486	0.0104		211.8670
Total	**0.0687**	**0.0892**	**1.0865**	**2.4400e-003**	**0.2012**	**1.4600e-003**	**0.2027**	**0.0534**	**1.3400e-003**	**0.0547**		**211.6486**	**211.6486**	**0.0104**		**211.8670**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0458	0.0000	7.0458	3.8730	0.0000	3.8730			0.0000			0.0000
Off-Road	5.2609	56.8897	42.6318	0.0391		3.0883	3.0883		2.8412	2.8412	0.0000	4,111.7444	4,111.7444	1.2275		4,137.5224
Total	**5.2609**	**56.8897**	**42.6318**	**0.0391**	**7.0458**	**3.0883**	**10.1341**	**3.8730**	**2.8412**	**6.7142**	**0.0000**	**4,111.7444**	**4,111.7444**	**1.2275**		**4,137.5224**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0687	0.0892	1.0865	2.4400e-003	0.2012	1.4600e-003	0.2027	0.0534	1.3400e-003	0.0547		211.6486	211.6486	0.0104		211.8670
Total	**0.0687**	**0.0892**	**1.0865**	**2.4400e-003**	**0.2012**	**1.4600e-003**	**0.2027**	**0.0534**	**1.3400e-003**	**0.0547**		**211.6486**	**211.6486**	**0.0104**		**211.8670**

3.4 Grading - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	3.8327	40.4161	26.6731	0.0298		2.3284	2.3284		2.1421	2.1421		3,129.0158	3,129.0158	0.9341		3,148.6328
Total	**3.8327**	**40.4161**	**26.6731**	**0.0298**	**6.5523**	**2.3284**	**8.8807**	**3.3675**	**2.1421**	**5.5096**		**3,129.0158**	**3,129.0158**	**0.9341**		**3,148.6328**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0572	0.0743	0.9054	2.0400e-003	0.1677	1.2200e-003	0.1689	0.0445	1.1200e-003	0.0456		176.3739	176.3739	8.6700e-003		176.5558
Total	**0.0572**	**0.0743**	**0.9054**	**2.0400e-003**	**0.1677**	**1.2200e-003**	**0.1689**	**0.0445**	**1.1200e-003**	**0.0456**		**176.3739**	**176.3739**	**8.6700e-003**		**176.5558**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Fugitive Dust					2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000			0.0000
Off-Road	3.8327	40.4161	26.6731	0.0298		2.3284	2.3284		2.1421	2.1421	0.0000	3,129.0158	3,129.0158	0.9341		3,148.6328
Total	**3.8327**	**40.4161**	**26.6731**	**0.0298**	**2.5554**	**2.3284**	**4.8838**	**1.3133**	**2.1421**	**3.4554**	**0.0000**	**3,129.0158**	**3,129.0158**	**0.9341**		**3,148.6328**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0572	0.0743	0.9054	2.0400e-003	0.1677	1.2200e-003	0.1689	0.0445	1.1200e-003	0.0456		176.3739	176.3739	8.6700e-003		176.5558
Total	**0.0572**	**0.0743**	**0.9054**	**2.0400e-003**	**0.1677**	**1.2200e-003**	**0.1689**	**0.0445**	**1.1200e-003**	**0.0456**		**176.3739**	**176.3739**	**8.6700e-003**		**176.5558**

3.5 Trenching - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3142	20.9277	13.3619	0.0172		1.6178	1.6178		1.4900	1.4900		1,778.6234	1,778.6234	0.5176		1,789.4923
Total	**2.3142**	**20.9277**	**13.3619**	**0.0172**		**1.6178**	**1.6178**		**1.4900**	**1.4900**		**1,778.6234**	**1,778.6234**	**0.5176**		**1,789.4923**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0687	0.0892	1.0865	2.4400e-003	0.2012	1.4600e-003	0.2027	0.0534	1.3400e-003	0.0547		211.6486	211.6486	0.0104		211.8670
Total	**0.0687**	**0.0892**	**1.0865**	**2.4400e-003**	**0.2012**	**1.4600e-003**	**0.2027**	**0.0534**	**1.3400e-003**	**0.0547**		**211.6486**	**211.6486**	**0.0104**		**211.8670**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3142	20.9277	13.3619	0.0172		1.6178	1.6178		1.4900	1.4900	0.0000	1,778.6234	1,778.6234	0.5176		1,789.4923
Total	**2.3142**	**20.9277**	**13.3619**	**0.0172**		**1.6178**	**1.6178**		**1.4900**	**1.4900**	**0.0000**	**1,778.6234**	**1,778.6234**	**0.5176**		**1,789.4923**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0687	0.0892	1.0865	2.4400e-003	0.2012	1.4600e-003	0.2027	0.0534	1.3400e-003	0.0547		211.6486	211.6486	0.0104		211.8670
Total	**0.0687**	**0.0892**	**1.0865**	**2.4400e-003**	**0.2012**	**1.4600e-003**	**0.2027**	**0.0534**	**1.3400e-003**	**0.0547**		**211.6486**	**211.6486**	**0.0104**		**211.8670**

3.5 Trenching - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2137	20.0065	13.2860	0.0172		1.5352	1.5352		1.4140	1.4140		1,759.4422	1,759.4422	0.5171		1,770.3006
Total	**2.2137**	**20.0065**	**13.2860**	**0.0172**		**1.5352**	**1.5352**		**1.4140**	**1.4140**		**1,759.4422**	**1,759.4422**	**0.5171**		**1,770.3006**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0625	0.0807	0.9882	2.4400e-003	0.2012	1.4100e-003	0.2026	0.0534	1.3000e-003	0.0547		204.2283	204.2283	9.6000e-003		204.4300
Total	**0.0625**	**0.0807**	**0.9882**	**2.4400e-003**	**0.2012**	**1.4100e-003**	**0.2026**	**0.0534**	**1.3000e-003**	**0.0547**		**204.2283**	**204.2283**	**9.6000e-003**		**204.4300**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2137	20.0065	13.2860	0.0172		1.5352	1.5352		1.4140	1.4140	0.0000	1,759.4422	1,759.4422	0.5171		1,770.3006
Total	**2.2137**	**20.0065**	**13.2860**	**0.0172**		**1.5352**	**1.5352**		**1.4140**	**1.4140**	**0.0000**	**1,759.4422**	**1,759.4422**	**0.5171**		**1,770.3006**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0625	0.0807	0.9882	2.4400e-003	0.2012	1.4100e-003	0.2026	0.0534	1.3000e-003	0.0547		204.2283	204.2283	9.6000e-003		204.4300
Total	**0.0625**	**0.0807**	**0.9882**	**2.4400e-003**	**0.2012**	**1.4100e-003**	**0.2026**	**0.0534**	**1.3000e-003**	**0.0547**		**204.2283**	**204.2283**	**9.6000e-003**		**204.4300**

3.6 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3816	13.7058	8.2122	0.0113		0.9398	0.9398		0.8646	0.8646		1,178.5549	1,178.5549	0.3555		1,186.0202
Total	**1.3816**	**13.7058**	**8.2122**	**0.0113**		**0.9398**	**0.9398**		**0.8646**	**0.8646**		**1,178.5549**	**1,178.5549**	**0.3555**		**1,186.0202**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2623	2.5951	3.0664	6.4900e-003	0.1875	0.0411	0.2286	0.0534	0.0378	0.0912		650.5766	650.5766	4.6200e-003		650.6736
Worker	0.2637	0.3406	4.1722	0.0103	0.8495	5.9400e-003	0.8554	0.2253	5.4700e-003	0.2308		862.2972	862.2972	0.0406		863.1487
Total	**0.5259**	**2.9357**	**7.2386**	**0.0168**	**1.0370**	**0.0471**	**1.0840**	**0.2787**	**0.0433**	**0.3220**		**1,512.8738**	**1,512.8738**	**0.0452**		**1,513.8224**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3816	13.7058	8.2122	0.0113		0.9398	0.9398		0.8646	0.8646	0.0000	1,178.5549	1,178.5549	0.3555		1,186.0202
Total	**1.3816**	**13.7058**	**8.2122**	**0.0113**		**0.9398**	**0.9398**		**0.8646**	**0.8646**	**0.0000**	**1,178.5549**	**1,178.5549**	**0.3555**		**1,186.0202**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2623	2.5951	3.0664	6.4900e-003	0.1875	0.0411	0.2286	0.0534	0.0378	0.0912		650.5766	650.5766	4.6200e-003		650.6736
Worker	0.2637	0.3406	4.1722	0.0103	0.8495	5.9400e-003	0.8554	0.2253	5.4700e-003	0.2308		862.2972	862.2972	0.0406		863.1487
Total	**0.5259**	**2.9357**	**7.2386**	**0.0168**	**1.0370**	**0.0471**	**1.0840**	**0.2787**	**0.0433**	**0.3220**		**1,512.8738**	**1,512.8738**	**0.0452**		**1,513.8224**

3.7 Paving - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7956	18.3417	12.5623	0.0186		1.1065	1.1065		1.0198	1.0198		1,902.2212	1,902.2212	0.5588		1,913.9557

Paving	0.5822					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.3778**	**18.3417**	**12.5623**	**0.0186**		**1.1065**	**1.1065**		**1.0198**	**1.0198**		**1,902.2212**	**1,902.2212**	**0.5588**		**1,913.9557**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0694	0.0896	1.0980	2.7100e-003	0.2236	1.5600e-003	0.2251	0.0593	1.4400e-003	0.0607		226.9203	226.9203	0.0107		227.1444
Total	**0.0694**	**0.0896**	**1.0980**	**2.7100e-003**	**0.2236**	**1.5600e-003**	**0.2251**	**0.0593**	**1.4400e-003**	**0.0607**		**226.9203**	**226.9203**	**0.0107**		**227.1444**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7956	18.3417	12.5623	0.0186		1.1065	1.1065		1.0198	1.0198	0.0000	1,902.2212	1,902.2212	0.5588		1,913.9557
Paving	0.5822					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.3778**	**18.3417**	**12.5623**	**0.0186**		**1.1065**	**1.1065**		**1.0198**	**1.0198**	**0.0000**	**1,902.2212**	**1,902.2212**	**0.5588**		**1,913.9557**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0694	0.0896	1.0980	2.7100e-003	0.2236	1.5600e-003	0.2251	0.0593	1.4400e-003	0.0607		226.9203	226.9203	0.0107		227.1444
Total	**0.0694**	**0.0896**	**1.0980**	**2.7100e-003**	**0.2236**	**1.5600e-003**	**0.2251**	**0.0593**	**1.4400e-003**	**0.0607**		**226.9203**	**226.9203**	**0.0107**		**227.1444**

3.8 Architectural Coating - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	6.6979					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3685	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966		281.4481	281.4481	0.0332		282.1449
Total	**7.0664**	**2.3722**	**1.8839**	**2.9700e-003**		**0.1966**	**0.1966**		**0.1966**	**0.1966**		**281.4481**	**281.4481**	**0.0332**		**282.1449**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0520	0.0672	0.8235	2.0400e-003	0.1677	1.1700e-003	0.1688	0.0445	1.0800e-003	0.0455		170.1902	170.1902	8.0000e-003		170.3583
Total	**0.0520**	**0.0672**	**0.8235**	**2.0400e-003**	**0.1677**	**1.1700e-003**	**0.1688**	**0.0445**	**1.0800e-003**	**0.0455**		**170.1902**	**170.1902**	**8.0000e-003**		**170.3583**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	6.6979					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3685	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966	0.0000	281.4481	281.4481	0.0332		282.1449
Total	**7.0664**	**2.3722**	**1.8839**	**2.9700e-003**		**0.1966**	**0.1966**		**0.1966**	**0.1966**	**0.0000**	**281.4481**	**281.4481**	**0.0332**		**282.1449**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0520	0.0672	0.8235	2.0400e-003	0.1677	1.1700e-003	0.1688	0.0445	1.0800e-003	0.0455		170.1902	170.1902	8.0000e-003		170.3583
Total	**0.0520**	**0.0672**	**0.8235**	**2.0400e-003**	**0.1677**	**1.1700e-003**	**0.1688**	**0.0445**	**1.0800e-003**	**0.0455**		**170.1902**	**170.1902**	**8.0000e-003**		**170.3583**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.6340	1.4607	7.0536	0.0191	1.3631	0.0208	1.3838	0.3637	0.0191	0.3828		1,602.3568	1,602.3568	0.0608		1,603.6335
Unmitigated	0.6340	1.4607	7.0536	0.0191	1.3631	0.0208	1.3838	0.3637	0.0191	0.3828		1,602.3568	1,602.3568	0.0608		1,603.6335

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	213.60	87.26	9.40	502,521	502,521
Parking Lot	0.00	0.00	0.00		
Total	213.60	87.26	9.40	502,521	502,521

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.510449	0.057012	0.191854	0.151889	0.041459	0.005887	0.015572	0.014818	0.001440	0.002145	0.004716	0.000509	0.002251

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	3.6400e-003	0.0331	0.0278	2.0000e-004		2.5200e-003	2.5200e-003		2.5200e-003	2.5200e-003		39.7254	39.7254	7.6000e-004	7.3000e-004	39.9672
NaturalGas Unmitigated	3.6400e-003	0.0331	0.0278	2.0000e-004		2.5200e-003	2.5200e-003		2.5200e-003	2.5200e-003		39.7254	39.7254	7.6000e-004	7.3000e-004	39.9672

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	337.666	3.6400e-003	0.0331	0.0278	2.0000e-004		2.5200e-003	2.5200e-003		2.5200e-003	2.5200e-003		39.7254	39.7254	7.6000e-004	7.3000e-004	39.9672
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**3.6400e-003**	**0.0331**	**0.0278**	**2.0000e-004**		**2.5200e-003**	**2.5200e-003**		**2.5200e-003**	**2.5200e-003**		**39.7254**	**39.7254**	**7.6000e-004**	**7.3000e-004**	**39.9672**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Junior College (2Yr)	0.337666	3.6400e-003	0.0331	0.0278	2.0000e-004		2.5200e-003	2.5200e-003		2.5200e-003	2.5200e-003		39.7254	39.7254	7.6000e-004	7.3000e-004	39.9672
Total		**3.6400e-003**	**0.0331**	**0.0278**	**2.0000e-004**		**2.5200e-003**	**2.5200e-003**		**2.5200e-003**	**2.5200e-003**		**39.7254**	**39.7254**	**7.6000e-004**	**7.3000e-004**	**39.9672**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.6795	1.8000e-004	0.0189	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0397	0.0397	1.1000e-004		0.0421
Unmitigated	3.6795	1.8000e-004	0.0189	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0397	0.0397	1.1000e-004		0.0421

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0825					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Consumer Products	3.5952					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.8200e-003	1.8000e-004	0.0189	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0397	0.0397	1.1000e-004		0.0421
Total	**3.6795**	**1.8000e-004**	**0.0189**	**0.0000**		**7.0000e-005**	**7.0000e-005**		**7.0000e-005**	**7.0000e-005**		**0.0397**	**0.0397**	**1.1000e-004**		**0.0421**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0825					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.5952					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.8200e-003	1.8000e-004	0.0189	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0397	0.0397	1.1000e-004		0.0421
Total	**3.6795**	**1.8000e-004**	**0.0189**	**0.0000**		**7.0000e-005**	**7.0000e-005**		**7.0000e-005**	**7.0000e-005**		**0.0397**	**0.0397**	**1.1000e-004**		**0.0421**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Phase 1 - Recycling Center

Orange County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	7.77	1000sqft	0.18	7,771.00	0
Parking Lot	173.80	1000sqft	4.00	173,804.00	0

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 2.2 **Precipitation Freq (Days)** 30

Climate Zone 8 **Operational Year** 2017

Utility Company Southern California Edison

CO2 Intensity (lb/MWhr) 630.89 **CH4 Intensity (lb/MWhr)** 0.029 **N2O Intensity (lb/MWhr)** 0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - modified

Construction Phase - Modified to reflect construction of 7,771 GSF structure

Off-road Equipment -

Off-road Equipment - Modified to reflect construction of 7,771 SF building

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Demolition -

Architectural Coating - modified based on SCAQMD rule 1113 (VOC content of 50 g/L and composite factor of 141 based on requirement of 100g/L for parking lot paints and 250 g/l for non-residential exterior)

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	6,493.00	14,314.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	19,478.00	11,657.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	141.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblConstructionPhase	NumDays	230.00	100.00
tblConstructionPhase	NumDays	20.00	5.00
tblLandUse	LandUseSquareFeet	7,770.00	7,771.00
tblLandUse	LandUseSquareFeet	173,800.00	173,804.00
tblLandUse	LotAcreage	3.99	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	OperationalYear	2014	2017

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Year	lb/day										lb/day					
2015	5.3333	56.9878	43.6580	0.0421	18.2675	3.0897	21.3572	9.9840	2.8426	12.8266	0.0000	4,324.1508	4,324.1508	1.2379	0.0000	4,350.1472
2016	7.1211	20.0952	15.8273	0.0275	1.0370	1.5366	2.0243	0.2787	1.4153	1.4686	0.0000	2,640.3175	2,640.3175	0.5695	0.0000	2,652.2761
Total	**12.4545**	**77.0830**	**59.4854**	**0.0697**	**19.3044**	**4.6264**	**23.3815**	**10.2627**	**4.2578**	**14.2952**	**0.0000**	**6,964.4682**	**6,964.4682**	**1.8074**	**0.0000**	**7,002.4234**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2015	5.3333	56.9878	43.6580	0.0421	7.2470	3.0897	10.3368	3.9263	2.8426	6.7689	0.0000	4,324.1508	4,324.1508	1.2379	0.0000	4,350.1472
2016	7.1211	20.0952	15.8273	0.0275	1.0370	1.5366	2.0243	0.2787	1.4153	1.4686	0.0000	2,640.3175	2,640.3175	0.5695	0.0000	2,652.2761
Total	**12.4545**	**77.0830**	**59.4854**	**0.0697**	**8.2840**	**4.6264**	**12.3611**	**4.2050**	**4.2578**	**8.2375**	**0.0000**	**6,964.4682**	**6,964.4682**	**1.8074**	**0.0000**	**7,002.4234**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**57.09**	**0.00**	**47.13**	**59.03**	**0.00**	**42.38**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.6795	1.8000e-004	0.0189	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0397	0.0397	1.1000e-004		0.0421

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Energy	3.6400e-003	0.0331	0.0278	2.0000e-004		2.5200e-003	2.5200e-003		2.5200e-003	2.5200e-003		39.7254	39.7254	7.6000e-004	7.3000e-004	39.9672
Mobile	0.6711	1.5419	7.0182	0.0182	1.3631	0.0209	1.3839	0.3637	0.0192	0.3829		1,532.4443	1,532.4443	0.0608		1,533.7218
Total	**4.3542**	**1.5752**	**7.0649**	**0.0184**	**1.3631**	**0.0235**	**1.3865**	**0.3637**	**0.0218**	**0.3855**		**1,572.2095**	**1,572.2095**	**0.0617**	**7.3000e-004**	**1,573.7310**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.6795	1.8000e-004	0.0189	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0397	0.0397	1.1000e-004		0.0421
Energy	3.6400e-003	0.0331	0.0278	2.0000e-004		2.5200e-003	2.5200e-003		2.5200e-003	2.5200e-003		39.7254	39.7254	7.6000e-004	7.3000e-004	39.9672
Mobile	0.6711	1.5419	7.0182	0.0182	1.3631	0.0209	1.3839	0.3637	0.0192	0.3829		1,532.4443	1,532.4443	0.0608		1,533.7218
Total	**4.3542**	**1.5752**	**7.0649**	**0.0184**	**1.3631**	**0.0235**	**1.3865**	**0.3637**	**0.0218**	**0.3855**		**1,572.2095**	**1,572.2095**	**0.0617**	**7.3000e-004**	**1,573.7310**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	12/1/2015	12/7/2015	5	5	
2	Site Preparation	Site Preparation	12/8/2015	12/14/2015	5	5	
3	Grading	Grading	12/15/2015	12/24/2015	5	8	
4	Trenching	Trenching	12/25/2015	1/7/2016	5	10	

5	Building Construction	Building Construction	1/8/2016	5/26/2016	5	100	
6	Paving	Paving	5/27/2016	6/21/2016	5	18	
7	Architectural Coating	Architectural Coating	6/22/2016	7/15/2016	5	18	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 11,657; Non-Residential Outdoor: 14,314 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Trenching	Plate Compactors	2	8.00	8	0.43
Trenching	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Trenching	Trenchers	2	8.00	80	0.50
Building Construction	Cranes	1	4.00	226	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Welders	0	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	125	0.42

Paving	Paving Equipment	2	6.00	130	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	2.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	76.00	30.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0730	0.0000	0.0730	0.0111	0.0000	0.0111			0.0000			0.0000
Off-Road	4.5083	48.3629	36.0738	0.0399		2.4508	2.4508		2.2858	2.2858		4,127.1934	4,127.1934	1.1188		4,150.6886
Total	**4.5083**	**48.3629**	**36.0738**	**0.0399**	**0.0730**	**2.4508**	**2.5239**	**0.0111**	**2.2858**	**2.2968**		**4,127.1934**	**4,127.1934**	**1.1188**		**4,150.6886**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.6400e-003	0.1292	0.0969	2.9000e-004	6.9700e-003	2.0800e-003	9.0500e-003	1.9100e-003	1.9100e-003	3.8200e-003		29.9119	29.9119	2.4000e-004		29.9169
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0603	0.0818	0.8552	1.9300e-003	0.1677	1.2200e-003	0.1689	0.0445	1.1200e-003	0.0456		167.0455	167.0455	8.6700e-003		167.2274
Total	**0.0690**	**0.2109**	**0.9521**	**2.2200e-003**	**0.1746**	**3.3000e-003**	**0.1779**	**0.0464**	**3.0300e-003**	**0.0494**		**196.9574**	**196.9574**	**8.9100e-003**		**197.1443**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0285	0.0000	0.0285	4.3100e-003	0.0000	4.3100e-003			0.0000			0.0000
Off-Road	4.5083	48.3629	36.0738	0.0399		2.4508	2.4508		2.2858	2.2858	0.0000	4,127.1934	4,127.1934	1.1188		4,150.6886
Total	**4.5083**	**48.3629**	**36.0738**	**0.0399**	**0.0285**	**2.4508**	**2.4793**	**4.3100e-003**	**2.2858**	**2.2901**	**0.0000**	**4,127.1934**	**4,127.1934**	**1.1188**		**4,150.6886**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.6400e-003	0.1292	0.0969	2.9000e-004	6.9700e-003	2.0800e-003	9.0500e-003	1.9100e-003	1.9100e-003	3.8200e-003		29.9119	29.9119	2.4000e-004		29.9169
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0603	0.0818	0.8552	1.9300e-003	0.1677	1.2200e-003	0.1689	0.0445	1.1200e-003	0.0456		167.0455	167.0455	8.6700e-003		167.2274
Total	**0.0690**	**0.2109**	**0.9521**	**2.2200e-003**	**0.1746**	**3.3000e-003**	**0.1779**	**0.0464**	**3.0300e-003**	**0.0494**		**196.9574**	**196.9574**	**8.9100e-003**		**197.1443**

3.3 Site Preparation - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	5.2609	56.8897	42.6318	0.0391		3.0883	3.0883		2.8412	2.8412		4,111.7444	4,111.7444	1.2275		4,137.5225
Total	**5.2609**	**56.8897**	**42.6318**	**0.0391**	**18.0663**	**3.0883**	**21.1545**	**9.9307**	**2.8412**	**12.7719**		**4,111.7444**	**4,111.7444**	**1.2275**		**4,137.5225**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0724	0.0981	1.0263	2.3100e-003	0.2012	1.4600e-003	0.2027	0.0534	1.3400e-003	0.0547		200.4546	200.4546	0.0104		200.6729
Total	**0.0724**	**0.0981**	**1.0263**	**2.3100e-003**	**0.2012**	**1.4600e-003**	**0.2027**	**0.0534**	**1.3400e-003**	**0.0547**		**200.4546**	**200.4546**	**0.0104**		**200.6729**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0458	0.0000	7.0458	3.8730	0.0000	3.8730			0.0000			0.0000
Off-Road	5.2609	56.8897	42.6318	0.0391		3.0883	3.0883		2.8412	2.8412	0.0000	4,111.7444	4,111.7444	1.2275		4,137.5224
Total	**5.2609**	**56.8897**	**42.6318**	**0.0391**	**7.0458**	**3.0883**	**10.1341**	**3.8730**	**2.8412**	**6.7142**	**0.0000**	**4,111.7444**	**4,111.7444**	**1.2275**		**4,137.5224**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0724	0.0981	1.0263	2.3100e-003	0.2012	1.4600e-003	0.2027	0.0534	1.3400e-003	0.0547		200.4546	200.4546	0.0104		200.6729
Total	**0.0724**	**0.0981**	**1.0263**	**2.3100e-003**	**0.2012**	**1.4600e-003**	**0.2027**	**0.0534**	**1.3400e-003**	**0.0547**		**200.4546**	**200.4546**	**0.0104**		**200.6729**

3.4 Grading - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	3.8327	40.4161	26.6731	0.0298		2.3284	2.3284		2.1421	2.1421		3,129.0158	3,129.0158	0.9341		3,148.6328
Total	**3.8327**	**40.4161**	**26.6731**	**0.0298**	**6.5523**	**2.3284**	**8.8807**	**3.3675**	**2.1421**	**5.5096**		**3,129.0158**	**3,129.0158**	**0.9341**		**3,148.6328**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0603	0.0818	0.8552	1.9300e-003	0.1677	1.2200e-003	0.1689	0.0445	1.1200e-003	0.0456		167.0455	167.0455	8.6700e-003		167.2274
Total	**0.0603**	**0.0818**	**0.8552**	**1.9300e-003**	**0.1677**	**1.2200e-003**	**0.1689**	**0.0445**	**1.1200e-003**	**0.0456**		**167.0455**	**167.0455**	**8.6700e-003**		**167.2274**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Fugitive Dust					2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000			0.0000
Off-Road	3.8327	40.4161	26.6731	0.0298		2.3284	2.3284		2.1421	2.1421	0.0000	3,129.0158	3,129.0158	0.9341		3,148.6328
Total	**3.8327**	**40.4161**	**26.6731**	**0.0298**	**2.5554**	**2.3284**	**4.8838**	**1.3133**	**2.1421**	**3.4554**	**0.0000**	**3,129.0158**	**3,129.0158**	**0.9341**		**3,148.6328**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0603	0.0818	0.8552	1.9300e-003	0.1677	1.2200e-003	0.1689	0.0445	1.1200e-003	0.0456		167.0455	167.0455	8.6700e-003		167.2274
Total	**0.0603**	**0.0818**	**0.8552**	**1.9300e-003**	**0.1677**	**1.2200e-003**	**0.1689**	**0.0445**	**1.1200e-003**	**0.0456**		**167.0455**	**167.0455**	**8.6700e-003**		**167.2274**

3.5 Trenching - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3142	20.9277	13.3619	0.0172		1.6178	1.6178		1.4900	1.4900		1,778.6234	1,778.6234	0.5176		1,789.4923
Total	**2.3142**	**20.9277**	**13.3619**	**0.0172**		**1.6178**	**1.6178**		**1.4900**	**1.4900**		**1,778.6234**	**1,778.6234**	**0.5176**		**1,789.4923**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0724	0.0981	1.0263	2.3100e-003	0.2012	1.4600e-003	0.2027	0.0534	1.3400e-003	0.0547		200.4546	200.4546	0.0104		200.6729
Total	**0.0724**	**0.0981**	**1.0263**	**2.3100e-003**	**0.2012**	**1.4600e-003**	**0.2027**	**0.0534**	**1.3400e-003**	**0.0547**		**200.4546**	**200.4546**	**0.0104**		**200.6729**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3142	20.9277	13.3619	0.0172		1.6178	1.6178		1.4900	1.4900	0.0000	1,778.6234	1,778.6234	0.5176		1,789.4923
Total	**2.3142**	**20.9277**	**13.3619**	**0.0172**		**1.6178**	**1.6178**		**1.4900**	**1.4900**	**0.0000**	**1,778.6234**	**1,778.6234**	**0.5176**		**1,789.4923**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0724	0.0981	1.0263	2.3100e-003	0.2012	1.4600e-003	0.2027	0.0534	1.3400e-003	0.0547		200.4546	200.4546	0.0104		200.6729
Total	**0.0724**	**0.0981**	**1.0263**	**2.3100e-003**	**0.2012**	**1.4600e-003**	**0.2027**	**0.0534**	**1.3400e-003**	**0.0547**		**200.4546**	**200.4546**	**0.0104**		**200.6729**

3.5 Trenching - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2137	20.0065	13.2860	0.0172		1.5352	1.5352		1.4140	1.4140		1,759.4422	1,759.4422	0.5171		1,770.3006
Total	**2.2137**	**20.0065**	**13.2860**	**0.0172**		**1.5352**	**1.5352**		**1.4140**	**1.4140**		**1,759.4422**	**1,759.4422**	**0.5171**		**1,770.3006**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0657	0.0887	0.9308	2.3100e-003	0.2012	1.4100e-003	0.2026	0.0534	1.3000e-003	0.0547		193.4222	193.4222	9.6000e-003		193.6239
Total	**0.0657**	**0.0887**	**0.9308**	**2.3100e-003**	**0.2012**	**1.4100e-003**	**0.2026**	**0.0534**	**1.3000e-003**	**0.0547**		**193.4222**	**193.4222**	**9.6000e-003**		**193.6239**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category						lb/day							lb/day			
Off-Road	2.2137	20.0065	13.2860	0.0172		1.5352	1.5352		1.4140	1.4140	0.0000	1,759.4422	1,759.4422	0.5171		1,770.3006
Total	**2.2137**	**20.0065**	**13.2860**	**0.0172**		**1.5352**	**1.5352**		**1.4140**	**1.4140**	**0.0000**	**1,759.4422**	**1,759.4422**	**0.5171**		**1,770.3006**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category						lb/day							lb/day			
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0657	0.0887	0.9308	2.3100e-003	0.2012	1.4100e-003	0.2026	0.0534	1.3000e-003	0.0547		193.4222	193.4222	9.6000e-003		193.6239
Total	**0.0657**	**0.0887**	**0.9308**	**2.3100e-003**	**0.2012**	**1.4100e-003**	**0.2026**	**0.0534**	**1.3000e-003**	**0.0547**		**193.4222**	**193.4222**	**9.6000e-003**		**193.6239**

3.6 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3816	13.7058	8.2122	0.0113		0.9398	0.9398		0.8646	0.8646		1,178.5549	1,178.5549	0.3555		1,186.0202
Total	**1.3816**	**13.7058**	**8.2122**	**0.0113**		**0.9398**	**0.9398**		**0.8646**	**0.8646**		**1,178.5549**	**1,178.5549**	**0.3555**		**1,186.0202**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2908	2.6562	3.6852	6.4400e-003	0.1875	0.0416	0.2290	0.0534	0.0382	0.0916		645.0911	645.0911	4.7600e-003		645.1910
Worker	0.2776	0.3746	3.9300	9.7600e-003	0.8495	5.9400e-003	0.8554	0.2253	5.4700e-003	0.2308		816.6715	816.6715	0.0406		817.5231
Total	**0.5683**	**3.0308**	**7.6152**	**0.0162**	**1.0370**	**0.0475**	**1.0845**	**0.2787**	**0.0437**	**0.3224**		**1,461.7626**	**1,461.7626**	**0.0453**		**1,462.7141**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3816	13.7058	8.2122	0.0113		0.9398	0.9398		0.8646	0.8646	0.0000	1,178.5549	1,178.5549	0.3555		1,186.0202
Total	**1.3816**	**13.7058**	**8.2122**	**0.0113**		**0.9398**	**0.9398**		**0.8646**	**0.8646**	**0.0000**	**1,178.5549**	**1,178.5549**	**0.3555**		**1,186.0202**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2908	2.6562	3.6852	6.4400e-003	0.1875	0.0416	0.2290	0.0534	0.0382	0.0916		645.0911	645.0911	4.7600e-003		645.1910
Worker	0.2776	0.3746	3.9300	9.7600e-003	0.8495	5.9400e-003	0.8554	0.2253	5.4700e-003	0.2308		816.6715	816.6715	0.0406		817.5231
Total	**0.5683**	**3.0308**	**7.6152**	**0.0162**	**1.0370**	**0.0475**	**1.0845**	**0.2787**	**0.0437**	**0.3224**		**1,461.7626**	**1,461.7626**	**0.0453**		**1,462.7141**

3.7 Paving - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7956	18.3417	12.5623	0.0186		1.1065	1.1065		1.0198	1.0198		1,902.2212	1,902.2212	0.5588		1,913.9557

Paving	0.5822					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.3778**	**18.3417**	**12.5623**	**0.0186**		**1.1065**	**1.1065**		**1.0198**	**1.0198**		**1,902.2212**	**1,902.2212**	**0.5588**		**1,913.9557**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0730	0.0986	1.0342	2.5700e-003	0.2236	1.5600e-003	0.2251	0.0593	1.4400e-003	0.0607		214.9136	214.9136	0.0107		215.1377
Total	**0.0730**	**0.0986**	**1.0342**	**2.5700e-003**	**0.2236**	**1.5600e-003**	**0.2251**	**0.0593**	**1.4400e-003**	**0.0607**		**214.9136**	**214.9136**	**0.0107**		**215.1377**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7956	18.3417	12.5623	0.0186		1.1065	1.1065		1.0198	1.0198	0.0000	1,902.2212	1,902.2212	0.5588		1,913.9557
Paving	0.5822					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.3778**	**18.3417**	**12.5623**	**0.0186**		**1.1065**	**1.1065**		**1.0198**	**1.0198**	**0.0000**	**1,902.2212**	**1,902.2212**	**0.5588**		**1,913.9557**

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0730	0.0986	1.0342	2.5700e-003	0.2236	1.5600e-003	0.2251	0.0593	1.4400e-003	0.0607		214.9136	214.9136	0.0107		215.1377
Total	**0.0730**	**0.0986**	**1.0342**	**2.5700e-003**	**0.2236**	**1.5600e-003**	**0.2251**	**0.0593**	**1.4400e-003**	**0.0607**		**214.9136**	**214.9136**	**0.0107**		**215.1377**

3.8 Architectural Coating - 2016

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Archit. Coating	6.6979					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3685	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966		281.4481	281.4481	0.0332		282.1449
Total	**7.0664**	**2.3722**	**1.8839**	**2.9700e-003**		**0.1966**	**0.1966**		**0.1966**	**0.1966**		**281.4481**	**281.4481**	**0.0332**		**282.1449**

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0548	0.0739	0.7757	1.9300e-003	0.1677	1.1700e-003	0.1688	0.0445	1.0800e-003	0.0455		161.1852	161.1852	8.0000e-003		161.3532
Total	**0.0548**	**0.0739**	**0.7757**	**1.9300e-003**	**0.1677**	**1.1700e-003**	**0.1688**	**0.0445**	**1.0800e-003**	**0.0455**		**161.1852**	**161.1852**	**8.0000e-003**		**161.3532**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	6.6979					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3685	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966	0.0000	281.4481	281.4481	0.0332		282.1449
Total	**7.0664**	**2.3722**	**1.8839**	**2.9700e-003**		**0.1966**	**0.1966**		**0.1966**	**0.1966**	**0.0000**	**281.4481**	**281.4481**	**0.0332**		**282.1449**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0548	0.0739	0.7757	1.9300e-003	0.1677	1.1700e-003	0.1688	0.0445	1.0800e-003	0.0455		161.1852	161.1852	8.0000e-003		161.3532
Total	**0.0548**	**0.0739**	**0.7757**	**1.9300e-003**	**0.1677**	**1.1700e-003**	**0.1688**	**0.0445**	**1.0800e-003**	**0.0455**		**161.1852**	**161.1852**	**8.0000e-003**		**161.3532**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.6711	1.5419	7.0182	0.0182	1.3631	0.0209	1.3839	0.3637	0.0192	0.3829		1,532.4443	1,532.4443	0.0608		1,533.7218
Unmitigated	0.6711	1.5419	7.0182	0.0182	1.3631	0.0209	1.3839	0.3637	0.0192	0.3829		1,532.4443	1,532.4443	0.0608		1,533.7218

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	213.60	87.26	9.40	502,521	502,521
Parking Lot	0.00	0.00	0.00		
Total	213.60	87.26	9.40	502,521	502,521

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.510449	0.057012	0.191854	0.151889	0.041459	0.005887	0.015572	0.014818	0.001440	0.002145	0.004716	0.000509	0.002251

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	3.6400e-003	0.0331	0.0278	2.0000e-004		2.5200e-003	2.5200e-003		2.5200e-003	2.5200e-003		39.7254	39.7254	7.6000e-004	7.3000e-004	39.9672
NaturalGas Unmitigated	3.6400e-003	0.0331	0.0278	2.0000e-004		2.5200e-003	2.5200e-003		2.5200e-003	2.5200e-003		39.7254	39.7254	7.6000e-004	7.3000e-004	39.9672

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	337.666	3.6400e-003	0.0331	0.0278	2.0000e-004		2.5200e-003	2.5200e-003		2.5200e-003	2.5200e-003		39.7254	39.7254	7.6000e-004	7.3000e-004	39.9672
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**3.6400e-003**	**0.0331**	**0.0278**	**2.0000e-004**		**2.5200e-003**	**2.5200e-003**		**2.5200e-003**	**2.5200e-003**		**39.7254**	**39.7254**	**7.6000e-004**	**7.3000e-004**	**39.9672**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Junior College (2Yr)	0.337666	3.6400e-003	0.0331	0.0278	2.0000e-004		2.5200e-003	2.5200e-003		2.5200e-003	2.5200e-003		39.7254	39.7254	7.6000e-004	7.3000e-004	39.9672
Total		**3.6400e-003**	**0.0331**	**0.0278**	**2.0000e-004**		**2.5200e-003**	**2.5200e-003**		**2.5200e-003**	**2.5200e-003**		**39.7254**	**39.7254**	**7.6000e-004**	**7.3000e-004**	**39.9672**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.6795	1.8000e-004	0.0189	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0397	0.0397	1.1000e-004		0.0421
Unmitigated	3.6795	1.8000e-004	0.0189	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0397	0.0397	1.1000e-004		0.0421

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0825					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Consumer Products	3.5952					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.8200e-003	1.8000e-004	0.0189	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0397	0.0397	1.1000e-004		0.0421
Total	**3.6795**	**1.8000e-004**	**0.0189**	**0.0000**		**7.0000e-005**	**7.0000e-005**		**7.0000e-005**	**7.0000e-005**		**0.0397**	**0.0397**	**1.1000e-004**		**0.0421**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0825					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.5952					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.8200e-003	1.8000e-004	0.0189	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0397	0.0397	1.1000e-004		0.0421
Total	**3.6795**	**1.8000e-004**	**0.0189**	**0.0000**		**7.0000e-005**	**7.0000e-005**		**7.0000e-005**	**7.0000e-005**		**0.0397**	**0.0397**	**1.1000e-004**		**0.0421**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Unscheduled Phase - Skill Center Renovation

Orange County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	24.59	1000sqft	0.56	24,592.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase -

Off-road Equipment - modified for renovation

Off-road Equipment -

Architectural Coating - SCAQMD Rule 1113

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets

tblProjectCharacteristics	OperationalYear	2014	2023

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.1814	0.5831	0.6655	1.1400e-003	6.7800e-003	0.0295	0.0362	1.8200e-003	0.0280	0.0298	0.0000	95.9171	95.9171	0.0188	0.0000	96.3123
Total	**0.1814**	**0.5831**	**0.6655**	**1.1400e-003**	**6.7800e-003**	**0.0295**	**0.0362**	**1.8200e-003**	**0.0280**	**0.0298**	**0.0000**	**95.9171**	**95.9171**	**0.0188**	**0.0000**	**96.3123**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.1814	0.5831	0.6655	1.1400e-003	6.7800e-003	0.0295	0.0362	1.8200e-003	0.0280	0.0298	0.0000	95.9170	95.9170	0.0188	0.0000	96.3122
Total	**0.1814**	**0.5831**	**0.6655**	**1.1400e-003**	**6.7800e-003**	**0.0295**	**0.0362**	**1.8200e-003**	**0.0280**	**0.0298**	**0.0000**	**95.9170**	**95.9170**	**0.0188**	**0.0000**	**96.3122**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category						tons/yr								MT/yr		
Area	0.1174	0.0000	3.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.1000e-004	6.1000e-004	0.0000	0.0000	6.4000e-004
Energy	2.1000e-003	0.0191	0.0161	1.1000e-004		1.4500e-003	1.4500e-003		1.4500e-003	1.4500e-003	0.0000	119.6891	119.6891	4.9400e-003	1.3200e-003	120.2028
Mobile	0.2141	0.4301	2.2601	8.3600e-003	0.6011	8.4600e-003	0.6096	0.1607	7.8100e-003	0.1685	0.0000	558.2414	558.2414	0.0187	0.0000	558.6344
Waste						0.0000	0.0000		0.0000	0.0000	6.4896	0.0000	6.4896	0.3835	0.0000	14.5437
Water						0.0000	0.0000		0.0000	0.0000	0.3826	10.4919	10.8746	0.0398	1.0300e-003	12.0287
Total	**0.3336**	**0.4492**	**2.2765**	**8.4700e-003**	**0.6011**	**9.9100e-003**	**0.6110**	**0.1607**	**9.2600e-003**	**0.1699**	**6.8723**	**688.4231**	**695.2953**	**0.4470**	**2.3500e-003**	**705.4101**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category						tons/yr								MT/yr		
Area	0.1174	0.0000	3.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.1000e-004	6.1000e-004	0.0000	0.0000	6.4000e-004
Energy	2.1000e-003	0.0191	0.0161	1.1000e-004		1.4500e-003	1.4500e-003		1.4500e-003	1.4500e-003	0.0000	119.6891	119.6891	4.9400e-003	1.3200e-003	120.2028
Mobile	0.2141	0.4301	2.2601	8.3600e-003	0.6011	8.4600e-003	0.6096	0.1607	7.8100e-003	0.1685	0.0000	558.2414	558.2414	0.0187	0.0000	558.6344
Waste						0.0000	0.0000		0.0000	0.0000	6.4896	0.0000	6.4896	0.3835	0.0000	14.5437
Water						0.0000	0.0000		0.0000	0.0000	0.3826	10.4919	10.8746	0.0398	1.0300e-003	12.0280

Total	**0.3336**	**0.4492**	**2.2765**	**8.4700e-003**	**0.6011**	**9.9100e-003**	**0.6110**	**0.1607**	**9.2600e-003**	**0.1699**	**6.8723**	**688.4231**	**695.2953**	**0.4470**	**2.3500e-003**	**705.4095**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	1/1/2022	5/20/2022	5	100	
2	Architectural Coating	Architectural Coating	5/21/2022	5/27/2022	5	5	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 36,888; Non-Residential Outdoor: 12,296 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction	Welders	1	8.00	46	0.45
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	4.00	226	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	7	10.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	2.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Clean Paved Roads

3.2 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0645	0.5686	0.6252	1.0200e-003		0.0290	0.0290		0.0276	0.0276	0.0000	87.4709	87.4709	0.0186	0.0000	87.8610
Total	**0.0645**	**0.5686**	**0.6252**	**1.0200e-003**		**0.0290**	**0.0290**		**0.0276**	**0.0276**	**0.0000**	**87.4709**	**87.4709**	**0.0186**	**0.0000**	**87.8610**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.3100e-003	9.3800e-003	0.0184	4.0000e-005	1.2300e-003	1.8000e-004	1.4100e-003	3.5000e-004	1.6000e-004	5.1000e-004	0.0000	3.6476	3.6476	3.0000e-005	0.0000	3.6482

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Worker	1.1300e-003	1.6100e-003	0.0171	7.0000e-005	5.4900e-003	4.0000e-005	5.5300e-003	1.4600e-003	4.0000e-005	1.4900e-003	0.0000	4.1190	4.1190	1.8000e-004	0.0000	4.1227
Total	**2.4400e-003**	**0.0110**	**0.0356**	**1.1000e-004**	**6.7200e-003**	**2.2000e-004**	**6.9400e-003**	**1.8100e-003**	**2.0000e-004**	**2.0000e-003**	**0.0000**	**7.7667**	**7.7667**	**2.1000e-004**	**0.0000**	**7.7709**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0645	0.5686	0.6252	1.0200e-003		0.0290	0.0290		0.0276	0.0276	0.0000	87.4708	87.4708	0.0186	0.0000	87.8609
Total	**0.0645**	**0.5686**	**0.6252**	**1.0200e-003**		**0.0290**	**0.0290**		**0.0276**	**0.0276**	**0.0000**	**87.4708**	**87.4708**	**0.0186**	**0.0000**	**87.8609**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.3100e-003	9.3800e-003	0.0184	4.0000e-005	1.2300e-003	1.8000e-004	1.4100e-003	3.5000e-004	1.6000e-004	5.1000e-004	0.0000	3.6476	3.6476	3.0000e-005	0.0000	3.6482
Worker	1.1300e-003	1.6100e-003	0.0171	7.0000e-005	5.4900e-003	4.0000e-005	5.5300e-003	1.4600e-003	4.0000e-005	1.4900e-003	0.0000	4.1190	4.1190	1.8000e-004	0.0000	4.1227
Total	**2.4400e-003**	**0.0110**	**0.0356**	**1.1000e-004**	**6.7200e-003**	**2.2000e-004**	**6.9400e-003**	**1.8100e-003**	**2.0000e-004**	**2.0000e-003**	**0.0000**	**7.7667**	**7.7667**	**2.1000e-004**	**0.0000**	**7.7709**

3.3 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1140					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.1000e-004	3.5200e-003	4.5300e-003	1.0000e-005		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6392
Total	**0.1145**	**3.5200e-003**	**4.5300e-003**	**1.0000e-005**		**2.0000e-004**	**2.0000e-004**		**2.0000e-004**	**2.0000e-004**	**0.0000**	**0.6383**	**0.6383**	**4.0000e-005**	**0.0000**	**0.6392**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	2.0000e-005	1.7000e-004	0.0000	5.0000e-005	0.0000	6.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0412	0.0412	0.0000	0.0000	0.0412
Total	**1.0000e-005**	**2.0000e-005**	**1.7000e-004**	**0.0000**	**5.0000e-005**	**0.0000**	**6.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0412**	**0.0412**	**0.0000**	**0.0000**	**0.0412**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Archit. Coating	0.1140					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.1000e-004	3.5200e-003	4.5300e-003	1.0000e-005		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6392
Total	**0.1145**	**3.5200e-003**	**4.5300e-003**	**1.0000e-005**		**2.0000e-004**	**2.0000e-004**		**2.0000e-004**	**2.0000e-004**	**0.0000**	**0.6383**	**0.6383**	**4.0000e-005**	**0.0000**	**0.6392**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	2.0000e-005	1.7000e-004	0.0000	5.0000e-005	0.0000	6.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0412	0.0412	0.0000	0.0000	0.0412
Total	**1.0000e-005**	**2.0000e-005**	**1.7000e-004**	**0.0000**	**5.0000e-005**	**0.0000**	**6.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0412**	**0.0412**	**0.0000**	**0.0000**	**0.0412**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2141	0.4301	2.2601	8.3600e-003	0.6011	8.4600e-003	0.6096	0.1607	7.8100e-003	0.1685	0.0000	558.2414	558.2414	0.0187	0.0000	558.6344
Unmitigated	0.2141	0.4301	2.2601	8.3600e-003	0.6011	8.4600e-003	0.6096	0.1607	7.8100e-003	0.1685	0.0000	558.2414	558.2414	0.0187	0.0000	558.6344

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	676.03	276.17	29.76	1,590,475	1,590,475
Total	676.03	276.17	29.76	1,590,475	1,590,475

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.503435	0.056741	0.195441	0.152143	0.042270	0.006027	0.016168	0.016833	0.001466	0.002186	0.004340	0.000491	0.002459

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	98.8757	98.8757	4.5500e-003	9.4000e-004	99.2627
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	98.8757	98.8757	4.5500e-003	9.4000e-004	99.2627
NaturalGas Mitigated	2.1000e-003	0.0191	0.0161	1.1000e-004		1.4500e-003	1.4500e-003		1.4500e-003	1.4500e-003	0.0000	20.8134	20.8134	4.0000e-004	3.8000e-004	20.9401

NaturalGas Unmitigated	2.1000e-003	0.0191	0.0161	1.1000e-004		1.4500e-003	1.4500e-003		1.4500e-003	1.4500e-003	0.0000	20.8134	20.8134	4.0000e-004	3.8000e-004	20.9401

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Junior College (2Yr)	390029	2.1000e-003	0.0191	0.0161	1.1000e-004		1.4500e-003	1.4500e-003		1.4500e-003	1.4500e-003	0.0000	20.8134	20.8134	4.0000e-004	3.8000e-004	20.9401
Total		**2.1000e-003**	**0.0191**	**0.0161**	**1.1000e-004**		**1.4500e-003**	**1.4500e-003**		**1.4500e-003**	**1.4500e-003**	**0.0000**	**20.8134**	**20.8134**	**4.0000e-004**	**3.8000e-004**	**20.9401**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Junior College (2Yr)	390029	2.1000e-003	0.0191	0.0161	1.1000e-004		1.4500e-003	1.4500e-003		1.4500e-003	1.4500e-003	0.0000	20.8134	20.8134	4.0000e-004	3.8000e-004	20.9401
Total		**2.1000e-003**	**0.0191**	**0.0161**	**1.1000e-004**		**1.4500e-003**	**1.4500e-003**		**1.4500e-003**	**1.4500e-003**	**0.0000**	**20.8134**	**20.8134**	**4.0000e-004**	**3.8000e-004**	**20.9401**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	345518	98.8757	4.5500e-003	9.4000e-004	99.2627
Total		**98.8757**	**4.5500e-003**	**9.4000e-004**	**99.2627**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	345518	98.8757	4.5500e-003	9.4000e-004	99.2627
Total		**98.8757**	**4.5500e-003**	**9.4000e-004**	**99.2627**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Mitigated	0.1174	0.0000	3.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.1000e-004	6.1000e-004	0.0000	0.0000	6.4000e-004
Unmitigated	0.1174	0.0000	3.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.1000e-004	6.1000e-004	0.0000	0.0000	6.4000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0285					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0889					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	3.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.1000e-004	6.1000e-004	0.0000	0.0000	6.4000e-004
Total	**0.1174**	**0.0000**	**3.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**6.1000e-004**	**6.1000e-004**	**0.0000**	**0.0000**	**6.4000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0285					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0889					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	3.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.1000e-004	6.1000e-004	0.0000	0.0000	6.4000e-004

Total	0.1174	0.0000	3.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.1000e-004	6.1000e-004	0.0000	0.0000	6.4000e-004

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	10.8746	0.0398	1.0300e-003	12.0280
Unmitigated	10.8746	0.0398	1.0300e-003	12.0287

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	1.20612 / 1.88649	10.8746	0.0398	1.0300e-003	12.0287
Total		**10.8746**	**0.0398**	**1.0300e-003**	**12.0287**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	1.20612 / 1.88649	10.8746	0.0398	1.0300e-003	12.0280
Total		**10.8746**	**0.0398**	**1.0300e-003**	**12.0280**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	6.4896	0.3835	0.0000	14.5437
Unmitigated	6.4896	0.3835	0.0000	14.5437

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e

Land Use	tons	MT/yr			
Junior College (2Yr)	31.97	6.4896	0.3835	0.0000	14.5437
Total		**6.4896**	**0.3835**	**0.0000**	**14.5437**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior College (2Yr)	31.97	6.4896	0.3835	0.0000	14.5437
Total		**6.4896**	**0.3835**	**0.0000**	**14.5437**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Unscheduled Phase - Skill Center Renovation

Orange County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	24.59	1000sqft	0.56	24,592.00	0

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 2.2 **Precipitation Freq (Days)** 30

Climate Zone 8 **Operational Year** 2023

Utility Company Southern California Edison

CO2 Intensity (lb/MWhr) 630.89 **CH4 Intensity (lb/MWhr)** 0.029 **N2O Intensity (lb/MWhr)** 0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase -

Off-road Equipment - modified for renovation

Off-road Equipment -

Architectural Coating - SCAQMD Rule 1113

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets

tblProjectCharacteristics	OperationalYear	2014	2023

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	45.8027	11.5804	13.1752	0.0227	0.1368	0.5852	0.7219	0.0368	0.5552	0.5920	0.0000	2,103.5906	2,103.5906	0.4140	0.0000	2,112.2843
Total	**45.8027**	**11.5804**	**13.1752**	**0.0227**	**0.1368**	**0.5852**	**0.7219**	**0.0368**	**0.5552**	**0.5920**	**0.0000**	**2,103.5906**	**2,103.5906**	**0.4140**	**0.0000**	**2,112.2843**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	45.8027	11.5804	13.1752	0.0227	0.1368	0.5852	0.7219	0.0368	0.5552	0.5920	0.0000	2,103.5906	2,103.5906	0.4140	0.0000	2,112.2843
Total	**45.8027**	**11.5804**	**13.1752**	**0.0227**	**0.1368**	**0.5852**	**0.7219**	**0.0368**	**0.5552**	**0.5920**	**0.0000**	**2,103.5906**	**2,103.5906**	**0.4140**	**0.0000**	**2,112.2843**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.6433	2.0000e-005	2.5100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.3800e-003	5.3800e-003	1.0000e-005		5.6800e-003
Energy	0.0115	0.1048	0.0880	6.3000e-004		7.9600e-003	7.9600e-003		7.9600e-003	7.9600e-003		125.7145	125.7145	2.4100e-003	2.3000e-003	126.4795
Mobile	1.5199	2.8148	15.9404	0.0610	4.3163	0.0597	4.3760	1.1519	0.0551	1.2070		4,484.2860	4,484.2860	0.1457		4,487.3447
Total	**2.1747**	**2.9196**	**16.0309**	**0.0617**	**4.3163**	**0.0676**	**4.3839**	**1.1519**	**0.0631**	**1.2150**		**4,610.0059**	**4,610.0059**	**0.1481**	**2.3000e-003**	**4,613.8300**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.6433	2.0000e-005	2.5100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.3800e-003	5.3800e-003	1.0000e-005		5.6800e-003
Energy	0.0115	0.1048	0.0880	6.3000e-004		7.9600e-003	7.9600e-003		7.9600e-003	7.9600e-003		125.7145	125.7145	2.4100e-003	2.3000e-003	126.4795
Mobile	1.5199	2.8148	15.9404	0.0610	4.3163	0.0597	4.3760	1.1519	0.0551	1.2070		4,484.2860	4,484.2860	0.1457		4,487.3447
Total	**2.1747**	**2.9196**	**16.0309**	**0.0617**	**4.3163**	**0.0676**	**4.3839**	**1.1519**	**0.0631**	**1.2150**		**4,610.0059**	**4,610.0059**	**0.1481**	**2.3000e-003**	**4,613.8300**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	1/1/2022	5/20/2022	5	100	
2	Architectural Coating	Architectural Coating	5/21/2022	5/27/2022	5	5	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 36,888; Non-Residential Outdoor: 12,296 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction	Welders	1	8.00	46	0.45
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	4.00	226	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	7	10.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	2.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Clean Paved Roads

3.2 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2890	11.3716	12.5040	0.0205		0.5808	0.5808		0.5512	0.5512		1,928.4037	1,928.4037	0.4095		1,937.0033
Total	**1.2890**	**11.3716**	**12.5040**	**0.0205**		**0.5808**	**0.5808**		**0.5512**	**0.5512**		**1,928.4037**	**1,928.4037**	**0.4095**		**1,937.0033**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0249	0.1803	0.3115	8.6000e-004	0.0250	3.5300e-003	0.0285	7.1200e-003	3.2500e-003	0.0104		80.7049	80.7049	6.0000e-004		80.7175
Worker	0.0231	0.0285	0.3597	1.3600e-003	0.1118	7.8000e-004	0.1126	0.0296	7.2000e-004	0.0304		94.4821	94.4821	3.8800e-003		94.5635
Total	**0.0480**	**0.2088**	**0.6712**	**2.2200e-003**	**0.1368**	**4.3100e-003**	**0.1411**	**0.0368**	**3.9700e-003**	**0.0407**		**175.1870**	**175.1870**	**4.4800e-003**		**175.2810**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2890	11.3716	12.5040	0.0205		0.5808	0.5808		0.5512	0.5512	0.0000	1,928.4037	1,928.4037	0.4095		1,937.0033
Total	**1.2890**	**11.3716**	**12.5040**	**0.0205**		**0.5808**	**0.5808**		**0.5512**	**0.5512**	**0.0000**	**1,928.4037**	**1,928.4037**	**0.4095**		**1,937.0033**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0249	0.1803	0.3115	8.6000e-004	0.0250	3.5300e-003	0.0285	7.1200e-003	3.2500e-003	0.0104		80.7049	80.7049	6.0000e-004		80.7175
Worker	0.0231	0.0285	0.3597	1.3600e-003	0.1118	7.8000e-004	0.1126	0.0296	7.2000e-004	0.0304		94.4821	94.4821	3.8800e-003		94.5635
Total	**0.0480**	**0.2088**	**0.6712**	**2.2200e-003**	**0.1368**	**4.3100e-003**	**0.1411**	**0.0368**	**3.9700e-003**	**0.0407**		**175.1870**	**175.1870**	**4.4800e-003**		**175.2810**

3.3 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Archit. Coating	45.5936					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.8329
Total	**45.7981**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.8329**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	4.6300e-003	5.7000e-003	0.0720	2.7000e-004	0.0224	1.6000e-004	0.0225	5.9300e-003	1.4000e-004	6.0700e-003		18.8964	18.8964	7.8000e-004		18.9127
Total	**4.6300e-003**	**5.7000e-003**	**0.0720**	**2.7000e-004**	**0.0224**	**1.6000e-004**	**0.0225**	**5.9300e-003**	**1.4000e-004**	**6.0700e-003**		**18.8964**	**18.8964**	**7.8000e-004**		**18.9127**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	45.5936					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.8329
Total	**45.7981**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.8329**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	4.6300e-003	5.7000e-003	0.0720	2.7000e-004	0.0224	1.6000e-004	0.0225	5.9300e-003	1.4000e-004	6.0700e-003		18.8964	18.8964	7.8000e-004		18.9127
Total	**4.6300e-003**	**5.7000e-003**	**0.0720**	**2.7000e-004**	**0.0224**	**1.6000e-004**	**0.0225**	**5.9300e-003**	**1.4000e-004**	**6.0700e-003**		**18.8964**	**18.8964**	**7.8000e-004**		**18.9127**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.5199	2.8148	15.9404	0.0610	4.3163	0.0597	4.3760	1.1519	0.0551	1.2070		4,484.2860	4,484.2860	0.1457		4,487.3447
Unmitigated	1.5199	2.8148	15.9404	0.0610	4.3163	0.0597	4.3760	1.1519	0.0551	1.2070		4,484.2860	4,484.2860	0.1457		4,487.3447

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT

Junior College (2Yr)	676.03	276.17	29.76	1,590,475	1,590,475
Total	676.03	276.17	29.76	1,590,475	1,590,475

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.503435	0.056741	0.195441	0.152143	0.042270	0.006027	0.016168	0.016833	0.001466	0.002186	0.004340	0.000491	0.002459

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0115	0.1048	0.0880	6.3000e-004		7.9600e-003	7.9600e-003		7.9600e-003	7.9600e-003		125.7145	125.7145	2.4100e-003	2.3000e-003	126.4795
NaturalGas Unmitigated	0.0115	0.1048	0.0880	6.3000e-004		7.9600e-003	7.9600e-003		7.9600e-003	7.9600e-003		125.7145	125.7145	2.4100e-003	2.3000e-003	126.4795

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	1068.57	0.0115	0.1048	0.0880	6.3000e-004		7.9600e-003	7.9600e-003		7.9600e-003	7.9600e-003		125.7145	125.7145	2.4100e-003	2.3000e-003	126.4795
Total		**0.0115**	**0.1048**	**0.0880**	**6.3000e-004**		**7.9600e-003**	**7.9600e-003**		**7.9600e-003**	**7.9600e-003**		**125.7145**	**125.7145**	**2.4100e-003**	**2.3000e-003**	**126.4795**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	1.06857	0.0115	0.1048	0.0880	6.3000e-004		7.9600e-003	7.9600e-003		7.9600e-003	7.9600e-003		125.7145	125.7145	2.4100e-003	2.3000e-003	126.4795
Total		**0.0115**	**0.1048**	**0.0880**	**6.3000e-004**		**7.9600e-003**	**7.9600e-003**		**7.9600e-003**	**7.9600e-003**		**125.7145**	**125.7145**	**2.4100e-003**	**2.3000e-003**	**126.4795**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.6433	2.0000e-005	2.5100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.3800e-003	5.3800e-003	1.0000e-005		5.6800e-003

Unmitigated	0.6433	2.0000e-005	2.5100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.3800e-003	5.3800e-003	1.0000e-005		5.6800e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1561					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.4869					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.3000e-004	2.0000e-005	2.5100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.3800e-003	5.3800e-003	1.0000e-005		5.6800e-003
Total	**0.6433**	**2.0000e-005**	**2.5100e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**5.3800e-003**	**5.3800e-003**	**1.0000e-005**		**5.6800e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1561					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.4869					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.3000e-004	2.0000e-005	2.5100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.3800e-003	5.3800e-003	1.0000e-005		5.6800e-003
Total	**0.6433**	**2.0000e-005**	**2.5100e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**5.3800e-003**	**5.3800e-003**	**1.0000e-005**		**5.6800e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Unscheduled Phase - Skill Center Renovation

Orange County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	24.59	1000sqft	0.56	24,592.00	0

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 2.2 **Precipitation Freq (Days)** 30

Climate Zone 8 **Operational Year** 2023

Utility Company Southern California Edison

CO2 Intensity (lb/MWhr) 630.89 **CH4 Intensity (lb/MWhr)** 0.029 **N2O Intensity (lb/MWhr)** 0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase -

Off-road Equipment - modified for renovation

Off-road Equipment -

Architectural Coating - SCAQMD Rule 1113

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets

tblProjectCharacteristics	OperationalYear	2014	2023

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	45.8030	11.5871	13.2273	0.0226	0.1368	0.5852	0.7220	0.0368	0.5552	0.5920	0.0000	2,097.8751	2,097.8751	0.4140	0.0000	2,106.5692
Total	**45.8030**	**11.5871**	**13.2273**	**0.0226**	**0.1368**	**0.5852**	**0.7220**	**0.0368**	**0.5552**	**0.5920**	**0.0000**	**2,097.8751**	**2,097.8751**	**0.4140**	**0.0000**	**2,106.5692**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	45.8030	11.5871	13.2273	0.0226	0.1368	0.5852	0.7220	0.0368	0.5552	0.5920	0.0000	2,097.8751	2,097.8751	0.4140	0.0000	2,106.5692
Total	**45.8030**	**11.5871**	**13.2273**	**0.0226**	**0.1368**	**0.5852**	**0.7220**	**0.0368**	**0.5552**	**0.5920**	**0.0000**	**2,097.8751**	**2,097.8751**	**0.4140**	**0.0000**	**2,106.5692**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.6433	2.0000e-005	2.5100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.3800e-003	5.3800e-003	1.0000e-005		5.6800e-003
Energy	0.0115	0.1048	0.0880	6.3000e-004		7.9600e-003	7.9600e-003		7.9600e-003	7.9600e-003		125.7145	125.7145	2.4100e-003	2.3000e-003	126.4795
Mobile	1.6020	2.9757	15.8699	0.0583	4.3163	0.0598	4.3761	1.1519	0.0553	1.2072		4,292.9900	4,292.9900	0.1458		4,296.0514
Total	**2.2569**	**3.0804**	**15.9604**	**0.0589**	**4.3163**	**0.0678**	**4.3841**	**1.1519**	**0.0632**	**1.2151**		**4,418.7098**	**4,418.7098**	**0.1482**	**2.3000e-003**	**4,422.5367**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.6433	2.0000e-005	2.5100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.3800e-003	5.3800e-003	1.0000e-005		5.6800e-003
Energy	0.0115	0.1048	0.0880	6.3000e-004		7.9600e-003	7.9600e-003		7.9600e-003	7.9600e-003		125.7145	125.7145	2.4100e-003	2.3000e-003	126.4795
Mobile	1.6020	2.9757	15.8699	0.0583	4.3163	0.0598	4.3761	1.1519	0.0553	1.2072		4,292.9900	4,292.9900	0.1458		4,296.0514
Total	**2.2569**	**3.0804**	**15.9604**	**0.0589**	**4.3163**	**0.0678**	**4.3841**	**1.1519**	**0.0632**	**1.2151**		**4,418.7098**	**4,418.7098**	**0.1482**	**2.3000e-003**	**4,422.5367**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	1/1/2022	5/20/2022	5	100	
2	Architectural Coating	Architectural Coating	5/21/2022	5/27/2022	5	5	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 36,888; Non-Residential Outdoor: 12,296 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction	Welders	1	8.00	46	0.45
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	4.00	226	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	7	10.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	2.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Clean Paved Roads

3.2 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2890	11.3716	12.5040	0.0205		0.5808	0.5808		0.5512	0.5512		1,928.4037	1,928.4037	0.4095		1,937.0033
Total	**1.2890**	**11.3716**	**12.5040**	**0.0205**		**0.5808**	**0.5808**		**0.5512**	**0.5512**		**1,928.4037**	**1,928.4037**	**0.4095**		**1,937.0033**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0270	0.1841	0.3889	8.6000e-004	0.0250	3.5600e-003	0.0286	7.1200e-003	3.2800e-003	0.0104		80.0190	80.0190	6.2000e-004		80.0321
Worker	0.0243	0.0313	0.3344	1.2900e-003	0.1118	7.8000e-004	0.1126	0.0296	7.2000e-004	0.0304		89.4525	89.4525	3.8800e-003		89.5338
Total	**0.0513**	**0.2154**	**0.7233**	**2.1500e-003**	**0.1368**	**4.3400e-003**	**0.1411**	**0.0368**	**4.0000e-003**	**0.0408**		**169.4715**	**169.4715**	**4.5000e-003**		**169.5659**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2890	11.3716	12.5040	0.0205		0.5808	0.5808		0.5512	0.5512	0.0000	1,928.4037	1,928.4037	0.4095		1,937.0033
Total	**1.2890**	**11.3716**	**12.5040**	**0.0205**		**0.5808**	**0.5808**		**0.5512**	**0.5512**	**0.0000**	**1,928.4037**	**1,928.4037**	**0.4095**		**1,937.0033**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0270	0.1841	0.3889	8.6000e-004	0.0250	3.5600e-003	0.0286	7.1200e-003	3.2800e-003	0.0104		80.0190	80.0190	6.2000e-004		80.0321
Worker	0.0243	0.0313	0.3344	1.2900e-003	0.1118	7.8000e-004	0.1126	0.0296	7.2000e-004	0.0304		89.4525	89.4525	3.8800e-003		89.5338
Total	**0.0513**	**0.2154**	**0.7233**	**2.1500e-003**	**0.1368**	**4.3400e-003**	**0.1411**	**0.0368**	**4.0000e-003**	**0.0408**		**169.4715**	**169.4715**	**4.5000e-003**		**169.5659**

3.3 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Archit. Coating	45.5936					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.8329
Total	**45.7981**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.8329**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	4.8500e-003	6.2600e-003	0.0669	2.6000e-004	0.0224	1.6000e-004	0.0225	5.9300e-003	1.4000e-004	6.0700e-003		17.8905	17.8905	7.8000e-004		17.9068
Total	**4.8500e-003**	**6.2600e-003**	**0.0669**	**2.6000e-004**	**0.0224**	**1.6000e-004**	**0.0225**	**5.9300e-003**	**1.4000e-004**	**6.0700e-003**		**17.8905**	**17.8905**	**7.8000e-004**		**17.9068**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	45.5936					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.8329
Total	**45.7981**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.8329**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	4.8500e-003	6.2600e-003	0.0669	2.6000e-004	0.0224	1.6000e-004	0.0225	5.9300e-003	1.4000e-004	6.0700e-003		17.8905	17.8905	7.8000e-004		17.9068
Total	**4.8500e-003**	**6.2600e-003**	**0.0669**	**2.6000e-004**	**0.0224**	**1.6000e-004**	**0.0225**	**5.9300e-003**	**1.4000e-004**	**6.0700e-003**		**17.8905**	**17.8905**	**7.8000e-004**		**17.9068**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.6020	2.9757	15.8699	0.0583	4.3163	0.0598	4.3761	1.1519	0.0553	1.2072		4,292.9900	4,292.9900	0.1458		4,296.0514
Unmitigated	1.6020	2.9757	15.8699	0.0583	4.3163	0.0598	4.3761	1.1519	0.0553	1.2072		4,292.9900	4,292.9900	0.1458		4,296.0514

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT

Junior College (2Yr)	676.03	276.17	29.76	1,590,475	1,590,475
Total	676.03	276.17	29.76	1,590,475	1,590,475

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.503435	0.056741	0.195441	0.152143	0.042270	0.006027	0.016168	0.016833	0.001466	0.002186	0.004340	0.000491	0.002459

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0115	0.1048	0.0880	6.3000e-004		7.9600e-003	7.9600e-003		7.9600e-003	7.9600e-003		125.7145	125.7145	2.4100e-003	2.3000e-003	126.4795
NaturalGas Unmitigated	0.0115	0.1048	0.0880	6.3000e-004		7.9600e-003	7.9600e-003		7.9600e-003	7.9600e-003		125.7145	125.7145	2.4100e-003	2.3000e-003	126.4795

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	1068.57	0.0115	0.1048	0.0880	6.3000e-004		7.9600e-003	7.9600e-003		7.9600e-003	7.9600e-003		125.7145	125.7145	2.4100e-003	2.3000e-003	126.4795
Total		**0.0115**	**0.1048**	**0.0880**	**6.3000e-004**		**7.9600e-003**	**7.9600e-003**		**7.9600e-003**	**7.9600e-003**		**125.7145**	**125.7145**	**2.4100e-003**	**2.3000e-003**	**126.4795**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	1.06857	0.0115	0.1048	0.0880	6.3000e-004		7.9600e-003	7.9600e-003		7.9600e-003	7.9600e-003		125.7145	125.7145	2.4100e-003	2.3000e-003	126.4795
Total		**0.0115**	**0.1048**	**0.0880**	**6.3000e-004**		**7.9600e-003**	**7.9600e-003**		**7.9600e-003**	**7.9600e-003**		**125.7145**	**125.7145**	**2.4100e-003**	**2.3000e-003**	**126.4795**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.6433	2.0000e-005	2.5100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.3800e-003	5.3800e-003	1.0000e-005		5.6800e-003

Unmitigated	0.6433	2.0000e-005	2.5100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.3800e-003	5.3800e-003	1.0000e-005		5.6800e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1561					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.4869					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.3000e-004	2.0000e-005	2.5100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.3800e-003	5.3800e-003	1.0000e-005		5.6800e-003
Total	**0.6433**	**2.0000e-005**	**2.5100e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**5.3800e-003**	**5.3800e-003**	**1.0000e-005**		**5.6800e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1561					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.4869					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.3000e-004	2.0000e-005	2.5100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.3800e-003	5.3800e-003	1.0000e-005		5.6800e-003
Total	**0.6433**	**2.0000e-005**	**2.5100e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**5.3800e-003**	**5.3800e-003**	**1.0000e-005**		**5.6800e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Phase 2 - Student Housing Project

Orange County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	303.69	Dwelling Unit	3.50	303,688.00	869

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - modified; Student Housing Project is multiple stories - according to HPI will be 3.5 acres

Construction Phase - modified

Off-road Equipment -

Off-road Equipment - modified

Off-road Equipment - modified to account for 3.5 acre footprint

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Trips and VMT -

Demolition - Assuming denisty of pavement is 150 lbs/ft3, and pavement is 1 foot deep

Architectural Coating - scaqmd rule 1113

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblGrading	AcresOfGrading	7.50	0.00
tblLandUse	LandUseSquareFeet	303,690.00	303,688.00
tblLandUse	LotAcreage	18.98	3.50
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.41	0.41
tblOffRoadEquipment	LoadFactor	0.48	0.48
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Scrapers
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00

tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblProjectCharacteristics	OperationalYear	2014	2020

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.5273	3.5407	3.7944	7.4400e-003	0.4433	0.1976	0.6409	0.1108	0.1880	0.2987	0.0000	603.0099	603.0099	0.0738	0.0000	604.5587
2018	1.2265	0.2797	0.3147	6.2000e-004	0.0225	0.0159	0.0384	6.0100e-003	0.0151	0.0211	0.0000	49.7666	49.7666	7.6900e-003	0.0000	49.9280
Total	**1.7538**	**3.8204**	**4.1091**	**8.0600e-003**	**0.4658**	**0.2135**	**0.6793**	**0.1168**	**0.2030**	**0.3198**	**0.0000**	**652.7765**	**652.7765**	**0.0815**	**0.0000**	**654.4868**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
2017	0.5273	3.5407	3.7944	7.4400e-003	0.3527	0.1976	0.5503	0.0913	0.1880	0.2792	0.0000	603.0096	603.0096	0.0738	0.0000	604.5584
2018	1.2265	0.2797	0.3147	6.2000e-004	0.0225	0.0159	0.0384	6.0100e-003	0.0151	0.0211	0.0000	49.7666	49.7666	7.6900e-003	0.0000	49.9280
Total	**1.7538**	**3.8204**	**4.1091**	**8.0600e-003**	**0.3752**	**0.2135**	**0.5887**	**0.0973**	**0.2030**	**0.3003**	**0.0000**	**652.7761**	**652.7761**	**0.0815**	**0.0000**	**654.4864**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**19.45**	**0.00**	**13.34**	**16.71**	**0.00**	**6.10**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.3063	0.0616	5.0498	3.2000e-003		0.3072	0.3072		0.3071	0.3071	32.2481	67.1048	99.3529	0.1012	2.1900e-003	102.1559
Energy	0.0180	0.1542	0.0656	9.8000e-004		0.0125	0.0125		0.0125	0.0125	0.0000	491.4725	491.4725	0.0178	6.2500e-003	493.7837
Mobile	0.9504	2.3716	10.8754	0.0357	2.5867	0.0366	2.6233	0.6912	0.0338	0.7250	0.0000	2,468.1116	2,468.1116	0.0898	0.0000	2,469.9967
Waste						0.0000	0.0000		0.0000	0.0000	28.3578	0.0000	28.3578	1.6759	0.0000	63.5517
Water						0.0000	0.0000		0.0000	0.0000	6.2774	113.3878	119.6652	0.6500	0.0163	138.3681
Total	**3.2747**	**2.5874**	**15.9908**	**0.0399**	**2.5867**	**0.3562**	**2.9429**	**0.6912**	**0.3534**	**1.0446**	**66.8833**	**3,140.0767**	**3,206.9601**	**2.5346**	**0.0247**	**3,267.8562**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Area	2.3063	0.0616	5.0498	3.2000e-003		0.3072	0.3072		0.3071	0.3071	32.2481	67.1048	99.3529	0.1012	2.1900e-003	102.1559
Energy	0.0180	0.1542	0.0656	9.8000e-004		0.0125	0.0125		0.0125	0.0125	0.0000	491.4725	491.4725	0.0178	6.2500e-003	493.7837
Mobile	0.9504	2.3716	10.8754	0.0357	2.5867	0.0366	2.6233	0.6912	0.0338	0.7250	0.0000	2,468.1116	2,468.1116	0.0898	0.0000	2,469.9967
Waste						0.0000	0.0000		0.0000	0.0000	28.3578	0.0000	28.3578	1.6759	0.0000	63.5517
Water						0.0000	0.0000		0.0000	0.0000	6.2774	113.3878	119.6652	0.6498	0.0163	138.3581
Total	**3.2747**	**2.5874**	**15.9908**	**0.0399**	**2.5867**	**0.3562**	**2.9429**	**0.6912**	**0.3534**	**1.0446**	**66.8833**	**3,140.0767**	**3,206.9601**	**2.5345**	**0.0247**	**3,267.8462**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2017	1/27/2017	5	20	
2	Site Preparation	Site Preparation	1/28/2017	2/3/2017	5	5	
3	Grading	Grading	2/4/2017	2/15/2017	5	8	
4	Trenching	Trenching	2/16/2017	3/1/2017	5	10	
5	Building Construction	Building Construction	3/2/2017	1/17/2018	5	230	
6	Paving	Paving	1/18/2018	2/12/2018	5	18	
7	Architectural Coating	Architectural Coating	2/13/2018	3/8/2018	5	18	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 614,968; Residential Outdoor: 204,989; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	0	8.00	162	0.38
Demolition	Rubber Tired Dozers	1	8.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Rubber Tired Dozers	0	8.00	255	0.40
Site Preparation	Scrapers	1	8.00	361	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Excavators	0	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Trenching	Trenchers	2	8.00	80	0.50
Trenching	Plate Compactors	2	8.00	8	0.43
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cranes	1	8.00	226	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	1,131.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	219.00	32.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	44.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1224	0.0000	0.1224	0.0185	0.0000	0.0185	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0272	0.2655	0.2084	2.4000e-004		0.0160	0.0160		0.0150	0.0150	0.0000	22.2587	22.2587	5.6500e-003	0.0000	22.3772
Total	**0.0272**	**0.2655**	**0.2084**	**2.4000e-004**	**0.1224**	**0.0160**	**0.1384**	**0.0185**	**0.0150**	**0.0335**	**0.0000**	**22.2587**	**22.2587**	**5.6500e-003**	**0.0000**	**22.3772**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0102	0.1504	0.1209	4.2000e-004	9.7000e-003	2.1500e-003	0.0119	2.6600e-003	1.9700e-003	4.6300e-003	0.0000	37.3667	37.3667	2.7000e-004	0.0000	37.3723
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-004	6.0000e-004	6.2400e-003	2.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.2366	1.2366	6.0000e-005	0.0000	1.2378
Total	**0.0106**	**0.1510**	**0.1271**	**4.4000e-004**	**0.0111**	**2.1600e-003**	**0.0133**	**3.0400e-003**	**1.9800e-003**	**5.0200e-003**	**0.0000**	**38.6033**	**38.6033**	**3.3000e-004**	**0.0000**	**38.6101**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0477	0.0000	0.0477	7.2200e-003	0.0000	7.2200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0272	0.2655	0.2084	2.4000e-004		0.0160	0.0160		0.0150	0.0150	0.0000	22.2586	22.2586	5.6500e-003	0.0000	22.3772
Total	**0.0272**	**0.2655**	**0.2084**	**2.4000e-004**	**0.0477**	**0.0160**	**0.0638**	**7.2200e-003**	**0.0150**	**0.0222**	**0.0000**	**22.2586**	**22.2586**	**5.6500e-003**	**0.0000**	**22.3772**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0102	0.1504	0.1209	4.2000e-004	9.7000e-003	2.1500e-003	0.0119	2.6600e-003	1.9700e-003	4.6300e-003	0.0000	37.3667	37.3667	2.7000e-004	0.0000	37.3723

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-004	6.0000e-004	6.2400e-003	2.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.2366	1.2366	6.0000e-005	0.0000	1.2378
Total	**0.0106**	**0.1510**	**0.1271**	**4.4000e-004**	**0.0111**	**2.1600e-003**	**0.0133**	**3.0400e-003**	**1.9800e-003**	**5.0200e-003**	**0.0000**	**38.6033**	**38.6033**	**3.3000e-004**	**0.0000**	**38.6101**

3.3 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.3300e-003	0.0717	0.0429	6.0000e-005		3.5000e-003	3.5000e-003		3.2200e-003	3.2200e-003	0.0000	5.5452	5.5452	1.7000e-003	0.0000	5.5809
Total	**6.3300e-003**	**0.0717**	**0.0429**	**6.0000e-005**	**0.0000**	**3.5000e-003**	**3.5000e-003**	**0.0000**	**3.2200e-003**	**3.2200e-003**	**0.0000**	**5.5452**	**5.5452**	**1.7000e-003**	**0.0000**	**5.5809**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	9.0000e-005	9.6000e-004	0.0000	2.2000e-004	0.0000	2.2000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1902	0.1902	1.0000e-005	0.0000	0.1904
Total	**6.0000e-005**	**9.0000e-005**	**9.6000e-004**	**0.0000**	**2.2000e-004**	**0.0000**	**2.2000e-004**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.1902**	**0.1902**	**1.0000e-005**	**0.0000**	**0.1904**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.3300e-003	0.0717	0.0429	6.0000e-005		3.5000e-003	3.5000e-003		3.2200e-003	3.2200e-003	0.0000	5.5452	5.5452	1.7000e-003	0.0000	5.5809
Total	**6.3300e-003**	**0.0717**	**0.0429**	**6.0000e-005**	**0.0000**	**3.5000e-003**	**3.5000e-003**	**0.0000**	**3.2200e-003**	**3.2200e-003**	**0.0000**	**5.5452**	**5.5452**	**1.7000e-003**	**0.0000**	**5.5809**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	9.0000e-005	9.6000e-004	0.0000	2.2000e-004	0.0000	2.2000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1902	0.1902	1.0000e-005	0.0000	0.1904
Total	**6.0000e-005**	**9.0000e-005**	**9.6000e-004**	**0.0000**	**2.2000e-004**	**0.0000**	**2.2000e-004**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.1902**	**0.1902**	**1.0000e-005**	**0.0000**	**0.1904**

3.4 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Fugitive Dust					0.0262	0.0000	0.0262	0.0135	0.0000	0.0135	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0108	0.1126	0.0759	8.0000e-005		6.2200e-003	6.2200e-003		5.7200e-003	5.7200e-003	0.0000	7.6370	7.6370	2.3400e-003	0.0000	7.6861
Total	**0.0108**	**0.1126**	**0.0759**	**8.0000e-005**	**0.0262**	**6.2200e-003**	**0.0324**	**0.0135**	**5.7200e-003**	**0.0192**	**0.0000**	**7.6370**	**7.6370**	**2.3400e-003**	**0.0000**	**7.6861**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	1.8000e-004	1.9200e-003	1.0000e-005	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3805	0.3805	2.0000e-005	0.0000	0.3809
Total	**1.2000e-004**	**1.8000e-004**	**1.9200e-003**	**1.0000e-005**	**4.4000e-004**	**0.0000**	**4.4000e-004**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**0.3805**	**0.3805**	**2.0000e-005**	**0.0000**	**0.3809**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0102	0.0000	0.0102	5.2500e-003	0.0000	5.2500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0108	0.1126	0.0759	8.0000e-005		6.2200e-003	6.2200e-003		5.7200e-003	5.7200e-003	0.0000	7.6369	7.6369	2.3400e-003	0.0000	7.6861

Total	**0.0108**	**0.1126**	**0.0759**	**8.0000e-005**	**0.0102**	**6.2200e-003**	**0.0164**	**5.2500e-003**	**5.7200e-003**	**0.0110**	**0.0000**	**7.6369**	**7.6369**	**2.3400e-003**	**0.0000**	**7.6861**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	1.8000e-004	1.9200e-003	1.0000e-005	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3805	0.3805	2.0000e-005	0.0000	0.3809
Total	**1.2000e-004**	**1.8000e-004**	**1.9200e-003**	**1.0000e-005**	**4.4000e-004**	**0.0000**	**4.4000e-004**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**0.3805**	**0.3805**	**2.0000e-005**	**0.0000**	**0.3809**

3.5 Trenching - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.3800e-003	0.0650	0.0422	6.0000e-005		4.9500e-003	4.9500e-003		4.5600e-003	4.5600e-003	0.0000	4.9794	4.9794	1.4600e-003	0.0000	5.0101
Total	**7.3800e-003**	**0.0650**	**0.0422**	**6.0000e-005**		**4.9500e-003**	**4.9500e-003**		**4.5600e-003**	**4.5600e-003**	**0.0000**	**4.9794**	**4.9794**	**1.4600e-003**	**0.0000**	**5.0101**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-004	3.0000e-004	3.1200e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.6183	0.6183	3.0000e-005	0.0000	0.6189
Total	**2.0000e-004**	**3.0000e-004**	**3.1200e-003**	**1.0000e-005**	**7.1000e-004**	**0.0000**	**7.2000e-004**	**1.9000e-004**	**0.0000**	**1.9000e-004**	**0.0000**	**0.6183**	**0.6183**	**3.0000e-005**	**0.0000**	**0.6189**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.3800e-003	0.0650	0.0422	6.0000e-005		4.9500e-003	4.9500e-003		4.5600e-003	4.5600e-003	0.0000	4.9794	4.9794	1.4600e-003	0.0000	5.0101
Total	**7.3800e-003**	**0.0650**	**0.0422**	**6.0000e-005**		**4.9500e-003**	**4.9500e-003**		**4.5600e-003**	**4.5600e-003**	**0.0000**	**4.9794**	**4.9794**	**1.4600e-003**	**0.0000**	**5.0101**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-004	3.0000e-004	3.1200e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.6183	0.6183	3.0000e-005	0.0000	0.6189
Total	**2.0000e-004**	**3.0000e-004**	**3.1200e-003**	**1.0000e-005**	**7.1000e-004**	**0.0000**	**7.2000e-004**	**1.9000e-004**	**0.0000**	**1.9000e-004**	**0.0000**	**0.6183**	**0.6183**	**3.0000e-005**	**0.0000**	**0.6189**

3.6 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3610	2.4802	1.7630	2.7000e-003		0.1586	0.1586		0.1519	0.1519	0.0000	229.8183	229.8183	0.0511	0.0000	230.8909
Total	**0.3610**	**2.4802**	**1.7630**	**2.7000e-003**		**0.1586**	**0.1586**		**0.1519**	**0.1519**	**0.0000**	**229.8183**	**229.8183**	**0.0511**	**0.0000**	**230.8909**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0299	0.2850	0.3875	7.5000e-004	0.0214	4.2700e-003	0.0256	6.1000e-003	3.9200e-003	0.0100	0.0000	66.9547	66.9547	4.8000e-004	0.0000	66.9647
Worker	0.0738	0.1092	1.1414	3.1000e-003	0.2609	1.8100e-003	0.2627	0.0693	1.6800e-003	0.0710	0.0000	226.0244	226.0244	0.0107	0.0000	226.2485
Total	**0.1036**	**0.3942**	**1.5289**	**3.8500e-003**	**0.2822**	**6.0800e-003**	**0.2883**	**0.0754**	**5.6000e-003**	**0.0810**	**0.0000**	**292.9791**	**292.9791**	**0.0112**	**0.0000**	**293.2132**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3610	2.4801	1.7630	2.7000e-003		0.1586	0.1586		0.1519	0.1519	0.0000	229.8180	229.8180	0.0511	0.0000	230.8906
Total	**0.3610**	**2.4801**	**1.7630**	**2.7000e-003**		**0.1586**	**0.1586**		**0.1519**	**0.1519**	**0.0000**	**229.8180**	**229.8180**	**0.0511**	**0.0000**	**230.8906**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0299	0.2850	0.3875	7.5000e-004	0.0214	4.2700e-003	0.0256	6.1000e-003	3.9200e-003	0.0100	0.0000	66.9547	66.9547	4.8000e-004	0.0000	66.9647
Worker	0.0738	0.1092	1.1414	3.1000e-003	0.2609	1.8100e-003	0.2627	0.0693	1.6800e-003	0.0710	0.0000	226.0244	226.0244	0.0107	0.0000	226.2485
Total	**0.1036**	**0.3942**	**1.5289**	**3.8500e-003**	**0.2822**	**6.0800e-003**	**0.2883**	**0.0754**	**5.6000e-003**	**0.0810**	**0.0000**	**292.9791**	**292.9791**	**0.0112**	**0.0000**	**293.2132**

3.6 Building Construction - 2018

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Off-Road	0.0189	0.1336	0.1018	1.6000e-004		8.1300e-003	8.1300e-003		7.7900e-003	7.7900e-003	0.0000	13.6639	13.6639	2.9400e-003	0.0000	13.7256
Total	**0.0189**	**0.1336**	**0.1018**	**1.6000e-004**		**8.1300e-003**	**8.1300e-003**		**7.7900e-003**	**7.7900e-003**	**0.0000**	**13.6639**	**13.6639**	**2.9400e-003**	**0.0000**	**13.7256**

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.6700e-003	0.0157	0.0222	4.0000e-005	1.2800e-003	2.4000e-004	1.5200e-003	3.7000e-004	2.2000e-004	5.9000e-004	0.0000	3.9430	3.9430	3.0000e-005	0.0000	3.9436
Worker	4.0200e-003	5.9700e-003	0.0625	1.9000e-004	0.0156	1.1000e-004	0.0157	4.1500e-003	1.0000e-004	4.2500e-003	0.0000	13.0329	13.0329	6.0000e-004	0.0000	13.0455
Total	**5.6900e-003**	**0.0216**	**0.0846**	**2.3000e-004**	**0.0169**	**3.5000e-004**	**0.0173**	**4.5200e-003**	**3.2000e-004**	**4.8400e-003**	**0.0000**	**16.9759**	**16.9759**	**6.3000e-004**	**0.0000**	**16.9890**

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Off-Road	0.0189	0.1336	0.1018	1.6000e-004		8.1300e-003	8.1300e-003		7.7900e-003	7.7900e-003	0.0000	13.6639	13.6639	2.9400e-003	0.0000	13.7255

Total	0.0189	0.1336	0.1018	1.6000e-004		8.1300e-003	8.1300e-003		7.7900e-003	7.7900e-003	0.0000	13.6639	13.6639	2.9400e-003	0.0000	13.7255

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.6700e-003	0.0157	0.0222	4.0000e-005	1.2800e-003	2.4000e-004	1.5200e-003	3.7000e-004	2.2000e-004	5.9000e-004	0.0000	3.9430	3.9430	3.0000e-005	0.0000	3.9436
Worker	4.0200e-003	5.9700e-003	0.0625	1.9000e-004	0.0156	1.1000e-004	0.0157	4.1500e-003	1.0000e-004	4.2500e-003	0.0000	13.0329	13.0329	6.0000e-004	0.0000	13.0455
Total	**5.6900e-003**	**0.0216**	**0.0846**	**2.3000e-004**	**0.0169**	**3.5000e-004**	**0.0173**	**4.5200e-003**	**3.2000e-004**	**4.8400e-003**	**0.0000**	**16.9759**	**16.9759**	**6.3000e-004**	**0.0000**	**16.9890**

3.7 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0102	0.1042	0.0890	1.3000e-004		6.0300e-003	6.0300e-003		5.5600e-003	5.5600e-003	0.0000	12.1321	12.1321	3.6900e-003	0.0000	12.2096
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0102**	**0.1042**	**0.0890**	**1.3000e-004**		**6.0300e-003**	**6.0300e-003**		**5.5600e-003**	**5.5600e-003**	**0.0000**	**12.1321**	**12.1321**	**3.6900e-003**	**0.0000**	**12.2096**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.3000e-004	4.9000e-004	5.1300e-003	2.0000e-005	1.2800e-003	1.0000e-005	1.2900e-003	3.4000e-004	1.0000e-005	3.5000e-004	0.0000	1.0712	1.0712	5.0000e-005	0.0000	1.0722
Total	**3.3000e-004**	**4.9000e-004**	**5.1300e-003**	**2.0000e-005**	**1.2800e-003**	**1.0000e-005**	**1.2900e-003**	**3.4000e-004**	**1.0000e-005**	**3.5000e-004**	**0.0000**	**1.0712**	**1.0712**	**5.0000e-005**	**0.0000**	**1.0722**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0102	0.1042	0.0890	1.3000e-004		6.0300e-003	6.0300e-003		5.5600e-003	5.5600e-003	0.0000	12.1321	12.1321	3.6900e-003	0.0000	12.2096
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0102**	**0.1042**	**0.0890**	**1.3000e-004**		**6.0300e-003**	**6.0300e-003**		**5.5600e-003**	**5.5600e-003**	**0.0000**	**12.1321**	**12.1321**	**3.6900e-003**	**0.0000**	**12.2096**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.3000e-004	4.9000e-004	5.1300e-003	2.0000e-005	1.2800e-003	1.0000e-005	1.2900e-003	3.4000e-004	1.0000e-005	3.5000e-004	0.0000	1.0712	1.0712	5.0000e-005	0.0000	1.0722
Total	**3.3000e-004**	**4.9000e-004**	**5.1300e-003**	**2.0000e-005**	**1.2800e-003**	**1.0000e-005**	**1.2900e-003**	**3.4000e-004**	**1.0000e-005**	**3.5000e-004**	**0.0000**	**1.0712**	**1.0712**	**5.0000e-005**	**0.0000**	**1.0722**

3.8 Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.1877					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6900e-003	0.0181	0.0167	3.0000e-005		1.3500e-003	1.3500e-003		1.3500e-003	1.3500e-003	0.0000	2.2979	2.2979	2.2000e-004	0.0000	2.3025
Total	**1.1904**	**0.0181**	**0.0167**	**3.0000e-005**		**1.3500e-003**	**1.3500e-003**		**1.3500e-003**	**1.3500e-003**	**0.0000**	**2.2979**	**2.2979**	**2.2000e-004**	**0.0000**	**2.3025**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1200e-003	1.6600e-003	0.0174	5.0000e-005	4.3500e-003	3.0000e-005	4.3800e-003	1.1500e-003	3.0000e-005	1.1800e-003	0.0000	3.6256	3.6256	1.7000e-004	0.0000	3.6291
Total	**1.1200e-003**	**1.6600e-003**	**0.0174**	**5.0000e-005**	**4.3500e-003**	**3.0000e-005**	**4.3800e-003**	**1.1500e-003**	**3.0000e-005**	**1.1800e-003**	**0.0000**	**3.6256**	**3.6256**	**1.7000e-004**	**0.0000**	**3.6291**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.1877					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6900e-003	0.0181	0.0167	3.0000e-005		1.3500e-003	1.3500e-003		1.3500e-003	1.3500e-003	0.0000	2.2979	2.2979	2.2000e-004	0.0000	2.3025
Total	**1.1904**	**0.0181**	**0.0167**	**3.0000e-005**		**1.3500e-003**	**1.3500e-003**		**1.3500e-003**	**1.3500e-003**	**0.0000**	**2.2979**	**2.2979**	**2.2000e-004**	**0.0000**	**2.3025**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1200e-003	1.6600e-003	0.0174	5.0000e-005	4.3500e-003	3.0000e-005	4.3800e-003	1.1500e-003	3.0000e-005	1.1800e-003	0.0000	3.6256	3.6256	1.7000e-004	0.0000	3.6291
Total	**1.1200e-003**	**1.6600e-003**	**0.0174**	**5.0000e-005**	**4.3500e-003**	**3.0000e-005**	**4.3800e-003**	**1.1500e-003**	**3.0000e-005**	**1.1800e-003**	**0.0000**	**3.6256**	**3.6256**	**1.7000e-004**	**0.0000**	**3.6291**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.9504	2.3716	10.8754	0.0357	2.5867	0.0366	2.6233	0.6912	0.0338	0.7250	0.0000	2,468.1116	2,468.1116	0.0898	0.0000	2,469.9967
Unmitigated	0.9504	2.3716	10.8754	0.0357	2.5867	0.0366	2.6233	0.6912	0.0338	0.7250	0.0000	2,468.1116	2,468.1116	0.0898	0.0000	2,469.9967

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	2,001.32	2,174.42	1843.40	6,846,217	6,846,217
Total	2,001.32	2,174.42	1,843.40	6,846,217	6,846,217

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.508857	0.056420	0.193204	0.150829	0.041936	0.005921	0.015893	0.015805	0.001454	0.002159	0.004747	0.000498	0.002277

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	312.9408	312.9408	0.0144	2.9800e-003	314.1655
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	312.9408	312.9408	0.0144	2.9800e-003	314.1655
NaturalGas Mitigated	0.0180	0.1542	0.0656	9.8000e-004		0.0125	0.0125		0.0125	0.0125	0.0000	178.5317	178.5317	3.4200e-003	3.2700e-003	179.6183
NaturalGas Unmitigated	0.0180	0.1542	0.0656	9.8000e-004		0.0125	0.0125		0.0125	0.0125	0.0000	178.5317	178.5317	3.4200e-003	3.2700e-003	179.6183

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	3.34556e+006	0.0180	0.1542	0.0656	9.8000e-004		0.0125	0.0125		0.0125	0.0125	0.0000	178.5317	178.5317	3.4200e-003	3.2700e-003	179.6183
Total		**0.0180**	**0.1542**	**0.0656**	**9.8000e-004**		**0.0125**	**0.0125**		**0.0125**	**0.0125**	**0.0000**	**178.5317**	**178.5317**	**3.4200e-003**	**3.2700e-003**	**179.6183**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					

Apartments Low Rise	3.34556e+006	0.0180	0.1542	0.0656	9.8000e-004		0.0125	0.0125		0.0125	0.0125	0.0000	178.5317	178.5317	3.4200e-003	3.2700e-003	179.6183
Total		**0.0180**	**0.1542**	**0.0656**	**9.8000e-004**		**0.0125**	**0.0125**		**0.0125**	**0.0125**	**0.0000**	**178.5317**	**178.5317**	**3.4200e-003**	**3.2700e-003**	**179.6183**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	1.09356e+006	312.9408	0.0144	2.9800e-003	314.1655
Total		**312.9408**	**0.0144**	**2.9800e-003**	**314.1655**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	1.09356e+006	312.9408	0.0144	2.9800e-003	314.1655
Total		**312.9408**	**0.0144**	**2.9800e-003**	**314.1655**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.3063	0.0616	5.0498	3.2000e-003		0.3072	0.3072		0.3071	0.3071	32.2481	67.1048	99.3529	0.1012	2.1900e-003	102.1559
Unmitigated	2.3063	0.0616	5.0498	3.2000e-003		0.3072	0.3072		0.3071	0.3071	32.2481	67.1048	99.3529	0.1012	2.1900e-003	102.1559

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1188					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.0974					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.9944	0.0252	1.9075	3.0300e-003		0.2899	0.2899		0.2899	0.2899	32.2481	61.9890	94.2371	0.0962	2.1900e-003	96.9353
Landscaping	0.0957	0.0363	3.1423	1.7000e-004		0.0173	0.0173		0.0173	0.0173	0.0000	5.1158	5.1158	4.9900e-003	0.0000	5.2206
Total	**2.3063**	**0.0616**	**5.0498**	**3.2000e-003**		**0.3072**	**0.3072**		**0.3071**	**0.3071**	**32.2481**	**67.1048**	**99.3529**	**0.1012**	**2.1900e-003**	**102.1559**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1188					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.0974					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.9944	0.0252	1.9075	3.0300e-003		0.2899	0.2899		0.2899	0.2899	32.2481	61.9890	94.2371	0.0962	2.1900e-003	96.9353
Landscaping	0.0957	0.0363	3.1423	1.7000e-004		0.0173	0.0173		0.0173	0.0173	0.0000	5.1158	5.1158	4.9900e-003	0.0000	5.2206
Total	**2.3063**	**0.0616**	**5.0498**	**3.2000e-003**		**0.3072**	**0.3072**		**0.3071**	**0.3071**	**32.2481**	**67.1048**	**99.3529**	**0.1012**	**2.1900e-003**	**102.1559**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	119.6652	0.6498	0.0163	138.3581
Unmitigated	119.6652	0.6500	0.0163	138.3681

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			

Apartments Low Rise	19.7866 / 12.4742	119.6652	0.6500	0.0163	138.3681
Total		**119.6652**	**0.6500**	**0.0163**	**138.3681**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	19.7866 / 12.4742	119.6652	0.6498	0.0163	138.3581
Total		**119.6652**	**0.6498**	**0.0163**	**138.3581**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	28.3578	1.6759	0.0000	63.5517
Unmitigated	28.3578	1.6759	0.0000	63.5517

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	139.7	28.3578	1.6759	0.0000	63.5517
Total		**28.3578**	**1.6759**	**0.0000**	**63.5517**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	139.7	28.3578	1.6759	0.0000	63.5517
Total		**28.3578**	**1.6759**	**0.0000**	**63.5517**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Phase 2 - Student Housing Project

Orange County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	303.69	Dwelling Unit	3.50	303,688.00	869

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 2.2 **Precipitation Freq (Days)** 30

Climate Zone 8 **Operational Year** 2020

Utility Company Southern California Edison

CO2 Intensity (lb/MWhr) 630.89 **CH4 Intensity (lb/MWhr)** 0.029 **N2O Intensity (lb/MWhr)** 0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - modified; Student Housing Project is multiple stories - according to HPI will be 3.5 acres

Construction Phase - modified

Off-road Equipment -

Off-road Equipment - modified

Off-road Equipment - modified to account for 3.5 acre footprint

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Trips and VMT -

Demolition - Assuming denisty of pavement is 150 lbs/ft3, and pavement is 1 foot deep

Architectural Coating - scaqmd rule 1113

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblGrading	AcresOfGrading	7.50	0.00
tblLandUse	LandUseSquareFeet	303,690.00	303,688.00
tblLandUse	LotAcreage	18.98	3.50
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.41	0.41
tblOffRoadEquipment	LoadFactor	0.48	0.48
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Scrapers
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00

tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblProjectCharacteristics	OperationalYear	2014	2020

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	4.2774	40.8929	32.2928	0.0678	13.3655	1.8189	15.1843	3.3971	1.6979	4.8285	0.0000	6,718.4960	6,718.4960	0.7531	0.0000	6,734.3114
2018	132.3873	23.6851	28.6279	0.0615	2.6479	1.3045	3.9524	0.7062	1.2484	1.9546	0.0000	5,287.4787	5,287.4787	0.6039	0.0000	5,300.1610
Total	**136.6647**	**64.5780**	**60.9206**	**0.1293**	**16.0134**	**3.1234**	**19.1368**	**4.1033**	**2.9463**	**6.7831**	**0.0000**	**12,005.9746**	**12,005.9746**	**1.3570**	**0.0000**	**12,034.4723**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					

2017	4.2774	40.8929	32.2928	0.0678	5.9022	1.8189	7.7211	1.3430	1.6979	2.7743	0.0000	6,718.4960	6,718.4960	0.7531	0.0000	6,734.3114
2018	132.3873	23.6851	28.6279	0.0615	2.6479	1.3045	3.9524	0.7062	1.2484	1.9546	0.0000	5,287.4787	5,287.4787	0.6039	0.0000	5,300.1610
Total	**136.6647**	**64.5780**	**60.9206**	**0.1293**	**8.5501**	**3.1234**	**11.6735**	**2.0491**	**2.9463**	**4.7289**	**0.0000**	**12,005.9746**	**12,005.9746**	**1.3570**	**0.0000**	**12,034.4723**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**46.61**	**0.00**	**39.00**	**50.06**	**0.00**	**30.28**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

<u>Unmitigated Operational</u>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	86.9836	2.3092	177.7402	0.2441		23.3298	23.3298		23.3262	23.3262	2,843.7964	5,511.6080	8,355.4044	8.5248	0.1931	8,594.2695
Energy	0.0989	0.8447	0.3595	5.3900e-003		0.0683	0.0683		0.0683	0.0683		1,078.3428	1,078.3428	0.0207	0.0198	1,084.9054
Mobile	5.6984	13.1361	65.2045	0.2202	15.7025	0.2183	15.9208	4.1901	0.2015	4.3916		16,768.0222	16,768.0222	0.5906		16,780.4257
Total	**92.7808**	**16.2900**	**243.3042**	**0.4697**	**15.7025**	**23.6164**	**39.3189**	**4.1901**	**23.5960**	**27.7860**	**2,843.7964**	**23,357.9729**	**26,201.7693**	**9.1361**	**0.2128**	**26,459.6005**

<u>Mitigated Operational</u>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	86.9836	2.3092	177.7402	0.2441		23.3298	23.3298		23.3262	23.3262	2,843.7964	5,511.6080	8,355.4044	8.5248	0.1931	8,594.2695

Energy	0.0989	0.8447	0.3595	5.3900e-003		0.0683	0.0683		0.0683	0.0683		1,078.3428	1,078.3428	0.0207	0.0198	1,084.9054
Mobile	5.6984	13.1361	65.2045	0.2202	15.7025	0.2183	15.9208	4.1901	0.2015	4.3916		16,768.0222	16,768.0222	0.5906		16,780.4257
Total	**92.7808**	**16.2900**	**243.3042**	**0.4697**	**15.7025**	**23.6164**	**39.3189**	**4.1901**	**23.5960**	**27.7860**	**2,843.7964**	**23,357.9729**	**26,201.7693**	**9.1361**	**0.2128**	**26,459.6005**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2017	1/27/2017	5	20	
2	Site Preparation	Site Preparation	1/28/2017	2/3/2017	5	5	
3	Grading	Grading	2/4/2017	2/15/2017	5	8	
4	Trenching	Trenching	2/16/2017	3/1/2017	5	10	
5	Building Construction	Building Construction	3/2/2017	1/17/2018	5	230	
6	Paving	Paving	1/18/2018	2/12/2018	5	18	
7	Architectural Coating	Architectural Coating	2/13/2018	3/8/2018	5	18	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 614,968; Residential Outdoor: 204,989; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	0	8.00	162	0.38

Demolition	Rubber Tired Dozers	1	8.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Rubber Tired Dozers	0	8.00	255	0.40
Site Preparation	Scrapers	1	8.00	361	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Excavators	0	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Trenching	Trenchers	2	8.00	80	0.50
Trenching	Plate Compactors	2	8.00	8	0.43
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cranes	1	8.00	226	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	1,131.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	219.00	32.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	44.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					12.2349	0.0000	12.2349	1.8525	0.0000	1.8525			0.0000			0.0000
Off-Road	2.7177	26.5484	20.8421	0.0244		1.6034	1.6034		1.4997	1.4997		2,453.5974	2,453.5974	0.6223		2,466.6663
Total	**2.7177**	**26.5484**	**20.8421**	**0.0244**	**12.2349**	**1.6034**	**13.8383**	**1.8525**	**1.4997**	**3.3522**		**2,453.5974**	**2,453.5974**	**0.6223**		**2,466.6663**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.9747	14.2915	10.7997	0.0416	0.9853	0.2145	1.1997	0.2698	0.1973	0.4671		4,123.1038	4,123.1038	0.0292		4,123.7175
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Worker	0.0411	0.0529	0.6510	1.7600e-003	0.1453	9.9000e-004	0.1463	0.0385	9.2000e-004	0.0395		141.7948	141.7948	6.4400e-003		141.9300
Total	**1.0158**	**14.3444**	**11.4507**	**0.0433**	**1.1306**	**0.2155**	**1.3460**	**0.3083**	**0.1982**	**0.5065**		**4,264.8986**	**4,264.8986**	**0.0357**		**4,265.6474**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.7716	0.0000	4.7716	0.7225	0.0000	0.7225			0.0000			0.0000
Off-Road	2.7177	26.5484	20.8421	0.0244		1.6034	1.6034		1.4997	1.4997	0.0000	2,453.5974	2,453.5974	0.6223		2,466.6663
Total	**2.7177**	**26.5484**	**20.8421**	**0.0244**	**4.7716**	**1.6034**	**6.3750**	**0.7225**	**1.4997**	**2.2221**	**0.0000**	**2,453.5974**	**2,453.5974**	**0.6223**		**2,466.6663**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.9747	14.2915	10.7997	0.0416	0.9853	0.2145	1.1997	0.2698	0.1973	0.4671		4,123.1038	4,123.1038	0.0292		4,123.7175
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0411	0.0529	0.6510	1.7600e-003	0.1453	9.9000e-004	0.1463	0.0385	9.2000e-004	0.0395		141.7948	141.7948	6.4400e-003		141.9300
Total	**1.0158**	**14.3444**	**11.4507**	**0.0433**	**1.1306**	**0.2155**	**1.3460**	**0.3083**	**0.1982**	**0.5065**		**4,264.8986**	**4,264.8986**	**0.0357**		**4,265.6474**

3.3 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	2.5324	28.6740	17.1667	0.0239		1.3983	1.3983		1.2864	1.2864		2,445.0311	2,445.0311	0.7492		2,460.7633
Total	**2.5324**	**28.6740**	**17.1667**	**0.0239**	**0.0000**	**1.3983**	**1.3983**	**0.0000**	**1.2864**	**1.2864**		**2,445.0311**	**2,445.0311**	**0.7492**		**2,460.7633**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0253	0.0326	0.4006	1.0900e-003	0.0894	6.1000e-004	0.0900	0.0237	5.6000e-004	0.0243		87.2583	87.2583	3.9600e-003		87.3415
Total	**0.0253**	**0.0326**	**0.4006**	**1.0900e-003**	**0.0894**	**6.1000e-004**	**0.0900**	**0.0237**	**5.6000e-004**	**0.0243**		**87.2583**	**87.2583**	**3.9600e-003**		**87.3415**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	2.5324	28.6740	17.1667	0.0239		1.3983	1.3983		1.2864	1.2864	0.0000	2,445.0311	2,445.0311	0.7492		2,460.7633
Total	**2.5324**	**28.6740**	**17.1667**	**0.0239**	**0.0000**	**1.3983**	**1.3983**	**0.0000**	**1.2864**	**1.2864**	**0.0000**	**2,445.0311**	**2,445.0311**	**0.7492**		**2,460.7633**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0253	0.0326	0.4006	1.0900e-003	0.0894	6.1000e-004	0.0900	0.0237	5.6000e-004	0.0243		87.2583	87.2583	3.9600e-003		87.3415
Total	**0.0253**	**0.0326**	**0.4006**	**1.0900e-003**	**0.0894**	**6.1000e-004**	**0.0900**	**0.0237**	**5.6000e-004**	**0.0243**		**87.2583**	**87.2583**	**3.9600e-003**		**87.3415**

3.4 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.6973	28.1608	18.9679	0.0206		1.5550	1.5550		1.4306	1.4306		2,104.5737	2,104.5737	0.6448		2,118.1153
Total	**2.6973**	**28.1608**	**18.9679**	**0.0206**	**6.5523**	**1.5550**	**8.1074**	**3.3675**	**1.4306**	**4.7981**		**2,104.5737**	**2,104.5737**	**0.6448**		**2,118.1153**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0316	0.0407	0.5007	1.3600e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		109.0729	109.0729	4.9500e-003		109.1769
Total	**0.0316**	**0.0407**	**0.5007**	**1.3600e-003**	**0.1118**	**7.6000e-004**	**0.1125**	**0.0296**	**7.1000e-004**	**0.0304**		**109.0729**	**109.0729**	**4.9500e-003**		**109.1769**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000			0.0000
Off-Road	2.6973	28.1608	18.9679	0.0206		1.5550	1.5550		1.4306	1.4306	0.0000	2,104.5737	2,104.5737	0.6448		2,118.1153
Total	**2.6973**	**28.1608**	**18.9679**	**0.0206**	**2.5554**	**1.5550**	**4.1104**	**1.3133**	**1.4306**	**2.7440**	**0.0000**	**2,104.5737**	**2,104.5737**	**0.6448**		**2,118.1153**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0316	0.0407	0.5007	1.3600e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		109.0729	109.0729	4.9500e-003		109.1769
Total	**0.0316**	**0.0407**	**0.5007**	**1.3600e-003**	**0.1118**	**7.6000e-004**	**0.1125**	**0.0296**	**7.1000e-004**	**0.0304**		**109.0729**	**109.0729**	**4.9500e-003**		**109.1769**

3.5 Trenching - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4756	13.0047	8.4321	0.0110		0.9894	0.9894		0.9118	0.9118		1,097.7642	1,097.7642	0.3224		1,104.5343
Total	**1.4756**	**13.0047**	**8.4321**	**0.0110**		**0.9894**	**0.9894**		**0.9118**	**0.9118**		**1,097.7642**	**1,097.7642**	**0.3224**		**1,104.5343**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0411	0.0529	0.6510	1.7600e-003	0.1453	9.9000e-004	0.1463	0.0385	9.2000e-004	0.0395		141.7948	141.7948	6.4400e-003		141.9300

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Total	**0.0411**	**0.0529**	**0.6510**	**1.7600e-003**	**0.1453**	**9.9000e-004**	**0.1463**	**0.0385**	**9.2000e-004**	**0.0395**		**141.7948**	**141.7948**	**6.4400e-003**		**141.9300**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4756	13.0047	8.4321	0.0110		0.9894	0.9894		0.9118	0.9118	0.0000	1,097.7642	1,097.7642	0.3224		1,104.5343
Total	**1.4756**	**13.0047**	**8.4321**	**0.0110**		**0.9894**	**0.9894**		**0.9118**	**0.9118**	**0.0000**	**1,097.7642**	**1,097.7642**	**0.3224**		**1,104.5343**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0411	0.0529	0.6510	1.7600e-003	0.1453	9.9000e-004	0.1463	0.0385	9.2000e-004	0.0395		141.7948	141.7948	6.4400e-003		141.9300
Total	**0.0411**	**0.0529**	**0.6510**	**1.7600e-003**	**0.1453**	**9.9000e-004**	**0.1463**	**0.0385**	**9.2000e-004**	**0.0395**		**141.7948**	**141.7948**	**6.4400e-003**		**141.9300**

3.6 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.3275	22.8585	16.2492	0.0249		1.4621	1.4621		1.3998	1.3998		2,334.8503	2,334.8503	0.5189		2,345.7479
Total	**3.3275**	**22.8585**	**16.2492**	**0.0249**		**1.4621**	**1.4621**		**1.3998**	**1.3998**		**2,334.8503**	**2,334.8503**	**0.5189**		**2,345.7479**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2581	2.5184	3.0771	6.9100e-003	0.2000	0.0392	0.2392	0.0570	0.0360	0.0930		682.6535	682.6535	4.7700e-003		682.7537
Worker	0.6918	0.8913	10.9663	0.0297	2.4479	0.0167	2.4646	0.6492	0.0155	0.6646		2,388.6968	2,388.6968	0.1084		2,390.9739
Total	**0.9499**	**3.4097**	**14.0433**	**0.0366**	**2.6479**	**0.0559**	**2.7038**	**0.7062**	**0.0515**	**0.7576**		**3,071.3502**	**3,071.3502**	**0.1132**		**3,073.7276**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	3.3275	22.8585	16.2492	0.0249		1.4621	1.4621		1.3998	1.3998	0.0000	2,334.8503	2,334.8503	0.5189		2,345.7479
Total	**3.3275**	**22.8585**	**16.2492**	**0.0249**		**1.4621**	**1.4621**		**1.3998**	**1.3998**	**0.0000**	**2,334.8503**	**2,334.8503**	**0.5189**		**2,345.7479**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2581	2.5184	3.0771	6.9100e-003	0.2000	0.0392	0.2392	0.0570	0.0360	0.0930		682.6535	682.6535	4.7700e-003		682.7537
Worker	0.6918	0.8913	10.9663	0.0297	2.4479	0.0167	2.4646	0.6492	0.0155	0.6646		2,388.6968	2,388.6968	0.1084		2,390.9739
Total	**0.9499**	**3.4097**	**14.0433**	**0.0366**	**2.6479**	**0.0559**	**2.7038**	**0.7062**	**0.0515**	**0.7576**		**3,071.3502**	**3,071.3502**	**0.1132**		**3,073.7276**

3.6 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9004	20.5600	15.6637	0.0249		1.2511	1.2511		1.1992	1.1992		2,317.2089	2,317.2089	0.4980		2,327.6664
Total	**2.9004**	**20.5600**	**15.6637**	**0.0249**		**1.2511**	**1.2511**		**1.1992**	**1.1992**		**2,317.2089**	**2,317.2089**	**0.4980**		**2,327.6664**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2417	2.3117	2.9210	6.9000e-003	0.2000	0.0369	0.2369	0.0570	0.0339	0.0909		671.0637	671.0637	4.7500e-003		671.1633
Worker	0.6314	0.8133	10.0432	0.0297	2.4479	0.0165	2.4644	0.6492	0.0153	0.6645		2,299.2062	2,299.2062	0.1012		2,301.3312
Total	**0.8731**	**3.1251**	**12.9641**	**0.0366**	**2.6479**	**0.0534**	**2.7013**	**0.7062**	**0.0492**	**0.7554**		**2,970.2698**	**2,970.2698**	**0.1059**		**2,972.4946**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9004	20.5600	15.6637	0.0249		1.2511	1.2511		1.1992	1.1992	0.0000	2,317.2089	2,317.2089	0.4980		2,327.6664
Total	**2.9004**	**20.5600**	**15.6637**	**0.0249**		**1.2511**	**1.2511**		**1.1992**	**1.1992**	**0.0000**	**2,317.2089**	**2,317.2089**	**0.4980**		**2,327.6664**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2417	2.3117	2.9210	6.9000e-003	0.2000	0.0369	0.2369	0.0570	0.0339	0.0909		671.0637	671.0637	4.7500e-003		671.1633
Worker	0.6314	0.8133	10.0432	0.0297	2.4479	0.0165	2.4644	0.6492	0.0153	0.6645		2,299.2062	2,299.2062	0.1012		2,301.3312
Total	**0.8731**	**3.1251**	**12.9641**	**0.0366**	**2.6479**	**0.0534**	**2.7013**	**0.7062**	**0.0492**	**0.7554**		**2,970.2698**	**2,970.2698**	**0.1059**		**2,972.4946**

3.7 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1306	11.5793	9.8923	0.0150		0.6701	0.6701		0.6177	0.6177		1,485.9270	1,485.9270	0.4521		1,495.4213
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1306**	**11.5793**	**9.8923**	**0.0150**		**0.6701**	**0.6701**		**0.6177**	**0.6177**		**1,485.9270**	**1,485.9270**	**0.4521**		**1,495.4213**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0375	0.0483	0.5962	1.7600e-003	0.1453	9.8000e-004	0.1463	0.0385	9.1000e-004	0.0395		136.4826	136.4826	6.0100e-003		136.6087

Total	0.0375	0.0483	0.5962	1.7600e-003	0.1453	9.8000e-004	0.1463	0.0385	9.1000e-004	0.0395		136.4826	136.4826	6.0100e-003		136.6087

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1306	11.5793	9.8923	0.0150		0.6701	0.6701		0.6177	0.6177	0.0000	1,485.9270	1,485.9270	0.4521		1,495.4213
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1306**	**11.5793**	**9.8923**	**0.0150**		**0.6701**	**0.6701**		**0.6177**	**0.6177**	**0.0000**	**1,485.9270**	**1,485.9270**	**0.4521**		**1,495.4213**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0375	0.0483	0.5962	1.7600e-003	0.1453	9.8000e-004	0.1463	0.0385	9.1000e-004	0.0395		136.4826	136.4826	6.0100e-003		136.6087
Total	**0.0375**	**0.0483**	**0.5962**	**1.7600e-003**	**0.1453**	**9.8000e-004**	**0.1463**	**0.0385**	**9.1000e-004**	**0.0395**		**136.4826**	**136.4826**	**6.0100e-003**		**136.6087**

3.8 Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	131.9618					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.0102
Total	**132.2604**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**		**281.4485**	**281.4485**	**0.0267**		**282.0102**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1269	0.1634	2.0178	5.9700e-003	0.4918	3.3200e-003	0.4951	0.1304	3.0700e-003	0.1335		461.9410	461.9410	0.0203		462.3679
Total	**0.1269**	**0.1634**	**2.0178**	**5.9700e-003**	**0.4918**	**3.3200e-003**	**0.4951**	**0.1304**	**3.0700e-003**	**0.1335**		**461.9410**	**461.9410**	**0.0203**		**462.3679**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Archit. Coating	131.9618					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.0102
Total	**132.2604**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**	**0.0000**	**281.4485**	**281.4485**	**0.0267**		**282.0102**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1269	0.1634	2.0178	5.9700e-003	0.4918	3.3200e-003	0.4951	0.1304	3.0700e-003	0.1335		461.9410	461.9410	0.0203		462.3679
Total	**0.1269**	**0.1634**	**2.0178**	**5.9700e-003**	**0.4918**	**3.3200e-003**	**0.4951**	**0.1304**	**3.0700e-003**	**0.1335**		**461.9410**	**461.9410**	**0.0203**		**462.3679**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	5.6984	13.1361	65.2045	0.2202	15.7025	0.2183	15.9208	4.1901	0.2015	4.3916		16,768.0222	16,768.0222	0.5906		16,780.4257
Unmitigated	5.6984	13.1361	65.2045	0.2202	15.7025	0.2183	15.9208	4.1901	0.2015	4.3916		16,768.0222	16,768.0222	0.5906		16,780.4257

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	2,001.32	2,174.42	1843.40	6,846,217	6,846,217
Total	2,001.32	2,174.42	1,843.40	6,846,217	6,846,217

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.508857	0.056420	0.193204	0.150829	0.041936	0.005921	0.015893	0.015805	0.001454	0.002159	0.004747	0.000498	0.002277

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0989	0.8447	0.3595	5.3900e-003		0.0683	0.0683		0.0683	0.0683		1,078.3428	1,078.3428	0.0207	0.0198	1,084.9054
NaturalGas Unmitigated	0.0989	0.8447	0.3595	5.3900e-003		0.0683	0.0683		0.0683	0.0683		1,078.3428	1,078.3428	0.0207	0.0198	1,084.9054

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	9165.91	0.0989	0.8447	0.3595	5.3900e-003		0.0683	0.0683		0.0683	0.0683		1,078.3428	1,078.3428	0.0207	0.0198	1,084.9054
Total		**0.0989**	**0.8447**	**0.3595**	**5.3900e-003**		**0.0683**	**0.0683**		**0.0683**	**0.0683**		**1,078.3428**	**1,078.3428**	**0.0207**	**0.0198**	**1,084.9054**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	9.16591	0.0989	0.8447	0.3595	5.3900e-003		0.0683	0.0683		0.0683	0.0683		1,078.3428	1,078.3428	0.0207	0.0198	1,084.9054
Total		**0.0989**	**0.8447**	**0.3595**	**5.3900e-003**		**0.0683**	**0.0683**		**0.0683**	**0.0683**		**1,078.3428**	**1,078.3428**	**0.0207**	**0.0198**	**1,084.9054**

6.0 Area Detail

6.1 Mitigation Measures Area

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Mitigated	86.9836	2.3092	177.7402	0.2441		23.3298	23.3298		23.3262	23.3262	2,843.7964	5,511.6080	8,355.4044	8.5248	0.1931	8,594.2695
Unmitigated	86.9836	2.3092	177.7402	0.2441		23.3298	23.3298		23.3262	23.3262	2,843.7964	5,511.6080	8,355.4044	8.5248	0.1931	8,594.2695

6.2 Area by SubCategory

Unmitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Architectural Coating	0.6508					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.0130					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	79.5543	2.0185	152.6021	0.2428		23.1916	23.1916		23.1880	23.1880	2,843.7964	5,466.4941	8,310.2905	8.4808	0.1931	8,548.2318
Landscaping	0.7655	0.2907	25.1381	1.3200e-003		0.1382	0.1382		0.1382	0.1382		45.1139	45.1139	0.0440		46.0377
Total	**86.9836**	**2.3092**	**177.7402**	**0.2441**		**23.3298**	**23.3298**		**23.3262**	**23.3262**	**2,843.7964**	**5,511.6080**	**8,355.4044**	**8.5248**	**0.1931**	**8,594.2695**

Mitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Architectural Coating	0.6508					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Consumer Products	6.0130					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	79.5543	2.0185	152.6021	0.2428		23.1916	23.1916		23.1880	23.1880	2,843.7964	5,466.4941	8,310.2905	8.4808	0.1931	8,548.2318
Landscaping	0.7655	0.2907	25.1381	1.3200e-003		0.1382	0.1382		0.1382	0.1382		45.1139	45.1139	0.0440		46.0377
Total	**86.9836**	**2.3092**	**177.7402**	**0.2441**		**23.3298**	**23.3298**		**23.3262**	**23.3262**	**2,843.7964**	**5,511.6080**	**8,355.4044**	**8.5248**	**0.1931**	**8,594.2695**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Phase 2 - Student Housing Project

Orange County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	303.69	Dwelling Unit	3.50	303,688.00	869

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 2.2 **Precipitation Freq (Days)** 30

Climate Zone 8 **Operational Year** 2020

Utility Company Southern California Edison

CO2 Intensity (lb/MWhr) 630.89 **CH4 Intensity (lb/MWhr)** 0.029 **N2O Intensity (lb/MWhr)** 0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - modified; Student Housing Project is multiple stories - according to HPI will be 3.5 acres

Construction Phase - modified

Off-road Equipment -

Off-road Equipment - modified

Off-road Equipment - modified to account for 3.5 acre footprint

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Trips and VMT -

Demolition - Assuming denisty of pavement is 150 lbs/ft3, and pavement is 1 foot deep

Architectural Coating - scaqmd rule 1113

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblGrading	AcresOfGrading	7.50	0.00
tblLandUse	LandUseSquareFeet	303,690.00	303,688.00
tblLandUse	LotAcreage	18.98	3.50
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.41	0.41
tblOffRoadEquipment	LoadFactor	0.48	0.48
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Scrapers
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00

tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblProjectCharacteristics	OperationalYear	2014	2020

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	4.3399	41.3869	33.9255	0.0676	13.3655	1.8194	15.1848	3.3971	1.6983	4.8285	0.0000	6,701.1506	6,701.1506	0.7531	0.0000	6,716.9660
2018	132.3936	23.8181	28.6348	0.0599	2.6479	1.3049	3.9528	0.7062	1.2488	1.9549	0.0000	5,159.9408	5,159.9408	0.6041	0.0000	5,172.6263
Total	**136.7335**	**65.2050**	**62.5603**	**0.1274**	**16.0134**	**3.1243**	**19.1376**	**4.1033**	**2.9471**	**6.7834**	**0.0000**	**11,861.0913**	**11,861.0913**	**1.3572**	**0.0000**	**11,889.5923**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					

2017	4.3399	41.3869	33.9255	0.0676	5.9022	1.8194	7.7216	1.3430	1.6983	2.7743	0.0000	6,701.1506	6,701.1506	0.7531	0.0000	6,716.9660
2018	132.3936	23.8181	28.6348	0.0599	2.6479	1.3049	3.9528	0.7062	1.2488	1.9549	0.0000	5,159.9408	5,159.9408	0.6041	0.0000	5,172.6263
Total	**136.7335**	**65.2050**	**62.5603**	**0.1274**	**8.5501**	**3.1243**	**11.6743**	**2.0491**	**2.9471**	**4.7292**	**0.0000**	**11,861.0913**	**11,861.0913**	**1.3572**	**0.0000**	**11,889.5923**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**46.61**	**0.00**	**39.00**	**50.06**	**0.00**	**30.28**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	86.9836	2.3092	177.7402	0.2441		23.3298	23.3298		23.3262	23.3262	2,843.7964	5,511.6080	8,355.4044	8.5248	0.1931	8,594.2695
Energy	0.0989	0.8447	0.3595	5.3900e-003		0.0683	0.0683		0.0683	0.0683		1,078.3428	1,078.3428	0.0207	0.0198	1,084.9054
Mobile	5.9903	13.8709	64.4048	0.2103	15.7025	0.2189	15.9214	4.1901	0.2021	4.3921		16,044.1493	16,044.1493	0.5910		16,056.5605
Total	**93.0727**	**17.0248**	**242.5044**	**0.4598**	**15.7025**	**23.6171**	**39.3195**	**4.1901**	**23.5966**	**27.7866**	**2,843.7964**	**22,634.1000**	**25,477.8964**	**9.1365**	**0.2128**	**25,735.7354**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	86.9836	2.3092	177.7402	0.2441		23.3298	23.3298		23.3262	23.3262	2,843.7964	5,511.6080	8,355.4044	8.5248	0.1931	8,594.2695

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Energy	0.0989	0.8447	0.3595	5.3900e-003		0.0683	0.0683		0.0683	0.0683		1,078.3428	1,078.3428	0.0207	0.0198	1,084.9054
Mobile	5.9903	13.8709	64.4048	0.2103	15.7025	0.2189	15.9214	4.1901	0.2021	4.3921		16,044.1493	16,044.1493	0.5910		16,056.5605
Total	**93.0727**	**17.0248**	**242.5044**	**0.4598**	**15.7025**	**23.6171**	**39.3195**	**4.1901**	**23.5966**	**27.7866**	**2,843.7964**	**22,634.1000**	**25,477.8964**	**9.1365**	**0.2128**	**25,735.7354**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2017	1/27/2017	5	20	
2	Site Preparation	Site Preparation	1/28/2017	2/3/2017	5	5	
3	Grading	Grading	2/4/2017	2/15/2017	5	8	
4	Trenching	Trenching	2/16/2017	3/1/2017	5	10	
5	Building Construction	Building Construction	3/2/2017	1/17/2018	5	230	
6	Paving	Paving	1/18/2018	2/12/2018	5	18	
7	Architectural Coating	Architectural Coating	2/13/2018	3/8/2018	5	18	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 614,968; Residential Outdoor: 204,989; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	0	8.00	162	0.38

Demolition	Rubber Tired Dozers	1	8.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Rubber Tired Dozers	0	8.00	255	0.40
Site Preparation	Scrapers	1	8.00	361	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Excavators	0	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Trenching	Trenchers	2	8.00	80	0.50
Trenching	Plate Compactors	2	8.00	8	0.43
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cranes	1	8.00	226	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	1,131.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	219.00	32.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	44.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					12.2349	0.0000	12.2349	1.8525	0.0000	1.8525			0.0000			0.0000
Off-Road	2.7177	26.5484	20.8421	0.0244		1.6034	1.6034		1.4997	1.4997		2,453.5974	2,453.5974	0.6223		2,466.6663
Total	**2.7177**	**26.5484**	**20.8421**	**0.0244**	**12.2349**	**1.6034**	**13.8383**	**1.8525**	**1.4997**	**3.3522**		**2,453.5974**	**2,453.5974**	**0.6223**		**2,466.6663**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.0379	14.7803	12.4720	0.0415	0.9853	0.2150	1.2002	0.2698	0.1977	0.4675		4,113.2670	4,113.2670	0.0296		4,113.8893
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Worker	0.0432	0.0582	0.6114	1.6700e-003	0.1453	9.9000e-004	0.1463	0.0385	9.2000e-004	0.0395		134.2862	134.2862	6.4400e-003		134.4213
Total	**1.0811**	**14.8385**	**13.0834**	**0.0432**	**1.1306**	**0.2160**	**1.3465**	**0.3083**	**0.1986**	**0.5070**		**4,247.5532**	**4,247.5532**	**0.0361**		**4,248.3106**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.7716	0.0000	4.7716	0.7225	0.0000	0.7225			0.0000			0.0000
Off-Road	2.7177	26.5484	20.8421	0.0244		1.6034	1.6034		1.4997	1.4997	0.0000	2,453.5974	2,453.5974	0.6223		2,466.6663
Total	**2.7177**	**26.5484**	**20.8421**	**0.0244**	**4.7716**	**1.6034**	**6.3750**	**0.7225**	**1.4997**	**2.2221**	**0.0000**	**2,453.5974**	**2,453.5974**	**0.6223**		**2,466.6663**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.0379	14.7803	12.4720	0.0415	0.9853	0.2150	1.2002	0.2698	0.1977	0.4675		4,113.2670	4,113.2670	0.0296		4,113.8893
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0432	0.0582	0.6114	1.6700e-003	0.1453	9.9000e-004	0.1463	0.0385	9.2000e-004	0.0395		134.2862	134.2862	6.4400e-003		134.4213
Total	**1.0811**	**14.8385**	**13.0834**	**0.0432**	**1.1306**	**0.2160**	**1.3465**	**0.3083**	**0.1986**	**0.5070**		**4,247.5532**	**4,247.5532**	**0.0361**		**4,248.3106**

3.3 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	2.5324	28.6740	17.1667	0.0239		1.3983	1.3983		1.2864	1.2864		2,445.0311	2,445.0311	0.7492		2,460.7633
Total	**2.5324**	**28.6740**	**17.1667**	**0.0239**	**0.0000**	**1.3983**	**1.3983**	**0.0000**	**1.2864**	**1.2864**		**2,445.0311**	**2,445.0311**	**0.7492**		**2,460.7633**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0266	0.0358	0.3762	1.0300e-003	0.0894	6.1000e-004	0.0900	0.0237	5.6000e-004	0.0243		82.6376	82.6376	3.9600e-003		82.7208
Total	**0.0266**	**0.0358**	**0.3762**	**1.0300e-003**	**0.0894**	**6.1000e-004**	**0.0900**	**0.0237**	**5.6000e-004**	**0.0243**		**82.6376**	**82.6376**	**3.9600e-003**		**82.7208**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	2.5324	28.6740	17.1667	0.0239		1.3983	1.3983		1.2864	1.2864	0.0000	2,445.0311	2,445.0311	0.7492		2,460.7633
Total	**2.5324**	**28.6740**	**17.1667**	**0.0239**	**0.0000**	**1.3983**	**1.3983**	**0.0000**	**1.2864**	**1.2864**	**0.0000**	**2,445.0311**	**2,445.0311**	**0.7492**		**2,460.7633**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0266	0.0358	0.3762	1.0300e-003	0.0894	6.1000e-004	0.0900	0.0237	5.6000e-004	0.0243		82.6376	82.6376	3.9600e-003		82.7208
Total	**0.0266**	**0.0358**	**0.3762**	**1.0300e-003**	**0.0894**	**6.1000e-004**	**0.0900**	**0.0237**	**5.6000e-004**	**0.0243**		**82.6376**	**82.6376**	**3.9600e-003**		**82.7208**

3.4 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.6973	28.1608	18.9679	0.0206		1.5550	1.5550		1.4306	1.4306		2,104.5737	2,104.5737	0.6448		2,118.1153
Total	**2.6973**	**28.1608**	**18.9679**	**0.0206**	**6.5523**	**1.5550**	**8.1074**	**3.3675**	**1.4306**	**4.7981**		**2,104.5737**	**2,104.5737**	**0.6448**		**2,118.1153**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0332	0.0448	0.4703	1.2800e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		103.2970	103.2970	4.9500e-003		103.4010
Total	**0.0332**	**0.0448**	**0.4703**	**1.2800e-003**	**0.1118**	**7.6000e-004**	**0.1125**	**0.0296**	**7.1000e-004**	**0.0304**		**103.2970**	**103.2970**	**4.9500e-003**		**103.4010**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000			0.0000
Off-Road	2.6973	28.1608	18.9679	0.0206		1.5550	1.5550		1.4306	1.4306	0.0000	2,104.5737	2,104.5737	0.6448		2,118.1153
Total	**2.6973**	**28.1608**	**18.9679**	**0.0206**	**2.5554**	**1.5550**	**4.1104**	**1.3133**	**1.4306**	**2.7440**	**0.0000**	**2,104.5737**	**2,104.5737**	**0.6448**		**2,118.1153**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0332	0.0448	0.4703	1.2800e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		103.2970	103.2970	4.9500e-003		103.4010
Total	**0.0332**	**0.0448**	**0.4703**	**1.2800e-003**	**0.1118**	**7.6000e-004**	**0.1125**	**0.0296**	**7.1000e-004**	**0.0304**		**103.2970**	**103.2970**	**4.9500e-003**		**103.4010**

3.5 Trenching - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4756	13.0047	8.4321	0.0110		0.9894	0.9894		0.9118	0.9118		1,097.7642	1,097.7642	0.3224		1,104.5343
Total	**1.4756**	**13.0047**	**8.4321**	**0.0110**		**0.9894**	**0.9894**		**0.9118**	**0.9118**		**1,097.7642**	**1,097.7642**	**0.3224**		**1,104.5343**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0432	0.0582	0.6114	1.6700e-003	0.1453	9.9000e-004	0.1463	0.0385	9.2000e-004	0.0395		134.2862	134.2862	6.4400e-003		134.4213

Total	0.0432	0.0582	0.6114	1.6700e-003	0.1453	9.9000e-004	0.1463	0.0385	9.2000e-004	0.0395		134.2862	134.2862	6.4400e-003		134.4213

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4756	13.0047	8.4321	0.0110		0.9894	0.9894		0.9118	0.9118	0.0000	1,097.7642	1,097.7642	0.3224		1,104.5343
Total	**1.4756**	**13.0047**	**8.4321**	**0.0110**		**0.9894**	**0.9894**		**0.9118**	**0.9118**	**0.0000**	**1,097.7642**	**1,097.7642**	**0.3224**		**1,104.5343**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0432	0.0582	0.6114	1.6700e-003	0.1453	9.9000e-004	0.1463	0.0385	9.2000e-004	0.0395		134.2862	134.2862	6.4400e-003		134.4213
Total	**0.0432**	**0.0582**	**0.6114**	**1.6700e-003**	**0.1453**	**9.9000e-004**	**0.1463**	**0.0385**	**9.2000e-004**	**0.0395**		**134.2862**	**134.2862**	**6.4400e-003**		**134.4213**

3.6 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.3275	22.8585	16.2492	0.0249		1.4621	1.4621		1.3998	1.3998		2,334.8503	2,334.8503	0.5189		2,345.7479
Total	**3.3275**	**22.8585**	**16.2492**	**0.0249**		**1.4621**	**1.4621**		**1.3998**	**1.3998**		**2,334.8503**	**2,334.8503**	**0.5189**		**2,345.7479**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2853	2.5762	3.7294	6.8700e-003	0.2000	0.0396	0.2396	0.0570	0.0364	0.0933		676.8829	676.8829	4.9200e-003		676.9863
Worker	0.7271	0.9802	10.2993	0.0281	2.4479	0.0167	2.4646	0.6492	0.0155	0.6646		2,262.2051	2,262.2051	0.1084		2,264.4822
Total	**1.0124**	**3.5564**	**14.0287**	**0.0350**	**2.6479**	**0.0563**	**2.7042**	**0.7062**	**0.0518**	**0.7580**		**2,939.0880**	**2,939.0880**	**0.1134**		**2,941.4685**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Off-Road	3.3275	22.8585	16.2492	0.0249		1.4621	1.4621		1.3998	1.3998	0.0000	2,334.8503	2,334.8503	0.5189		2,345.7479
Total	**3.3275**	**22.8585**	**16.2492**	**0.0249**		**1.4621**	**1.4621**		**1.3998**	**1.3998**	**0.0000**	**2,334.8503**	**2,334.8503**	**0.5189**		**2,345.7479**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2853	2.5762	3.7294	6.8700e-003	0.2000	0.0396	0.2396	0.0570	0.0364	0.0933		676.8829	676.8829	4.9200e-003		676.9863
Worker	0.7271	0.9802	10.2993	0.0281	2.4479	0.0167	2.4646	0.6492	0.0155	0.6646		2,262.2051	2,262.2051	0.1084		2,264.4822
Total	**1.0124**	**3.5564**	**14.0287**	**0.0350**	**2.6479**	**0.0563**	**2.7042**	**0.7062**	**0.0518**	**0.7580**		**2,939.0880**	**2,939.0880**	**0.1134**		**2,941.4685**

3.6 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9004	20.5600	15.6637	0.0249		1.2511	1.2511		1.1992	1.1992		2,317.2089	2,317.2089	0.4980		2,327.6664
Total	**2.9004**	**20.5600**	**15.6637**	**0.0249**		**1.2511**	**1.2511**		**1.1992**	**1.1992**		**2,317.2089**	**2,317.2089**	**0.4980**		**2,327.6664**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2660	2.3637	3.5684	6.8500e-003	0.2000	0.0373	0.2373	0.0570	0.0343	0.0912		665.3779	665.3779	4.9000e-003		665.4808
Worker	0.6627	0.8944	9.4027	0.0281	2.4479	0.0165	2.4644	0.6492	0.0153	0.6645		2,177.3540	2,177.3540	0.1012		2,179.4791
Total	**0.9288**	**3.2581**	**12.9711**	**0.0350**	**2.6479**	**0.0538**	**2.7017**	**0.7062**	**0.0496**	**0.7557**		**2,842.7319**	**2,842.7319**	**0.1061**		**2,844.9599**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9004	20.5600	15.6637	0.0249		1.2511	1.2511		1.1992	1.1992	0.0000	2,317.2089	2,317.2089	0.4980		2,327.6664
Total	**2.9004**	**20.5600**	**15.6637**	**0.0249**		**1.2511**	**1.2511**		**1.1992**	**1.1992**	**0.0000**	**2,317.2089**	**2,317.2089**	**0.4980**		**2,327.6664**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2660	2.3637	3.5684	6.8500e-003	0.2000	0.0373	0.2373	0.0570	0.0343	0.0912		665.3779	665.3779	4.9000e-003		665.4808
Worker	0.6627	0.8944	9.4027	0.0281	2.4479	0.0165	2.4644	0.6492	0.0153	0.6645		2,177.3540	2,177.3540	0.1012		2,179.4791
Total	**0.9288**	**3.2581**	**12.9711**	**0.0350**	**2.6479**	**0.0538**	**2.7017**	**0.7062**	**0.0496**	**0.7557**		**2,842.7319**	**2,842.7319**	**0.1061**		**2,844.9599**

3.7 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1306	11.5793	9.8923	0.0150		0.6701	0.6701		0.6177	0.6177		1,485.9270	1,485.9270	0.4521		1,495.4213
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1306**	**11.5793**	**9.8923**	**0.0150**		**0.6701**	**0.6701**		**0.6177**	**0.6177**		**1,485.9270**	**1,485.9270**	**0.4521**		**1,495.4213**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0393	0.0531	0.5582	1.6700e-003	0.1453	9.8000e-004	0.1463	0.0385	9.1000e-004	0.0395		129.2493	129.2493	6.0100e-003		129.3755

Total	0.0393	0.0531	0.5582	1.6700e-003	0.1453	9.8000e-004	0.1463	0.0385	9.1000e-004	0.0395		129.2493	129.2493	6.0100e-003		129.3755

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1306	11.5793	9.8923	0.0150		0.6701	0.6701		0.6177	0.6177	0.0000	1,485.9270	1,485.9270	0.4521		1,495.4213
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1306**	**11.5793**	**9.8923**	**0.0150**		**0.6701**	**0.6701**		**0.6177**	**0.6177**	**0.0000**	**1,485.9270**	**1,485.9270**	**0.4521**		**1,495.4213**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0393	0.0531	0.5582	1.6700e-003	0.1453	9.8000e-004	0.1463	0.0385	9.1000e-004	0.0395		129.2493	129.2493	6.0100e-003		129.3755
Total	**0.0393**	**0.0531**	**0.5582**	**1.6700e-003**	**0.1453**	**9.8000e-004**	**0.1463**	**0.0385**	**9.1000e-004**	**0.0395**		**129.2493**	**129.2493**	**6.0100e-003**		**129.3755**

3.8 Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	131.9618					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.0102
Total	**132.2604**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**		**281.4485**	**281.4485**	**0.0267**		**282.0102**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1332	0.1797	1.8891	5.6500e-003	0.4918	3.3200e-003	0.4951	0.1304	3.0700e-003	0.1335		437.4593	437.4593	0.0203		437.8862
Total	**0.1332**	**0.1797**	**1.8891**	**5.6500e-003**	**0.4918**	**3.3200e-003**	**0.4951**	**0.1304**	**3.0700e-003**	**0.1335**		**437.4593**	**437.4593**	**0.0203**		**437.8862**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Archit. Coating	131.9618					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.0102
Total	**132.2604**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**	**0.0000**	**281.4485**	**281.4485**	**0.0267**		**282.0102**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1332	0.1797	1.8891	5.6500e-003	0.4918	3.3200e-003	0.4951	0.1304	3.0700e-003	0.1335		437.4593	437.4593	0.0203		437.8862
Total	**0.1332**	**0.1797**	**1.8891**	**5.6500e-003**	**0.4918**	**3.3200e-003**	**0.4951**	**0.1304**	**3.0700e-003**	**0.1335**		**437.4593**	**437.4593**	**0.0203**		**437.8862**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	5.9903	13.8709	64.4048	0.2103	15.7025	0.2189	15.9214	4.1901	0.2021	4.3921		16,044.1493	16,044.1493	0.5910		16,056.5605
Unmitigated	5.9903	13.8709	64.4048	0.2103	15.7025	0.2189	15.9214	4.1901	0.2021	4.3921		16,044.1493	16,044.1493	0.5910		16,056.5605

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	2,001.32	2,174.42	1843.40	6,846,217	6,846,217
Total	2,001.32	2,174.42	1,843.40	6,846,217	6,846,217

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.508857	0.056420	0.193204	0.150829	0.041936	0.005921	0.015893	0.015805	0.001454	0.002159	0.004747	0.000498	0.002277

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0989	0.8447	0.3595	5.3900e-003		0.0683	0.0683		0.0683	0.0683		1,078.3428	1,078.3428	0.0207	0.0198	1,084.9054
NaturalGas Unmitigated	0.0989	0.8447	0.3595	5.3900e-003		0.0683	0.0683		0.0683	0.0683		1,078.3428	1,078.3428	0.0207	0.0198	1,084.9054

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	9165.91	0.0989	0.8447	0.3595	5.3900e-003		0.0683	0.0683		0.0683	0.0683		1,078.3428	1,078.3428	0.0207	0.0198	1,084.9054
Total		**0.0989**	**0.8447**	**0.3595**	**5.3900e-003**		**0.0683**	**0.0683**		**0.0683**	**0.0683**		**1,078.3428**	**1,078.3428**	**0.0207**	**0.0198**	**1,084.9054**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	9.16591	0.0989	0.8447	0.3595	5.3900e-003		0.0683	0.0683		0.0683	0.0683		1,078.3428	1,078.3428	0.0207	0.0198	1,084.9054
Total		**0.0989**	**0.8447**	**0.3595**	**5.3900e-003**		**0.0683**	**0.0683**		**0.0683**	**0.0683**		**1,078.3428**	**1,078.3428**	**0.0207**	**0.0198**	**1,084.9054**

6.0 Area Detail

6.1 Mitigation Measures Area

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Mitigated	86.9836	2.3092	177.7402	0.2441		23.3298	23.3298		23.3262	23.3262	2,843.7964	5,511.6080	8,355.4044	8.5248	0.1931	8,594.2695
Unmitigated	86.9836	2.3092	177.7402	0.2441		23.3298	23.3298		23.3262	23.3262	2,843.7964	5,511.6080	8,355.4044	8.5248	0.1931	8,594.2695

6.2 Area by SubCategory

Unmitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Architectural Coating	0.6508					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.0130					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	79.5543	2.0185	152.6021	0.2428		23.1916	23.1916		23.1880	23.1880	2,843.7964	5,466.4941	8,310.2905	8.4808	0.1931	8,548.2318
Landscaping	0.7655	0.2907	25.1381	1.3200e-003		0.1382	0.1382		0.1382	0.1382		45.1139	45.1139	0.0440		46.0377
Total	**86.9836**	**2.3092**	**177.7402**	**0.2441**		**23.3298**	**23.3298**		**23.3262**	**23.3262**	**2,843.7964**	**5,511.6080**	**8,355.4044**	**8.5248**	**0.1931**	**8,594.2695**

Mitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Architectural Coating	0.6508					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Consumer Products	6.0130					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	79.5543	2.0185	152.6021	0.2428		23.1916	23.1916		23.1880	23.1880	2,843.7964	5,466.4941	8,310.2905	8.4808	0.1931	8,548.2318
Landscaping	0.7655	0.2907	25.1381	1.3200e-003		0.1382	0.1382		0.1382	0.1382		45.1139	45.1139	0.0440		46.0377
Total	**86.9836**	**2.3092**	**177.7402**	**0.2441**		**23.3298**	**23.3298**		**23.3262**	**23.3262**	**2,843.7964**	**5,511.6080**	**8,355.4044**	**8.5248**	**0.1931**	**8,594.2695**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Phase 2 - Student Union

Orange County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	189.81	1000sqft	4.36	189,806.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - modified

Construction Phase - modified

Off-road Equipment -

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Trips and VMT - modified

Demolition - Assuming density of pavement is 150 lbs/ft3 and pavement is 1 ft deep

Architectural Coating - modified per SCAQMD Rule 1113

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblProjectCharacteristics	OperationalYear	2014	2020

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.2502	2.3113	2.0699	3.4500e-003	0.2404	0.1235	0.3639	0.0711	0.1154	0.1865	0.0000	297.7362	297.7362	0.0555	0.0000	298.9018
2019	1.0914	1.7836	1.7987	3.3400e-003	0.0789	0.1010	0.1799	0.0212	0.0948	0.1161	0.0000	275.9371	275.9371	0.0476	0.0000	276.9367
Total	**1.3416**	**4.0949**	**3.8686**	**6.7900e-003**	**0.3193**	**0.2244**	**0.5438**	**0.0924**	**0.2102**	**0.3026**	**0.0000**	**573.6733**	**573.6733**	**0.1031**	**0.0000**	**575.8385**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.2502	2.3113	2.0699	3.4500e-003	0.1311	0.1235	0.2546	0.0378	0.1154	0.1532	0.0000	297.7359	297.7359	0.0555	0.0000	298.9016
2019	1.0914	1.7836	1.7987	3.3400e-003	0.0789	0.1010	0.1799	0.0212	0.0948	0.1161	0.0000	275.9369	275.9369	0.0476	0.0000	276.9365
Total	**1.3416**	**4.0949**	**3.8686**	**6.7900e-003**	**0.2101**	**0.2244**	**0.4345**	**0.0590**	**0.2102**	**0.2693**	**0.0000**	**573.6728**	**573.6728**	**0.1031**	**0.0000**	**575.8381**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**34.22**	**0.00**	**20.09**	**36.07**	**0.00**	**11.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.9060	2.0000e-005	2.4400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.7100e-003	4.7100e-003	1.0000e-005	0.0000	4.9800e-003
Energy	0.0162	0.1476	0.1240	8.9000e-004		0.0112	0.0112		0.0112	0.0112	0.0000	923.7848	923.7848	0.0382	0.0102	927.7490
Mobile	1.8576	4.3356	20.1171	0.0642	4.6381	0.0663	4.7044	1.2394	0.0612	1.3006	0.0000	4,439.8362	4,439.8362	0.1625	0.0000	4,443.2489
Waste						0.0000	0.0000		0.0000	0.0000	50.0880	0.0000	50.0880	2.9601	0.0000	112.2505
Water						0.0000	0.0000		0.0000	0.0000	2.9536	80.9872	83.9409	0.3071	7.9300e-003	92.8491
Total	**2.7799**	**4.4832**	**20.2435**	**0.0651**	**4.6381**	**0.0775**	**4.7156**	**1.2394**	**0.0724**	**1.3118**	**53.0417**	**5,444.6130**	**5,497.6546**	**3.4679**	**0.0181**	**5,576.1025**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.9060	2.0000e-005	2.4400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.7100e-003	4.7100e-003	1.0000e-005	0.0000	4.9800e-003
Energy	0.0162	0.1476	0.1240	8.9000e-004		0.0112	0.0112		0.0112	0.0112	0.0000	923.7848	923.7848	0.0382	0.0102	927.7490
Mobile	1.8576	4.3356	20.1171	0.0642	4.6381	0.0663	4.7044	1.2394	0.0612	1.3006	0.0000	4,439.8362	4,439.8362	0.1625	0.0000	4,443.2489
Waste						0.0000	0.0000		0.0000	0.0000	50.0880	0.0000	50.0880	2.9601	0.0000	112.2505
Water						0.0000	0.0000		0.0000	0.0000	2.9536	80.9872	83.9409	0.3070	7.9200e-003	92.8444
Total	**2.7799**	**4.4832**	**20.2435**	**0.0651**	**4.6381**	**0.0775**	**4.7156**	**1.2394**	**0.0724**	**1.3118**	**53.0417**	**5,444.6130**	**5,497.6546**	**3.4678**	**0.0181**	**5,576.0978**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.06**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition - Pavement Removal	Demolition	6/1/2018	6/28/2018	5	20	
2	Demolition	Demolition	6/29/2018	7/26/2018	5	20	
3	Site Preparation	Site Preparation	7/27/2018	8/2/2018	5	5	
4	Grading	Grading	8/3/2018	8/14/2018	5	8	
5	Trenching	Trenching	8/15/2018	8/28/2018	5	10	
6	Building Construction	Building Construction	8/29/2018	7/16/2019	5	230	
7	Paving	Paving	7/17/2019	8/9/2019	5	18	

8	Architectural Coating	Architectural Coating	8/10/2019	9/4/2019		5	18	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 284,709; Non-Residential Outdoor: 94,903 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Demolition - Pavement Removal	Concrete/Industrial Saws	1	8.00	81	0.73
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Demolition - Pavement Removal	Excavators	3	8.00	162	0.38
Demolition - Pavement Removal	Rubber Tired Dozers	2	8.00	255	0.40
Trenching	Trenchers	2	8.00	80	0.50
Trenching	Plate Compactors	2	8.00	8	0.43
Grading	Excavators	1	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	125	0.42
Paving	Paving Equipment	2	6.00	130	0.36
Paving	Rollers	2	6.00	80	0.38

Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition - Pavement Removal	6	15.00	0.00	704.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	80.00	31.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	16.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	6	15.00	0.00	292.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - Pavement Removal - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0762	0.0000	0.0762	0.0115	0.0000	0.0115	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.0356	0.3683	0.3173	4.0000e-004		0.0181	0.0181		0.0169	0.0169	0.0000	36.1362	36.1362	9.9900e-003	0.0000	36.3460
Total	**0.0356**	**0.3683**	**0.3173**	**4.0000e-004**	**0.0762**	**0.0181**	**0.0943**	**0.0115**	**0.0169**	**0.0284**	**0.0000**	**36.1362**	**36.1362**	**9.9900e-003**	**0.0000**	**36.3460**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.1100e-003	0.0869	0.0733	2.6000e-004	6.0400e-003	1.3400e-003	7.3700e-003	1.6600e-003	1.2300e-003	2.8800e-003	0.0000	22.8701	22.8701	1.7000e-004	0.0000	22.8737
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.2000e-004	6.3000e-004	6.5800e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3733	1.3733	6.0000e-005	0.0000	1.3747
Total	**6.5300e-003**	**0.0875**	**0.0798**	**2.8000e-004**	**7.6900e-003**	**1.3500e-003**	**9.0300e-003**	**2.1000e-003**	**1.2400e-003**	**3.3300e-003**	**0.0000**	**24.2435**	**24.2435**	**2.3000e-004**	**0.0000**	**24.2483**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0297	0.0000	0.0297	4.5000e-003	0.0000	4.5000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0356	0.3683	0.3173	4.0000e-004		0.0181	0.0181		0.0169	0.0169	0.0000	36.1361	36.1361	9.9900e-003	0.0000	36.3459
Total	**0.0356**	**0.3683**	**0.3173**	**4.0000e-004**	**0.0297**	**0.0181**	**0.0478**	**4.5000e-003**	**0.0169**	**0.0214**	**0.0000**	**36.1361**	**36.1361**	**9.9900e-003**	**0.0000**	**36.3459**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					tons/yr								MT/yr			
Hauling	6.1100e-003	0.0869	0.0733	2.6000e-004	6.0400e-003	1.3400e-003	7.3700e-003	1.6600e-003	1.2300e-003	2.8800e-003	0.0000	22.8701	22.8701	1.7000e-004	0.0000	22.8737
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.2000e-004	6.3000e-004	6.5800e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3733	1.3733	6.0000e-005	0.0000	1.3747
Total	**6.5300e-003**	**0.0875**	**0.0798**	**2.8000e-004**	**7.6900e-003**	**1.3500e-003**	**9.0300e-003**	**2.1000e-003**	**1.2400e-003**	**3.3300e-003**	**0.0000**	**24.2435**	**24.2435**	**2.3000e-004**	**0.0000**	**24.2483**

3.3 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					tons/yr								MT/yr			
Fugitive Dust					0.0316	0.0000	0.0316	4.7800e-003	0.0000	4.7800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0356	0.3683	0.3173	4.0000e-004		0.0181	0.0181		0.0169	0.0169	0.0000	36.1362	36.1362	9.9900e-003	0.0000	36.3460
Total	**0.0356**	**0.3683**	**0.3173**	**4.0000e-004**	**0.0316**	**0.0181**	**0.0497**	**4.7800e-003**	**0.0169**	**0.0216**	**0.0000**	**36.1362**	**36.1362**	**9.9900e-003**	**0.0000**	**36.3460**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					tons/yr								MT/yr			

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	2.5400e-003	0.0360	0.0304	1.1000e-004	2.5000e-003	5.5000e-004	3.0600e-003	6.9000e-004	5.1000e-004	1.2000e-003	0.0000	9.4859	9.4859	7.0000e-005	0.0000	9.4874
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.2000e-004	6.3000e-004	6.5800e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3733	1.3733	6.0000e-005	0.0000	1.3747
Total	**2.9600e-003**	**0.0367**	**0.0370**	**1.3000e-004**	**4.1500e-003**	**5.6000e-004**	**4.7200e-003**	**1.1300e-003**	**5.2000e-004**	**1.6500e-003**	**0.0000**	**10.8592**	**10.8592**	**1.3000e-004**	**0.0000**	**10.8620**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0123	0.0000	0.0123	1.8600e-003	0.0000	1.8600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0356	0.3683	0.3173	4.0000e-004		0.0181	0.0181		0.0169	0.0169	0.0000	36.1361	36.1361	9.9900e-003	0.0000	36.3459
Total	**0.0356**	**0.3683**	**0.3173**	**4.0000e-004**	**0.0123**	**0.0181**	**0.0304**	**1.8600e-003**	**0.0169**	**0.0187**	**0.0000**	**36.1361**	**36.1361**	**9.9900e-003**	**0.0000**	**36.3459**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.5400e-003	0.0360	0.0304	1.1000e-004	2.5000e-003	5.5000e-004	3.0600e-003	6.9000e-004	5.1000e-004	1.2000e-003	0.0000	9.4859	9.4859	7.0000e-005	0.0000	9.4874
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.2000e-004	6.3000e-004	6.5800e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3733	1.3733	6.0000e-005	0.0000	1.3747
Total	**2.9600e-003**	**0.0367**	**0.0370**	**1.3000e-004**	**4.1500e-003**	**5.6000e-004**	**4.7200e-003**	**1.1300e-003**	**5.2000e-004**	**1.6500e-003**	**0.0000**	**10.8592**	**10.8592**	**1.3000e-004**	**0.0000**	**10.8620**

3.4 Site Preparation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0452	0.0000	0.0452	0.0248	0.0000	0.0248	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0107	0.1140	0.0906	1.0000e-004		5.9100e-003	5.9100e-003		5.4400e-003	5.4400e-003	0.0000	8.9353	8.9353	2.7800e-003	0.0000	8.9937
Total	**0.0107**	**0.1140**	**0.0906**	**1.0000e-004**	**0.0452**	**5.9100e-003**	**0.0511**	**0.0248**	**5.4400e-003**	**0.0303**	**0.0000**	**8.9353**	**8.9353**	**2.7800e-003**	**0.0000**	**8.9937**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3000e-004	1.9000e-004	1.9700e-003	1.0000e-005	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4120	0.4120	2.0000e-005	0.0000	0.4124
Total	**1.3000e-004**	**1.9000e-004**	**1.9700e-003**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.4120**	**0.4120**	**2.0000e-005**	**0.0000**	**0.4124**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0176	0.0000	0.0176	9.6800e-003	0.0000	9.6800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0107	0.1140	0.0906	1.0000e-004		5.9100e-003	5.9100e-003		5.4400e-003	5.4400e-003	0.0000	8.9352	8.9352	2.7800e-003	0.0000	8.9937
Total	**0.0107**	**0.1140**	**0.0906**	**1.0000e-004**	**0.0176**	**5.9100e-003**	**0.0235**	**9.6800e-003**	**5.4400e-003**	**0.0151**	**0.0000**	**8.9352**	**8.9352**	**2.7800e-003**	**0.0000**	**8.9937**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3000e-004	1.9000e-004	1.9700e-003	1.0000e-005	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4120	0.4120	2.0000e-005	0.0000	0.4124
Total	**1.3000e-004**	**1.9000e-004**	**1.9700e-003**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.4120**	**0.4120**	**2.0000e-005**	**0.0000**	**0.4124**

3.5 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0262	0.0000	0.0262	0.0135	0.0000	0.0135	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Off-Road	0.0120	0.1243	0.0960	1.2000e-004		6.8800e-003	6.8800e-003		6.3300e-003	6.3300e-003	0.0000	10.8612	10.8612	3.3800e-003	0.0000	10.9322
Total	**0.0120**	**0.1243**	**0.0960**	**1.2000e-004**	**0.0262**	**6.8800e-003**	**0.0331**	**0.0135**	**6.3300e-003**	**0.0198**	**0.0000**	**10.8612**	**10.8612**	**3.3800e-003**	**0.0000**	**10.9322**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	2.5000e-004	2.6300e-003	1.0000e-005	6.6000e-004	0.0000	6.6000e-004	1.7000e-004	0.0000	1.8000e-004	0.0000	0.5493	0.5493	3.0000e-005	0.0000	0.5499
Total	**1.7000e-004**	**2.5000e-004**	**2.6300e-003**	**1.0000e-005**	**6.6000e-004**	**0.0000**	**6.6000e-004**	**1.7000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**0.5493**	**0.5493**	**3.0000e-005**	**0.0000**	**0.5499**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0102	0.0000	0.0102	5.2500e-003	0.0000	5.2500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0120	0.1243	0.0960	1.2000e-004		6.8800e-003	6.8800e-003		6.3300e-003	6.3300e-003	0.0000	10.8612	10.8612	3.3800e-003	0.0000	10.9322
Total	**0.0120**	**0.1243**	**0.0960**	**1.2000e-004**	**0.0102**	**6.8800e-003**	**0.0171**	**5.2500e-003**	**6.3300e-003**	**0.0116**	**0.0000**	**10.8612**	**10.8612**	**3.3800e-003**	**0.0000**	**10.9322**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	2.5000e-004	2.6300e-003	1.0000e-005	6.6000e-004	0.0000	6.6000e-004	1.7000e-004	0.0000	1.8000e-004	0.0000	0.5493	0.5493	3.0000e-005	0.0000	0.5499
Total	**1.7000e-004**	**2.5000e-004**	**2.6300e-003**	**1.0000e-005**	**6.6000e-004**	**0.0000**	**6.6000e-004**	**1.7000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**0.5493**	**0.5493**	**3.0000e-005**	**0.0000**	**0.5499**

3.6 Trenching - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.3900e-003	0.0576	0.0411	6.0000e-005		4.2200e-003	4.2200e-003		3.8900e-003	3.8900e-003	0.0000	4.9013	4.9013	1.4600e-003	0.0000	4.9320
Total	**6.3900e-003**	**0.0576**	**0.0411**	**6.0000e-005**		**4.2200e-003**	**4.2200e-003**		**3.8900e-003**	**3.8900e-003**	**0.0000**	**4.9013**	**4.9013**	**1.4600e-003**	**0.0000**	**4.9320**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8000e-004	2.7000e-004	2.8500e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5951	0.5951	3.0000e-005	0.0000	0.5957
Total	**1.8000e-004**	**2.7000e-004**	**2.8500e-003**	**1.0000e-005**	**7.1000e-004**	**0.0000**	**7.2000e-004**	**1.9000e-004**	**0.0000**	**1.9000e-004**	**0.0000**	**0.5951**	**0.5951**	**3.0000e-005**	**0.0000**	**0.5957**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.3900e-003	0.0576	0.0411	6.0000e-005		4.2200e-003	4.2200e-003		3.8900e-003	3.8900e-003	0.0000	4.9013	4.9013	1.4600e-003	0.0000	4.9320
Total	**6.3900e-003**	**0.0576**	**0.0411**	**6.0000e-005**		**4.2200e-003**	**4.2200e-003**		**3.8900e-003**	**3.8900e-003**	**0.0000**	**4.9013**	**4.9013**	**1.4600e-003**	**0.0000**	**4.9320**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8000e-004	2.7000e-004	2.8500e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5951	0.5951	3.0000e-005	0.0000	0.5957
Total	**1.8000e-004**	**2.7000e-004**	**2.8500e-003**	**1.0000e-005**	**7.1000e-004**	**0.0000**	**7.2000e-004**	**1.9000e-004**	**0.0000**	**1.9000e-004**	**0.0000**	**0.5951**	**0.5951**	**3.0000e-005**	**0.0000**	**0.5957**

3.7 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1188	1.0351	0.7802	1.1900e-003		0.0665	0.0665		0.0625	0.0625	0.0000	105.3625	105.3625	0.0258	0.0000	105.9040
Total	**0.1188**	**1.0351**	**0.7802**	**1.1900e-003**		**0.0665**	**0.0665**		**0.0625**	**0.0625**	**0.0000**	**105.3625**	**105.3625**	**0.0258**	**0.0000**	**105.9040**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0111	0.1039	0.1470	3.0000e-004	8.4900e-003	1.6000e-003	0.0101	2.4200e-003	1.4700e-003	3.8900e-003	0.0000	26.1507	26.1507	1.9000e-004	0.0000	26.1546
Worker	0.0101	0.0149	0.1562	4.6000e-004	0.0391	2.7000e-004	0.0394	0.0104	2.5000e-004	0.0106	0.0000	32.5937	32.5937	1.4900e-003	0.0000	32.6251
Total	**0.0211**	**0.1188**	**0.3032**	**7.6000e-004**	**0.0476**	**1.8700e-003**	**0.0494**	**0.0128**	**1.7200e-003**	**0.0145**	**0.0000**	**58.7444**	**58.7444**	**1.6800e-003**	**0.0000**	**58.7797**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1188	1.0351	0.7802	1.1900e-003		0.0665	0.0665		0.0625	0.0625	0.0000	105.3624	105.3624	0.0258	0.0000	105.9039
Total	**0.1188**	**1.0351**	**0.7802**	**1.1900e-003**		**0.0665**	**0.0665**		**0.0625**	**0.0625**	**0.0000**	**105.3624**	**105.3624**	**0.0258**	**0.0000**	**105.9039**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0111	0.1039	0.1470	3.0000e-004	8.4900e-003	1.6000e-003	0.0101	2.4200e-003	1.4700e-003	3.8900e-003	0.0000	26.1507	26.1507	1.9000e-004	0.0000	26.1546
Worker	0.0101	0.0149	0.1562	4.6000e-004	0.0391	2.7000e-004	0.0394	0.0104	2.5000e-004	0.0106	0.0000	32.5937	32.5937	1.4900e-003	0.0000	32.6251
Total	**0.0211**	**0.1188**	**0.3032**	**7.6000e-004**	**0.0476**	**1.8700e-003**	**0.0494**	**0.0128**	**1.7200e-003**	**0.0145**	**0.0000**	**58.7444**	**58.7444**	**1.6800e-003**	**0.0000**	**58.7797**

3.7 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1658	1.4780	1.2070	1.8900e-003		0.0906	0.0906		0.0852	0.0852	0.0000	165.0566	165.0566	0.0402	0.0000	165.8999

Total	0.1658	1.4780	1.2070	1.8900e-003		0.0906	0.0906		0.0852	0.0852	0.0000	165.0566	165.0566	0.0402	0.0000	165.8999

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0164	0.1526	0.2221	4.7000e-004	0.0135	2.3600e-003	0.0158	3.8400e-003	2.1700e-003	6.0100e-003	0.0000	40.8539	40.8539	3.0000e-004	0.0000	40.8602
Worker	0.0149	0.0219	0.2306	7.4000e-004	0.0619	4.3000e-004	0.0623	0.0164	4.0000e-004	0.0168	0.0000	50.0258	50.0258	2.2600e-003	0.0000	50.0732
Total	**0.0313**	**0.1745**	**0.4526**	**1.2100e-003**	**0.0754**	**2.7900e-003**	**0.0782**	**0.0203**	**2.5700e-003**	**0.0229**	**0.0000**	**90.8797**	**90.8797**	**2.5600e-003**	**0.0000**	**90.9334**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1658	1.4780	1.2070	1.8900e-003		0.0906	0.0906		0.0852	0.0852	0.0000	165.0564	165.0564	0.0402	0.0000	165.8997
Total	**0.1658**	**1.4780**	**1.2070**	**1.8900e-003**		**0.0906**	**0.0906**		**0.0852**	**0.0852**	**0.0000**	**165.0564**	**165.0564**	**0.0402**	**0.0000**	**165.8997**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0164	0.1526	0.2221	4.7000e-004	0.0135	2.3600e-003	0.0158	3.8400e-003	2.1700e-003	6.0100e-003	0.0000	40.8539	40.8539	3.0000e-004	0.0000	40.8602
Worker	0.0149	0.0219	0.2306	7.4000e-004	0.0619	4.3000e-004	0.0623	0.0164	4.0000e-004	0.0168	0.0000	50.0258	50.0258	2.2600e-003	0.0000	50.0732
Total	**0.0313**	**0.1745**	**0.4526**	**1.2100e-003**	**0.0754**	**2.7900e-003**	**0.0782**	**0.0203**	**2.5700e-003**	**0.0229**	**0.0000**	**90.8797**	**90.8797**	**2.5600e-003**	**0.0000**	**90.9334**

3.8 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0113	0.1133	0.1093	1.7000e-004		6.4000e-003	6.4000e-003		5.9000e-003	5.9000e-003	0.0000	14.8291	14.8291	4.5600e-003	0.0000	14.9248
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0113**	**0.1133**	**0.1093**	**1.7000e-004**		**6.4000e-003**	**6.4000e-003**		**5.9000e-003**	**5.9000e-003**	**0.0000**	**14.8291**	**14.8291**	**4.5600e-003**	**0.0000**	**14.9248**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.8000e-004	7.0000e-004	7.3600e-003	2.0000e-005	1.9800e-003	1.0000e-005	1.9900e-003	5.2000e-004	1.0000e-005	5.4000e-004	0.0000	1.5966	1.5966	7.0000e-005	0.0000	1.5981
Total	**4.8000e-004**	**7.0000e-004**	**7.3600e-003**	**2.0000e-005**	**1.9800e-003**	**1.0000e-005**	**1.9900e-003**	**5.2000e-004**	**1.0000e-005**	**5.4000e-004**	**0.0000**	**1.5966**	**1.5966**	**7.0000e-005**	**0.0000**	**1.5981**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0113	0.1133	0.1093	1.7000e-004		6.4000e-003	6.4000e-003		5.9000e-003	5.9000e-003	0.0000	14.8290	14.8290	4.5600e-003	0.0000	14.9248
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0113**	**0.1133**	**0.1093**	**1.7000e-004**		**6.4000e-003**	**6.4000e-003**		**5.9000e-003**	**5.9000e-003**	**0.0000**	**14.8290**	**14.8290**	**4.5600e-003**	**0.0000**	**14.9248**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.8000e-004	7.0000e-004	7.3600e-003	2.0000e-005	1.9800e-003	1.0000e-005	1.9900e-003	5.2000e-004	1.0000e-005	5.4000e-004	0.0000	1.5966	1.5966	7.0000e-005	0.0000	1.5981
Total	**4.8000e-004**	**7.0000e-004**	**7.3600e-003**	**2.0000e-005**	**1.9800e-003**	**1.0000e-005**	**1.9900e-003**	**5.2000e-004**	**1.0000e-005**	**5.4000e-004**	**0.0000**	**1.5966**	**1.5966**	**7.0000e-005**	**0.0000**	**1.5981**

3.9 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.8798					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.4000e-003	0.0165	0.0166	3.0000e-005		1.1600e-003	1.1600e-003		1.1600e-003	1.1600e-003	0.0000	2.2979	2.2979	1.9000e-004	0.0000	2.3020
Total	**0.8822**	**0.0165**	**0.0166**	**3.0000e-005**		**1.1600e-003**	**1.1600e-003**		**1.1600e-003**	**1.1600e-003**	**0.0000**	**2.2979**	**2.2979**	**1.9000e-004**	**0.0000**	**2.3020**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.8000e-004	5.6000e-004	5.8900e-003	2.0000e-005	1.5800e-003	1.0000e-005	1.5900e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.2773	1.2773	6.0000e-005	0.0000	1.2785
Total	**3.8000e-004**	**5.6000e-004**	**5.8900e-003**	**2.0000e-005**	**1.5800e-003**	**1.0000e-005**	**1.5900e-003**	**4.2000e-004**	**1.0000e-005**	**4.3000e-004**	**0.0000**	**1.2773**	**1.2773**	**6.0000e-005**	**0.0000**	**1.2785**

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Archit. Coating	0.8798					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.4000e-003	0.0165	0.0166	3.0000e-005		1.1600e-003	1.1600e-003		1.1600e-003	1.1600e-003	0.0000	2.2979	2.2979	1.9000e-004	0.0000	2.3020
Total	**0.8822**	**0.0165**	**0.0166**	**3.0000e-005**		**1.1600e-003**	**1.1600e-003**		**1.1600e-003**	**1.1600e-003**	**0.0000**	**2.2979**	**2.2979**	**1.9000e-004**	**0.0000**	**2.3020**

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.8000e-004	5.6000e-004	5.8900e-003	2.0000e-005	1.5800e-003	1.0000e-005	1.5900e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.2773	1.2773	6.0000e-005	0.0000	1.2785
Total	**3.8000e-004**	**5.6000e-004**	**5.8900e-003**	**2.0000e-005**	**1.5800e-003**	**1.0000e-005**	**1.5900e-003**	**4.2000e-004**	**1.0000e-005**	**4.3000e-004**	**0.0000**	**1.2773**	**1.2773**	**6.0000e-005**	**0.0000**	**1.2785**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Mitigated	1.8576	4.3356	20.1171	0.0642	4.6381	0.0663	4.7044	1.2394	0.0612	1.3006	0.0000	4,439.8362	4,439.8362	0.1625	0.0000	4,443.2489
Unmitigated	1.8576	4.3356	20.1171	0.0642	4.6381	0.0663	4.7044	1.2394	0.0612	1.3006	0.0000	4,439.8362	4,439.8362	0.1625	0.0000	4,443.2489

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	5,217.77	2,131.52	229.67	12,275,608	12,275,608
Total	5,217.77	2,131.52	229.67	12,275,608	12,275,608

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.508857	0.056420	0.193204	0.150829	0.041936	0.005921	0.015893	0.015805	0.001454	0.002159	0.004747	0.000498	0.002277

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	763.1425	763.1425	0.0351	7.2600e-003	766.1291
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	763.1425	763.1425	0.0351	7.2600e-003	766.1291
NaturalGas Mitigated	0.0162	0.1476	0.1240	8.9000e-004		0.0112	0.0112		0.0112	0.0112	0.0000	160.6423	160.6423	3.0800e-003	2.9500e-003	161.6200
NaturalGas Unmitigated	0.0162	0.1476	0.1240	8.9000e-004		0.0112	0.0112		0.0112	0.0112	0.0000	160.6423	160.6423	3.0800e-003	2.9500e-003	161.6200

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Junior College (2Yr)	3.01032e+006	0.0162	0.1476	0.1240	8.9000e-004		0.0112	0.0112		0.0112	0.0112	0.0000	160.6423	160.6423	3.0800e-003	2.9500e-003	161.6200
Total		**0.0162**	**0.1476**	**0.1240**	**8.9000e-004**		**0.0112**	**0.0112**		**0.0112**	**0.0112**	**0.0000**	**160.6423**	**160.6423**	**3.0800e-003**	**2.9500e-003**	**161.6200**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Junior College (2Yr)	3.01032e+006	0.0162	0.1476	0.1240	8.9000e-004		0.0112	0.0112		0.0112	0.0112	0.0000	160.6423	160.6423	3.0800e-003	2.9500e-003	161.6200
Total		**0.0162**	**0.1476**	**0.1240**	**8.9000e-004**		**0.0112**	**0.0112**		**0.0112**	**0.0112**	**0.0000**	**160.6423**	**160.6423**	**3.0800e-003**	**2.9500e-003**	**161.6200**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	2.66677e+006	763.1425	0.0351	7.2600e-003	766.1291
Total		**763.1425**	**0.0351**	**7.2600e-003**	**766.1291**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	2.66677e+006	763.1425	0.0351	7.2600e-003	766.1291
Total		**763.1425**	**0.0351**	**7.2600e-003**	**766.1291**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.9060	2.0000e-005	2.4400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.7100e-003	4.7100e-003	1.0000e-005	0.0000	4.9800e-003
Unmitigated	0.9060	2.0000e-005	2.4400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.7100e-003	4.7100e-003	1.0000e-005	0.0000	4.9800e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.2199					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6859					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.3000e-004	2.0000e-005	2.4400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.7100e-003	4.7100e-003	1.0000e-005	0.0000	4.9800e-003
Total	**0.9060**	**2.0000e-005**	**2.4400e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**4.7100e-003**	**4.7100e-003**	**1.0000e-005**	**0.0000**	**4.9800e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.2199					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6859					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Landscaping	2.3000e-004	2.0000e-005	2.4400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.7100e-003	4.7100e-003	1.0000e-005	0.0000	4.9800e-003
Total	**0.9060**	**2.0000e-005**	**2.4400e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**4.7100e-003**	**4.7100e-003**	**1.0000e-005**	**0.0000**	**4.9800e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	83.9409	0.3070	7.9200e-003	92.8444
Unmitigated	83.9409	0.3071	7.9300e-003	92.8491

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	9.31 / 14.5618	83.9409	0.3071	7.9300e-003	92.8491
Total		**83.9409**	**0.3071**	**7.9300e-003**	**92.8491**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	9.31 / 14.5618	83.9409	0.3070	7.9200e-003	92.8444
Total		**83.9409**	**0.3070**	**7.9200e-003**	**92.8444**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	50.0880	2.9601	0.0000	112.2505
Unmitigated	50.0880	2.9601	0.0000	112.2505

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e

Land Use	tons	MT/yr			
Junior College (2Yr)	246.75	50.0880	2.9601	0.0000	112.2505
Total		**50.0880**	**2.9601**	**0.0000**	**112.2505**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior College (2Yr)	246.75	50.0880	2.9601	0.0000	112.2505
Total		**50.0880**	**2.9601**	**0.0000**	**112.2505**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Phase 2 - Student Union

Orange County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	189.81	1000sqft	4.36	189,806.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - modified

Construction Phase - modified

Off-road Equipment -

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Trips and VMT - modified

Demolition - Assuming density of pavement is 150 lbs/ft3 and pavement is 1 ft deep

Architectural Coating - modified per SCAQMD Rule 1113

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblProjectCharacteristics	OperationalYear	2014	2020

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	4.3440	45.6756	38.9340	0.0678	18.2675	2.3668	20.6342	9.9840	2.1774	12.1615	0.0000	6,664.3402	6,664.3402	1.2348	0.0000	6,690.2715
2019	98.0597	23.3175	23.2251	0.0444	1.0880	1.3245	2.4125	0.2923	1.2446	1.5369	0.0000	4,035.5674	4,035.5674	0.6678	0.0000	4,049.5918
Total	**102.4037**	**68.9932**	**62.1591**	**0.1122**	**19.3555**	**3.6912**	**23.0467**	**10.2764**	**3.4220**	**13.6984**	**0.0000**	**10,699.9076**	**10,699.9076**	**1.9027**	**0.0000**	**10,739.8633**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	4.3440	45.6756	38.9340	0.0678	7.2470	2.3668	9.6138	3.9263	2.1774	6.1038	0.0000	6,664.3402	6,664.3402	1.2348	0.0000	6,690.2714
2019	98.0597	23.3175	23.2251	0.0444	1.0880	1.3245	2.4125	0.2923	1.2446	1.5369	0.0000	4,035.5674	4,035.5674	0.6678	0.0000	4,049.5918
Total	**102.4037**	**68.9932**	**62.1591**	**0.1122**	**8.3350**	**3.6912**	**12.0263**	**4.2187**	**3.4220**	**7.6407**	**0.0000**	**10,699.9076**	**10,699.9076**	**1.9027**	**0.0000**	**10,739.8632**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**56.94**	**0.00**	**47.82**	**58.95**	**0.00**	**44.22**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.9651	1.8000e-004	0.0195	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0415	0.0415	1.1000e-004		0.0439
Energy	0.0889	0.8086	0.6792	4.8500e-003		0.0615	0.0615		0.0615	0.0615		970.2895	970.2895	0.0186	0.0178	976.1945
Mobile	13.1673	28.4349	141.8112	0.4686	33.3045	0.4677	33.7722	8.8870	0.4317	9.3187		35,678.0239	35,678.0239	1.2648		35,704.5837
Total	**18.2213**	**29.2437**	**142.5099**	**0.4734**	**33.3045**	**0.5292**	**33.8337**	**8.8870**	**0.4932**	**9.3802**		**36,648.3549**	**36,648.3549**	**1.2835**	**0.0178**	**36,680.8221**

Mitigated Operational

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Area	4.9651	1.8000e-004	0.0195	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0415	0.0415	1.1000e-004		0.0439
Energy	0.0889	0.8086	0.6792	4.8500e-003		0.0615	0.0615		0.0615	0.0615		970.2895	970.2895	0.0186	0.0178	976.1945
Mobile	13.1673	28.4349	141.8112	0.4686	33.3045	0.4677	33.7722	8.8870	0.4317	9.3187		35,678.0239	35,678.0239	1.2648		35,704.5837
Total	**18.2213**	**29.2437**	**142.5099**	**0.4734**	**33.3045**	**0.5292**	**33.8337**	**8.8870**	**0.4932**	**9.3802**		**36,648.3549**	**36,648.3549**	**1.2835**	**0.0178**	**36,680.8221**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition - Pavement Removal	Demolition	6/1/2018	6/28/2018	5	20	
2	Demolition	Demolition	6/29/2018	7/26/2018	5	20	
3	Site Preparation	Site Preparation	7/27/2018	8/2/2018	5	5	
4	Grading	Grading	8/3/2018	8/14/2018	5	8	
5	Trenching	Trenching	8/15/2018	8/28/2018	5	10	
6	Building Construction	Building Construction	8/29/2018	7/16/2019	5	230	
7	Paving	Paving	7/17/2019	8/9/2019	5	18	
8	Architectural Coating	Architectural Coating	8/10/2019	9/4/2019	5	18	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 284,709; Non-Residential Outdoor: 94,903 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Demolition - Pavement Removal	Concrete/Industrial Saws	1	8.00	81	0.73
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Demolition - Pavement Removal	Excavators	3	8.00	162	0.38
Demolition - Pavement Removal	Rubber Tired Dozers	2	8.00	255	0.40
Trenching	Trenchers	2	8.00	80	0.50
Trenching	Plate Compactors	2	8.00	8	0.43
Grading	Excavators	1	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	125	0.42
Paving	Paving Equipment	2	6.00	130	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73

Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition - Pavement Removal	6	15.00	0.00	704.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	80.00	31.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	16.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	6	15.00	0.00	292.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - Pavement Removal - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.6159	0.0000	7.6159	1.1531	0.0000	1.1531			0.0000			0.0000
Off-Road	3.5606	36.8310	31.7250	0.0399		1.8090	1.8090		1.6856	1.6856		3,983.3282	3,983.3282	1.1015		4,006.4585
Total	**3.5606**	**36.8310**	**31.7250**	**0.0399**	**7.6159**	**1.8090**	**9.4249**	**1.1531**	**1.6856**	**2.8387**		**3,983.3282**	**3,983.3282**	**1.1015**		**4,006.4585**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.5885	8.2571	6.5211	0.0258	0.6134	0.1334	0.7468	0.1680	0.1227	0.2907		2,523.5321	2,523.5321	0.0184		2,523.9192
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0433	0.0557	0.6879	2.0300e-003	0.1677	1.1300e-003	0.1688	0.0445	1.0500e-003	0.0455		157.4799	157.4799	6.9300e-003		157.6254
Total	**0.6318**	**8.3129**	**7.2090**	**0.0279**	**0.7810**	**0.1345**	**0.9156**	**0.2124**	**0.1238**	**0.3362**		**2,681.0120**	**2,681.0120**	**0.0254**		**2,681.5447**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.9702	0.0000	2.9702	0.4497	0.0000	0.4497			0.0000			0.0000
Off-Road	3.5606	36.8310	31.7250	0.0399		1.8090	1.8090		1.6856	1.6856	0.0000	3,983.3282	3,983.3282	1.1015		4,006.4585
Total	**3.5606**	**36.8310**	**31.7250**	**0.0399**	**2.9702**	**1.8090**	**4.7792**	**0.4497**	**1.6856**	**2.1353**	**0.0000**	**3,983.3282**	**3,983.3282**	**1.1015**		**4,006.4585**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.5885	8.2571	6.5211	0.0258	0.6134	0.1334	0.7468	0.1680	0.1227	0.2907		2,523.5321	2,523.5321	0.0184		2,523.9192
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0433	0.0557	0.6879	2.0300e-003	0.1677	1.1300e-003	0.1688	0.0445	1.0500e-003	0.0455		157.4799	157.4799	6.9300e-003		157.6254
Total	**0.6318**	**8.3129**	**7.2090**	**0.0279**	**0.7810**	**0.1345**	**0.9156**	**0.2124**	**0.1238**	**0.3362**		**2,681.0120**	**2,681.0120**	**0.0254**		**2,681.5447**

3.3 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.1562	0.0000	3.1562	0.4779	0.0000	0.4779			0.0000			0.0000
Off-Road	3.5606	36.8310	31.7250	0.0399		1.8090	1.8090		1.6856	1.6856		3,983.3282	3,983.3282	1.1015		4,006.4585
Total	**3.5606**	**36.8310**	**31.7250**	**0.0399**	**3.1562**	**1.8090**	**4.9651**	**0.4779**	**1.6856**	**2.1635**		**3,983.3282**	**3,983.3282**	**1.1015**		**4,006.4585**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2441	3.4248	2.7048	0.0107	0.2544	0.0553	0.3097	0.0697	0.0509	0.1206		1,046.6923	1,046.6923	7.6500e-003		1,046.8529
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0433	0.0557	0.6879	2.0300e-003	0.1677	1.1300e-003	0.1688	0.0445	1.0500e-003	0.0455		157.4799	157.4799	6.9300e-003		157.6254

Total	**0.2874**	**3.4806**	**3.3927**	**0.0128**	**0.4221**	**0.0565**	**0.4785**	**0.1141**	**0.0520**	**0.1661**		**1,204.1722**	**1,204.1722**	**0.0146**		**1,204.4783**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.2309	0.0000	1.2309	0.1864	0.0000	0.1864			0.0000			0.0000
Off-Road	3.5606	36.8310	31.7250	0.0399		1.8090	1.8090		1.6856	1.6856	0.0000	3,983.3282	3,983.3282	1.1015		4,006.4585
Total	**3.5606**	**36.8310**	**31.7250**	**0.0399**	**1.2309**	**1.8090**	**3.0399**	**0.1864**	**1.6856**	**1.8720**	**0.0000**	**3,983.3282**	**3,983.3282**	**1.1015**		**4,006.4585**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2441	3.4248	2.7048	0.0107	0.2544	0.0553	0.3097	0.0697	0.0509	0.1206		1,046.6923	1,046.6923	7.6500e-003		1,046.8529
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0433	0.0557	0.6879	2.0300e-003	0.1677	1.1300e-003	0.1688	0.0445	1.0500e-003	0.0455		157.4799	157.4799	6.9300e-003		157.6254
Total	**0.2874**	**3.4806**	**3.3927**	**0.0128**	**0.4221**	**0.0565**	**0.4785**	**0.1141**	**0.0520**	**0.1661**		**1,204.1722**	**1,204.1722**	**0.0146**		**1,204.4783**

3.4 Site Preparation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.2921	45.6088	36.2346	0.0391		2.3654	2.3654		2.1762	2.1762		3,939.7731	3,939.7731	1.2265		3,965.5297
Total	**4.2921**	**45.6088**	**36.2346**	**0.0391**	**18.0663**	**2.3654**	**20.4317**	**9.9307**	**2.1762**	**12.1069**		**3,939.7731**	**3,939.7731**	**1.2265**		**3,965.5297**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0519	0.0669	0.8255	2.4400e-003	0.2012	1.3600e-003	0.2026	0.0534	1.2600e-003	0.0546		188.9759	188.9759	8.3200e-003		189.1505
Total	**0.0519**	**0.0669**	**0.8255**	**2.4400e-003**	**0.2012**	**1.3600e-003**	**0.2026**	**0.0534**	**1.2600e-003**	**0.0546**		**188.9759**	**188.9759**	**8.3200e-003**		**189.1505**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Fugitive Dust					7.0458	0.0000	7.0458	3.8730	0.0000	3.8730			0.0000			0.0000
Off-Road	4.2921	45.6088	36.2346	0.0391		2.3654	2.3654		2.1762	2.1762	0.0000	3,939.7731	3,939.7731	1.2265		3,965.5297
Total	**4.2921**	**45.6088**	**36.2346**	**0.0391**	**7.0458**	**2.3654**	**9.4113**	**3.8730**	**2.1762**	**6.0491**	**0.0000**	**3,939.7731**	**3,939.7731**	**1.2265**		**3,965.5297**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0519	0.0669	0.8255	2.4400e-003	0.2012	1.3600e-003	0.2026	0.0534	1.2600e-003	0.0546		188.9759	188.9759	8.3200e-003		189.1505
Total	**0.0519**	**0.0669**	**0.8255**	**2.4400e-003**	**0.2012**	**1.3600e-003**	**0.2026**	**0.0534**	**1.2600e-003**	**0.0546**		**188.9759**	**188.9759**	**8.3200e-003**		**189.1505**

3.5 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	3.0028	31.0702	23.9988	0.0297		1.7201	1.7201		1.5825	1.5825		2,993.1005	2,993.1005	0.9318		3,012.6681
Total	**3.0028**	**31.0702**	**23.9988**	**0.0297**	**6.5523**	**1.7201**	**8.2724**	**3.3675**	**1.5825**	**4.9500**		**2,993.1005**	**2,993.1005**	**0.9318**		**3,012.6681**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0433	0.0557	0.6879	2.0300e-003	0.1677	1.1300e-003	0.1688	0.0445	1.0500e-003	0.0455		157.4799	157.4799	6.9300e-003		157.6254
Total	**0.0433**	**0.0557**	**0.6879**	**2.0300e-003**	**0.1677**	**1.1300e-003**	**0.1688**	**0.0445**	**1.0500e-003**	**0.0455**		**157.4799**	**157.4799**	**6.9300e-003**		**157.6254**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000			0.0000
Off-Road	3.0028	31.0702	23.9988	0.0297		1.7201	1.7201		1.5825	1.5825	0.0000	2,993.1005	2,993.1005	0.9318		3,012.6681
Total	**3.0028**	**31.0702**	**23.9988**	**0.0297**	**2.5554**	**1.7201**	**4.2755**	**1.3133**	**1.5825**	**2.8958**	**0.0000**	**2,993.1005**	**2,993.1005**	**0.9318**		**3,012.6681**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0433	0.0557	0.6879	2.0300e-003	0.1677	1.1300e-003	0.1688	0.0445	1.0500e-003	0.0455		157.4799	157.4799	6.9300e-003		157.6254
Total	**0.0433**	**0.0557**	**0.6879**	**2.0300e-003**	**0.1677**	**1.1300e-003**	**0.1688**	**0.0445**	**1.0500e-003**	**0.0455**		**157.4799**	**157.4799**	**6.9300e-003**		**157.6254**

3.6 Trenching - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2784	11.5096	8.2146	0.0110		0.8431	0.8431		0.7773	0.7773		1,080.5613	1,080.5613	0.3221		1,087.3251
Total	**1.2784**	**11.5096**	**8.2146**	**0.0110**		**0.8431**	**0.8431**		**0.7773**	**0.7773**		**1,080.5613**	**1,080.5613**	**0.3221**		**1,087.3251**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0375	0.0483	0.5962	1.7600e-003	0.1453	9.8000e-004	0.1463	0.0385	9.1000e-004	0.0395		136.4826	136.4826	6.0100e-003		136.6087

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Total	**0.0375**	**0.0483**	**0.5962**	**1.7600e-003**	**0.1453**	**9.8000e-004**	**0.1463**	**0.0385**	**9.1000e-004**	**0.0395**		**136.4826**	**136.4826**	**6.0100e-003**		**136.6087**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2784	11.5096	8.2146	0.0110		0.8431	0.8431		0.7773	0.7773	0.0000	1,080.5613	1,080.5613	0.3221		1,087.3251
Total	**1.2784**	**11.5096**	**8.2146**	**0.0110**		**0.8431**	**0.8431**		**0.7773**	**0.7773**	**0.0000**	**1,080.5613**	**1,080.5613**	**0.3221**		**1,087.3251**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0375	0.0483	0.5962	1.7600e-003	0.1453	9.8000e-004	0.1463	0.0385	9.1000e-004	0.0395		136.4826	136.4826	6.0100e-003		136.6087
Total	**0.0375**	**0.0483**	**0.5962**	**1.7600e-003**	**0.1453**	**9.8000e-004**	**0.1463**	**0.0385**	**9.1000e-004**	**0.0395**		**136.4826**	**136.4826**	**6.0100e-003**		**136.6087**

3.7 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048		2,609.9390	2,609.9390	0.6387		2,623.3517
Total	**2.6687**	**23.2608**	**17.5327**	**0.0268**		**1.4943**	**1.4943**		**1.4048**	**1.4048**		**2,609.9390**	**2,609.9390**	**0.6387**		**2,623.3517**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2342	2.2395	2.8297	6.6900e-003	0.1938	0.0357	0.2295	0.0552	0.0329	0.0881		650.0929	650.0929	4.6000e-003		650.1895
Worker	0.2307	0.2971	3.6687	0.0109	0.8942	6.0400e-003	0.9003	0.2372	5.5900e-003	0.2427		839.8927	839.8927	0.0370		840.6689
Total	**0.4648**	**2.5366**	**6.4984**	**0.0175**	**1.0880**	**0.0418**	**1.1298**	**0.2923**	**0.0385**	**0.3308**		**1,489.9856**	**1,489.9856**	**0.0416**		**1,490.8584**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048	0.0000	2,609.9389	2,609.9389	0.6387		2,623.3517
Total	**2.6687**	**23.2608**	**17.5327**	**0.0268**		**1.4943**	**1.4943**		**1.4048**	**1.4048**	**0.0000**	**2,609.9389**	**2,609.9389**	**0.6387**		**2,623.3517**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2342	2.2395	2.8297	6.6900e-003	0.1938	0.0357	0.2295	0.0552	0.0329	0.0881		650.0929	650.0929	4.6000e-003		650.1895
Worker	0.2307	0.2971	3.6687	0.0109	0.8942	6.0400e-003	0.9003	0.2372	5.5900e-003	0.2427		839.8927	839.8927	0.0370		840.6689
Total	**0.4648**	**2.5366**	**6.4984**	**0.0175**	**1.0880**	**0.0418**	**1.1298**	**0.2923**	**0.0385**	**0.3308**		**1,489.9856**	**1,489.9856**	**0.0416**		**1,490.8584**

3.7 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083		2,580.7618	2,580.7618	0.6279		2,593.9479
Total	**2.3516**	**20.9650**	**17.1204**	**0.0268**		**1.2850**	**1.2850**		**1.2083**	**1.2083**		**2,580.7618**	**2,580.7618**	**0.6279**		**2,593.9479**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2196	2.0771	2.6797	6.7000e-003	0.1938	0.0333	0.2271	0.0552	0.0307	0.0859		641.0554	641.0554	4.6300e-003		641.1526
Worker	0.2158	0.2754	3.4250	0.0109	0.8942	6.0900e-003	0.9003	0.2372	5.6400e-003	0.2428		813.7503	813.7503	0.0353		814.4913
Total	**0.4354**	**2.3525**	**6.1047**	**0.0176**	**1.0880**	**0.0394**	**1.1274**	**0.2923**	**0.0363**	**0.3287**		**1,454.8057**	**1,454.8057**	**0.0399**		**1,455.6439**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083	0.0000	2,580.7618	2,580.7618	0.6279		2,593.9479
Total	**2.3516**	**20.9650**	**17.1204**	**0.0268**		**1.2850**	**1.2850**		**1.2083**	**1.2083**	**0.0000**	**2,580.7618**	**2,580.7618**	**0.6279**		**2,593.9479**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2196	2.0771	2.6797	6.7000e-003	0.1938	0.0333	0.2271	0.0552	0.0307	0.0859		641.0554	641.0554	4.6300e-003		641.1526
Worker	0.2158	0.2754	3.4250	0.0109	0.8942	6.0900e-003	0.9003	0.2372	5.6400e-003	0.2428		813.7503	813.7503	0.0353		814.4913
Total	**0.4354**	**2.3525**	**6.1047**	**0.0176**	**1.0880**	**0.0394**	**1.1274**	**0.2923**	**0.0363**	**0.3287**		**1,454.8057**	**1,454.8057**	**0.0399**		**1,455.6439**

3.8 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2520	12.5889	12.1441	0.0187		0.7111	0.7111		0.6560	0.6560		1,816.2490	1,816.2490	0.5585		1,827.9782
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2520**	**12.5889**	**12.1441**	**0.0187**		**0.7111**	**0.7111**		**0.6560**	**0.6560**		**1,816.2490**	**1,816.2490**	**0.5585**		**1,827.9782**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0540	0.0688	0.8563	2.7300e-003	0.2236	1.5200e-003	0.2251	0.0593	1.4100e-003	0.0607		203.4376	203.4376	8.8200e-003		203.6228

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Total	**0.0540**	**0.0688**	**0.8563**	**2.7300e-003**	**0.2236**	**1.5200e-003**	**0.2251**	**0.0593**	**1.4100e-003**	**0.0607**		**203.4376**	**203.4376**	**8.8200e-003**		**203.6228**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2520	12.5889	12.1441	0.0187		0.7111	0.7111		0.6560	0.6560	0.0000	1,816.2490	1,816.2490	0.5585		1,827.9782
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2520**	**12.5889**	**12.1441**	**0.0187**		**0.7111**	**0.7111**		**0.6560**	**0.6560**	**0.0000**	**1,816.2490**	**1,816.2490**	**0.5585**		**1,827.9782**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0540	0.0688	0.8563	2.7300e-003	0.2236	1.5200e-003	0.2251	0.0593	1.4100e-003	0.0607		203.4376	203.4376	8.8200e-003		203.6228
Total	**0.0540**	**0.0688**	**0.8563**	**2.7300e-003**	**0.2236**	**1.5200e-003**	**0.2251**	**0.0593**	**1.4100e-003**	**0.0607**		**203.4376**	**203.4376**	**8.8200e-003**		**203.6228**

3.9 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	97.7501					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		281.9473
Total	**98.0165**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**		**281.4481**	**281.4481**	**0.0238**		**281.9473**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0432	0.0551	0.6850	2.1800e-003	0.1788	1.2200e-003	0.1801	0.0474	1.1300e-003	0.0486		162.7501	162.7501	7.0600e-003		162.8983
Total	**0.0432**	**0.0551**	**0.6850**	**2.1800e-003**	**0.1788**	**1.2200e-003**	**0.1801**	**0.0474**	**1.1300e-003**	**0.0486**		**162.7501**	**162.7501**	**7.0600e-003**		**162.8983**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Archit. Coating	97.7501					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		281.9473
Total	**98.0165**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**	**0.0000**	**281.4481**	**281.4481**	**0.0238**		**281.9473**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0432	0.0551	0.6850	2.1800e-003	0.1788	1.2200e-003	0.1801	0.0474	1.1300e-003	0.0486		162.7501	162.7501	7.0600e-003		162.8983
Total	**0.0432**	**0.0551**	**0.6850**	**2.1800e-003**	**0.1788**	**1.2200e-003**	**0.1801**	**0.0474**	**1.1300e-003**	**0.0486**		**162.7501**	**162.7501**	**7.0600e-003**		**162.8983**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	13.1673	28.4349	141.8112	0.4686	33.3045	0.4677	33.7722	8.8870	0.4317	9.3187		35,678.0239	35,678.0239	1.2648		35,704.5837
Unmitigated	13.1673	28.4349	141.8112	0.4686	33.3045	0.4677	33.7722	8.8870	0.4317	9.3187		35,678.0239	35,678.0239	1.2648		35,704.5837

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	5,217.77	2,131.52	229.67	12,275,608	12,275,608
Total	5,217.77	2,131.52	229.67	12,275,608	12,275,608

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.508857	0.056420	0.193204	0.150829	0.041936	0.005921	0.015893	0.015805	0.001454	0.002159	0.004747	0.000498	0.002277

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0889	0.8086	0.6792	4.8500e-003		0.0615	0.0615		0.0615	0.0615		970.2895	970.2895	0.0186	0.0178	976.1945
NaturalGas Unmitigated	0.0889	0.8086	0.6792	4.8500e-003		0.0615	0.0615		0.0615	0.0615		970.2895	970.2895	0.0186	0.0178	976.1945

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	8247.46	0.0889	0.8086	0.6792	4.8500e-003		0.0615	0.0615		0.0615	0.0615		970.2895	970.2895	0.0186	0.0178	976.1945
Total		**0.0889**	**0.8086**	**0.6792**	**4.8500e-003**		**0.0615**	**0.0615**		**0.0615**	**0.0615**		**970.2895**	**970.2895**	**0.0186**	**0.0178**	**976.1945**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	8.24746	0.0889	0.8086	0.6792	4.8500e-003		0.0615	0.0615		0.0615	0.0615		970.2895	970.2895	0.0186	0.0178	976.1945
Total		**0.0889**	**0.8086**	**0.6792**	**4.8500e-003**		**0.0615**	**0.0615**		**0.0615**	**0.0615**		**970.2895**	**970.2895**	**0.0186**	**0.0178**	**976.1945**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.9651	1.8000e-004	0.0195	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0415	0.0415	1.1000e-004		0.0439
Unmitigated	4.9651	1.8000e-004	0.0195	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0415	0.0415	1.1000e-004		0.0439

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.2051					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.7582					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.8300e-003	1.8000e-004	0.0195	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0415	0.0415	1.1000e-004		0.0439
Total	**4.9651**	**1.8000e-004**	**0.0195**	**0.0000**		**7.0000e-005**	**7.0000e-005**		**7.0000e-005**	**7.0000e-005**		**0.0415**	**0.0415**	**1.1000e-004**		**0.0439**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Consumer Products	3.7582					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.8300e-003	1.8000e-004	0.0195	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0415	0.0415	1.1000e-004		0.0439

Architectural Coating	1.2051					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**4.9651**	**1.8000e-004**	**0.0195**	**0.0000**		**7.0000e-005**	**7.0000e-005**		**7.0000e-005**	**7.0000e-005**		**0.0415**	**0.0415**	**1.1000e-004**		**0.0439**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Phase 2 - Student Union

Orange County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	189.81	1000sqft	4.36	189,806.00	0

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 2.2 **Precipitation Freq (Days)** 30

Climate Zone 8 **Operational Year** 2020

Utility Company Southern California Edison

CO2 Intensity (lb/MWhr) 630.89 **CH4 Intensity (lb/MWhr)** 0.029 **N2O Intensity (lb/MWhr)** 0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - modified

Construction Phase - modified

Off-road Equipment -

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Trips and VMT - modified

Demolition - Assuming density of pavement is 150 lbs/ft3 and pavement is 1 ft deep

Architectural Coating - modified per SCAQMD Rule 1113

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblProjectCharacteristics	OperationalYear	2014	2020

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	4.3466	45.6823	39.9371	0.0677	18.2675	2.3668	20.6342	9.9840	2.1774	12.1615	0.0000	6,649.9696	6,649.9696	1.2348	0.0000	6,675.9009
2019	98.0618	23.3907	23.6218	0.0438	1.0880	1.3248	2.4128	0.2923	1.2449	1.5372	0.0000	3,986.9241	3,986.9241	0.6680	0.0000	4,000.9517
Total	**102.4084**	**69.0730**	**63.5589**	**0.1114**	**19.3555**	**3.6916**	**23.0470**	**10.2764**	**3.4223**	**13.6987**	**0.0000**	**10,636.8937**	**10,636.8937**	**1.9028**	**0.0000**	**10,676.8525**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	4.3466	45.6823	39.9371	0.0677	7.2470	2.3668	9.6138	3.9263	2.1774	6.1038	0.0000	6,649.9696	6,649.9696	1.2348	0.0000	6,675.9009
2019	98.0618	23.3907	23.6218	0.0438	1.0880	1.3248	2.4128	0.2923	1.2449	1.5372	0.0000	3,986.9241	3,986.9241	0.6680	0.0000	4,000.9517
Total	**102.4084**	**69.0730**	**63.5589**	**0.1114**	**8.3350**	**3.6916**	**12.0266**	**4.2187**	**3.4223**	**7.6410**	**0.0000**	**10,636.8937**	**10,636.8937**	**1.9028**	**0.0000**	**10,676.8525**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**56.94**	**0.00**	**47.82**	**58.95**	**0.00**	**44.22**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.9651	1.8000e-004	0.0195	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0415	0.0415	1.1000e-004		0.0439
Energy	0.0889	0.8086	0.6792	4.8500e-003		0.0615	0.0615		0.0615	0.0615		970.2895	970.2895	0.0186	0.0178	976.1945
Mobile	13.8819	30.0031	141.1798	0.4474	33.3045	0.4692	33.7737	8.8870	0.4331	9.3201		34,139.2147	34,139.2147	1.2656		34,165.7932
Total	**18.9360**	**30.8118**	**141.8785**	**0.4523**	**33.3045**	**0.5307**	**33.8352**	**8.8870**	**0.4946**	**9.3816**		**35,109.5457**	**35,109.5457**	**1.2844**	**0.0178**	**35,142.0316**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.9651	1.8000e-004	0.0195	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0415	0.0415	1.1000e-004		0.0439
Energy	0.0889	0.8086	0.6792	4.8500e-003		0.0615	0.0615		0.0615	0.0615		970.2895	970.2895	0.0186	0.0178	976.1945
Mobile	13.8819	30.0031	141.1798	0.4474	33.3045	0.4692	33.7737	8.8870	0.4331	9.3201		34,139.2147	34,139.2147	1.2656		34,165.7932
Total	**18.9360**	**30.8118**	**141.8785**	**0.4523**	**33.3045**	**0.5307**	**33.8352**	**8.8870**	**0.4946**	**9.3816**		**35,109.5457**	**35,109.5457**	**1.2844**	**0.0178**	**35,142.0316**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition - Pavement Removal	Demolition	6/1/2018	6/28/2018	5	20	
2	Demolition	Demolition	6/29/2018	7/26/2018	5	20	
3	Site Preparation	Site Preparation	7/27/2018	8/2/2018	5	5	
4	Grading	Grading	8/3/2018	8/14/2018	5	8	
5	Trenching	Trenching	8/15/2018	8/28/2018	5	10	
6	Building Construction	Building Construction	8/29/2018	7/16/2019	5	230	
7	Paving	Paving	7/17/2019	8/9/2019	5	18	
8	Architectural Coating	Architectural Coating	8/10/2019	9/4/2019	5	18	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 284,709; Non-Residential Outdoor: 94,903 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Demolition - Pavement Removal	Concrete/Industrial Saws	1	8.00	81	0.73
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Demolition - Pavement Removal	Excavators	3	8.00	162	0.38
Demolition - Pavement Removal	Rubber Tired Dozers	2	8.00	255	0.40
Trenching	Trenchers	2	8.00	80	0.50
Trenching	Plate Compactors	2	8.00	8	0.43
Grading	Excavators	1	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	125	0.42
Paving	Paving Equipment	2	6.00	130	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73

Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition - Pavement Removal	6	15.00	0.00	704.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	80.00	31.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	16.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	6	15.00	0.00	292.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - Pavement Removal - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.6159	0.0000	7.6159	1.1531	0.0000	1.1531			0.0000			0.0000
Off-Road	3.5606	36.8310	31.7250	0.0399		1.8090	1.8090		1.6856	1.6856		3,983.3282	3,983.3282	1.1015		4,006.4585
Total	**3.5606**	**36.8310**	**31.7250**	**0.0399**	**7.6159**	**1.8090**	**9.4249**	**1.1531**	**1.6856**	**2.8387**		**3,983.3282**	**3,983.3282**	**1.1015**		**4,006.4585**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.6236	8.5390	7.5681	0.0258	0.6134	0.1337	0.7471	0.1680	0.1230	0.2910		2,517.5076	2,517.5076	0.0187		2,517.9002
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0454	0.0613	0.6440	1.9300e-003	0.1677	1.1300e-003	0.1688	0.0445	1.0500e-003	0.0455		149.1338	149.1338	6.9300e-003		149.2794
Total	**0.6690**	**8.6003**	**8.2121**	**0.0277**	**0.7810**	**0.1348**	**0.9159**	**0.2124**	**0.1240**	**0.3365**		**2,666.6414**	**2,666.6414**	**0.0256**		**2,667.1796**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.9702	0.0000	2.9702	0.4497	0.0000	0.4497			0.0000			0.0000
Off-Road	3.5606	36.8310	31.7250	0.0399		1.8090	1.8090		1.6856	1.6856	0.0000	3,983.3282	3,983.3282	1.1015		4,006.4585
Total	**3.5606**	**36.8310**	**31.7250**	**0.0399**	**2.9702**	**1.8090**	**4.7792**	**0.4497**	**1.6856**	**2.1353**	**0.0000**	**3,983.3282**	**3,983.3282**	**1.1015**		**4,006.4585**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.6236	8.5390	7.5681	0.0258	0.6134	0.1337	0.7471	0.1680	0.1230	0.2910		2,517.5076	2,517.5076	0.0187		2,517.9002
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0454	0.0613	0.6440	1.9300e-003	0.1677	1.1300e-003	0.1688	0.0445	1.0500e-003	0.0455		149.1338	149.1338	6.9300e-003		149.2794
Total	**0.6690**	**8.6003**	**8.2121**	**0.0277**	**0.7810**	**0.1348**	**0.9159**	**0.2124**	**0.1240**	**0.3365**		**2,666.6414**	**2,666.6414**	**0.0256**		**2,667.1796**

3.3 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.1562	0.0000	3.1562	0.4779	0.0000	0.4779			0.0000			0.0000
Off-Road	3.5606	36.8310	31.7250	0.0399		1.8090	1.8090		1.6856	1.6856		3,983.3282	3,983.3282	1.1015		4,006.4585
Total	**3.5606**	**36.8310**	**31.7250**	**0.0399**	**3.1562**	**1.8090**	**4.9651**	**0.4779**	**1.6856**	**2.1635**		**3,983.3282**	**3,983.3282**	**1.1015**		**4,006.4585**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2586	3.5418	3.1390	0.0107	0.2544	0.0555	0.3099	0.0697	0.0510	0.1207		1,044.1935	1,044.1935	7.7500e-003		1,044.3563
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0454	0.0613	0.6440	1.9300e-003	0.1677	1.1300e-003	0.1688	0.0445	1.0500e-003	0.0455		149.1338	149.1338	6.9300e-003		149.2794

Total	**0.3040**	**3.6030**	**3.7831**	**0.0126**	**0.4221**	**0.0566**	**0.4787**	**0.1141**	**0.0521**	**0.1662**		**1,193.3273**	**1,193.3273**	**0.0147**		**1,193.6357**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.2309	0.0000	1.2309	0.1864	0.0000	0.1864			0.0000			0.0000
Off-Road	3.5606	36.8310	31.7250	0.0399		1.8090	1.8090		1.6856	1.6856	0.0000	3,983.3282	3,983.3282	1.1015		4,006.4585
Total	**3.5606**	**36.8310**	**31.7250**	**0.0399**	**1.2309**	**1.8090**	**3.0399**	**0.1864**	**1.6856**	**1.8720**	**0.0000**	**3,983.3282**	**3,983.3282**	**1.1015**		**4,006.4585**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2586	3.5418	3.1390	0.0107	0.2544	0.0555	0.3099	0.0697	0.0510	0.1207		1,044.1935	1,044.1935	7.7500e-003		1,044.3563
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0454	0.0613	0.6440	1.9300e-003	0.1677	1.1300e-003	0.1688	0.0445	1.0500e-003	0.0455		149.1338	149.1338	6.9300e-003		149.2794
Total	**0.3040**	**3.6030**	**3.7831**	**0.0126**	**0.4221**	**0.0566**	**0.4787**	**0.1141**	**0.0521**	**0.1662**		**1,193.3273**	**1,193.3273**	**0.0147**		**1,193.6357**

3.4 Site Preparation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.2921	45.6088	36.2346	0.0391		2.3654	2.3654		2.1762	2.1762		3,939.7731	3,939.7731	1.2265		3,965.5297
Total	**4.2921**	**45.6088**	**36.2346**	**0.0391**	**18.0663**	**2.3654**	**20.4317**	**9.9307**	**2.1762**	**12.1069**		**3,939.7731**	**3,939.7731**	**1.2265**		**3,965.5297**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0545	0.0735	0.7728	2.3100e-003	0.2012	1.3600e-003	0.2026	0.0534	1.2600e-003	0.0546		178.9606	178.9606	8.3200e-003		179.1353
Total	**0.0545**	**0.0735**	**0.7728**	**2.3100e-003**	**0.2012**	**1.3600e-003**	**0.2026**	**0.0534**	**1.2600e-003**	**0.0546**		**178.9606**	**178.9606**	**8.3200e-003**		**179.1353**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					7.0458	0.0000	7.0458	3.8730	0.0000	3.8730			0.0000			0.0000
Off-Road	4.2921	45.6088	36.2346	0.0391		2.3654	2.3654		2.1762	2.1762	0.0000	3,939.7731	3,939.7731	1.2265		3,965.5297
Total	**4.2921**	**45.6088**	**36.2346**	**0.0391**	**7.0458**	**2.3654**	**9.4113**	**3.8730**	**2.1762**	**6.0491**	**0.0000**	**3,939.7731**	**3,939.7731**	**1.2265**		**3,965.5297**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0545	0.0735	0.7728	2.3100e-003	0.2012	1.3600e-003	0.2026	0.0534	1.2600e-003	0.0546		178.9606	178.9606	8.3200e-003		179.1353
Total	**0.0545**	**0.0735**	**0.7728**	**2.3100e-003**	**0.2012**	**1.3600e-003**	**0.2026**	**0.0534**	**1.2600e-003**	**0.0546**		**178.9606**	**178.9606**	**8.3200e-003**		**179.1353**

3.5 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	3.0028	31.0702	23.9988	0.0297		1.7201	1.7201		1.5825	1.5825		2,993.1005	2,993.1005	0.9318		3,012.6681
Total	**3.0028**	**31.0702**	**23.9988**	**0.0297**	**6.5523**	**1.7201**	**8.2724**	**3.3675**	**1.5825**	**4.9500**		**2,993.1005**	**2,993.1005**	**0.9318**		**3,012.6681**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0454	0.0613	0.6440	1.9300e-003	0.1677	1.1300e-003	0.1688	0.0445	1.0500e-003	0.0455		149.1338	149.1338	6.9300e-003		149.2794
Total	**0.0454**	**0.0613**	**0.6440**	**1.9300e-003**	**0.1677**	**1.1300e-003**	**0.1688**	**0.0445**	**1.0500e-003**	**0.0455**		**149.1338**	**149.1338**	**6.9300e-003**		**149.2794**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000			0.0000
Off-Road	3.0028	31.0702	23.9988	0.0297		1.7201	1.7201		1.5825	1.5825	0.0000	2,993.1005	2,993.1005	0.9318		3,012.6681
Total	**3.0028**	**31.0702**	**23.9988**	**0.0297**	**2.5554**	**1.7201**	**4.2755**	**1.3133**	**1.5825**	**2.8958**	**0.0000**	**2,993.1005**	**2,993.1005**	**0.9318**		**3,012.6681**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0454	0.0613	0.6440	1.9300e-003	0.1677	1.1300e-003	0.1688	0.0445	1.0500e-003	0.0455		149.1338	149.1338	6.9300e-003		149.2794
Total	**0.0454**	**0.0613**	**0.6440**	**1.9300e-003**	**0.1677**	**1.1300e-003**	**0.1688**	**0.0445**	**1.0500e-003**	**0.0455**		**149.1338**	**149.1338**	**6.9300e-003**		**149.2794**

3.6 Trenching - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2784	11.5096	8.2146	0.0110		0.8431	0.8431		0.7773	0.7773		1,080.5613	1,080.5613	0.3221		1,087.3251
Total	**1.2784**	**11.5096**	**8.2146**	**0.0110**		**0.8431**	**0.8431**		**0.7773**	**0.7773**		**1,080.5613**	**1,080.5613**	**0.3221**		**1,087.3251**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0393	0.0531	0.5582	1.6700e-003	0.1453	9.8000e-004	0.1463	0.0385	9.1000e-004	0.0395		129.2493	129.2493	6.0100e-003		129.3755

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Total	**0.0393**	**0.0531**	**0.5582**	**1.6700e-003**	**0.1453**	**9.8000e-004**	**0.1463**	**0.0385**	**9.1000e-004**	**0.0395**		**129.2493**	**129.2493**	**6.0100e-003**		**129.3755**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2784	11.5096	8.2146	0.0110		0.8431	0.8431		0.7773	0.7773	0.0000	1,080.5613	1,080.5613	0.3221		1,087.3251
Total	**1.2784**	**11.5096**	**8.2146**	**0.0110**		**0.8431**	**0.8431**		**0.7773**	**0.7773**	**0.0000**	**1,080.5613**	**1,080.5613**	**0.3221**		**1,087.3251**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0393	0.0531	0.5582	1.6700e-003	0.1453	9.8000e-004	0.1463	0.0385	9.1000e-004	0.0395		129.2493	129.2493	6.0100e-003		129.3755
Total	**0.0393**	**0.0531**	**0.5582**	**1.6700e-003**	**0.1453**	**9.8000e-004**	**0.1463**	**0.0385**	**9.1000e-004**	**0.0395**		**129.2493**	**129.2493**	**6.0100e-003**		**129.3755**

3.7 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048		2,609.9390	2,609.9390	0.6387		2,623.3517
Total	**2.6687**	**23.2608**	**17.5327**	**0.0268**		**1.4943**	**1.4943**		**1.4048**	**1.4048**		**2,609.9390**	**2,609.9390**	**0.6387**		**2,623.3517**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2577	2.2899	3.4569	6.6400e-003	0.1938	0.0361	0.2299	0.0552	0.0332	0.0884		644.5848	644.5848	4.7500e-003		644.6845
Worker	0.2421	0.3267	3.4348	0.0103	0.8942	6.0400e-003	0.9003	0.2372	5.5900e-003	0.2427		795.3805	795.3805	0.0370		796.1568
Total	**0.4998**	**2.6166**	**6.8917**	**0.0169**	**1.0880**	**0.0421**	**1.1301**	**0.2923**	**0.0388**	**0.3311**		**1,439.9653**	**1,439.9653**	**0.0417**		**1,440.8413**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Off-Road	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048	0.0000	2,609.9389	2,609.9389	0.6387		2,623.3517
Total	**2.6687**	**23.2608**	**17.5327**	**0.0268**		**1.4943**	**1.4943**		**1.4048**	**1.4048**	**0.0000**	**2,609.9389**	**2,609.9389**	**0.6387**		**2,623.3517**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2577	2.2899	3.4569	6.6400e-003	0.1938	0.0361	0.2299	0.0552	0.0332	0.0884		644.5848	644.5848	4.7500e-003		644.6845
Worker	0.2421	0.3267	3.4348	0.0103	0.8942	6.0400e-003	0.9003	0.2372	5.5900e-003	0.2427		795.3805	795.3805	0.0370		796.1568
Total	**0.4998**	**2.6166**	**6.8917**	**0.0169**	**1.0880**	**0.0421**	**1.1301**	**0.2923**	**0.0388**	**0.3311**		**1,439.9653**	**1,439.9653**	**0.0417**		**1,440.8413**

3.7 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083		2,580.7618	2,580.7618	0.6279		2,593.9479
Total	**2.3516**	**20.9650**	**17.1204**	**0.0268**		**1.2850**	**1.2850**		**1.2083**	**1.2083**		**2,580.7618**	**2,580.7618**	**0.6279**		**2,593.9479**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2404	2.1229	3.3034	6.6500e-003	0.1938	0.0337	0.2274	0.0552	0.0310	0.0862		635.6297	635.6297	4.7800e-003		635.7301
Worker	0.2263	0.3028	3.1981	0.0103	0.8942	6.0900e-003	0.9003	0.2372	5.6400e-003	0.2428		770.5326	770.5326	0.0353		771.2736
Total	**0.4667**	**2.4256**	**6.5015**	**0.0170**	**1.0880**	**0.0398**	**1.1277**	**0.2923**	**0.0366**	**0.3289**		**1,406.1623**	**1,406.1623**	**0.0401**		**1,407.0038**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083	0.0000	2,580.7618	2,580.7618	0.6279		2,593.9479
Total	**2.3516**	**20.9650**	**17.1204**	**0.0268**		**1.2850**	**1.2850**		**1.2083**	**1.2083**	**0.0000**	**2,580.7618**	**2,580.7618**	**0.6279**		**2,593.9479**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2404	2.1229	3.3034	6.6500e-003	0.1938	0.0337	0.2274	0.0552	0.0310	0.0862		635.6297	635.6297	4.7800e-003		635.7301
Worker	0.2263	0.3028	3.1981	0.0103	0.8942	6.0900e-003	0.9003	0.2372	5.6400e-003	0.2428		770.5326	770.5326	0.0353		771.2736
Total	**0.4667**	**2.4256**	**6.5015**	**0.0170**	**1.0880**	**0.0398**	**1.1277**	**0.2923**	**0.0366**	**0.3289**		**1,406.1623**	**1,406.1623**	**0.0401**		**1,407.0038**

3.8 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2520	12.5889	12.1441	0.0187		0.7111	0.7111		0.6560	0.6560		1,816.2490	1,816.2490	0.5585		1,827.9782
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2520**	**12.5889**	**12.1441**	**0.0187**		**0.7111**	**0.7111**		**0.6560**	**0.6560**		**1,816.2490**	**1,816.2490**	**0.5585**		**1,827.9782**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0566	0.0757	0.7995	2.5800e-003	0.2236	1.5200e-003	0.2251	0.0593	1.4100e-003	0.0607		192.6332	192.6332	8.8200e-003		192.8184

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Total	**0.0566**	**0.0757**	**0.7995**	**2.5800e-003**	**0.2236**	**1.5200e-003**	**0.2251**	**0.0593**	**1.4100e-003**	**0.0607**		**192.6332**	**192.6332**	**8.8200e-003**		**192.8184**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2520	12.5889	12.1441	0.0187		0.7111	0.7111		0.6560	0.6560	0.0000	1,816.2490	1,816.2490	0.5585		1,827.9782
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2520**	**12.5889**	**12.1441**	**0.0187**		**0.7111**	**0.7111**		**0.6560**	**0.6560**	**0.0000**	**1,816.2490**	**1,816.2490**	**0.5585**		**1,827.9782**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0566	0.0757	0.7995	2.5800e-003	0.2236	1.5200e-003	0.2251	0.0593	1.4100e-003	0.0607		192.6332	192.6332	8.8200e-003		192.8184
Total	**0.0566**	**0.0757**	**0.7995**	**2.5800e-003**	**0.2236**	**1.5200e-003**	**0.2251**	**0.0593**	**1.4100e-003**	**0.0607**		**192.6332**	**192.6332**	**8.8200e-003**		**192.8184**

3.9 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	97.7501					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		281.9473
Total	**98.0165**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**		**281.4481**	**281.4481**	**0.0238**		**281.9473**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0453	0.0606	0.6396	2.0600e-003	0.1788	1.2200e-003	0.1801	0.0474	1.1300e-003	0.0486		154.1065	154.1065	7.0600e-003		154.2547
Total	**0.0453**	**0.0606**	**0.6396**	**2.0600e-003**	**0.1788**	**1.2200e-003**	**0.1801**	**0.0474**	**1.1300e-003**	**0.0486**		**154.1065**	**154.1065**	**7.0600e-003**		**154.2547**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Archit. Coating	97.7501					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		281.9473
Total	**98.0165**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**	**0.0000**	**281.4481**	**281.4481**	**0.0238**		**281.9473**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0453	0.0606	0.6396	2.0600e-003	0.1788	1.2200e-003	0.1801	0.0474	1.1300e-003	0.0486		154.1065	154.1065	7.0600e-003		154.2547
Total	**0.0453**	**0.0606**	**0.6396**	**2.0600e-003**	**0.1788**	**1.2200e-003**	**0.1801**	**0.0474**	**1.1300e-003**	**0.0486**		**154.1065**	**154.1065**	**7.0600e-003**		**154.2547**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	13.8819	30.0031	141.1798	0.4474	33.3045	0.4692	33.7737	8.8870	0.4331	9.3201		34,139.2147	34,139.2147	1.2656		34,165.7932
Unmitigated	13.8819	30.0031	141.1798	0.4474	33.3045	0.4692	33.7737	8.8870	0.4331	9.3201		34,139.2147	34,139.2147	1.2656		34,165.7932

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	5,217.77	2,131.52	229.67	12,275,608	12,275,608
Total	5,217.77	2,131.52	229.67	12,275,608	12,275,608

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.508857	0.056420	0.193204	0.150829	0.041936	0.005921	0.015893	0.015805	0.001454	0.002159	0.004747	0.000498	0.002277

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0889	0.8086	0.6792	4.8500e-003		0.0615	0.0615		0.0615	0.0615		970.2895	970.2895	0.0186	0.0178	976.1945
NaturalGas Unmitigated	0.0889	0.8086	0.6792	4.8500e-003		0.0615	0.0615		0.0615	0.0615		970.2895	970.2895	0.0186	0.0178	976.1945

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	8247.46	0.0889	0.8086	0.6792	4.8500e-003		0.0615	0.0615		0.0615	0.0615		970.2895	970.2895	0.0186	0.0178	976.1945
Total		**0.0889**	**0.8086**	**0.6792**	**4.8500e-003**		**0.0615**	**0.0615**		**0.0615**	**0.0615**		**970.2895**	**970.2895**	**0.0186**	**0.0178**	**976.1945**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	8.24746	0.0889	0.8086	0.6792	4.8500e-003		0.0615	0.0615		0.0615	0.0615		970.2895	970.2895	0.0186	0.0178	976.1945
Total		**0.0889**	**0.8086**	**0.6792**	**4.8500e-003**		**0.0615**	**0.0615**		**0.0615**	**0.0615**		**970.2895**	**970.2895**	**0.0186**	**0.0178**	**976.1945**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.9651	1.8000e-004	0.0195	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0415	0.0415	1.1000e-004		0.0439
Unmitigated	4.9651	1.8000e-004	0.0195	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0415	0.0415	1.1000e-004		0.0439

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.2051					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.7582					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.8300e-003	1.8000e-004	0.0195	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0415	0.0415	1.1000e-004		0.0439
Total	**4.9651**	**1.8000e-004**	**0.0195**	**0.0000**		**7.0000e-005**	**7.0000e-005**		**7.0000e-005**	**7.0000e-005**		**0.0415**	**0.0415**	**1.1000e-004**		**0.0439**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Consumer Products	3.7582					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.8300e-003	1.8000e-004	0.0195	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0415	0.0415	1.1000e-004		0.0439

Architectural Coating	1.2051					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**4.9651**	**1.8000e-004**	**0.0195**	**0.0000**		**7.0000e-005**	**7.0000e-005**		**7.0000e-005**	**7.0000e-005**		**0.0415**	**0.0415**	**1.1000e-004**		**0.0439**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Phase 1 - Watson Hall Renovation

Orange County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	58.60	1000sqft	0.33	58,603.00	0

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 2.2 **Precipitation Freq (Days)** 30

Climate Zone 8 **Operational Year** 2018

Utility Company Southern California Edison

CO2 Intensity (lb/MWhr) 630.89 **CH4 Intensity (lb/MWhr)** 0.029 **N2O Intensity (lb/MWhr)** 0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Modified

Construction Phase - modified to reflect arch coating for 58,603 gsf

Off-road Equipment -

Off-road Equipment - modified

Demolition -

Architectural Coating - Modified per SCAQMD Rule 1113

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblConstructionPhase	NumDays	5.00	10.00

tblLandUse	LandUseSquareFeet	58,600.00	58,603.00
tblLandUse	LotAcreage	1.35	0.33
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblProjectCharacteristics	OperationalYear	2014	2018

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	0.3816	0.9147	0.6906	1.0800e-003	0.0171	0.0608	0.0779	4.6000e-003	0.0570	0.0616	0.0000	95.9887	95.9887	0.0194	0.0000	96.3961
Total	**0.3816**	**0.9147**	**0.6906**	**1.0800e-003**	**0.0171**	**0.0608**	**0.0779**	**4.6000e-003**	**0.0570**	**0.0616**	**0.0000**	**95.9887**	**95.9887**	**0.0194**	**0.0000**	**96.3961**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	0.3816	0.9147	0.6906	1.0800e-003	0.0171	0.0608	0.0779	4.6000e-003	0.0570	0.0616	0.0000	95.9886	95.9886	0.0194	0.0000	96.3960
Total	**0.3816**	**0.9147**	**0.6906**	**1.0800e-003**	**0.0171**	**0.0608**	**0.0779**	**4.6000e-003**	**0.0570**	**0.0616**	**0.0000**	**95.9886**	**95.9886**	**0.0194**	**0.0000**	**96.3960**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2797	1.0000e-005	7.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4500e-003	1.4500e-003	0.0000	0.0000	1.5400e-003
Energy	5.0100e-003	0.0456	0.0383	2.7000e-004		3.4600e-003	3.4600e-003		3.4600e-003	3.4600e-003	0.0000	285.2205	285.2205	0.0118	3.1500e-003	286.4445
Mobile	0.6331	1.5584	7.0043	0.0197	1.4317	0.0216	1.4533	0.3826	0.0199	0.4024	0.0000	1,456.4354	1,456.4354	0.0552	0.0000	1,457.5940
Waste						0.0000	0.0000		0.0000	0.0000	15.4639	0.0000	15.4639	0.9139	0.0000	34.6555
Water						0.0000	0.0000		0.0000	0.0000	0.9119	25.0032	25.9150	0.0948	2.4500e-003	28.6653
Total	**0.9179**	**1.6039**	**7.0434**	**0.0200**	**1.4317**	**0.0250**	**1.4567**	**0.3826**	**0.0233**	**0.4059**	**16.3757**	**1,766.6606**	**1,783.0363**	**1.0757**	**5.6000e-003**	**1,807.3608**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2797	1.0000e-005	7.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4500e-003	1.4500e-003	0.0000	0.0000	1.5400e-003

Energy	5.0100e-003	0.0456	0.0383	2.7000e-004		3.4600e-003	3.4600e-003		3.4600e-003	3.4600e-003	0.0000	285.2205	285.2205	0.0118	3.1500e-003	286.4445
Mobile	0.6331	1.5584	7.0043	0.0197	1.4317	0.0216	1.4533	0.3826	0.0199	0.4024	0.0000	1,456.4354	1,456.4354	0.0552	0.0000	1,457.5940
Waste						0.0000	0.0000		0.0000	0.0000	15.4639	0.0000	15.4639	0.9139	0.0000	34.6555
Water						0.0000	0.0000		0.0000	0.0000	0.9119	25.0032	25.9150	0.0948	2.4500e-003	28.6638
Total	**0.9179**	**1.6039**	**7.0434**	**0.0200**	**1.4317**	**0.0250**	**1.4567**	**0.3826**	**0.0233**	**0.4059**	**16.3757**	**1,766.6606**	**1,783.0363**	**1.0756**	**5.6000e-003**	**1,807.3593**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	8/1/2016	12/16/2016	5	100	
2	Architectural Coating	Architectural Coating	12/17/2016	12/30/2016	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 87,905; Non-Residential Outdoor: 29,302 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	1	4.00	226	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Welders	1	4.00	46	0.45
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37

Building Construction	Generator Sets	1	4.00	84	0.74
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	7	25.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0991	0.8512	0.5549	7.9000e-004		0.0590	0.0590		0.0553	0.0553	0.0000	72.2941	72.2941	0.0186	0.0000	72.6838
Total	**0.0991**	**0.8512**	**0.5549**	**7.9000e-004**		**0.0590**	**0.0590**		**0.0553**	**0.0553**	**0.0000**	**72.2941**	**72.2941**	**0.0186**	**0.0000**	**72.6838**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.6700e-003	0.0451	0.0590	1.1000e-004	3.0800e-003	6.9000e-004	3.7700e-003	8.8000e-004	6.3000e-004	1.5100e-003	0.0000	9.8017	9.8017	7.0000e-005	0.0000	9.8032
Worker	4.2700e-003	6.3300e-003	0.0660	1.6000e-004	0.0137	1.0000e-004	0.0138	3.6400e-003	9.0000e-005	3.7300e-003	0.0000	12.3689	12.3689	6.1000e-004	0.0000	12.3816
Total	**8.9400e-003**	**0.0515**	**0.1249**	**2.7000e-004**	**0.0168**	**7.9000e-004**	**0.0176**	**4.5200e-003**	**7.2000e-004**	**5.2400e-003**	**0.0000**	**22.1707**	**22.1707**	**6.8000e-004**	**0.0000**	**22.1848**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0991	0.8512	0.5549	7.9000e-004		0.0590	0.0590		0.0553	0.0553	0.0000	72.2940	72.2940	0.0186	0.0000	72.6837
Total	**0.0991**	**0.8512**	**0.5549**	**7.9000e-004**		**0.0590**	**0.0590**		**0.0553**	**0.0553**	**0.0000**	**72.2940**	**72.2940**	**0.0186**	**0.0000**	**72.6837**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.6700e-003	0.0451	0.0590	1.1000e-004	3.0800e-003	6.9000e-004	3.7700e-003	8.8000e-004	6.3000e-004	1.5100e-003	0.0000	9.8017	9.8017	7.0000e-005	0.0000	9.8032
Worker	4.2700e-003	6.3300e-003	0.0660	1.6000e-004	0.0137	1.0000e-004	0.0138	3.6400e-003	9.0000e-005	3.7300e-003	0.0000	12.3689	12.3689	6.1000e-004	0.0000	12.3816

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Total	**8.9400e-003**	**0.0515**	**0.1249**	**2.7000e-004**	**0.0168**	**7.9000e-004**	**0.0176**	**4.5200e-003**	**7.2000e-004**	**5.2400e-003**	**0.0000**	**22.1707**	**22.1707**	**6.8000e-004**	**0.0000**	**22.1848**

3.3 Architectural Coating - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2716					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.8400e-003	0.0119	9.4200e-003	1.0000e-005		9.8000e-004	9.8000e-004		9.8000e-004	9.8000e-004	0.0000	1.2766	1.2766	1.5000e-004	0.0000	1.2798
Total	**0.2735**	**0.0119**	**9.4200e-003**	**1.0000e-005**		**9.8000e-004**	**9.8000e-004**		**9.8000e-004**	**9.8000e-004**	**0.0000**	**1.2766**	**1.2766**	**1.5000e-004**	**0.0000**	**1.2798**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e-005	1.3000e-004	1.3200e-003	0.0000	2.7000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2474	0.2474	1.0000e-005	0.0000	0.2476
Total	**9.0000e-005**	**1.3000e-004**	**1.3200e-003**	**0.0000**	**2.7000e-004**	**0.0000**	**2.8000e-004**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.2474**	**0.2474**	**1.0000e-005**	**0.0000**	**0.2476**

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Archit. Coating	0.2716					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.8400e-003	0.0119	9.4200e-003	1.0000e-005		9.8000e-004	9.8000e-004		9.8000e-004	9.8000e-004	0.0000	1.2766	1.2766	1.5000e-004	0.0000	1.2798
Total	**0.2735**	**0.0119**	**9.4200e-003**	**1.0000e-005**		**9.8000e-004**	**9.8000e-004**		**9.8000e-004**	**9.8000e-004**	**0.0000**	**1.2766**	**1.2766**	**1.5000e-004**	**0.0000**	**1.2798**

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e-005	1.3000e-004	1.3200e-003	0.0000	2.7000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2474	0.2474	1.0000e-005	0.0000	0.2476
Total	**9.0000e-005**	**1.3000e-004**	**1.3200e-003**	**0.0000**	**2.7000e-004**	**0.0000**	**2.8000e-004**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.2474**	**0.2474**	**1.0000e-005**	**0.0000**	**0.2476**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.6331	1.5584	7.0043	0.0197	1.4317	0.0216	1.4533	0.3826	0.0199	0.4024	0.0000	1,456.4354	1,456.4354	0.0552	0.0000	1,457.5940
Unmitigated	0.6331	1.5584	7.0043	0.0197	1.4317	0.0216	1.4533	0.3826	0.0199	0.4024	0.0000	1,456.4354	1,456.4354	0.0552	0.0000	1,457.5940

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	1,610.91	658.08	70.91	3,789,926	3,789,926
Total	1,610.91	658.08	70.91	3,789,926	3,789,926

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.510011	0.056836	0.192178	0.151564	0.041643	0.005905	0.015642	0.015146	0.001440	0.002149	0.004721	0.000504	0.002262

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	235.6219	235.6219	0.0108	2.2400e-003	236.5440
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	235.6219	235.6219	0.0108	2.2400e-003	236.5440
NaturalGas Mitigated	5.0100e-003	0.0456	0.0383	2.7000e-004		3.4600e-003	3.4600e-003		3.4600e-003	3.4600e-003	0.0000	49.5987	49.5987	9.5000e-004	9.1000e-004	49.9005
NaturalGas Unmitigated	5.0100e-003	0.0456	0.0383	2.7000e-004		3.4600e-003	3.4600e-003		3.4600e-003	3.4600e-003	0.0000	49.5987	49.5987	9.5000e-004	9.1000e-004	49.9005

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Junior College (2Yr)	929444	5.0100e-003	0.0456	0.0383	2.7000e-004		3.4600e-003	3.4600e-003		3.4600e-003	3.4600e-003	0.0000	49.5987	49.5987	9.5000e-004	9.1000e-004	49.9005
Total		**5.0100e-003**	**0.0456**	**0.0383**	**2.7000e-004**		**3.4600e-003**	**3.4600e-003**		**3.4600e-003**	**3.4600e-003**	**0.0000**	**49.5987**	**49.5987**	**9.5000e-004**	**9.1000e-004**	**49.9005**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Junior College (2Yr)	929444	5.0100e-003	0.0456	0.0383	2.7000e-004		3.4600e-003	3.4600e-003		3.4600e-003	3.4600e-003	0.0000	49.5987	49.5987	9.5000e-004	9.1000e-004	49.9005
Total		**5.0100e-003**	**0.0456**	**0.0383**	**2.7000e-004**		**3.4600e-003**	**3.4600e-003**		**3.4600e-003**	**3.4600e-003**	**0.0000**	**49.5987**	**49.5987**	**9.5000e-004**	**9.1000e-004**	**49.9005**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	823372	235.6219	0.0108	2.2400e-003	236.5440
Total		**235.6219**	**0.0108**	**2.2400e-003**	**236.5440**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	823372	235.6219	0.0108	2.2400e-003	236.5440
Total		**235.6219**	**0.0108**	**2.2400e-003**	**236.5440**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2797	1.0000e-005	7.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4500e-003	1.4500e-003	0.0000	0.0000	1.5400e-003
Unmitigated	0.2797	1.0000e-005	7.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4500e-003	1.4500e-003	0.0000	0.0000	1.5400e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0679					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2118					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	7.0000e-005	1.0000e-005	7.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4500e-003	1.4500e-003	0.0000	0.0000	1.5400e-003
Total	**0.2797**	**1.0000e-005**	**7.6000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.4500e-003**	**1.4500e-003**	**0.0000**	**0.0000**	**1.5400e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					

Architectural Coating	0.0679					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2118					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	7.0000e-005	1.0000e-005	7.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4500e-003	1.4500e-003	0.0000	0.0000	1.5400e-003
Total	**0.2797**	**1.0000e-005**	**7.6000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.4500e-003**	**1.4500e-003**	**0.0000**	**0.0000**	**1.5400e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	25.9150	0.0948	2.4500e-003	28.6638
Unmitigated	25.9150	0.0948	2.4500e-003	28.6653

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	2.87427 / 4.49566	25.9150	0.0948	2.4500e-003	28.6653
Total		**25.9150**	**0.0948**	**2.4500e-003**	**28.6653**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	2.87427 / 4.49566	25.9150	0.0948	2.4500e-003	28.6638
Total		**25.9150**	**0.0948**	**2.4500e-003**	**28.6638**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	15.4639	0.9139	0.0000	34.6555
Unmitigated	15.4639	0.9139	0.0000	34.6555

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior College (2Yr)	76.18	15.4639	0.9139	0.0000	34.6555
Total		**15.4639**	**0.9139**	**0.0000**	**34.6555**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior College (2Yr)	76.18	15.4639	0.9139	0.0000	34.6555
Total		**15.4639**	**0.9139**	**0.0000**	**34.6555**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Phase 1 - Watson Hall Renovation

Orange County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	58.60	1000sqft	0.33	58,603.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2018
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Modified

Construction Phase - modified to reflect arch coating for 58,603 gsf

Off-road Equipment -

Off-road Equipment - modified

Demolition -

Architectural Coating - Modified per SCAQMD Rule 1113

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblConstructionPhase	NumDays	5.00	10.00

tblLandUse	LandUseSquareFeet	58,600.00	58,603.00
tblLandUse	LotAcreage	1.35	0.33
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblProjectCharacteristics	OperationalYear	2014	2018

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	54.7115	18.0013	13.4931	0.0215	0.3419	1.1959	1.5378	0.0919	1.1194	1.2113	0.0000	2,094.3203	2,094.3203	0.4241	0.0000	2,103.2257
Total	**54.7115**	**18.0013**	**13.4931**	**0.0215**	**0.3419**	**1.1959**	**1.5378**	**0.0919**	**1.1194**	**1.2113**	**0.0000**	**2,094.3203**	**2,094.3203**	**0.4241**	**0.0000**	**2,103.2257**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	54.7115	18.0013	13.4931	0.0215	0.3419	1.1959	1.5378	0.0919	1.1194	1.2113	0.0000	2,094.3203	2,094.3203	0.4241	0.0000	2,103.2257
Total	**54.7115**	**18.0013**	**13.4931**	**0.0215**	**0.3419**	**1.1959**	**1.5378**	**0.0919**	**1.1194**	**1.2113**	**0.0000**	**2,094.3203**	**2,094.3203**	**0.4241**	**0.0000**	**2,103.2257**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.5330	6.0000e-005	6.0700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0128	0.0128	4.0000e-005		0.0136
Energy	0.0275	0.2497	0.2097	1.5000e-003		0.0190	0.0190		0.0190	0.0190		299.5789	299.5789	5.7400e-003	5.4900e-003	301.4021
Mobile	4.4782	10.2207	49.3765	0.1438	10.2806	0.1520	10.4325	2.7431	0.1401	2.8832		11,706.6497	11,706.6497	0.4294		11,715.6666
Total	**6.0386**	**10.4704**	**49.5923**	**0.1453**	**10.2806**	**0.1710**	**10.4515**	**2.7431**	**0.1591**	**2.9022**		**12,006.2414**	**12,006.2414**	**0.4352**	**5.4900e-003**	**12,017.0823**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.5330	6.0000e-005	6.0700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0128	0.0128	4.0000e-005		0.0136
Energy	0.0275	0.2497	0.2097	1.5000e-003		0.0190	0.0190		0.0190	0.0190		299.5789	299.5789	5.7400e-003	5.4900e-003	301.4021
Mobile	4.4782	10.2207	49.3765	0.1438	10.2806	0.1520	10.4325	2.7431	0.1401	2.8832		11,706.6497	11,706.6497	0.4294		11,715.6666

Total	**6.0386**	**10.4704**	**49.5923**	**0.1453**	**10.2806**	**0.1710**	**10.4515**	**2.7431**	**0.1591**	**2.9022**		**12,006.2414**	**12,006.2414**	**0.4352**	**5.4900e-003**	**12,017.0823**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	8/1/2016	12/16/2016	5	100	
2	Architectural Coating	Architectural Coating	12/17/2016	12/30/2016	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 87,905; Non-Residential Outdoor: 29,302 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	1	4.00	226	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Welders	1	4.00	46	0.45
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Generator Sets	1	4.00	84	0.74
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	7	25.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9823	17.0242	11.0986	0.0159		1.1802	1.1802		1.1050	1.1050		1,593.8110	1,593.8110	0.4092		1,602.4040
Total	**1.9823**	**17.0242**	**11.0986**	**0.0159**		**1.1802**	**1.1802**		**1.1050**	**1.1050**		**1,593.8110**	**1,593.8110**	**0.4092**		**1,602.4040**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0874	0.8650	1.0221	2.1600e-003	0.0625	0.0137	0.0762	0.0178	0.0126	0.0304		216.8589	216.8589	1.5400e-003		216.8912

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Worker	0.0867	0.1121	1.3724	3.3900e-003	0.2794	1.9500e-003	0.2814	0.0741	1.8000e-003	0.0759		283.6504	283.6504	0.0133		283.9305
Total	**0.1742**	**0.9771**	**2.3946**	**5.5500e-003**	**0.3419**	**0.0157**	**0.3576**	**0.0919**	**0.0144**	**0.1063**		**500.5093**	**500.5093**	**0.0149**		**500.8217**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9823	17.0242	11.0986	0.0159		1.1802	1.1802		1.1050	1.1050	0.0000	1,593.8110	1,593.8110	0.4092		1,602.4040
Total	**1.9823**	**17.0242**	**11.0986**	**0.0159**		**1.1802**	**1.1802**		**1.1050**	**1.1050**	**0.0000**	**1,593.8110**	**1,593.8110**	**0.4092**		**1,602.4040**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0874	0.8650	1.0221	2.1600e-003	0.0625	0.0137	0.0762	0.0178	0.0126	0.0304		216.8589	216.8589	1.5400e-003		216.8912
Worker	0.0867	0.1121	1.3724	3.3900e-003	0.2794	1.9500e-003	0.2814	0.0741	1.8000e-003	0.0759		283.6504	283.6504	0.0133		283.9305
Total	**0.1742**	**0.9771**	**2.3946**	**5.5500e-003**	**0.3419**	**0.0157**	**0.3576**	**0.0919**	**0.0144**	**0.1063**		**500.5093**	**500.5093**	**0.0149**		**500.8217**

3.3 Architectural Coating - 2016

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Archit. Coating	54.3257					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3685	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966		281.4481	281.4481	0.0332		282.1449
Total	**54.6941**	**2.3722**	**1.8839**	**2.9700e-003**		**0.1966**	**0.1966**		**0.1966**	**0.1966**		**281.4481**	**281.4481**	**0.0332**		**282.1449**

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0174	0.0224	0.2745	6.8000e-004	0.0559	3.9000e-004	0.0563	0.0148	3.6000e-004	0.0152		56.7301	56.7301	2.6700e-003		56.7861
Total	**0.0174**	**0.0224**	**0.2745**	**6.8000e-004**	**0.0559**	**3.9000e-004**	**0.0563**	**0.0148**	**3.6000e-004**	**0.0152**		**56.7301**	**56.7301**	**2.6700e-003**		**56.7861**

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					

Archit. Coating	54.3257					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3685	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966	0.0000	281.4481	281.4481	0.0332		282.1449
Total	**54.6941**	**2.3722**	**1.8839**	**2.9700e-003**		**0.1966**	**0.1966**		**0.1966**	**0.1966**	**0.0000**	**281.4481**	**281.4481**	**0.0332**		**282.1449**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0174	0.0224	0.2745	6.8000e-004	0.0559	3.9000e-004	0.0563	0.0148	3.6000e-004	0.0152		56.7301	56.7301	2.6700e-003		56.7861
Total	**0.0174**	**0.0224**	**0.2745**	**6.8000e-004**	**0.0559**	**3.9000e-004**	**0.0563**	**0.0148**	**3.6000e-004**	**0.0152**		**56.7301**	**56.7301**	**2.6700e-003**		**56.7861**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.4782	10.2207	49.3765	0.1438	10.2806	0.1520	10.4325	2.7431	0.1401	2.8832		11,706.6497	11,706.6497	0.4294		11,715.6666
Unmitigated	4.4782	10.2207	49.3765	0.1438	10.2806	0.1520	10.4325	2.7431	0.1401	2.8832		11,706.6497	11,706.6497	0.4294		11,715.6666

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	1,610.91	658.08	70.91	3,789,926	3,789,926
Total	1,610.91	658.08	70.91	3,789,926	3,789,926

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.510011	0.056836	0.192178	0.151564	0.041643	0.005905	0.015642	0.015146	0.001440	0.002149	0.004721	0.000504	0.002262

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0275	0.2497	0.2097	1.5000e-003		0.0190	0.0190		0.0190	0.0190		299.5789	299.5789	5.7400e-003	5.4900e-003	301.4021
NaturalGas Unmitigated	0.0275	0.2497	0.2097	1.5000e-003		0.0190	0.0190		0.0190	0.0190		299.5789	299.5789	5.7400e-003	5.4900e-003	301.4021

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	2546.42	0.0275	0.2497	0.2097	1.5000e-003		0.0190	0.0190		0.0190	0.0190		299.5789	299.5789	5.7400e-003	5.4900e-003	301.4021
Total		**0.0275**	**0.2497**	**0.2097**	**1.5000e-003**		**0.0190**	**0.0190**		**0.0190**	**0.0190**		**299.5789**	**299.5789**	**5.7400e-003**	**5.4900e-003**	**301.4021**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	2.54642	0.0275	0.2497	0.2097	1.5000e-003		0.0190	0.0190		0.0190	0.0190		299.5789	299.5789	5.7400e-003	5.4900e-003	301.4021
Total		**0.0275**	**0.2497**	**0.2097**	**1.5000e-003**		**0.0190**	**0.0190**		**0.0190**	**0.0190**		**299.5789**	**299.5789**	**5.7400e-003**	**5.4900e-003**	**301.4021**

6.0 Area Detail

6.1 Mitigation Measures Area

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Mitigated	1.5330	6.0000e-005	6.0700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0128	0.0128	4.0000e-005		0.0136
Unmitigated	1.5330	6.0000e-005	6.0700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0128	0.0128	4.0000e-005		0.0136

6.2 Area by SubCategory

Unmitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Architectural Coating	0.3721					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.1603					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.8000e-004	6.0000e-005	6.0700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0128	0.0128	4.0000e-005		0.0136
Total	**1.5330**	**6.0000e-005**	**6.0700e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0128**	**0.0128**	**4.0000e-005**		**0.0136**

Mitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Architectural Coating	0.3721					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.1603					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Landscaping	5.8000e-004	6.0000e-005	6.0700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0128	0.0128	4.0000e-005		0.0136
Total	**1.5330**	**6.0000e-005**	**6.0700e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0128**	**0.0128**	**4.0000e-005**		**0.0136**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Phase 1 - Watson Hall Renovation

Orange County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	58.60	1000sqft	0.33	58,603.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2018
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Modified

Construction Phase - modified to reflect arch coating for 58,603 gsf

Off-road Equipment -

Off-road Equipment - modified

Demolition -

Architectural Coating - Modified per SCAQMD Rule 1113

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblConstructionPhase	NumDays	5.00	10.00

tblLandUse	LandUseSquareFeet	58,600.00	58,603.00
tblLandUse	LotAcreage	1.35	0.33
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblProjectCharacteristics	OperationalYear	2014	2018

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	54.7124	18.0329	13.6197	0.0213	0.3419	1.1960	1.5379	0.0919	1.1195	1.2115	0.0000	2,077.4833	2,077.4833	0.4241	0.0000	2,086.3897
Total	**54.7124**	**18.0329**	**13.6197**	**0.0213**	**0.3419**	**1.1960**	**1.5379**	**0.0919**	**1.1195**	**1.2115**	**0.0000**	**2,077.4833**	**2,077.4833**	**0.4241**	**0.0000**	**2,086.3897**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	54.7124	18.0329	13.6197	0.0213	0.3419	1.1960	1.5379	0.0919	1.1195	1.2115	0.0000	2,077.4833	2,077.4833	0.4241	0.0000	2,086.3897
Total	**54.7124**	**18.0329**	**13.6197**	**0.0213**	**0.3419**	**1.1960**	**1.5379**	**0.0919**	**1.1195**	**1.2115**	**0.0000**	**2,077.4833**	**2,077.4833**	**0.4241**	**0.0000**	**2,086.3897**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.5330	6.0000e-005	6.0700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0128	0.0128	4.0000e-005		0.0136
Energy	0.0275	0.2497	0.2097	1.5000e-003		0.0190	0.0190		0.0190	0.0190		299.5789	299.5789	5.7400e-003	5.4900e-003	301.4021
Mobile	4.7326	10.7846	49.1380	0.1373	10.2806	0.1526	10.4331	2.7431	0.1407	2.8838		11,198.1218	11,198.1218	0.4296		11,207.1441
Total	**6.2931**	**11.0343**	**49.3538**	**0.1388**	**10.2806**	**0.1716**	**10.4521**	**2.7431**	**0.1597**	**2.9028**		**11,497.7136**	**11,497.7136**	**0.4354**	**5.4900e-003**	**11,508.5598**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.5330	6.0000e-005	6.0700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0128	0.0128	4.0000e-005		0.0136
Energy	0.0275	0.2497	0.2097	1.5000e-003		0.0190	0.0190		0.0190	0.0190		299.5789	299.5789	5.7400e-003	5.4900e-003	301.4021
Mobile	4.7326	10.7846	49.1380	0.1373	10.2806	0.1526	10.4331	2.7431	0.1407	2.8838		11,198.1218	11,198.1218	0.4296		11,207.1441

Total	**6.2931**	**11.0343**	**49.3538**	**0.1388**	**10.2806**	**0.1716**	**10.4521**	**2.7431**	**0.1597**	**2.9028**		**11,497.7136**	**11,497.7136**	**0.4354**	**5.4900e-003**	**11,508.5598**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	8/1/2016	12/16/2016	5	100	
2	Architectural Coating	Architectural Coating	12/17/2016	12/30/2016	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 87,905; Non-Residential Outdoor: 29,302 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	1	4.00	226	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Welders	1	4.00	46	0.45
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Generator Sets	1	4.00	84	0.74
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	7	25.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9823	17.0242	11.0986	0.0159		1.1802	1.1802		1.1050	1.1050		1,593.8110	1,593.8110	0.4092		1,602.4040
Total	**1.9823**	**17.0242**	**11.0986**	**0.0159**		**1.1802**	**1.1802**		**1.1050**	**1.1050**		**1,593.8110**	**1,593.8110**	**0.4092**		**1,602.4040**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0969	0.8854	1.2284	2.1500e-003	0.0625	0.0139	0.0764	0.0178	0.0127	0.0305		215.0304	215.0304	1.5900e-003		215.0637

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Worker	0.0913	0.1232	1.2928	3.2100e-003	0.2794	1.9500e-003	0.2814	0.0741	1.8000e-003	0.0759		268.6420	268.6420	0.0133		268.9221
Total	**0.1882**	**1.0086**	**2.5211**	**5.3600e-003**	**0.3419**	**0.0158**	**0.3577**	**0.0919**	**0.0145**	**0.1064**		**483.6723**	**483.6723**	**0.0149**		**483.9857**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9823	17.0242	11.0986	0.0159		1.1802	1.1802		1.1050	1.1050	0.0000	1,593.8110	1,593.8110	0.4092		1,602.4040
Total	**1.9823**	**17.0242**	**11.0986**	**0.0159**		**1.1802**	**1.1802**		**1.1050**	**1.1050**	**0.0000**	**1,593.8110**	**1,593.8110**	**0.4092**		**1,602.4040**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0969	0.8854	1.2284	2.1500e-003	0.0625	0.0139	0.0764	0.0178	0.0127	0.0305		215.0304	215.0304	1.5900e-003		215.0637
Worker	0.0913	0.1232	1.2928	3.2100e-003	0.2794	1.9500e-003	0.2814	0.0741	1.8000e-003	0.0759		268.6420	268.6420	0.0133		268.9221
Total	**0.1882**	**1.0086**	**2.5211**	**5.3600e-003**	**0.3419**	**0.0158**	**0.3577**	**0.0919**	**0.0145**	**0.1064**		**483.6723**	**483.6723**	**0.0149**		**483.9857**

3.3 Architectural Coating - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	54.3257					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3685	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966		281.4481	281.4481	0.0332		282.1449
Total	**54.6941**	**2.3722**	**1.8839**	**2.9700e-003**		**0.1966**	**0.1966**		**0.1966**	**0.1966**		**281.4481**	**281.4481**	**0.0332**		**282.1449**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0183	0.0247	0.2586	6.4000e-004	0.0559	3.9000e-004	0.0563	0.0148	3.6000e-004	0.0152		53.7284	53.7284	2.6700e-003		53.7844
Total	**0.0183**	**0.0247**	**0.2586**	**6.4000e-004**	**0.0559**	**3.9000e-004**	**0.0563**	**0.0148**	**3.6000e-004**	**0.0152**		**53.7284**	**53.7284**	**2.6700e-003**		**53.7844**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Archit. Coating	54.3257					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3685	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966	0.0000	281.4481	281.4481	0.0332		282.1449
Total	**54.6941**	**2.3722**	**1.8839**	**2.9700e-003**		**0.1966**	**0.1966**		**0.1966**	**0.1966**	**0.0000**	**281.4481**	**281.4481**	**0.0332**		**282.1449**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0183	0.0247	0.2586	6.4000e-004	0.0559	3.9000e-004	0.0563	0.0148	3.6000e-004	0.0152		53.7284	53.7284	2.6700e-003		53.7844
Total	**0.0183**	**0.0247**	**0.2586**	**6.4000e-004**	**0.0559**	**3.9000e-004**	**0.0563**	**0.0148**	**3.6000e-004**	**0.0152**		**53.7284**	**53.7284**	**2.6700e-003**		**53.7844**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.7326	10.7846	49.1380	0.1373	10.2806	0.1526	10.4331	2.7431	0.1407	2.8838		11,198.1218	11,198.1218	0.4296		11,207.1441
Unmitigated	4.7326	10.7846	49.1380	0.1373	10.2806	0.1526	10.4331	2.7431	0.1407	2.8838		11,198.1218	11,198.1218	0.4296		11,207.1441

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	1,610.91	658.08	70.91	3,789,926	3,789,926
Total	1,610.91	658.08	70.91	3,789,926	3,789,926

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.510011	0.056836	0.192178	0.151564	0.041643	0.005905	0.015642	0.015146	0.001440	0.002149	0.004721	0.000504	0.002262

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0275	0.2497	0.2097	1.5000e-003		0.0190	0.0190		0.0190	0.0190		299.5789	299.5789	5.7400e-003	5.4900e-003	301.4021
NaturalGas Unmitigated	0.0275	0.2497	0.2097	1.5000e-003		0.0190	0.0190		0.0190	0.0190		299.5789	299.5789	5.7400e-003	5.4900e-003	301.4021

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	2546.42	0.0275	0.2497	0.2097	1.5000e-003		0.0190	0.0190		0.0190	0.0190		299.5789	299.5789	5.7400e-003	5.4900e-003	301.4021
Total		**0.0275**	**0.2497**	**0.2097**	**1.5000e-003**		**0.0190**	**0.0190**		**0.0190**	**0.0190**		**299.5789**	**299.5789**	**5.7400e-003**	**5.4900e-003**	**301.4021**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	2.54642	0.0275	0.2497	0.2097	1.5000e-003		0.0190	0.0190		0.0190	0.0190		299.5789	299.5789	5.7400e-003	5.4900e-003	301.4021
Total		**0.0275**	**0.2497**	**0.2097**	**1.5000e-003**		**0.0190**	**0.0190**		**0.0190**	**0.0190**		**299.5789**	**299.5789**	**5.7400e-003**	**5.4900e-003**	**301.4021**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.5330	6.0000e-005	6.0700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0128	0.0128	4.0000e-005		0.0136
Unmitigated	1.5330	6.0000e-005	6.0700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0128	0.0128	4.0000e-005		0.0136

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3721					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.1603					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.8000e-004	6.0000e-005	6.0700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0128	0.0128	4.0000e-005		0.0136
Total	**1.5330**	**6.0000e-005**	**6.0700e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0128**	**0.0128**	**4.0000e-005**		**0.0136**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3721					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.1603					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Landscaping	5.8000e-004	6.0000e-005	6.0700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0128	0.0128	4.0000e-005		0.0136
Total	**1.5330**	**6.0000e-005**	**6.0700e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0128**	**0.0128**	**4.0000e-005**		**0.0136**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

PROPOSED PROJECT CONSTRUCTION WITH MITIGATION

Annual, Summer, and Winter Emissions

Phase 2 - Adaptive PE, Gymnasium and Pool

Orange County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	98.48	1000sqft	3.10	98,477.00	0
Parking Lot	48.72	1000sqft	1.12	48,720.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - modified

Construction Phase - modified

Off-road Equipment -

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Demolition -

Architectural Coating - scaqmd rule 1113. non-res interior = 50 g/l. non-res exterior traffic coatings = 100 g/l, adjusted to 242 g/l Adjusted to reflect that parking lot of is exterior

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblConstructionPhase	NumDays	18.00	20.00
tblLandUse	LandUseSquareFeet	98,480.00	98,477.00
tblLandUse	LotAcreage	2.26	3.10
tblProjectCharacteristics	OperationalYear	2014	2019

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.2331	2.0731	1.8252	2.9800e-003	0.1459	0.1187	0.2647	0.0555	0.1111	0.1666	0.0000	255.7369	255.7369	0.0510	0.0000	256.8073
2019	0.4688	1.5172	1.4766	2.6600e-003	0.0534	0.0873	0.1407	0.0144	0.0820	0.0964	0.0000	222.1007	222.1007	0.0411	0.0000	222.9630
Total	**0.7018**	**3.5903**	**3.3018**	**5.6400e-003**	**0.1993**	**0.2061**	**0.4054**	**0.0699**	**0.1931**	**0.2630**	**0.0000**	**477.8376**	**477.8376**	**0.0920**	**0.0000**	**479.7703**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Year	tons/yr										MT/yr					
2018	0.2331	2.0731	1.8252	2.9800e-003	0.0878	0.1187	0.2065	0.0300	0.1111	0.1411	0.0000	255.7367	255.7367	0.0510	0.0000	256.8071
2019	0.4688	1.5172	1.4766	2.6600e-003	0.0534	0.0873	0.1407	0.0144	0.0820	0.0964	0.0000	222.1006	222.1006	0.0411	0.0000	222.9628
Total	**0.7018**	**3.5903**	**3.3018**	**5.6400e-003**	**0.1412**	**0.2061**	**0.3472**	**0.0443**	**0.1931**	**0.2374**	**0.0000**	**477.8372**	**477.8372**	**0.0920**	**0.0000**	**479.7699**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**29.18**	**0.00**	**14.35**	**36.59**	**0.00**	**9.72**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6479	2.0000e-005	1.9000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.6500e-003	3.6500e-003	1.0000e-005	0.0000	3.8600e-003
Energy	8.4200e-003	0.0766	0.0643	4.6000e-004		5.8200e-003	5.8200e-003		5.8200e-003	5.8200e-003	0.0000	491.5561	491.5561	0.0204	5.4100e-003	493.6608
Mobile	1.0099	2.4531	11.0591	0.0333	2.4063	0.0355	2.4417	0.6430	0.0327	0.6757	0.0000	2,385.7395	2,385.7395	0.0885	0.0000	2,387.5989
Waste						0.0000	0.0000		0.0000	0.0000	25.9869	0.0000	25.9869	1.5358	0.0000	58.2383
Water						0.0000	0.0000		0.0000	0.0000	1.5325	42.0190	43.5514	0.1593	4.1200e-003	48.1733
Total	**1.6662**	**2.5297**	**11.1253**	**0.0337**	**2.4063**	**0.0413**	**2.4476**	**0.6430**	**0.0386**	**0.6816**	**27.5194**	**2,919.3182**	**2,946.8376**	**1.8040**	**9.5300e-003**	**2,987.6752**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6479	2.0000e-005	1.9000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.6500e-003	3.6500e-003	1.0000e-005	0.0000	3.8600e-003
Energy	8.4200e-003	0.0766	0.0643	4.6000e-004		5.8200e-003	5.8200e-003		5.8200e-003	5.8200e-003	0.0000	491.5561	491.5561	0.0204	5.4100e-003	493.6608
Mobile	1.0099	2.4531	11.0591	0.0333	2.4063	0.0355	2.4417	0.6430	0.0327	0.6757	0.0000	2,385.7395	2,385.7395	0.0885	0.0000	2,387.5989
Waste						0.0000	0.0000		0.0000	0.0000	25.9869	0.0000	25.9869	1.5358	0.0000	58.2383
Water						0.0000	0.0000		0.0000	0.0000	1.5325	42.0190	43.5514	0.1593	4.1100e-003	48.1709
Total	**1.6662**	**2.5297**	**11.1253**	**0.0337**	**2.4063**	**0.0413**	**2.4476**	**0.6430**	**0.0386**	**0.6816**	**27.5194**	**2,919.3182**	**2,946.8376**	**1.8040**	**9.5200e-003**	**2,987.6728**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.10**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2018	6/28/2018	5	20	
2	Site Preparation	Site Preparation	6/29/2018	7/5/2018	5	5	
3	Grading	Grading	7/6/2018	7/17/2018	5	8	
4	Trenching	Trenching	7/18/2018	7/31/2018	5	10	
5	Building Construction	Building Construction	8/1/2018	6/18/2019	5	230	
6	Paving	Paving	6/19/2019	7/12/2019	5	18	
7	Architectural Coating	Architectural Coating	7/13/2019	8/9/2019	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 149,908; Non-Residential Outdoor: 49,969 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Trenching	Plate Compactors	2	8.00	8	0.43
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Trenching	Trenchers	2	8.00	80	0.50
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	125	0.42
Paving	Paving Equipment	2	6.00	130	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	222.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	62.00	24.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	12.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0240	0.0000	0.0240	3.6300e-003	0.0000	3.6300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0356	0.3683	0.3173	4.0000e-004		0.0181	0.0181		0.0169	0.0169	0.0000	36.1362	36.1362	9.9900e-003	0.0000	36.3460
Total	**0.0356**	**0.3683**	**0.3173**	**4.0000e-004**	**0.0240**	**0.0181**	**0.0421**	**3.6300e-003**	**0.0169**	**0.0205**	**0.0000**	**36.1362**	**36.1362**	**9.9900e-003**	**0.0000**	**36.3460**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	1.9300e-003	0.0274	0.0231	8.0000e-005	1.9000e-003	4.2000e-004	2.3300e-003	5.2000e-004	3.9000e-004	9.1000e-004	0.0000	7.2119	7.2119	5.0000e-005	0.0000	7.2130
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.2000e-004	6.3000e-004	6.5800e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3733	1.3733	6.0000e-005	0.0000	1.3747
Total	**2.3500e-003**	**0.0280**	**0.0297**	**1.0000e-004**	**3.5500e-003**	**4.3000e-004**	**3.9900e-003**	**9.6000e-004**	**4.0000e-004**	**1.3600e-003**	**0.0000**	**8.5852**	**8.5852**	**1.1000e-004**	**0.0000**	**8.5877**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					9.3500e-003	0.0000	9.3500e-003	1.4200e-003	0.0000	1.4200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0356	0.3683	0.3173	4.0000e-004		0.0181	0.0181		0.0169	0.0169	0.0000	36.1361	36.1361	9.9900e-003	0.0000	36.3459
Total	**0.0356**	**0.3683**	**0.3173**	**4.0000e-004**	**9.3500e-003**	**0.0181**	**0.0274**	**1.4200e-003**	**0.0169**	**0.0183**	**0.0000**	**36.1361**	**36.1361**	**9.9900e-003**	**0.0000**	**36.3459**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.9300e-003	0.0274	0.0231	8.0000e-005	1.9000e-003	4.2000e-004	2.3300e-003	5.2000e-004	3.9000e-004	9.1000e-004	0.0000	7.2119	7.2119	5.0000e-005	0.0000	7.2130
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.2000e-004	6.3000e-004	6.5800e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3733	1.3733	6.0000e-005	0.0000	1.3747

Total	**2.3500e-003**	**0.0280**	**0.0297**	**1.0000e-004**	**3.5500e-003**	**4.3000e-004**	**3.9900e-003**	**9.6000e-004**	**4.0000e-004**	**1.3600e-003**	**0.0000**	**8.5852**	**8.5852**	**1.1000e-004**	**0.0000**	**8.5877**

3.3 Site Preparation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0452	0.0000	0.0452	0.0248	0.0000	0.0248	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0107	0.1140	0.0906	1.0000e-004		5.9100e-003	5.9100e-003		5.4400e-003	5.4400e-003	0.0000	8.9353	8.9353	2.7800e-003	0.0000	8.9937
Total	**0.0107**	**0.1140**	**0.0906**	**1.0000e-004**	**0.0452**	**5.9100e-003**	**0.0511**	**0.0248**	**5.4400e-003**	**0.0303**	**0.0000**	**8.9353**	**8.9353**	**2.7800e-003**	**0.0000**	**8.9937**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3000e-004	1.9000e-004	1.9700e-003	1.0000e-005	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4120	0.4120	2.0000e-005	0.0000	0.4124
Total	**1.3000e-004**	**1.9000e-004**	**1.9700e-003**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.4120**	**0.4120**	**2.0000e-005**	**0.0000**	**0.4124**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0176	0.0000	0.0176	9.6800e-003	0.0000	9.6800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0107	0.1140	0.0906	1.0000e-004		5.9100e-003	5.9100e-003		5.4400e-003	5.4400e-003	0.0000	8.9352	8.9352	2.7800e-003	0.0000	8.9937
Total	**0.0107**	**0.1140**	**0.0906**	**1.0000e-004**	**0.0176**	**5.9100e-003**	**0.0235**	**9.6800e-003**	**5.4400e-003**	**0.0151**	**0.0000**	**8.9352**	**8.9352**	**2.7800e-003**	**0.0000**	**8.9937**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3000e-004	1.9000e-004	1.9700e-003	1.0000e-005	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4120	0.4120	2.0000e-005	0.0000	0.4124
Total	**1.3000e-004**	**1.9000e-004**	**1.9700e-003**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.4120**	**0.4120**	**2.0000e-005**	**0.0000**	**0.4124**

3.4 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.0262	0.0000	0.0262	0.0135	0.0000	0.0135	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0120	0.1243	0.0960	1.2000e-004		6.8800e-003	6.8800e-003		6.3300e-003	6.3300e-003	0.0000	10.8612	10.8612	3.3800e-003	0.0000	10.9322
Total	**0.0120**	**0.1243**	**0.0960**	**1.2000e-004**	**0.0262**	**6.8800e-003**	**0.0331**	**0.0135**	**6.3300e-003**	**0.0198**	**0.0000**	**10.8612**	**10.8612**	**3.3800e-003**	**0.0000**	**10.9322**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	2.5000e-004	2.6300e-003	1.0000e-005	6.6000e-004	0.0000	6.6000e-004	1.7000e-004	0.0000	1.8000e-004	0.0000	0.5493	0.5493	3.0000e-005	0.0000	0.5499
Total	**1.7000e-004**	**2.5000e-004**	**2.6300e-003**	**1.0000e-005**	**6.6000e-004**	**0.0000**	**6.6000e-004**	**1.7000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**0.5493**	**0.5493**	**3.0000e-005**	**0.0000**	**0.5499**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0102	0.0000	0.0102	5.2500e-003	0.0000	5.2500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0120	0.1243	0.0960	1.2000e-004		6.8800e-003	6.8800e-003		6.3300e-003	6.3300e-003	0.0000	10.8612	10.8612	3.3800e-003	0.0000	10.9322
Total	**0.0120**	**0.1243**	**0.0960**	**1.2000e-004**	**0.0102**	**6.8800e-003**	**0.0171**	**5.2500e-003**	**6.3300e-003**	**0.0116**	**0.0000**	**10.8612**	**10.8612**	**3.3800e-003**	**0.0000**	**10.9322**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	2.5000e-004	2.6300e-003	1.0000e-005	6.6000e-004	0.0000	6.6000e-004	1.7000e-004	0.0000	1.8000e-004	0.0000	0.5493	0.5493	3.0000e-005	0.0000	0.5499
Total	**1.7000e-004**	**2.5000e-004**	**2.6300e-003**	**1.0000e-005**	**6.6000e-004**	**0.0000**	**6.6000e-004**	**1.7000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**0.5493**	**0.5493**	**3.0000e-005**	**0.0000**	**0.5499**

3.5 Trenching - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.3700e-003	0.0574	0.0410	5.0000e-005		4.2000e-003	4.2000e-003		3.8800e-003	3.8800e-003	0.0000	4.8913	4.8913	1.4600e-003	0.0000	4.9219
Total	**6.3700e-003**	**0.0574**	**0.0410**	**5.0000e-005**		**4.2000e-003**	**4.2000e-003**		**3.8800e-003**	**3.8800e-003**	**0.0000**	**4.8913**	**4.8913**	**1.4600e-003**	**0.0000**	**4.9219**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8000e-004	2.7000e-004	2.8500e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5951	0.5951	3.0000e-005	0.0000	0.5957
Total	**1.8000e-004**	**2.7000e-004**	**2.8500e-003**	**1.0000e-005**	**7.1000e-004**	**0.0000**	**7.2000e-004**	**1.9000e-004**	**0.0000**	**1.9000e-004**	**0.0000**	**0.5951**	**0.5951**	**3.0000e-005**	**0.0000**	**0.5957**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.3700e-003	0.0574	0.0410	5.0000e-005		4.2000e-003	4.2000e-003		3.8800e-003	3.8800e-003	0.0000	4.8913	4.8913	1.4600e-003	0.0000	4.9219
Total	**6.3700e-003**	**0.0574**	**0.0410**	**5.0000e-005**		**4.2000e-003**	**4.2000e-003**		**3.8800e-003**	**3.8800e-003**	**0.0000**	**4.8913**	**4.8913**	**1.4600e-003**	**0.0000**	**4.9219**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8000e-004	2.7000e-004	2.8500e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5951	0.5951	3.0000e-005	0.0000	0.5957

Total	**1.8000e-004**	**2.7000e-004**	**2.8500e-003**	**1.0000e-005**	**7.1000e-004**	**0.0000**	**7.2000e-004**	**1.9000e-004**	**0.0000**	**1.9000e-004**	**0.0000**	**0.5951**	**0.5951**	**3.0000e-005**	**0.0000**	**0.5957**

3.6 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1454	1.2677	0.9555	1.4600e-003		0.0814	0.0814		0.0766	0.0766	0.0000	129.0395	129.0395	0.0316	0.0000	129.7026
Total	**0.1454**	**1.2677**	**0.9555**	**1.4600e-003**		**0.0814**	**0.0814**		**0.0766**	**0.0766**	**0.0000**	**129.0395**	**129.0395**	**0.0316**	**0.0000**	**129.7026**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0105	0.0985	0.1394	2.8000e-004	8.0500e-003	1.5100e-003	9.5700e-003	2.3000e-003	1.3900e-003	3.6900e-003	0.0000	24.7953	24.7953	1.8000e-004	0.0000	24.7990
Worker	9.5500e-003	0.0142	0.1483	4.4000e-004	0.0371	2.5000e-004	0.0374	9.8500e-003	2.4000e-004	0.0101	0.0000	30.9366	30.9366	1.4200e-003	0.0000	30.9663
Total	**0.0201**	**0.1127**	**0.2877**	**7.2000e-004**	**0.0451**	**1.7600e-003**	**0.0469**	**0.0122**	**1.6300e-003**	**0.0138**	**0.0000**	**55.7319**	**55.7319**	**1.6000e-003**	**0.0000**	**55.7653**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1454	1.2677	0.9555	1.4600e-003		0.0814	0.0814		0.0766	0.0766	0.0000	129.0393	129.0393	0.0316	0.0000	129.7025
Total	**0.1454**	**1.2677**	**0.9555**	**1.4600e-003**		**0.0814**	**0.0814**		**0.0766**	**0.0766**	**0.0000**	**129.0393**	**129.0393**	**0.0316**	**0.0000**	**129.7025**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0105	0.0985	0.1394	2.8000e-004	8.0500e-003	1.5100e-003	9.5700e-003	2.3000e-003	1.3900e-003	3.6900e-003	0.0000	24.7953	24.7953	1.8000e-004	0.0000	24.7990
Worker	9.5500e-003	0.0142	0.1483	4.4000e-004	0.0371	2.5000e-004	0.0374	9.8500e-003	2.4000e-004	0.0101	0.0000	30.9366	30.9366	1.4200e-003	0.0000	30.9663
Total	**0.0201**	**0.1127**	**0.2877**	**7.2000e-004**	**0.0451**	**1.7600e-003**	**0.0469**	**0.0122**	**1.6300e-003**	**0.0138**	**0.0000**	**55.7319**	**55.7319**	**1.6000e-003**	**0.0000**	**55.7653**

3.6 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.1423	1.2684	1.0358	1.6200e-003		0.0778	0.0778		0.0731	0.0731	0.0000	141.6443	141.6443	0.0345	0.0000	142.3680
Total	**0.1423**	**1.2684**	**1.0358**	**1.6200e-003**		**0.0778**	**0.0778**		**0.0731**	**0.0731**	**0.0000**	**141.6443**	**141.6443**	**0.0345**	**0.0000**	**142.3680**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0109	0.1014	0.1475	3.1000e-004	8.9400e-003	1.5700e-003	0.0105	2.5500e-003	1.4400e-003	3.9900e-003	0.0000	27.1425	27.1425	2.0000e-004	0.0000	27.1467
Worker	9.9100e-003	0.0146	0.1534	4.9000e-004	0.0412	2.9000e-004	0.0415	0.0109	2.6000e-004	0.0112	0.0000	33.2707	33.2707	1.5000e-003	0.0000	33.3022
Total	**0.0208**	**0.1160**	**0.3009**	**8.0000e-004**	**0.0501**	**1.8600e-003**	**0.0520**	**0.0135**	**1.7000e-003**	**0.0152**	**0.0000**	**60.4132**	**60.4132**	**1.7000e-003**	**0.0000**	**60.4489**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1423	1.2684	1.0358	1.6200e-003		0.0778	0.0778		0.0731	0.0731	0.0000	141.6441	141.6441	0.0345	0.0000	142.3678
Total	**0.1423**	**1.2684**	**1.0358**	**1.6200e-003**		**0.0778**	**0.0778**		**0.0731**	**0.0731**	**0.0000**	**141.6441**	**141.6441**	**0.0345**	**0.0000**	**142.3678**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0109	0.1014	0.1475	3.1000e-004	8.9400e-003	1.5700e-003	0.0105	2.5500e-003	1.4400e-003	3.9900e-003	0.0000	27.1425	27.1425	2.0000e-004	0.0000	27.1467
Worker	9.9100e-003	0.0146	0.1534	4.9000e-004	0.0412	2.9000e-004	0.0415	0.0109	2.6000e-004	0.0112	0.0000	33.2707	33.2707	1.5000e-003	0.0000	33.3022
Total	**0.0208**	**0.1160**	**0.3009**	**8.0000e-004**	**0.0501**	**1.8600e-003**	**0.0520**	**0.0135**	**1.7000e-003**	**0.0152**	**0.0000**	**60.4132**	**60.4132**	**1.7000e-003**	**0.0000**	**60.4489**

3.7 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0113	0.1133	0.1093	1.7000e-004		6.4000e-003	6.4000e-003		5.9000e-003	5.9000e-003	0.0000	14.8291	14.8291	4.5600e-003	0.0000	14.9248
Paving	1.4700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0127**	**0.1133**	**0.1093**	**1.7000e-004**		**6.4000e-003**	**6.4000e-003**		**5.9000e-003**	**5.9000e-003**	**0.0000**	**14.8291**	**14.8291**	**4.5600e-003**	**0.0000**	**14.9248**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.8000e-004	7.0000e-004	7.3600e-003	2.0000e-005	1.9800e-003	1.0000e-005	1.9900e-003	5.2000e-004	1.0000e-005	5.4000e-004	0.0000	1.5966	1.5966	7.0000e-005	0.0000	1.5981
Total	**4.8000e-004**	**7.0000e-004**	**7.3600e-003**	**2.0000e-005**	**1.9800e-003**	**1.0000e-005**	**1.9900e-003**	**5.2000e-004**	**1.0000e-005**	**5.4000e-004**	**0.0000**	**1.5966**	**1.5966**	**7.0000e-005**	**0.0000**	**1.5981**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0113	0.1133	0.1093	1.7000e-004		6.4000e-003	6.4000e-003		5.9000e-003	5.9000e-003	0.0000	14.8290	14.8290	4.5600e-003	0.0000	14.9248
Paving	1.4700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0127**	**0.1133**	**0.1093**	**1.7000e-004**		**6.4000e-003**	**6.4000e-003**		**5.9000e-003**	**5.9000e-003**	**0.0000**	**14.8290**	**14.8290**	**4.5600e-003**	**0.0000**	**14.9248**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.8000e-004	7.0000e-004	7.3600e-003	2.0000e-005	1.9800e-003	1.0000e-005	1.9900e-003	5.2000e-004	1.0000e-005	5.4000e-004	0.0000	1.5966	1.5966	7.0000e-005	0.0000	1.5981

Total	**4.8000e-004**	**7.0000e-004**	**7.3600e-003**	**2.0000e-005**	**1.9800e-003**	**1.0000e-005**	**1.9900e-003**	**5.2000e-004**	**1.0000e-005**	**5.4000e-004**	**0.0000**	**1.5966**	**1.5966**	**7.0000e-005**	**0.0000**	**1.5981**

3.8 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2895					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6600e-003	0.0184	0.0184	3.0000e-005		1.2900e-003	1.2900e-003		1.2900e-003	1.2900e-003	0.0000	2.5533	2.5533	2.2000e-004	0.0000	2.5578
Total	**0.2922**	**0.0184**	**0.0184**	**3.0000e-005**		**1.2900e-003**	**1.2900e-003**		**1.2900e-003**	**1.2900e-003**	**0.0000**	**2.5533**	**2.5533**	**2.2000e-004**	**0.0000**	**2.5578**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2000e-004	4.7000e-004	4.9100e-003	2.0000e-005	1.3200e-003	1.0000e-005	1.3300e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.0644	1.0644	5.0000e-005	0.0000	1.0654
Total	**3.2000e-004**	**4.7000e-004**	**4.9100e-003**	**2.0000e-005**	**1.3200e-003**	**1.0000e-005**	**1.3300e-003**	**3.5000e-004**	**1.0000e-005**	**3.6000e-004**	**0.0000**	**1.0644**	**1.0644**	**5.0000e-005**	**0.0000**	**1.0654**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2895					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6600e-003	0.0184	0.0184	3.0000e-005		1.2900e-003	1.2900e-003		1.2900e-003	1.2900e-003	0.0000	2.5533	2.5533	2.2000e-004	0.0000	2.5578
Total	**0.2922**	**0.0184**	**0.0184**	**3.0000e-005**		**1.2900e-003**	**1.2900e-003**		**1.2900e-003**	**1.2900e-003**	**0.0000**	**2.5533**	**2.5533**	**2.2000e-004**	**0.0000**	**2.5578**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2000e-004	4.7000e-004	4.9100e-003	2.0000e-005	1.3200e-003	1.0000e-005	1.3300e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.0644	1.0644	5.0000e-005	0.0000	1.0654
Total	**3.2000e-004**	**4.7000e-004**	**4.9100e-003**	**2.0000e-005**	**1.3200e-003**	**1.0000e-005**	**1.3300e-003**	**3.5000e-004**	**1.0000e-005**	**3.6000e-004**	**0.0000**	**1.0644**	**1.0644**	**5.0000e-005**	**0.0000**	**1.0654**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Mitigated	1.0099	2.4531	11.0591	0.0333	2.4063	0.0355	2.4417	0.6430	0.0327	0.6757	0.0000	2,385.7395	2,385.7395	0.0885	0.0000	2,387.5989
Unmitigated	1.0099	2.4531	11.0591	0.0333	2.4063	0.0355	2.4417	0.6430	0.0327	0.6757	0.0000	2,385.7395	2,385.7395	0.0885	0.0000	2,387.5989

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	2,707.22	1,105.93	119.16	6,369,145	6,369,145
Parking Lot	0.00	0.00	0.00		
Total	2,707.22	1,105.93	119.16	6,369,145	6,369,145

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.509471	0.056616	0.192725	0.151095	0.041772	0.005913	0.015766	0.015535	0.001447	0.002155	0.004735	0.000502	0.002269

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	408.2100	408.2100	0.0188	3.8800e-003	409.8076
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	408.2100	408.2100	0.0188	3.8800e-003	409.8076
NaturalGas Mitigated	8.4200e-003	0.0766	0.0643	4.6000e-004		5.8200e-003	5.8200e-003		5.8200e-003	5.8200e-003	0.0000	83.3460	83.3460	1.6000e-003	1.5300e-003	83.8532
NaturalGas Unmitigated	8.4200e-003	0.0766	0.0643	4.6000e-004		5.8200e-003	5.8200e-003		5.8200e-003	5.8200e-003	0.0000	83.3460	83.3460	1.6000e-003	1.5300e-003	83.8532

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Junior College (2Yr)	1.56185e+006	8.4200e-003	0.0766	0.0643	4.6000e-004		5.8200e-003	5.8200e-003		5.8200e-003	5.8200e-003	0.0000	83.3460	83.3460	1.6000e-003	1.5300e-003	83.8532
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**8.4200e-003**	**0.0766**	**0.0643**	**4.6000e-004**		**5.8200e-003**	**5.8200e-003**		**5.8200e-003**	**5.8200e-003**	**0.0000**	**83.3460**	**83.3460**	**1.6000e-003**	**1.5300e-003**	**83.8532**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Junior College (2Yr)	1.56185e+006	8.4200e-003	0.0766	0.0643	4.6000e-004		5.8200e-003	5.8200e-003		5.8200e-003	5.8200e-003	0.0000	83.3460	83.3460	1.6000e-003	1.5300e-003	83.8532
Total		**8.4200e-003**	**0.0766**	**0.0643**	**4.6000e-004**		**5.8200e-003**	**5.8200e-003**		**5.8200e-003**	**5.8200e-003**	**0.0000**	**83.3460**	**83.3460**	**1.6000e-003**	**1.5300e-003**	**83.8532**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	1.3836e+006	395.9410	0.0182	3.7700e-003	397.4906
Parking Lot	42873.6	12.2690	5.6000e-004	1.2000e-004	12.3170
Total		**408.2100**	**0.0188**	**3.8900e-003**	**409.8076**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	1.3836e+006	395.9410	0.0182	3.7700e-003	397.4906
Parking Lot	42873.6	12.2690	5.6000e-004	1.2000e-004	12.3170
Total		**408.2100**	**0.0188**	**3.8900e-003**	**409.8076**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.6479	2.0000e-005	1.9000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.6500e-003	3.6500e-003	1.0000e-005	0.0000	3.8600e-003
Unmitigated	0.6479	2.0000e-005	1.9000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.6500e-003	3.6500e-003	1.0000e-005	0.0000	3.8600e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1158					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5319					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.8000e-004	2.0000e-005	1.9000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.6500e-003	3.6500e-003	1.0000e-005	0.0000	3.8600e-003
Total	**0.6479**	**2.0000e-005**	**1.9000e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**3.6500e-003**	**3.6500e-003**	**1.0000e-005**	**0.0000**	**3.8600e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1158					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5319					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.8000e-004	2.0000e-005	1.9000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.6500e-003	3.6500e-003	1.0000e-005	0.0000	3.8600e-003
Total	**0.6479**	**2.0000e-005**	**1.9000e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**3.6500e-003**	**3.6500e-003**	**1.0000e-005**	**0.0000**	**3.8600e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	43.5514	0.1593	4.1100e-003	48.1709
Unmitigated	43.5514	0.1593	4.1200e-003	48.1733

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	4.83035 / 7.55516	43.5514	0.1593	4.1200e-003	48.1733
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000

Total		**43.5514**	**0.1593**	**4.1200e-003**	**48.1733**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	4.83035 / 7.55516	43.5514	0.1593	4.1100e-003	48.1709
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**43.5514**	**0.1593**	**4.1100e-003**	**48.1709**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	25.9869	1.5358	0.0000	58.2383
Unmitigated	25.9869	1.5358	0.0000	58.2383

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior College (2Yr)	128.02	25.9869	1.5358	0.0000	58.2383
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**25.9869**	**1.5358**	**0.0000**	**58.2383**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior College (2Yr)	128.02	25.9869	1.5358	0.0000	58.2383
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**25.9869**	**1.5358**	**0.0000**	**58.2383**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Phase 2 - Adaptive PE, Gymnasium and Pool

Orange County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	98.48	1000sqft	3.10	98,477.00	0
Parking Lot	48.72	1000sqft	1.12	48,720.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - modified

Construction Phase - modified

Off-road Equipment -

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Demolition -

Architectural Coating - scaqmd rule 1113. non-res interior = 50 g/l. non-res exterior traffic coatings = 100 g/l, adjusted to 242 g/l Adjusted to reflect that parking lot of is exterior

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblConstructionPhase	NumDays	18.00	20.00
tblLandUse	LandUseSquareFeet	98,480.00	98,477.00
tblLandUse	LotAcreage	2.26	3.10
tblProjectCharacteristics	OperationalYear	2014	2019

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	4.3440	45.6756	37.0600	0.0501	18.2675	2.3668	20.6342	9.9840	2.1774	12.1615	0.0000	4,936.5810	4,936.5810	1.2348	0.0000	4,962.5122
2019	29.2497	22.7866	21.8494	0.0404	0.8430	1.3156	2.1586	0.2265	1.2364	1.4629	0.0000	3,707.7192	3,707.7192	0.6588	0.0000	3,721.5549
Total	**33.5938**	**68.4622**	**58.9094**	**0.0906**	**19.1105**	**3.6823**	**22.7928**	**10.2106**	**3.4138**	**13.6244**	**0.0000**	**8,644.3001**	**8,644.3001**	**1.8937**	**0.0000**	**8,684.0671**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Year	lb/day										lb/day					
2018	4.3440	45.6756	37.0600	0.0501	7.2470	2.3668	9.6138	3.9263	2.1774	6.1038	0.0000	4,936.5810	4,936.5810	1.2348	0.0000	4,962.5122
2019	29.2497	22.7866	21.8494	0.0404	0.8430	1.3156	2.1586	0.2265	1.2364	1.4629	0.0000	3,707.7192	3,707.7192	0.6588	0.0000	3,721.5549
Total	**33.5938**	**68.4622**	**58.9094**	**0.0906**	**8.0901**	**3.6823**	**11.7724**	**4.1528**	**3.4138**	**7.5667**	**0.0000**	**8,644.3001**	**8,644.3001**	**1.8937**	**0.0000**	**8,684.0671**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**57.67**	**0.00**	**48.35**	**59.33**	**0.00**	**44.46**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.5505	1.4000e-004	0.0152	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0322	0.0322	9.0000e-005		0.0341
Energy	0.0462	0.4195	0.3524	2.5200e-003		0.0319	0.0319		0.0319	0.0319		503.4151	503.4151	9.6500e-003	9.2300e-003	506.4788
Mobile	7.1514	16.0954	77.9747	0.2429	17.2786	0.2501	17.5287	4.6105	0.2308	4.8413		19,174.2627	19,174.2627	0.6891		19,188.7337
Total	**10.7481**	**16.5150**	**78.3423**	**0.2454**	**17.2786**	**0.2820**	**17.5606**	**4.6105**	**0.2627**	**4.8732**		**19,677.7100**	**19,677.7100**	**0.6988**	**9.2300e-003**	**19,695.2465**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Area	3.5505	1.4000e-004	0.0152	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0322	0.0322	9.0000e-005		0.0341
Energy	0.0462	0.4195	0.3524	2.5200e-003		0.0319	0.0319		0.0319	0.0319		503.4151	503.4151	9.6500e-003	9.2300e-003	506.4788
Mobile	7.1514	16.0954	77.9747	0.2429	17.2786	0.2501	17.5287	4.6105	0.2308	4.8413		19,174.2627	19,174.2627	0.6891		19,188.7337
Total	**10.7481**	**16.5150**	**78.3423**	**0.2454**	**17.2786**	**0.2820**	**17.5606**	**4.6105**	**0.2627**	**4.8732**		**19,677.7100**	**19,677.7100**	**0.6988**	**9.2300e-003**	**19,695.2465**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2018	6/28/2018	5	20	
2	Site Preparation	Site Preparation	6/29/2018	7/5/2018	5	5	
3	Grading	Grading	7/6/2018	7/17/2018	5	8	
4	Trenching	Trenching	7/18/2018	7/31/2018	5	10	
5	Building Construction	Building Construction	8/1/2018	6/18/2019	5	230	
6	Paving	Paving	6/19/2019	7/12/2019	5	18	
7	Architectural Coating	Architectural Coating	7/13/2019	8/9/2019	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 149,908; Non-Residential Outdoor: 49,969 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor

Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Trenching	Plate Compactors	2	8.00	8	0.43
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Trenching	Trenchers	2	8.00	80	0.50
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	125	0.42
Paving	Paving Equipment	2	6.00	130	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	222.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Trenching	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	62.00	24.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	12.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.3979	0.0000	2.3979	0.3631	0.0000	0.3631			0.0000			0.0000
Off-Road	3.5606	36.8310	31.7250	0.0399		1.8090	1.8090		1.6856	1.6856		3,983.3282	3,983.3282	1.1015		4,006.4585
Total	**3.5606**	**36.8310**	**31.7250**	**0.0399**	**2.3979**	**1.8090**	**4.2068**	**0.3631**	**1.6856**	**2.0487**		**3,983.3282**	**3,983.3282**	**1.1015**		**4,006.4585**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1856	2.6038	2.0564	8.1500e-003	0.1934	0.0421	0.2355	0.0530	0.0387	0.0917		795.7729	795.7729	5.8100e-003		795.8950
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Worker	0.0433	0.0557	0.6879	2.0300e-003	0.1677	1.1300e-003	0.1688	0.0445	1.0500e-003	0.0455		157.4799	157.4799	6.9300e-003		157.6254
Total	**0.2288**	**2.6595**	**2.7443**	**0.0102**	**0.3611**	**0.0432**	**0.4043**	**0.0974**	**0.0398**	**0.1372**		**953.2528**	**953.2528**	**0.0127**		**953.5204**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.9352	0.0000	0.9352	0.1416	0.0000	0.1416			0.0000			0.0000
Off-Road	3.5606	36.8310	31.7250	0.0399		1.8090	1.8090		1.6856	1.6856	0.0000	3,983.3282	3,983.3282	1.1015		4,006.4585
Total	**3.5606**	**36.8310**	**31.7250**	**0.0399**	**0.9352**	**1.8090**	**2.7441**	**0.1416**	**1.6856**	**1.8272**	**0.0000**	**3,983.3282**	**3,983.3282**	**1.1015**		**4,006.4585**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1856	2.6038	2.0564	8.1500e-003	0.1934	0.0421	0.2355	0.0530	0.0387	0.0917		795.7729	795.7729	5.8100e-003		795.8950
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0433	0.0557	0.6879	2.0300e-003	0.1677	1.1300e-003	0.1688	0.0445	1.0500e-003	0.0455		157.4799	157.4799	6.9300e-003		157.6254
Total	**0.2288**	**2.6595**	**2.7443**	**0.0102**	**0.3611**	**0.0432**	**0.4043**	**0.0974**	**0.0398**	**0.1372**		**953.2528**	**953.2528**	**0.0127**		**953.5204**

3.3 Site Preparation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category						lb/day								lb/day		
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.2921	45.6088	36.2346	0.0391		2.3654	2.3654		2.1762	2.1762		3,939.7731	3,939.7731	1.2265		3,965.5297
Total	**4.2921**	**45.6088**	**36.2346**	**0.0391**	**18.0663**	**2.3654**	**20.4317**	**9.9307**	**2.1762**	**12.1069**		**3,939.7731**	**3,939.7731**	**1.2265**		**3,965.5297**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category						lb/day								lb/day		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0519	0.0669	0.8255	2.4400e-003	0.2012	1.3600e-003	0.2026	0.0534	1.2600e-003	0.0546		188.9759	188.9759	8.3200e-003		189.1505
Total	**0.0519**	**0.0669**	**0.8255**	**2.4400e-003**	**0.2012**	**1.3600e-003**	**0.2026**	**0.0534**	**1.2600e-003**	**0.0546**		**188.9759**	**188.9759**	**8.3200e-003**		**189.1505**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category						lb/day								lb/day		

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					7.0458	0.0000	7.0458	3.8730	0.0000	3.8730			0.0000			0.0000
Off-Road	4.2921	45.6088	36.2346	0.0391		2.3654	2.3654		2.1762	2.1762	0.0000	3,939.7731	3,939.7731	1.2265		3,965.5297
Total	**4.2921**	**45.6088**	**36.2346**	**0.0391**	**7.0458**	**2.3654**	**9.4113**	**3.8730**	**2.1762**	**6.0491**	**0.0000**	**3,939.7731**	**3,939.7731**	**1.2265**		**3,965.5297**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0519	0.0669	0.8255	2.4400e-003	0.2012	1.3600e-003	0.2026	0.0534	1.2600e-003	0.0546		188.9759	188.9759	8.3200e-003		189.1505
Total	**0.0519**	**0.0669**	**0.8255**	**2.4400e-003**	**0.2012**	**1.3600e-003**	**0.2026**	**0.0534**	**1.2600e-003**	**0.0546**		**188.9759**	**188.9759**	**8.3200e-003**		**189.1505**

3.4 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	3.0028	31.0702	23.9988	0.0297		1.7201	1.7201		1.5825	1.5825		2,993.1005	2,993.1005	0.9318		3,012.6681
Total	**3.0028**	**31.0702**	**23.9988**	**0.0297**	**6.5523**	**1.7201**	**8.2724**	**3.3675**	**1.5825**	**4.9500**		**2,993.1005**	**2,993.1005**	**0.9318**		**3,012.6681**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0433	0.0557	0.6879	2.0300e-003	0.1677	1.1300e-003	0.1688	0.0445	1.0500e-003	0.0455		157.4799	157.4799	6.9300e-003		157.6254
Total	**0.0433**	**0.0557**	**0.6879**	**2.0300e-003**	**0.1677**	**1.1300e-003**	**0.1688**	**0.0445**	**1.0500e-003**	**0.0455**		**157.4799**	**157.4799**	**6.9300e-003**		**157.6254**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000			0.0000
Off-Road	3.0028	31.0702	23.9988	0.0297		1.7201	1.7201		1.5825	1.5825	0.0000	2,993.1005	2,993.1005	0.9318		3,012.6681
Total	**3.0028**	**31.0702**	**23.9988**	**0.0297**	**2.5554**	**1.7201**	**4.2755**	**1.3133**	**1.5825**	**2.8958**	**0.0000**	**2,993.1005**	**2,993.1005**	**0.9318**		**3,012.6681**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0433	0.0557	0.6879	2.0300e-003	0.1677	1.1300e-003	0.1688	0.0445	1.0500e-003	0.0455		157.4799	157.4799	6.9300e-003		157.6254
Total	**0.0433**	**0.0557**	**0.6879**	**2.0300e-003**	**0.1677**	**1.1300e-003**	**0.1688**	**0.0445**	**1.0500e-003**	**0.0455**		**157.4799**	**157.4799**	**6.9300e-003**		**157.6254**

3.5 Trenching - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2748	11.4785	8.1968	0.0110		0.8407	0.8407		0.7750	0.7750		1,078.3462	1,078.3462	0.3214		1,085.0955
Total	**1.2748**	**11.4785**	**8.1968**	**0.0110**		**0.8407**	**0.8407**		**0.7750**	**0.7750**		**1,078.3462**	**1,078.3462**	**0.3214**		**1,085.0955**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0375	0.0483	0.5962	1.7600e-003	0.1453	9.8000e-004	0.1463	0.0385	9.1000e-004	0.0395		136.4826	136.4826	6.0100e-003		136.6087

Total	0.0375	0.0483	0.5962	1.7600e-003	0.1453	9.8000e-004	0.1463	0.0385	9.1000e-004	0.0395		136.4826	136.4826	6.0100e-003		136.6087

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2748	11.4785	8.1968	0.0110		0.8407	0.8407		0.7750	0.7750	0.0000	1,078.3462	1,078.3462	0.3214		1,085.0955
Total	**1.2748**	**11.4785**	**8.1968**	**0.0110**		**0.8407**	**0.8407**		**0.7750**	**0.7750**	**0.0000**	**1,078.3462**	**1,078.3462**	**0.3214**		**1,085.0955**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0375	0.0483	0.5962	1.7600e-003	0.1453	9.8000e-004	0.1463	0.0385	9.1000e-004	0.0395		136.4826	136.4826	6.0100e-003		136.6087
Total	**0.0375**	**0.0483**	**0.5962**	**1.7600e-003**	**0.1453**	**9.8000e-004**	**0.1463**	**0.0385**	**9.1000e-004**	**0.0395**		**136.4826**	**136.4826**	**6.0100e-003**		**136.6087**

3.6 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048		2,609.9390	2,609.9390	0.6387		2,623.3517
Total	**2.6687**	**23.2608**	**17.5327**	**0.0268**		**1.4943**	**1.4943**		**1.4048**	**1.4048**		**2,609.9390**	**2,609.9390**	**0.6387**		**2,623.3517**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1813	1.7338	2.1907	5.1800e-003	0.1500	0.0277	0.1777	0.0427	0.0255	0.0682		503.2977	503.2977	3.5600e-003		503.3725
Worker	0.1788	0.2303	2.8433	8.4100e-003	0.6930	4.6800e-003	0.6977	0.1838	4.3300e-003	0.1881		650.9168	650.9168	0.0287		651.5184
Total	**0.3600**	**1.9641**	**5.0340**	**0.0136**	**0.8430**	**0.0324**	**0.8754**	**0.2265**	**0.0298**	**0.2563**		**1,154.2146**	**1,154.2146**	**0.0322**		**1,154.8909**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Off-Road	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048	0.0000	2,609.9389	2,609.9389	0.6387		2,623.3517
Total	**2.6687**	**23.2608**	**17.5327**	**0.0268**		**1.4943**	**1.4943**		**1.4048**	**1.4048**	**0.0000**	**2,609.9389**	**2,609.9389**	**0.6387**		**2,623.3517**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1813	1.7338	2.1907	5.1800e-003	0.1500	0.0277	0.1777	0.0427	0.0255	0.0682		503.2977	503.2977	3.5600e-003		503.3725
Worker	0.1788	0.2303	2.8433	8.4100e-003	0.6930	4.6800e-003	0.6977	0.1838	4.3300e-003	0.1881		650.9168	650.9168	0.0287		651.5184
Total	**0.3600**	**1.9641**	**5.0340**	**0.0136**	**0.8430**	**0.0324**	**0.8754**	**0.2265**	**0.0298**	**0.2563**		**1,154.2146**	**1,154.2146**	**0.0322**		**1,154.8909**

3.6 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083		2,580.7618	2,580.7618	0.6279		2,593.9479
Total	**2.3516**	**20.9650**	**17.1204**	**0.0268**		**1.2850**	**1.2850**		**1.2083**	**1.2083**		**2,580.7618**	**2,580.7618**	**0.6279**		**2,593.9479**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1700	1.6081	2.0746	5.1900e-003	0.1500	0.0258	0.1758	0.0427	0.0237	0.0665		496.3010	496.3010	3.5800e-003		496.3762
Worker	0.1673	0.2134	2.6544	8.4500e-003	0.6930	4.7200e-003	0.6977	0.1838	4.3700e-003	0.1882		630.6565	630.6565	0.0274		631.2308
Total	**0.3373**	**1.8215**	**4.7290**	**0.0136**	**0.8430**	**0.0305**	**0.8736**	**0.2265**	**0.0281**	**0.2546**		**1,126.9574**	**1,126.9574**	**0.0309**		**1,127.6070**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083	0.0000	2,580.7618	2,580.7618	0.6279		2,593.9479
Total	**2.3516**	**20.9650**	**17.1204**	**0.0268**		**1.2850**	**1.2850**		**1.2083**	**1.2083**	**0.0000**	**2,580.7618**	**2,580.7618**	**0.6279**		**2,593.9479**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1700	1.6081	2.0746	5.1900e-003	0.1500	0.0258	0.1758	0.0427	0.0237	0.0665		496.3010	496.3010	3.5800e-003		496.3762
Worker	0.1673	0.2134	2.6544	8.4500e-003	0.6930	4.7200e-003	0.6977	0.1838	4.3700e-003	0.1882		630.6565	630.6565	0.0274		631.2308
Total	**0.3373**	**1.8215**	**4.7290**	**0.0136**	**0.8430**	**0.0305**	**0.8736**	**0.2265**	**0.0281**	**0.2546**		**1,126.9574**	**1,126.9574**	**0.0309**		**1,127.6070**

3.7 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2520	12.5889	12.1441	0.0187		0.7111	0.7111		0.6560	0.6560		1,816.2490	1,816.2490	0.5585		1,827.9782
Paving	0.1630					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.4150**	**12.5889**	**12.1441**	**0.0187**		**0.7111**	**0.7111**		**0.6560**	**0.6560**		**1,816.2490**	**1,816.2490**	**0.5585**		**1,827.9782**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0540	0.0688	0.8563	2.7300e-003	0.2236	1.5200e-003	0.2251	0.0593	1.4100e-003	0.0607		203.4376	203.4376	8.8200e-003		203.6228

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Total	**0.0540**	**0.0688**	**0.8563**	**2.7300e-003**	**0.2236**	**1.5200e-003**	**0.2251**	**0.0593**	**1.4100e-003**	**0.0607**		**203.4376**	**203.4376**	**8.8200e-003**		**203.6228**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2520	12.5889	12.1441	0.0187		0.7111	0.7111		0.6560	0.6560	0.0000	1,816.2490	1,816.2490	0.5585		1,827.9782
Paving	0.1630					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.4150**	**12.5889**	**12.1441**	**0.0187**		**0.7111**	**0.7111**		**0.6560**	**0.6560**	**0.0000**	**1,816.2490**	**1,816.2490**	**0.5585**		**1,827.9782**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0540	0.0688	0.8563	2.7300e-003	0.2236	1.5200e-003	0.2251	0.0593	1.4100e-003	0.0607		203.4376	203.4376	8.8200e-003		203.6228
Total	**0.0540**	**0.0688**	**0.8563**	**2.7300e-003**	**0.2236**	**1.5200e-003**	**0.2251**	**0.0593**	**1.4100e-003**	**0.0607**		**203.4376**	**203.4376**	**8.8200e-003**		**203.6228**

3.8 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	28.9509					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		281.9473
Total	**29.2174**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**		**281.4481**	**281.4481**	**0.0238**		**281.9473**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0324	0.0413	0.5138	1.6400e-003	0.1341	9.1000e-004	0.1350	0.0356	8.5000e-004	0.0364		122.0625	122.0625	5.2900e-003		122.1737
Total	**0.0324**	**0.0413**	**0.5138**	**1.6400e-003**	**0.1341**	**9.1000e-004**	**0.1350**	**0.0356**	**8.5000e-004**	**0.0364**		**122.0625**	**122.0625**	**5.2900e-003**		**122.1737**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Archit. Coating	28.9509					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		281.9473
Total	**29.2174**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**	**0.0000**	**281.4481**	**281.4481**	**0.0238**		**281.9473**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0324	0.0413	0.5138	1.6400e-003	0.1341	9.1000e-004	0.1350	0.0356	8.5000e-004	0.0364		122.0625	122.0625	5.2900e-003		122.1737
Total	**0.0324**	**0.0413**	**0.5138**	**1.6400e-003**	**0.1341**	**9.1000e-004**	**0.1350**	**0.0356**	**8.5000e-004**	**0.0364**		**122.0625**	**122.0625**	**5.2900e-003**		**122.1737**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	7.1514	16.0954	77.9747	0.2429	17.2786	0.2501	17.5287	4.6105	0.2308	4.8413		19,174.2627	19,174.2627	0.6891		19,188.7337
Unmitigated	7.1514	16.0954	77.9747	0.2429	17.2786	0.2501	17.5287	4.6105	0.2308	4.8413		19,174.2627	19,174.2627	0.6891		19,188.7337

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	2,707.22	1,105.93	119.16	6,369,145	6,369,145
Parking Lot	0.00	0.00	0.00		
Total	2,707.22	1,105.93	119.16	6,369,145	6,369,145

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.509471	0.056616	0.192725	0.151095	0.041772	0.005913	0.015766	0.015535	0.001447	0.002155	0.004735	0.000502	0.002269

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0462	0.4195	0.3524	2.5200e-003		0.0319	0.0319		0.0319	0.0319		503.4151	503.4151	9.6500e-003	9.2300e-003	506.4788
NaturalGas Unmitigated	0.0462	0.4195	0.3524	2.5200e-003		0.0319	0.0319		0.0319	0.0319		503.4151	503.4151	9.6500e-003	9.2300e-003	506.4788

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	4279.03	0.0462	0.4195	0.3524	2.5200e-003		0.0319	0.0319		0.0319	0.0319		503.4151	503.4151	9.6500e-003	9.2300e-003	506.4788
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0462**	**0.4195**	**0.3524**	**2.5200e-003**		**0.0319**	**0.0319**		**0.0319**	**0.0319**		**503.4151**	**503.4151**	**9.6500e-003**	**9.2300e-003**	**506.4788**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	4.27903	0.0462	0.4195	0.3524	2.5200e-003		0.0319	0.0319		0.0319	0.0319		503.4151	503.4151	9.6500e-003	9.2300e-003	506.4788
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0462**	**0.4195**	**0.3524**	**2.5200e-003**		**0.0319**	**0.0319**		**0.0319**	**0.0319**		**503.4151**	**503.4151**	**9.6500e-003**	**9.2300e-003**	**506.4788**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.5505	1.4000e-004	0.0152	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0322	0.0322	9.0000e-005		0.0341
Unmitigated	3.5505	1.4000e-004	0.0152	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0322	0.0322	9.0000e-005		0.0341

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.6345					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.9145					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.4400e-003	1.4000e-004	0.0152	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0322	0.0322	9.0000e-005		0.0341
Total	**3.5505**	**1.4000e-004**	**0.0152**	**0.0000**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**		**0.0322**	**0.0322**	**9.0000e-005**		**0.0341**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					

Architectural Coating	0.6345					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.9145					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.4400e-003	1.4000e-004	0.0152	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0322	0.0322	9.0000e-005		0.0341
Total	**3.5505**	**1.4000e-004**	**0.0152**	**0.0000**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**		**0.0322**	**0.0322**	**9.0000e-005**		**0.0341**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Phase 2 - Adaptive PE, Gymnasium and Pool

Orange County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	98.48	1000sqft	3.10	98,477.00	0
Parking Lot	48.72	1000sqft	1.12	48,720.00	0

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 2.2 **Precipitation Freq (Days)** 30

Climate Zone 8 **Operational Year** 2019

Utility Company Southern California Edison

CO2 Intensity (lb/MWhr) 630.89 **CH4 Intensity (lb/MWhr)** 0.029 **N2O Intensity (lb/MWhr)** 0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - modified

Construction Phase - modified

Off-road Equipment -

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Demolition -

Architectural Coating - scaqmd rule 1113. non-res interior = 50 g/l. non-res exterior traffic coatings = 100 g/l, adjusted to 242 g/l
Adjusted to reflect that parking lot of is exterior

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblConstructionPhase	NumDays	18.00	20.00
tblLandUse	LandUseSquareFeet	98,480.00	98,477.00
tblLandUse	LotAcreage	2.26	3.10
tblProjectCharacteristics	OperationalYear	2014	2019

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	4.3466	45.6823	37.0074	0.0500	18.2675	2.3668	20.6342	9.9840	2.1774	12.1615	0.0000	4,926.3351	4,926.3351	1.2348	0.0000	4,952.2664
2019	29.2513	22.8432	22.1563	0.0400	0.8430	1.3158	2.1589	0.2265	1.2366	1.4631	0.0000	3,670.0250	3,670.0250	0.6590	0.0000	3,683.8631
Total	**33.5979**	**68.5255**	**59.1637**	**0.0899**	**19.1105**	**3.6826**	**22.7931**	**10.2106**	**3.4141**	**13.6246**	**0.0000**	**8,596.3601**	**8,596.3601**	**1.8938**	**0.0000**	**8,636.1295**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Year	lb/day										lb/day					
2018	4.3466	45.6823	37.0074	0.0500	7.2470	2.3668	9.6138	3.9263	2.1774	6.1038	0.0000	4,926.3351	4,926.3351	1.2348	0.0000	4,952.2664
2019	29.2513	22.8432	22.1563	0.0400	0.8430	1.3158	2.1589	0.2265	1.2366	1.4631	0.0000	3,670.0250	3,670.0250	0.6590	0.0000	3,683.8631
Total	**33.5979**	**68.5255**	**59.1637**	**0.0899**	**8.0901**	**3.6826**	**11.7727**	**4.1528**	**3.4141**	**7.5669**	**0.0000**	**8,596.3601**	**8,596.3601**	**1.8938**	**0.0000**	**8,636.1295**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**57.67**	**0.00**	**48.35**	**59.33**	**0.00**	**44.46**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.5505	1.4000e-004	0.0152	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0322	0.0322	9.0000e-005		0.0341
Energy	0.0462	0.4195	0.3524	2.5200e-003		0.0319	0.0319		0.0319	0.0319		503.4151	503.4151	9.6500e-003	9.2300e-003	506.4788
Mobile	7.5470	16.9767	77.5929	0.2320	17.2786	0.2510	17.5296	4.6105	0.2316	4.8421		18,343.8325	18,343.8325	0.6895		18,358.3128
Total	**11.1436**	**17.3964**	**77.9605**	**0.2345**	**17.2786**	**0.2829**	**17.5616**	**4.6105**	**0.2635**	**4.8740**		**18,847.2798**	**18,847.2798**	**0.6993**	**9.2300e-003**	**18,864.8256**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Area	3.5505	1.4000e-004	0.0152	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0322	0.0322	9.0000e-005		0.0341
Energy	0.0462	0.4195	0.3524	2.5200e-003		0.0319	0.0319		0.0319	0.0319		503.4151	503.4151	9.6500e-003	9.2300e-003	506.4788
Mobile	7.5470	16.9767	77.5929	0.2320	17.2786	0.2510	17.5296	4.6105	0.2316	4.8421		18,343.8325	18,343.8325	0.6895		18,358.3128
Total	**11.1436**	**17.3964**	**77.9605**	**0.2345**	**17.2786**	**0.2829**	**17.5616**	**4.6105**	**0.2635**	**4.8740**		**18,847.2798**	**18,847.2798**	**0.6993**	**9.2300e-003**	**18,864.8256**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2018	6/28/2018	5	20	
2	Site Preparation	Site Preparation	6/29/2018	7/5/2018	5	5	
3	Grading	Grading	7/6/2018	7/17/2018	5	8	
4	Trenching	Trenching	7/18/2018	7/31/2018	5	10	
5	Building Construction	Building Construction	8/1/2018	6/18/2019	5	230	
6	Paving	Paving	6/19/2019	7/12/2019	5	18	
7	Architectural Coating	Architectural Coating	7/13/2019	8/9/2019	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 149,908; Non-Residential Outdoor: 49,969 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor

Demolition	Concrete/Industrial Saws		1	8.00	81	0.73
Demolition	Excavators		3	8.00	162	0.38
Demolition	Rubber Tired Dozers		2	8.00	255	0.40
Site Preparation	Rubber Tired Dozers		3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes		4	8.00	97	0.37
Grading	Excavators		1	8.00	162	0.38
Grading	Graders		1	8.00	174	0.41
Grading	Rubber Tired Dozers		1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes		3	8.00	97	0.37
Trenching	Plate Compactors		2	8.00	8	0.43
Trenching	Tractors/Loaders/Backhoes		1	8.00	97	0.37
Trenching	Trenchers		2	8.00	80	0.50
Building Construction	Cranes		1	7.00	226	0.29
Building Construction	Forklifts		3	8.00	89	0.20
Building Construction	Generator Sets		1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes		3	7.00	97	0.37
Building Construction	Welders		1	8.00	46	0.45
Paving	Cement and Mortar Mixers		2	6.00	9	0.56
Paving	Pavers		1	8.00	125	0.42
Paving	Paving Equipment		2	6.00	130	0.36
Paving	Rollers		2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes		1	8.00	97	0.37
Architectural Coating	Air Compressors		1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	222.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Trenching	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	62.00	24.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	12.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.3979	0.0000	2.3979	0.3631	0.0000	0.3631			0.0000			0.0000
Off-Road	3.5606	36.8310	31.7250	0.0399		1.8090	1.8090		1.6856	1.6856		3,983.3282	3,983.3282	1.1015		4,006.4585
Total	**3.5606**	**36.8310**	**31.7250**	**0.0399**	**2.3979**	**1.8090**	**4.2068**	**0.3631**	**1.6856**	**2.0487**		**3,983.3282**	**3,983.3282**	**1.1015**		**4,006.4585**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1966	2.6927	2.3865	8.1300e-003	0.1934	0.0422	0.2356	0.0530	0.0388	0.0918		793.8731	793.8731	5.9000e-003		793.9969
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Worker	0.0454	0.0613	0.6440	1.9300e-003	0.1677	1.1300e-003	0.1688	0.0445	1.0500e-003	0.0455		149.1338	149.1338	6.9300e-003		149.2794
Total	**0.2420**	**2.7540**	**3.0305**	**0.0101**	**0.3611**	**0.0433**	**0.4044**	**0.0974**	**0.0398**	**0.1373**		**943.0070**	**943.0070**	**0.0128**		**943.2763**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.9352	0.0000	0.9352	0.1416	0.0000	0.1416			0.0000			0.0000
Off-Road	3.5606	36.8310	31.7250	0.0399		1.8090	1.8090		1.6856	1.6856	0.0000	3,983.3282	3,983.3282	1.1015		4,006.4585
Total	**3.5606**	**36.8310**	**31.7250**	**0.0399**	**0.9352**	**1.8090**	**2.7441**	**0.1416**	**1.6856**	**1.8272**	**0.0000**	**3,983.3282**	**3,983.3282**	**1.1015**		**4,006.4585**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1966	2.6927	2.3865	8.1300e-003	0.1934	0.0422	0.2356	0.0530	0.0388	0.0918		793.8731	793.8731	5.9000e-003		793.9969
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0454	0.0613	0.6440	1.9300e-003	0.1677	1.1300e-003	0.1688	0.0445	1.0500e-003	0.0455		149.1338	149.1338	6.9300e-003		149.2794
Total	**0.2420**	**2.7540**	**3.0305**	**0.0101**	**0.3611**	**0.0433**	**0.4044**	**0.0974**	**0.0398**	**0.1373**		**943.0070**	**943.0070**	**0.0128**		**943.2763**

3.3 Site Preparation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.2921	45.6088	36.2346	0.0391		2.3654	2.3654		2.1762	2.1762		3,939.7731	3,939.7731	1.2265		3,965.5297
Total	**4.2921**	**45.6088**	**36.2346**	**0.0391**	**18.0663**	**2.3654**	**20.4317**	**9.9307**	**2.1762**	**12.1069**		**3,939.7731**	**3,939.7731**	**1.2265**		**3,965.5297**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0545	0.0735	0.7728	2.3100e-003	0.2012	1.3600e-003	0.2026	0.0534	1.2600e-003	0.0546		178.9606	178.9606	8.3200e-003		179.1353
Total	**0.0545**	**0.0735**	**0.7728**	**2.3100e-003**	**0.2012**	**1.3600e-003**	**0.2026**	**0.0534**	**1.2600e-003**	**0.0546**		**178.9606**	**178.9606**	**8.3200e-003**		**179.1353**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					7.0458	0.0000	7.0458	3.8730	0.0000	3.8730			0.0000			0.0000
Off-Road	4.2921	45.6088	36.2346	0.0391		2.3654	2.3654		2.1762	2.1762	0.0000	3,939.7731	3,939.7731	1.2265		3,965.5297
Total	**4.2921**	**45.6088**	**36.2346**	**0.0391**	**7.0458**	**2.3654**	**9.4113**	**3.8730**	**2.1762**	**6.0491**	**0.0000**	**3,939.7731**	**3,939.7731**	**1.2265**		**3,965.5297**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0545	0.0735	0.7728	2.3100e-003	0.2012	1.3600e-003	0.2026	0.0534	1.2600e-003	0.0546		178.9606	178.9606	8.3200e-003		179.1353
Total	**0.0545**	**0.0735**	**0.7728**	**2.3100e-003**	**0.2012**	**1.3600e-003**	**0.2026**	**0.0534**	**1.2600e-003**	**0.0546**		**178.9606**	**178.9606**	**8.3200e-003**		**179.1353**

3.4 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	3.0028	31.0702	23.9988	0.0297		1.7201	1.7201		1.5825	1.5825		2,993.1005	2,993.1005	0.9318		3,012.6681
Total	**3.0028**	**31.0702**	**23.9988**	**0.0297**	**6.5523**	**1.7201**	**8.2724**	**3.3675**	**1.5825**	**4.9500**		**2,993.1005**	**2,993.1005**	**0.9318**		**3,012.6681**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0454	0.0613	0.6440	1.9300e-003	0.1677	1.1300e-003	0.1688	0.0445	1.0500e-003	0.0455		149.1338	149.1338	6.9300e-003		149.2794
Total	**0.0454**	**0.0613**	**0.6440**	**1.9300e-003**	**0.1677**	**1.1300e-003**	**0.1688**	**0.0445**	**1.0500e-003**	**0.0455**		**149.1338**	**149.1338**	**6.9300e-003**		**149.2794**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000			0.0000
Off-Road	3.0028	31.0702	23.9988	0.0297		1.7201	1.7201		1.5825	1.5825	0.0000	2,993.1005	2,993.1005	0.9318		3,012.6681
Total	**3.0028**	**31.0702**	**23.9988**	**0.0297**	**2.5554**	**1.7201**	**4.2755**	**1.3133**	**1.5825**	**2.8958**	**0.0000**	**2,993.1005**	**2,993.1005**	**0.9318**		**3,012.6681**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0454	0.0613	0.6440	1.9300e-003	0.1677	1.1300e-003	0.1688	0.0445	1.0500e-003	0.0455		149.1338	149.1338	6.9300e-003		149.2794
Total	**0.0454**	**0.0613**	**0.6440**	**1.9300e-003**	**0.1677**	**1.1300e-003**	**0.1688**	**0.0445**	**1.0500e-003**	**0.0455**		**149.1338**	**149.1338**	**6.9300e-003**		**149.2794**

3.5 Trenching - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2748	11.4785	8.1968	0.0110		0.8407	0.8407		0.7750	0.7750		1,078.3462	1,078.3462	0.3214		1,085.0955
Total	**1.2748**	**11.4785**	**8.1968**	**0.0110**		**0.8407**	**0.8407**		**0.7750**	**0.7750**		**1,078.3462**	**1,078.3462**	**0.3214**		**1,085.0955**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0393	0.0531	0.5582	1.6700e-003	0.1453	9.8000e-004	0.1463	0.0385	9.1000e-004	0.0395		129.2493	129.2493	6.0100e-003		129.3755

Total	**0.0393**	**0.0531**	**0.5582**	**1.6700e-003**	**0.1453**	**9.8000e-004**	**0.1463**	**0.0385**	**9.1000e-004**	**0.0395**		**129.2493**	**129.2493**	**6.0100e-003**		**129.3755**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category						lb/day							lb/day			
Off-Road	1.2748	11.4785	8.1968	0.0110		0.8407	0.8407		0.7750	0.7750	0.0000	1,078.3462	1,078.3462	0.3214		1,085.0955
Total	**1.2748**	**11.4785**	**8.1968**	**0.0110**		**0.8407**	**0.8407**		**0.7750**	**0.7750**	**0.0000**	**1,078.3462**	**1,078.3462**	**0.3214**		**1,085.0955**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category						lb/day							lb/day			
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0393	0.0531	0.5582	1.6700e-003	0.1453	9.8000e-004	0.1463	0.0385	9.1000e-004	0.0395		129.2493	129.2493	6.0100e-003		129.3755
Total	**0.0393**	**0.0531**	**0.5582**	**1.6700e-003**	**0.1453**	**9.8000e-004**	**0.1463**	**0.0385**	**9.1000e-004**	**0.0395**		**129.2493**	**129.2493**	**6.0100e-003**		**129.3755**

3.6 Building Construction - 2018

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Off-Road	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048		2,609.9390	2,609.9390	0.6387		2,623.3517
Total	**2.6687**	**23.2608**	**17.5327**	**0.0268**		**1.4943**	**1.4943**		**1.4048**	**1.4048**		**2,609.9390**	**2,609.9390**	**0.6387**		**2,623.3517**

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1995	1.7728	2.6763	5.1400e-003	0.1500	0.0279	0.1780	0.0427	0.0257	0.0684		499.0334	499.0334	3.6800e-003		499.1106
Worker	0.1876	0.2532	2.6620	7.9600e-003	0.6930	4.6800e-003	0.6977	0.1838	4.3300e-003	0.1881		616.4199	616.4199	0.0287		617.0215
Total	**0.3872**	**2.0260**	**5.3383**	**0.0131**	**0.8430**	**0.0326**	**0.8756**	**0.2265**	**0.0300**	**0.2565**		**1,115.4533**	**1,115.4533**	**0.0323**		**1,116.1321**

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					

Off-Road	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048	0.0000	2,609.9389	2,609.9389	0.6387		2,623.3517
Total	**2.6687**	**23.2608**	**17.5327**	**0.0268**		**1.4943**	**1.4943**		**1.4048**	**1.4048**	**0.0000**	**2,609.9389**	**2,609.9389**	**0.6387**		**2,623.3517**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1995	1.7728	2.6763	5.1400e-003	0.1500	0.0279	0.1780	0.0427	0.0257	0.0684		499.0334	499.0334	3.6800e-003		499.1106
Worker	0.1876	0.2532	2.6620	7.9600e-003	0.6930	4.6800e-003	0.6977	0.1838	4.3300e-003	0.1881		616.4199	616.4199	0.0287		617.0215
Total	**0.3872**	**2.0260**	**5.3383**	**0.0131**	**0.8430**	**0.0326**	**0.8756**	**0.2265**	**0.0300**	**0.2565**		**1,115.4533**	**1,115.4533**	**0.0323**		**1,116.1321**

3.6 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083		2,580.7618	2,580.7618	0.6279		2,593.9479
Total	**2.3516**	**20.9650**	**17.1204**	**0.0268**		**1.2850**	**1.2850**		**1.2083**	**1.2083**		**2,580.7618**	**2,580.7618**	**0.6279**		**2,593.9479**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1862	1.6435	2.5574	5.1500e-003	0.1500	0.0261	0.1761	0.0427	0.0240	0.0667		492.1004	492.1004	3.7000e-003		492.1782
Worker	0.1754	0.2346	2.4785	8.0000e-003	0.6930	4.7200e-003	0.6977	0.1838	4.3700e-003	0.1882		597.1628	597.1628	0.0274		597.7371
Total	**0.3615**	**1.8781**	**5.0360**	**0.0132**	**0.8430**	**0.0308**	**0.8738**	**0.2265**	**0.0283**	**0.2549**		**1,089.2632**	**1,089.2632**	**0.0311**		**1,089.9152**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083	0.0000	2,580.7618	2,580.7618	0.6279		2,593.9479
Total	**2.3516**	**20.9650**	**17.1204**	**0.0268**		**1.2850**	**1.2850**		**1.2083**	**1.2083**	**0.0000**	**2,580.7618**	**2,580.7618**	**0.6279**		**2,593.9479**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1862	1.6435	2.5574	5.1500e-003	0.1500	0.0261	0.1761	0.0427	0.0240	0.0667		492.1004	492.1004	3.7000e-003		492.1782
Worker	0.1754	0.2346	2.4785	8.0000e-003	0.6930	4.7200e-003	0.6977	0.1838	4.3700e-003	0.1882		597.1628	597.1628	0.0274		597.7371
Total	**0.3615**	**1.8781**	**5.0360**	**0.0132**	**0.8430**	**0.0308**	**0.8738**	**0.2265**	**0.0283**	**0.2549**		**1,089.2632**	**1,089.2632**	**0.0311**		**1,089.9152**

3.7 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2520	12.5889	12.1441	0.0187		0.7111	0.7111		0.6560	0.6560		1,816.2490	1,816.2490	0.5585		1,827.9782
Paving	0.1630					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.4150**	**12.5889**	**12.1441**	**0.0187**		**0.7111**	**0.7111**		**0.6560**	**0.6560**		**1,816.2490**	**1,816.2490**	**0.5585**		**1,827.9782**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0566	0.0757	0.7995	2.5800e-003	0.2236	1.5200e-003	0.2251	0.0593	1.4100e-003	0.0607		192.6332	192.6332	8.8200e-003		192.8184

Total	**0.0566**	**0.0757**	**0.7995**	**2.5800e-003**	**0.2236**	**1.5200e-003**	**0.2251**	**0.0593**	**1.4100e-003**	**0.0607**		**192.6332**	**192.6332**	**8.8200e-003**		**192.8184**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2520	12.5889	12.1441	0.0187		0.7111	0.7111		0.6560	0.6560	0.0000	1,816.2490	1,816.2490	0.5585		1,827.9782
Paving	0.1630					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.4150**	**12.5889**	**12.1441**	**0.0187**		**0.7111**	**0.7111**		**0.6560**	**0.6560**	**0.0000**	**1,816.2490**	**1,816.2490**	**0.5585**		**1,827.9782**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0566	0.0757	0.7995	2.5800e-003	0.2236	1.5200e-003	0.2251	0.0593	1.4100e-003	0.0607		192.6332	192.6332	8.8200e-003		192.8184
Total	**0.0566**	**0.0757**	**0.7995**	**2.5800e-003**	**0.2236**	**1.5200e-003**	**0.2251**	**0.0593**	**1.4100e-003**	**0.0607**		**192.6332**	**192.6332**	**8.8200e-003**		**192.8184**

3.8 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	28.9509					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		281.9473
Total	**29.2174**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**		**281.4481**	**281.4481**	**0.0238**		**281.9473**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0339	0.0454	0.4797	1.5500e-003	0.1341	9.1000e-004	0.1350	0.0356	8.5000e-004	0.0364		115.5799	115.5799	5.2900e-003		115.6910
Total	**0.0339**	**0.0454**	**0.4797**	**1.5500e-003**	**0.1341**	**9.1000e-004**	**0.1350**	**0.0356**	**8.5000e-004**	**0.0364**		**115.5799**	**115.5799**	**5.2900e-003**		**115.6910**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Archit. Coating	28.9509					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		281.9473
Total	**29.2174**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**	**0.0000**	**281.4481**	**281.4481**	**0.0238**		**281.9473**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0339	0.0454	0.4797	1.5500e-003	0.1341	9.1000e-004	0.1350	0.0356	8.5000e-004	0.0364		115.5799	115.5799	5.2900e-003		115.6910
Total	**0.0339**	**0.0454**	**0.4797**	**1.5500e-003**	**0.1341**	**9.1000e-004**	**0.1350**	**0.0356**	**8.5000e-004**	**0.0364**		**115.5799**	**115.5799**	**5.2900e-003**		**115.6910**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	7.5470	16.9767	77.5929	0.2320	17.2786	0.2510	17.5296	4.6105	0.2316	4.8421		18,343.8325	18,343.8325	0.6895		18,358.3128
Unmitigated	7.5470	16.9767	77.5929	0.2320	17.2786	0.2510	17.5296	4.6105	0.2316	4.8421		18,343.8325	18,343.8325	0.6895		18,358.3128

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	2,707.22	1,105.93	119.16	6,369,145	6,369,145
Parking Lot	0.00	0.00	0.00		
Total	2,707.22	1,105.93	119.16	6,369,145	6,369,145

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.509471	0.056616	0.192725	0.151095	0.041772	0.005913	0.015766	0.015535	0.001447	0.002155	0.004735	0.000502	0.002269

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0462	0.4195	0.3524	2.5200e-003		0.0319	0.0319		0.0319	0.0319		503.4151	503.4151	9.6500e-003	9.2300e-003	506.4788
NaturalGas Unmitigated	0.0462	0.4195	0.3524	2.5200e-003		0.0319	0.0319		0.0319	0.0319		503.4151	503.4151	9.6500e-003	9.2300e-003	506.4788

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	4279.03	0.0462	0.4195	0.3524	2.5200e-003		0.0319	0.0319		0.0319	0.0319		503.4151	503.4151	9.6500e-003	9.2300e-003	506.4788
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0462**	**0.4195**	**0.3524**	**2.5200e-003**		**0.0319**	**0.0319**		**0.0319**	**0.0319**		**503.4151**	**503.4151**	**9.6500e-003**	**9.2300e-003**	**506.4788**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	4.27903	0.0462	0.4195	0.3524	2.5200e-003		0.0319	0.0319		0.0319	0.0319		503.4151	503.4151	9.6500e-003	9.2300e-003	506.4788
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0462**	**0.4195**	**0.3524**	**2.5200e-003**		**0.0319**	**0.0319**		**0.0319**	**0.0319**		**503.4151**	**503.4151**	**9.6500e-003**	**9.2300e-003**	**506.4788**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.5505	1.4000e-004	0.0152	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0322	0.0322	9.0000e-005		0.0341
Unmitigated	3.5505	1.4000e-004	0.0152	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0322	0.0322	9.0000e-005		0.0341

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.6345					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.9145					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.4400e-003	1.4000e-004	0.0152	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0322	0.0322	9.0000e-005		0.0341
Total	**3.5505**	**1.4000e-004**	**0.0152**	**0.0000**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**		**0.0322**	**0.0322**	**9.0000e-005**		**0.0341**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					

Architectural Coating	0.6345					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.9145					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.4400e-003	1.4000e-004	0.0152	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0322	0.0322	9.0000e-005		0.0341
Total	**3.5505**	**1.4000e-004**	**0.0152**	**0.0000**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**		**0.0322**	**0.0322**	**9.0000e-005**		**0.0341**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Phase 3 - Chemistry Building

Orange County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	43.92	1000sqft	0.39	43,916.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Chemistry Building will be multiple stories

Construction Phase - modified

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - modified

Demolition -

Architectural Coating - SCAQMD Rule 1113

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value

tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblConstructionPhase	NumDays	5.00	10.00
tblLandUse	LandUseSquareFeet	43,920.00	43,916.00
tblLandUse	LotAcreage	1.01	0.39
tblProjectCharacteristics	OperationalYear	2014	2022

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0410	0.3961	0.3769	6.6000e-004	0.0233	0.0226	0.0458	4.9800e-003	0.0209	0.0258	0.0000	55.6388	55.6388	0.0131	0.0000	55.9129
2021	0.1453	0.1707	0.1786	3.2000e-004	4.9300e-003	9.2800e-003	0.0142	1.3200e-003	8.5800e-003	9.9000e-003	0.0000	26.4267	26.4267	6.5500e-003	0.0000	26.5642
Total	**0.1863**	**0.5668**	**0.5555**	**9.8000e-004**	**0.0282**	**0.0318**	**0.0600**	**6.3000e-003**	**0.0294**	**0.0357**	**0.0000**	**82.0655**	**82.0655**	**0.0196**	**0.0000**	**82.4771**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0410	0.3961	0.3769	6.6000e-004	0.0151	0.0226	0.0377	3.5700e-003	0.0209	0.0244	0.0000	55.6388	55.6388	0.0131	0.0000	55.9128
2021	0.1453	0.1707	0.1786	3.2000e-004	4.9300e-003	9.2800e-003	0.0142	1.3200e-003	8.5800e-003	9.9000e-003	0.0000	26.4267	26.4267	6.5500e-003	0.0000	26.5642

Total	**0.1863**	**0.5668**	**0.5555**	**9.8000e-004**	**0.0201**	**0.0318**	**0.0519**	**4.8900e-003**	**0.0294**	**0.0343**	**0.0000**	**82.0655**	**82.0655**	**0.0196**	**0.0000**	**82.4771**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**28.85**	**0.00**	**13.53**	**22.38**	**0.00**	**3.95**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2096	1.0000e-005	5.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0900e-003	1.0900e-003	0.0000	0.0000	1.1500e-003
Energy	3.7600e-003	0.0341	0.0287	2.0000e-004		2.5900e-003	2.5900e-003		2.5900e-003	2.5900e-003	0.0000	213.7389	213.7389	8.8300e-003	2.3600e-003	214.6562
Mobile	0.3980	0.8550	4.2203	0.0149	1.0734	0.0150	1.0884	0.2869	0.0139	0.3007	0.0000	1,006.7092	1,006.7092	0.0347	0.0000	1,007.4382
Waste						0.0000	0.0000		0.0000	0.0000	11.5908	0.0000	11.5908	0.6850	0.0000	25.9757
Water						0.0000	0.0000		0.0000	0.0000	0.6834	18.7396	19.4230	0.0711	1.8400e-003	21.4843
Total	**0.6113**	**0.8892**	**4.2495**	**0.0151**	**1.0734**	**0.0176**	**1.0910**	**0.2869**	**0.0165**	**0.3033**	**12.2742**	**1,239.1888**	**1,251.4630**	**0.7996**	**4.2000e-003**	**1,269.5555**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2096	1.0000e-005	5.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0900e-003	1.0900e-003	0.0000	0.0000	1.1500e-003

Energy	3.7600e-003	0.0341	0.0287	2.0000e-004		2.5900e-003	2.5900e-003		2.5900e-003	2.5900e-003	0.0000	213.7389	213.7389	8.8300e-003	2.3600e-003	214.6562
Mobile	0.3980	0.8550	4.2203	0.0149	1.0734	0.0150	1.0884	0.2869	0.0139	0.3007	0.0000	1,006.7092	1,006.7092	0.0347	0.0000	1,007.4382
Waste						0.0000	0.0000		0.0000	0.0000	11.5908	0.0000	11.5908	0.6850	0.0000	25.9757
Water						0.0000	0.0000		0.0000	0.0000	0.6834	18.7396	19.4230	0.0710	1.8300e-003	21.4832
Total	**0.6113**	**0.8892**	**4.2495**	**0.0151**	**1.0734**	**0.0176**	**1.0910**	**0.2869**	**0.0165**	**0.3033**	**12.2742**	**1,239.1888**	**1,251.4630**	**0.7996**	**4.1900e-003**	**1,269.5544**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2020	9/14/2020	5	10	
2	Site Preparation	Site Preparation	9/15/2020	9/15/2020	5	1	
3	Grading	Grading	9/16/2020	9/17/2020	5	2	
4	Trenching	Trenching	9/18/2020	10/1/2020	5	10	
5	Building Construction	Building Construction	10/2/2020	2/18/2021	5	100	
6	Paving	Paving	2/19/2021	2/25/2021	5	5	
7	Architectural Coating	Architectural Coating	2/26/2021	3/11/2021	5	10	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 65,874; Non-Residential Outdoor: 21,958 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Trenching	Plate Compactors	1	8.00	8	0.43
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Trenching	Trenchers	1	8.00	80	0.50
Building Construction	Cranes	1	4.00	226	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	125	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	114.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	18.00	7.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Architectural Coating	1	4.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0123	0.0000	0.0123	1.8600e-003	0.0000	1.8600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.2600e-003	0.0386	0.0405	6.0000e-005		2.2800e-003	2.2800e-003		2.1800e-003	2.1800e-003	0.0000	5.2240	5.2240	9.9000e-004	0.0000	5.2448
Total	**4.2600e-003**	**0.0386**	**0.0405**	**6.0000e-005**	**0.0123**	**2.2800e-003**	**0.0146**	**1.8600e-003**	**2.1800e-003**	**4.0400e-003**	**0.0000**	**5.2240**	**5.2240**	**9.9000e-004**	**0.0000**	**5.2448**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.1000e-004	0.0118	0.0111	4.0000e-005	9.8000e-004	2.1000e-004	1.1900e-003	2.7000e-004	1.9000e-004	4.6000e-004	0.0000	3.5683	3.5683	3.0000e-005	0.0000	3.5689
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	1.8000e-004	1.9200e-003	1.0000e-005	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4257	0.4257	2.0000e-005	0.0000	0.4261
Total	**1.0300e-003**	**0.0120**	**0.0131**	**5.0000e-005**	**1.5300e-003**	**2.1000e-004**	**1.7400e-003**	**4.2000e-004**	**1.9000e-004**	**6.1000e-004**	**0.0000**	**3.9941**	**3.9941**	**5.0000e-005**	**0.0000**	**3.9951**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					4.8000e-003	0.0000	4.8000e-003	7.3000e-004	0.0000	7.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.2600e-003	0.0386	0.0405	6.0000e-005		2.2800e-003	2.2800e-003		2.1800e-003	2.1800e-003	0.0000	5.2240	5.2240	9.9000e-004	0.0000	5.2448
Total	**4.2600e-003**	**0.0386**	**0.0405**	**6.0000e-005**	**4.8000e-003**	**2.2800e-003**	**7.0800e-003**	**7.3000e-004**	**2.1800e-003**	**2.9100e-003**	**0.0000**	**5.2240**	**5.2240**	**9.9000e-004**	**0.0000**	**5.2448**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.1000e-004	0.0118	0.0111	4.0000e-005	9.8000e-004	2.1000e-004	1.1900e-003	2.7000e-004	1.9000e-004	4.6000e-004	0.0000	3.5683	3.5683	3.0000e-005	0.0000	3.5689
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	1.8000e-004	1.9200e-003	1.0000e-005	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4257	0.4257	2.0000e-005	0.0000	0.4261
Total	**1.0300e-003**	**0.0120**	**0.0131**	**5.0000e-005**	**1.5300e-003**	**2.1000e-004**	**1.7400e-003**	**4.2000e-004**	**1.9000e-004**	**6.1000e-004**	**0.0000**	**3.9941**	**3.9941**	**5.0000e-005**	**0.0000**	**3.9951**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.6000e-004	4.5300e-003	3.4200e-003	0.0000		2.6000e-004	2.6000e-004		2.4000e-004	2.4000e-004	0.0000	0.4093	0.4093	1.3000e-004	0.0000	0.4120
Total	**4.6000e-004**	**4.5300e-003**	**3.4200e-003**	**0.0000**	**2.7000e-004**	**2.6000e-004**	**5.3000e-004**	**3.0000e-005**	**2.4000e-004**	**2.7000e-004**	**0.0000**	**0.4093**	**0.4093**	**1.3000e-004**	**0.0000**	**0.4120**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	1.0000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0213	0.0213	0.0000	0.0000	0.0213
Total	**1.0000e-005**	**1.0000e-005**	**1.0000e-004**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0213**	**0.0213**	**0.0000**	**0.0000**	**0.0213**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.0000e-004	0.0000	1.0000e-004	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.6000e-004	4.5300e-003	3.4200e-003	0.0000		2.6000e-004	2.6000e-004		2.4000e-004	2.4000e-004	0.0000	0.4093	0.4093	1.3000e-004	0.0000	0.4120

Total	4.6000e-004	4.5300e-003	3.4200e-003	0.0000	1.0000e-004	2.6000e-004	3.6000e-004	1.0000e-005	2.4000e-004	2.5000e-004	0.0000	0.4093	0.4093	1.3000e-004	0.0000	0.4120

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	1.0000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0213	0.0213	0.0000	0.0000	0.0213
Total	**1.0000e-005**	**1.0000e-005**	**1.0000e-004**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0213**	**0.0213**	**0.0000**	**0.0000**	**0.0213**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.5000e-004	0.0000	7.5000e-004	4.1000e-004	0.0000	4.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.5000e-004	7.7200e-003	8.1000e-003	1.0000e-005		4.6000e-004	4.6000e-004		4.4000e-004	4.4000e-004	0.0000	1.0448	1.0448	2.0000e-004	0.0000	1.0490
Total	**8.5000e-004**	**7.7200e-003**	**8.1000e-003**	**1.0000e-005**	**7.5000e-004**	**4.6000e-004**	**1.2100e-003**	**4.1000e-004**	**4.4000e-004**	**8.5000e-004**	**0.0000**	**1.0448**	**1.0448**	**2.0000e-004**	**0.0000**	**1.0490**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	4.0000e-005	3.8000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0852	0.0852	0.0000	0.0000	0.0852
Total	**2.0000e-005**	**4.0000e-005**	**3.8000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0852**	**0.0852**	**0.0000**	**0.0000**	**0.0852**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.9000e-004	0.0000	2.9000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.5000e-004	7.7200e-003	8.1000e-003	1.0000e-005		4.6000e-004	4.6000e-004		4.4000e-004	4.4000e-004	0.0000	1.0448	1.0448	2.0000e-004	0.0000	1.0490
Total	**8.5000e-004**	**7.7200e-003**	**8.1000e-003**	**1.0000e-005**	**2.9000e-004**	**4.6000e-004**	**7.5000e-004**	**1.6000e-004**	**4.4000e-004**	**6.0000e-004**	**0.0000**	**1.0448**	**1.0448**	**2.0000e-004**	**0.0000**	**1.0490**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	4.0000e-005	3.8000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0852	0.0852	0.0000	0.0000	0.0852
Total	**2.0000e-005**	**4.0000e-005**	**3.8000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0852**	**0.0852**	**0.0000**	**0.0000**	**0.0852**

3.5 Trenching - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.4000e-003	0.0313	0.0260	4.0000e-005		2.1700e-003	2.1700e-003		2.0000e-003	2.0000e-003	0.0000	3.0411	3.0411	9.5000e-004	0.0000	3.0610
Total	**3.4000e-003**	**0.0313**	**0.0260**	**4.0000e-005**		**2.1700e-003**	**2.1700e-003**		**2.0000e-003**	**2.0000e-003**	**0.0000**	**3.0411**	**3.0411**	**9.5000e-004**	**0.0000**	**3.0610**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-004	1.5000e-004	1.5300e-003	1.0000e-005	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3406	0.3406	2.0000e-005	0.0000	0.3409
Total	**1.0000e-004**	**1.5000e-004**	**1.5300e-003**	**1.0000e-005**	**4.4000e-004**	**0.0000**	**4.4000e-004**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**0.3406**	**0.3406**	**2.0000e-005**	**0.0000**	**0.3409**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.4000e-003	0.0313	0.0260	4.0000e-005		2.1700e-003	2.1700e-003		2.0000e-003	2.0000e-003	0.0000	3.0411	3.0411	9.5000e-004	0.0000	3.0610
Total	**3.4000e-003**	**0.0313**	**0.0260**	**4.0000e-005**		**2.1700e-003**	**2.1700e-003**		**2.0000e-003**	**2.0000e-003**	**0.0000**	**3.0411**	**3.0411**	**9.5000e-004**	**0.0000**	**3.0610**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-004	1.5000e-004	1.5300e-003	1.0000e-005	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3406	0.3406	2.0000e-005	0.0000	0.3409
Total	**1.0000e-004**	**1.5000e-004**	**1.5300e-003**	**1.0000e-005**	**4.4000e-004**	**0.0000**	**4.4000e-004**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**0.3406**	**0.3406**	**2.0000e-005**	**0.0000**	**0.3409**

3.6 Building Construction - 2020

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Off-Road	0.0279	0.2858	0.2394	3.7000e-004		0.0169	0.0169		0.0156	0.0156	0.0000	32.3414	32.3414	0.0105	0.0000	32.5610
Total	**0.0279**	**0.2858**	**0.2394**	**3.7000e-004**		**0.0169**	**0.0169**		**0.0156**	**0.0156**	**0.0000**	**32.3414**	**32.3414**	**0.0105**	**0.0000**	**32.5610**

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.5700e-003	0.0139	0.0220	5.0000e-005	1.4000e-003	2.2000e-004	1.6300e-003	4.0000e-004	2.1000e-004	6.1000e-004	0.0000	4.1562	4.1562	3.0000e-005	0.0000	4.1568
Worker	1.4600e-003	2.1200e-003	0.0224	8.0000e-005	6.4200e-003	4.0000e-005	6.4700e-003	1.7100e-003	4.0000e-005	1.7500e-003	0.0000	4.9811	4.9811	2.2000e-004	0.0000	4.9858
Total	**3.0300e-003**	**0.0160**	**0.0445**	**1.3000e-004**	**7.8200e-003**	**2.6000e-004**	**8.1000e-003**	**2.1100e-003**	**2.5000e-004**	**2.3600e-003**	**0.0000**	**9.1372**	**9.1372**	**2.5000e-004**	**0.0000**	**9.1426**

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Off-Road	0.0279	0.2858	0.2394	3.7000e-004		0.0169	0.0169		0.0156	0.0156	0.0000	32.3413	32.3413	0.0105	0.0000	32.5610

Total	**0.0279**	**0.2858**	**0.2394**	**3.7000e-004**		**0.0169**	**0.0169**		**0.0156**	**0.0156**	**0.0000**	**32.3413**	**32.3413**	**0.0105**	**0.0000**	**32.5610**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.5700e-003	0.0139	0.0220	5.0000e-005	1.4000e-003	2.2000e-004	1.6300e-003	4.0000e-004	2.1000e-004	6.1000e-004	0.0000	4.1562	4.1562	3.0000e-005	0.0000	4.1568
Worker	1.4600e-003	2.1200e-003	0.0224	8.0000e-005	6.4200e-003	4.0000e-005	6.4700e-003	1.7100e-003	4.0000e-005	1.7500e-003	0.0000	4.9811	4.9811	2.2000e-004	0.0000	4.9858
Total	**3.0300e-003**	**0.0160**	**0.0445**	**1.3000e-004**	**7.8200e-003**	**2.6000e-004**	**8.1000e-003**	**2.1100e-003**	**2.5000e-004**	**2.3600e-003**	**0.0000**	**9.1372**	**9.1372**	**2.5000e-004**	**0.0000**	**9.1426**

3.6 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0135	0.1388	0.1267	2.0000e-004		7.7900e-003	7.7900e-003		7.1700e-003	7.1700e-003	0.0000	17.4184	17.4184	5.6300e-003	0.0000	17.5367
Total	**0.0135**	**0.1388**	**0.1267**	**2.0000e-004**		**7.7900e-003**	**7.7900e-003**		**7.1700e-003**	**7.1700e-003**	**0.0000**	**17.4184**	**17.4184**	**5.6300e-003**	**0.0000**	**17.5367**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.2000e-004	6.3300e-003	0.0116	3.0000e-005	7.5000e-004	1.1000e-004	8.6000e-004	2.2000e-004	1.0000e-004	3.2000e-004	0.0000	2.2361	2.2361	2.0000e-005	0.0000	2.2364
Worker	7.5000e-004	1.0700e-003	0.0114	4.0000e-005	3.4600e-003	2.0000e-005	3.4800e-003	9.2000e-004	2.0000e-005	9.4000e-004	0.0000	2.6379	2.6379	1.2000e-004	0.0000	2.6404
Total	**1.5700e-003**	**7.4000e-003**	**0.0230**	**7.0000e-005**	**4.2100e-003**	**1.3000e-004**	**4.3400e-003**	**1.1400e-003**	**1.2000e-004**	**1.2600e-003**	**0.0000**	**4.8740**	**4.8740**	**1.4000e-004**	**0.0000**	**4.8768**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0135	0.1388	0.1267	2.0000e-004		7.7900e-003	7.7900e-003		7.1700e-003	7.1700e-003	0.0000	17.4183	17.4183	5.6300e-003	0.0000	17.5366
Total	**0.0135**	**0.1388**	**0.1267**	**2.0000e-004**		**7.7900e-003**	**7.7900e-003**		**7.1700e-003**	**7.1700e-003**	**0.0000**	**17.4183**	**17.4183**	**5.6300e-003**	**0.0000**	**17.5366**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.2000e-004	6.3300e-003	0.0116	3.0000e-005	7.5000e-004	1.1000e-004	8.6000e-004	2.2000e-004	1.0000e-004	3.2000e-004	0.0000	2.2361	2.2361	2.0000e-005	0.0000	2.2364
Worker	7.5000e-004	1.0700e-003	0.0114	4.0000e-005	3.4600e-003	2.0000e-005	3.4800e-003	9.2000e-004	2.0000e-005	9.4000e-004	0.0000	2.6379	2.6379	1.2000e-004	0.0000	2.6404
Total	**1.5700e-003**	**7.4000e-003**	**0.0230**	**7.0000e-005**	**4.2100e-003**	**1.3000e-004**	**4.3400e-003**	**1.1400e-003**	**1.2000e-004**	**1.2600e-003**	**0.0000**	**4.8740**	**4.8740**	**1.4000e-004**	**0.0000**	**4.8768**

3.7 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.7800e-003	0.0166	0.0175	3.0000e-005		8.7000e-004	8.7000e-004		8.1000e-004	8.1000e-004	0.0000	2.3134	2.3134	6.7000e-004	0.0000	2.3275
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.7800e-003**	**0.0166**	**0.0175**	**3.0000e-005**		**8.7000e-004**	**8.7000e-004**		**8.1000e-004**	**8.1000e-004**	**0.0000**	**2.3134**	**2.3134**	**6.7000e-004**	**0.0000**	**2.3275**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	1.5000e-004	1.6300e-003	1.0000e-005	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3769	0.3769	2.0000e-005	0.0000	0.3772
Total	**1.1000e-004**	**1.5000e-004**	**1.6300e-003**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.3769**	**0.3769**	**2.0000e-005**	**0.0000**	**0.3772**

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Off-Road	1.7800e-003	0.0166	0.0175	3.0000e-005		8.7000e-004	8.7000e-004		8.1000e-004	8.1000e-004	0.0000	2.3134	2.3134	6.7000e-004	0.0000	2.3275
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.7800e-003**	**0.0166**	**0.0175**	**3.0000e-005**		**8.7000e-004**	**8.7000e-004**		**8.1000e-004**	**8.1000e-004**	**0.0000**	**2.3134**	**2.3134**	**6.7000e-004**	**0.0000**	**2.3275**

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	1.5000e-004	1.6300e-003	1.0000e-005	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3769	0.3769	2.0000e-005	0.0000	0.3772
Total	**1.1000e-004**	**1.5000e-004**	**1.6300e-003**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.3769**	**0.3769**	**2.0000e-005**	**0.0000**	**0.3772**

3.8 Architectural Coating - 2021

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Archit. Coating	0.1272					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0900e-003	7.6300e-003	9.0900e-003	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004	0.0000	1.2766	1.2766	9.0000e-005	0.0000	1.2785
Total	**0.1283**	**7.6300e-003**	**9.0900e-003**	**1.0000e-005**		**4.7000e-004**	**4.7000e-004**		**4.7000e-004**	**4.7000e-004**	**0.0000**	**1.2766**	**1.2766**	**9.0000e-005**	**0.0000**	**1.2785**

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	7.0000e-005	7.2000e-004	0.0000	2.2000e-004	0.0000	2.2000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1675	0.1675	1.0000e-005	0.0000	0.1676
Total	**5.0000e-005**	**7.0000e-005**	**7.2000e-004**	**0.0000**	**2.2000e-004**	**0.0000**	**2.2000e-004**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.1675**	**0.1675**	**1.0000e-005**	**0.0000**	**0.1676**

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Archit. Coating	0.1272					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Off-Road	1.0900e-003	7.6300e-003	9.0900e-003	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004	0.0000	1.2766	1.2766	9.0000e-005	0.0000	1.2785
Total	**0.1283**	**7.6300e-003**	**9.0900e-003**	**1.0000e-005**		**4.7000e-004**	**4.7000e-004**		**4.7000e-004**	**4.7000e-004**	**0.0000**	**1.2766**	**1.2766**	**9.0000e-005**	**0.0000**	**1.2785**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	7.0000e-005	7.2000e-004	0.0000	2.2000e-004	0.0000	2.2000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1675	0.1675	1.0000e-005	0.0000	0.1676
Total	**5.0000e-005**	**7.0000e-005**	**7.2000e-004**	**0.0000**	**2.2000e-004**	**0.0000**	**2.2000e-004**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.1675**	**0.1675**	**1.0000e-005**	**0.0000**	**0.1676**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3980	0.8550	4.2203	0.0149	1.0734	0.0150	1.0884	0.2869	0.0139	0.3007	0.0000	1,006.7092	1,006.7092	0.0347	0.0000	1,007.4382
Unmitigated	0.3980	0.8550	4.2203	0.0149	1.0734	0.0150	1.0884	0.2869	0.0139	0.3007	0.0000	1,006.7092	1,006.7092	0.0347	0.0000	1,007.4382

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	1,207.36	493.22	53.14	2,840,504	2,840,504
Total	1,207.36	493.22	53.14	2,840,504	2,840,504

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.505043	0.056653	0.194832	0.151784	0.042126	0.005989	0.016072	0.016505	0.001461	0.002178	0.004464	0.000494	0.002401

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	176.5706	176.5706	8.1200e-003	1.6800e-003	177.2617
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	176.5706	176.5706	8.1200e-003	1.6800e-003	177.2617
NaturalGas Mitigated	3.7600e-003	0.0341	0.0287	2.0000e-004		2.5900e-003	2.5900e-003		2.5900e-003	2.5900e-003	0.0000	37.1683	37.1683	7.1000e-004	6.8000e-004	37.3945
NaturalGas Unmitigated	3.7600e-003	0.0341	0.0287	2.0000e-004		2.5900e-003	2.5900e-003		2.5900e-003	2.5900e-003	0.0000	37.1683	37.1683	7.1000e-004	6.8000e-004	37.3945

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Junior College (2Yr)	696508	3.7600e-003	0.0341	0.0287	2.0000e-004		2.5900e-003	2.5900e-003		2.5900e-003	2.5900e-003	0.0000	37.1683	37.1683	7.1000e-004	6.8000e-004	37.3945
Total		**3.7600e-003**	**0.0341**	**0.0287**	**2.0000e-004**		**2.5900e-003**	**2.5900e-003**		**2.5900e-003**	**2.5900e-003**	**0.0000**	**37.1683**	**37.1683**	**7.1000e-004**	**6.8000e-004**	**37.3945**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Junior College (2Yr)	696508	3.7600e-003	0.0341	0.0287	2.0000e-004		2.5900e-003	2.5900e-003		2.5900e-003	2.5900e-003	0.0000	37.1683	37.1683	7.1000e-004	6.8000e-004	37.3945
Total		**3.7600e-003**	**0.0341**	**0.0287**	**2.0000e-004**		**2.5900e-003**	**2.5900e-003**		**2.5900e-003**	**2.5900e-003**	**0.0000**	**37.1683**	**37.1683**	**7.1000e-004**	**6.8000e-004**	**37.3945**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	617020	176.5706	8.1200e-003	1.6800e-003	177.2617
Total		**176.5706**	**8.1200e-003**	**1.6800e-003**	**177.2617**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	617020	176.5706	8.1200e-003	1.6800e-003	177.2617
Total		**176.5706**	**8.1200e-003**	**1.6800e-003**	**177.2617**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2096	1.0000e-005	5.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0900e-003	1.0900e-003	0.0000	0.0000	1.1500e-003

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Unmitigated	0.2096	1.0000e-005	5.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0900e-003	1.0900e-003	0.0000	0.0000	1.1500e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0509					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1587					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.0000e-005	1.0000e-005	5.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0900e-003	1.0900e-003	0.0000	0.0000	1.1500e-003
Total	**0.2096**	**1.0000e-005**	**5.6000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.0900e-003**	**1.0900e-003**	**0.0000**	**0.0000**	**1.1500e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0509					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1587					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.0000e-005	1.0000e-005	5.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0900e-003	1.0900e-003	0.0000	0.0000	1.1500e-003
Total	**0.2096**	**1.0000e-005**	**5.6000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.0900e-003**	**1.0900e-003**	**0.0000**	**0.0000**	**1.1500e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	19.4230	0.0710	1.8300e-003	21.4832
Unmitigated	19.4230	0.0711	1.8400e-003	21.4843

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	2.15423 / 3.36944	19.4230	0.0711	1.8400e-003	21.4843
Total		**19.4230**	**0.0711**	**1.8400e-003**	**21.4843**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e

Land Use	Mgal	MT/yr			
Junior College (2Yr)	2.15423 / 3.36944	19.4230	0.0710	1.8300e-003	21.4832
Total		**19.4230**	**0.0710**	**1.8300e-003**	**21.4832**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	11.5908	0.6850	0.0000	25.9757
Unmitigated	11.5908	0.6850	0.0000	25.9757

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior College (2Yr)	57.1	11.5908	0.6850	0.0000	25.9757

Total		11.5908	0.6850	0.0000	25.9757

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior College (2Yr)	57.1	11.5908	0.6850	0.0000	25.9757
Total		**11.5908**	**0.6850**	**0.0000**	**25.9757**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Phase 3 - Chemistry Building

Orange County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	43.92	1000sqft	0.39	43,916.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Chemistry Building will be multiple stories

Construction Phase - modified

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - modified

Demolition -

Architectural Coating - SCAQMD Rule 1113

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value

tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblConstructionPhase	NumDays	5.00	10.00
tblLandUse	LandUseSquareFeet	43,920.00	43,916.00
tblLandUse	LotAcreage	1.01	0.39
tblProjectCharacteristics	OperationalYear	2014	2022

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	1.0557	10.0019	10.4664	0.0218	2.7713	0.5282	3.2703	0.4567	0.4860	0.9315	0.0000	2,036.8206	2,036.8206	0.3634	0.0000	2,044.4511
2021	25.6724	8.3344	8.4837	0.0153	0.2450	0.4531	0.6980	0.0658	0.4168	0.4826	0.0000	1,411.3989	1,411.3989	0.3631	0.0000	1,419.0247
Total	**26.7282**	**18.3363**	**18.9500**	**0.0371**	**3.0163**	**0.9813**	**3.9683**	**0.5225**	**0.9028**	**1.4142**	**0.0000**	**3,448.2195**	**3,448.2195**	**0.7265**	**0.0000**	**3,463.4758**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	1.0557	10.0019	10.4664	0.0218	1.2702	0.5282	1.7691	0.2294	0.4860	0.7042	0.0000	2,036.8206	2,036.8206	0.3634	0.0000	2,044.4511
2021	25.6724	8.3344	8.4837	0.0153	0.2450	0.4531	0.6980	0.0658	0.4168	0.4826	0.0000	1,411.3989	1,411.3989	0.3631	0.0000	1,419.0247

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Total	**26.7282**	**18.3363**	**18.9500**	**0.0371**	**1.5152**	**0.9813**	**2.4671**	**0.2952**	**0.9028**	**1.1869**	**0.0000**	**3,448.2195**	**3,448.2195**	**0.7265**	**0.0000**	**3,463.4758**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**49.77**	**0.00**	**37.83**	**43.50**	**0.00**	**16.07**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.1488	4.0000e-005	4.4900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.6100e-003	9.6100e-003	3.0000e-005		0.0101
Energy	0.0206	0.1871	0.1572	1.1200e-003		0.0142	0.0142		0.0142	0.0142		224.4989	224.4989	4.3000e-003	4.1200e-003	225.8651
Mobile	2.8239	5.6009	29.7615	0.1089	7.7080	0.1059	7.8138	2.0570	0.0978	2.1548		8,087.6782	8,087.6782	0.2702		8,093.3515
Total	**3.9933**	**5.7880**	**29.9231**	**0.1100**	**7.7080**	**0.1201**	**7.8281**	**2.0570**	**0.1120**	**2.1690**		**8,312.1867**	**8,312.1867**	**0.2745**	**4.1200e-003**	**8,319.2268**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.1488	4.0000e-005	4.4900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.6100e-003	9.6100e-003	3.0000e-005		0.0101
Energy	0.0206	0.1871	0.1572	1.1200e-003		0.0142	0.0142		0.0142	0.0142		224.4989	224.4989	4.3000e-003	4.1200e-003	225.8651
Mobile	2.8239	5.6009	29.7615	0.1089	7.7080	0.1059	7.8138	2.0570	0.0978	2.1548		8,087.6782	8,087.6782	0.2702		8,093.3515

Total	3.9933	5.7880	29.9231	0.1100	7.7080	0.1201	7.8281	2.0570	0.1120	2.1690		8,312.1867	8,312.1867	0.2745	4.1200e-003	8,319.2268

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2020	9/14/2020	5	10	
2	Site Preparation	Site Preparation	9/15/2020	9/15/2020	5	1	
3	Grading	Grading	9/16/2020	9/17/2020	5	2	
4	Trenching	Trenching	9/18/2020	10/1/2020	5	10	
5	Building Construction	Building Construction	10/2/2020	2/18/2021	5	100	
6	Paving	Paving	2/19/2021	2/25/2021	5	5	
7	Architectural Coating	Architectural Coating	2/26/2021	3/11/2021	5	10	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 65,874; Non-Residential Outdoor: 21,958 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	174	0.41

Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Trenching	Plate Compactors	1	8.00	8	0.43
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Trenching	Trenchers	1	8.00	80	0.50
Building Construction	Cranes	1	4.00	226	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	125	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	114.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	18.00	7.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	4.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.4609	0.0000	2.4609	0.3726	0.0000	0.3726			0.0000			0.0000
Off-Road	0.8527	7.7248	8.0981	0.0120		0.4561	0.4561		0.4355	0.4355		1,151.7011	1,151.7011	0.2184		1,156.2863
Total	**0.8527**	**7.7248**	**8.0981**	**0.0120**	**2.4609**	**0.4561**	**2.9170**	**0.3726**	**0.4355**	**0.8081**		**1,151.7011**	**1,151.7011**	**0.2184**		**1,156.2863**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1775	2.2449	1.9662	8.3700e-003	0.1987	0.0421	0.2407	0.0544	0.0387	0.0931		787.4715	787.4715	6.1200e-003		787.6000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0255	0.0321	0.4020	1.3600e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		97.6480	97.6480	4.2000e-003		97.7363
Total	**0.2030**	**2.2771**	**2.3683**	**9.7300e-003**	**0.3105**	**0.0428**	**0.3533**	**0.0841**	**0.0394**	**0.1235**		**885.1196**	**885.1196**	**0.0103**		**885.3363**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Fugitive Dust					0.9598	0.0000	0.9598	0.1453	0.0000	0.1453			0.0000			0.0000
Off-Road	0.8527	7.7248	8.0981	0.0120		0.4561	0.4561		0.4355	0.4355	0.0000	1,151.7011	1,151.7011	0.2184		1,156.2863
Total	**0.8527**	**7.7248**	**8.0981**	**0.0120**	**0.9598**	**0.4561**	**1.4158**	**0.1453**	**0.4355**	**0.5808**	**0.0000**	**1,151.7011**	**1,151.7011**	**0.2184**		**1,156.2863**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1775	2.2449	1.9662	8.3700e-003	0.1987	0.0421	0.2407	0.0544	0.0387	0.0931		787.4715	787.4715	6.1200e-003		787.6000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0255	0.0321	0.4020	1.3600e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		97.6480	97.6480	4.2000e-003		97.7363
Total	**0.2030**	**2.2771**	**2.3683**	**9.7300e-003**	**0.3105**	**0.0428**	**0.3533**	**0.0841**	**0.0394**	**0.1235**		**885.1196**	**885.1196**	**0.0103**		**885.3363**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.9225	9.0637	6.8357	9.3100e-003		0.5213	0.5213		0.4796	0.4796		902.2494	902.2494	0.2918		908.3773

Total	**0.9225**	**9.0637**	**6.8357**	**9.3100e-003**	**0.5303**	**0.5213**	**1.0516**	**0.0573**	**0.4796**	**0.5369**		**902.2494**	**902.2494**	**0.2918**		**908.3773**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0128	0.0161	0.2010	6.8000e-004	0.0559	3.8000e-004	0.0563	0.0148	3.5000e-004	0.0152		48.8240	48.8240	2.1000e-003		48.8681
Total	**0.0128**	**0.0161**	**0.2010**	**6.8000e-004**	**0.0559**	**3.8000e-004**	**0.0563**	**0.0148**	**3.5000e-004**	**0.0152**		**48.8240**	**48.8240**	**2.1000e-003**		**48.8681**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2068	0.0000	0.2068	0.0223	0.0000	0.0223			0.0000			0.0000
Off-Road	0.9225	9.0637	6.8357	9.3100e-003		0.5213	0.5213		0.4796	0.4796	0.0000	902.2494	902.2494	0.2918		908.3773
Total	**0.9225**	**9.0637**	**6.8357**	**9.3100e-003**	**0.2068**	**0.5213**	**0.7281**	**0.0223**	**0.4796**	**0.5019**	**0.0000**	**902.2494**	**902.2494**	**0.2918**		**908.3773**

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0128	0.0161	0.2010	6.8000e-004	0.0559	3.8000e-004	0.0563	0.0148	3.5000e-004	0.0152		48.8240	48.8240	2.1000e-003		48.8681
Total	**0.0128**	**0.0161**	**0.2010**	**6.8000e-004**	**0.0559**	**3.8000e-004**	**0.0563**	**0.0148**	**3.5000e-004**	**0.0152**		**48.8240**	**48.8240**	**2.1000e-003**		**48.8681**

3.4 Grading - 2020

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	0.8527	7.7248	8.0981	0.0120		0.4561	0.4561		0.4355	0.4355		1,151.7011	1,151.7011	0.2184		1,156.2863
Total	**0.8527**	**7.7248**	**8.0981**	**0.0120**	**0.7528**	**0.4561**	**1.2089**	**0.4138**	**0.4355**	**0.8492**		**1,151.7011**	**1,151.7011**	**0.2184**		**1,156.2863**

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0255	0.0321	0.4020	1.3600e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		97.6480	97.6480	4.2000e-003		97.7363
Total	**0.0255**	**0.0321**	**0.4020**	**1.3600e-003**	**0.1118**	**7.6000e-004**	**0.1125**	**0.0296**	**7.1000e-004**	**0.0304**		**97.6480**	**97.6480**	**4.2000e-003**		**97.7363**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2936	0.0000	0.2936	0.1614	0.0000	0.1614			0.0000			0.0000
Off-Road	0.8527	7.7248	8.0981	0.0120		0.4561	0.4561		0.4355	0.4355	0.0000	1,151.7011	1,151.7011	0.2184		1,156.2863
Total	**0.8527**	**7.7248**	**8.0981**	**0.0120**	**0.2936**	**0.4561**	**0.7497**	**0.1614**	**0.4355**	**0.5968**	**0.0000**	**1,151.7011**	**1,151.7011**	**0.2184**		**1,156.2863**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0255	0.0321	0.4020	1.3600e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		97.6480	97.6480	4.2000e-003		97.7363
Total	**0.0255**	**0.0321**	**0.4020**	**1.3600e-003**	**0.1118**	**7.6000e-004**	**0.1125**	**0.0296**	**7.1000e-004**	**0.0304**		**97.6480**	**97.6480**	**4.2000e-003**		**97.7363**

3.5 Trenching - 2020

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Off-Road	0.6801	6.2504	5.1941	7.0500e-003		0.4344	0.4344		0.4005	0.4005		670.4398	670.4398	0.2093		674.8343
Total	**0.6801**	**6.2504**	**5.1941**	**7.0500e-003**		**0.4344**	**0.4344**		**0.4005**	**0.4005**		**670.4398**	**670.4398**	**0.2093**		**674.8343**

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0204	0.0257	0.3216	1.0900e-003	0.0894	6.1000e-004	0.0900	0.0237	5.7000e-004	0.0243		78.1184	78.1184	3.3600e-003		78.1890
Total	**0.0204**	**0.0257**	**0.3216**	**1.0900e-003**	**0.0894**	**6.1000e-004**	**0.0900**	**0.0237**	**5.7000e-004**	**0.0243**		**78.1184**	**78.1184**	**3.3600e-003**		**78.1890**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6801	6.2504	5.1941	7.0500e-003		0.4344	0.4344		0.4005	0.4005	0.0000	670.4398	670.4398	0.2093		674.8343
Total	**0.6801**	**6.2504**	**5.1941**	**7.0500e-003**		**0.4344**	**0.4344**		**0.4005**	**0.4005**	**0.0000**	**670.4398**	**670.4398**	**0.2093**		**674.8343**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0204	0.0257	0.3216	1.0900e-003	0.0894	6.1000e-004	0.0900	0.0237	5.7000e-004	0.0243		78.1184	78.1184	3.3600e-003		78.1890
Total	**0.0204**	**0.0257**	**0.3216**	**1.0900e-003**	**0.0894**	**6.1000e-004**	**0.0900**	**0.0237**	**5.7000e-004**	**0.0243**		**78.1184**	**78.1184**	**3.3600e-003**		**78.1890**

3.6 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8568	8.7940	7.3646	0.0113		0.5200	0.5200		0.4784	0.4784		1,096.9306	1,096.9306	0.3548		1,104.3807

Total	**0.8568**	**8.7940**	**7.3646**	**0.0113**		**0.5200**	**0.5200**		**0.4784**	**0.4784**		**1,096.9306**	**1,096.9306**	**0.3548**		**1,104.3807**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0459	0.4095	0.5726	1.5100e-003	0.0438	6.8800e-003	0.0506	0.0125	6.3300e-003	0.0188		141.4703	141.4703	1.0200e-003		141.4918
Worker	0.0459	0.0579	0.7237	2.4500e-003	0.2012	1.3800e-003	0.2026	0.0534	1.2800e-003	0.0546		175.7665	175.7665	7.5600e-003		175.9253
Total	**0.0918**	**0.4674**	**1.2962**	**3.9600e-003**	**0.2450**	**8.2600e-003**	**0.2532**	**0.0658**	**7.6100e-003**	**0.0734**		**317.2367**	**317.2367**	**8.5800e-003**		**317.4171**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8568	8.7940	7.3646	0.0113		0.5200	0.5200		0.4784	0.4784	0.0000	1,096.9306	1,096.9306	0.3548		1,104.3807
Total	**0.8568**	**8.7940**	**7.3646**	**0.0113**		**0.5200**	**0.5200**		**0.4784**	**0.4784**	**0.0000**	**1,096.9306**	**1,096.9306**	**0.3548**		**1,104.3807**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0459	0.4095	0.5726	1.5100e-003	0.0438	6.8800e-003	0.0506	0.0125	6.3300e-003	0.0188		141.4703	141.4703	1.0200e-003		141.4918
Worker	0.0459	0.0579	0.7237	2.4500e-003	0.2012	1.3800e-003	0.2026	0.0534	1.2800e-003	0.0546		175.7665	175.7665	7.5600e-003		175.9253
Total	**0.0918**	**0.4674**	**1.2962**	**3.9600e-003**	**0.2450**	**8.2600e-003**	**0.2532**	**0.0658**	**7.6100e-003**	**0.0734**		**317.2367**	**317.2367**	**8.5800e-003**		**317.4171**

3.6 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7705	7.9325	7.2422	0.0113		0.4454	0.4454		0.4098	0.4098		1,097.1688	1,097.1688	0.3549		1,104.6206
Total	**0.7705**	**7.9325**	**7.2422**	**0.0113**		**0.4454**	**0.4454**		**0.4098**	**0.4098**		**1,097.1688**	**1,097.1688**	**0.3549**		**1,104.6206**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0444	0.3476	0.5577	1.5100e-003	0.0438	6.2500e-003	0.0500	0.0125	5.7500e-003	0.0182		141.3522	141.3522	1.0300e-003		141.3738
Worker	0.0437	0.0544	0.6838	2.4600e-003	0.2012	1.3900e-003	0.2026	0.0534	1.2900e-003	0.0547		172.8779	172.8779	7.2600e-003		173.0302
Total	**0.0881**	**0.4019**	**1.2415**	**3.9700e-003**	**0.2450**	**7.6400e-003**	**0.2526**	**0.0658**	**7.0400e-003**	**0.0729**		**314.2301**	**314.2301**	**8.2900e-003**		**314.4041**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7705	7.9325	7.2422	0.0113		0.4454	0.4454		0.4098	0.4098	0.0000	1,097.1688	1,097.1688	0.3549		1,104.6206
Total	**0.7705**	**7.9325**	**7.2422**	**0.0113**		**0.4454**	**0.4454**		**0.4098**	**0.4098**	**0.0000**	**1,097.1688**	**1,097.1688**	**0.3549**		**1,104.6206**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0444	0.3476	0.5577	1.5100e-003	0.0438	6.2500e-003	0.0500	0.0125	5.7500e-003	0.0182		141.3522	141.3522	1.0300e-003		141.3738
Worker	0.0437	0.0544	0.6838	2.4600e-003	0.2012	1.3900e-003	0.2026	0.0534	1.2900e-003	0.0547		172.8779	172.8779	7.2600e-003		173.0302
Total	**0.0881**	**0.4019**	**1.2415**	**3.9700e-003**	**0.2450**	**7.6400e-003**	**0.2526**	**0.0658**	**7.0400e-003**	**0.0729**		**314.2301**	**314.2301**	**8.2900e-003**		**314.4041**

3.7 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7131	6.6304	6.9921	0.0111		0.3492	0.3492		0.3247	0.3247		1,020.0280	1,020.0280	0.2966		1,026.2569
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7131**	**6.6304**	**6.9921**	**0.0111**		**0.3492**	**0.3492**		**0.3247**	**0.3247**		**1,020.0280**	**1,020.0280**	**0.2966**		**1,026.2569**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0437	0.0544	0.6838	2.4600e-003	0.2012	1.3900e-003	0.2026	0.0534	1.2900e-003	0.0547		172.8779	172.8779	7.2600e-003		173.0302
Total	**0.0437**	**0.0544**	**0.6838**	**2.4600e-003**	**0.2012**	**1.3900e-003**	**0.2026**	**0.0534**	**1.2900e-003**	**0.0547**		**172.8779**	**172.8779**	**7.2600e-003**		**173.0302**

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Off-Road	0.7131	6.6304	6.9921	0.0111		0.3492	0.3492		0.3247	0.3247	0.0000	1,020.0280	1,020.0280	0.2966		1,026.2569
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7131**	**6.6304**	**6.9921**	**0.0111**		**0.3492**	**0.3492**		**0.3247**	**0.3247**	**0.0000**	**1,020.0280**	**1,020.0280**	**0.2966**		**1,026.2569**

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0437	0.0544	0.6838	2.4600e-003	0.2012	1.3900e-003	0.2026	0.0534	1.2900e-003	0.0547		172.8779	172.8779	7.2600e-003		173.0302
Total	**0.0437**	**0.0544**	**0.6838**	**2.4600e-003**	**0.2012**	**1.3900e-003**	**0.2026**	**0.0534**	**1.2900e-003**	**0.0547**		**172.8779**	**172.8779**	**7.2600e-003**		**173.0302**

3.8 Architectural Coating - 2021

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Archit. Coating	25.4438					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.8537
Total	**25.6627**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.8537**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	9.7100e-003	0.0121	0.1520	5.5000e-004	0.0447	3.1000e-004	0.0450	0.0119	2.9000e-004	0.0121		38.4173	38.4173	1.6100e-003		38.4512
Total	**9.7100e-003**	**0.0121**	**0.1520**	**5.5000e-004**	**0.0447**	**3.1000e-004**	**0.0450**	**0.0119**	**2.9000e-004**	**0.0121**		**38.4173**	**38.4173**	**1.6100e-003**		**38.4512**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	25.4438					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.8537
Total	**25.6627**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.8537**

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	9.7100e-003	0.0121	0.1520	5.5000e-004	0.0447	3.1000e-004	0.0450	0.0119	2.9000e-004	0.0121		38.4173	38.4173	1.6100e-003		38.4512
Total	**9.7100e-003**	**0.0121**	**0.1520**	**5.5000e-004**	**0.0447**	**3.1000e-004**	**0.0450**	**0.0119**	**2.9000e-004**	**0.0121**		**38.4173**	**38.4173**	**1.6100e-003**		**38.4512**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Mitigated	2.8239	5.6009	29.7615	0.1089	7.7080	0.1059	7.8138	2.0570	0.0978	2.1548		8,087.6782	8,087.6782	0.2702		8,093.3515
Unmitigated	2.8239	5.6009	29.7615	0.1089	7.7080	0.1059	7.8138	2.0570	0.0978	2.1548		8,087.6782	8,087.6782	0.2702		8,093.3515

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	1,207.36	493.22	53.14	2,840,504	2,840,504
Total	1,207.36	493.22	53.14	2,840,504	2,840,504

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.505043	0.056653	0.194832	0.151784	0.042126	0.005989	0.016072	0.016505	0.001461	0.002178	0.004464	0.000494	0.002401

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0206	0.1871	0.1572	1.1200e-003		0.0142	0.0142		0.0142	0.0142		224.4989	224.4989	4.3000e-003	4.1200e-003	225.8651
NaturalGas Unmitigated	0.0206	0.1871	0.1572	1.1200e-003		0.0142	0.0142		0.0142	0.0142		224.4989	224.4989	4.3000e-003	4.1200e-003	225.8651

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	1908.24	0.0206	0.1871	0.1572	1.1200e-003		0.0142	0.0142		0.0142	0.0142		224.4989	224.4989	4.3000e-003	4.1200e-003	225.8651
Total		**0.0206**	**0.1871**	**0.1572**	**1.1200e-003**		**0.0142**	**0.0142**		**0.0142**	**0.0142**		**224.4989**	**224.4989**	**4.3000e-003**	**4.1200e-003**	**225.8651**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	1.90824	0.0206	0.1871	0.1572	1.1200e-003		0.0142	0.0142		0.0142	0.0142		224.4989	224.4989	4.3000e-003	4.1200e-003	225.8651
Total		**0.0206**	**0.1871**	**0.1572**	**1.1200e-003**		**0.0142**	**0.0142**		**0.0142**	**0.0142**		**224.4989**	**224.4989**	**4.3000e-003**	**4.1200e-003**	**225.8651**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.1488	4.0000e-005	4.4900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.6100e-003	9.6100e-003	3.0000e-005		0.0101
Unmitigated	1.1488	4.0000e-005	4.4900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.6100e-003	9.6100e-003	3.0000e-005		0.0101

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2788					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.8695					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.2000e-004	4.0000e-005	4.4900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.6100e-003	9.6100e-003	3.0000e-005		0.0101
Total	**1.1488**	**4.0000e-005**	**4.4900e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**9.6100e-003**	**9.6100e-003**	**3.0000e-005**		**0.0101**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2788					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.8695					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.2000e-004	4.0000e-005	4.4900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.6100e-003	9.6100e-003	3.0000e-005		0.0101
Total	**1.1488**	**4.0000e-005**	**4.4900e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**9.6100e-003**	**9.6100e-003**	**3.0000e-005**		**0.0101**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Phase 3 - Chemistry Building

Orange County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	43.92	1000sqft	0.39	43,916.00	0

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 2.2 **Precipitation Freq (Days)** 30

Climate Zone 8 **Operational Year** 2022

Utility Company Southern California Edison

CO2 Intensity (lb/MWhr) 630.89 **CH4 Intensity (lb/MWhr)** 0.029 **N2O Intensity (lb/MWhr)** 0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Chemistry Building will be multiple stories

Construction Phase - modified

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - modified

Demolition -

Architectural Coating - SCAQMD Rule 1113

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value

tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblConstructionPhase	NumDays	5.00	10.00
tblLandUse	LandUseSquareFeet	43,920.00	43,916.00
tblLandUse	LotAcreage	1.01	0.39
tblProjectCharacteristics	OperationalYear	2014	2022

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	1.0653	10.0812	10.7829	0.0217	2.7713	0.5283	3.2704	0.4567	0.4860	0.9316	0.0000	2,029.7535	2,029.7535	0.3634	0.0000	2,037.3847
2021	25.6729	8.3472	8.5750	0.0152	0.2450	0.4531	0.6981	0.0658	0.4169	0.4827	0.0000	1,401.0025	1,401.0025	0.3632	0.0000	1,408.6291
Total	**26.7382**	**18.4284**	**19.3579**	**0.0368**	**3.0163**	**0.9814**	**3.9684**	**0.5225**	**0.9029**	**1.4143**	**0.0000**	**3,430.7560**	**3,430.7560**	**0.7266**	**0.0000**	**3,446.0138**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	1.0653	10.0812	10.7829	0.0217	1.2702	0.5283	1.7692	0.2294	0.4860	0.7043	0.0000	2,029.7534	2,029.7534	0.3634	0.0000	2,037.3847
2021	25.6729	8.3472	8.5750	0.0152	0.2450	0.4531	0.6981	0.0658	0.4169	0.4827	0.0000	1,401.0025	1,401.0025	0.3632	0.0000	1,408.6291

Total	**26.7382**	**18.4284**	**19.3579**	**0.0368**	**1.5152**	**0.9814**	**2.4673**	**0.2952**	**0.9029**	**1.1870**	**0.0000**	**3,430.7559**	**3,430.7559**	**0.7266**	**0.0000**	**3,446.0138**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**49.77**	**0.00**	**37.83**	**43.50**	**0.00**	**16.07**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.1488	4.0000e-005	4.4900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.6100e-003	9.6100e-003	3.0000e-005		0.0101
Energy	0.0206	0.1871	0.1572	1.1200e-003		0.0142	0.0142		0.0142	0.0142		224.4989	224.4989	4.3000e-003	4.1200e-003	225.8651
Mobile	2.9756	5.9173	29.6303	0.1040	7.7080	0.1062	7.8141	2.0570	0.0981	2.1550		7,741.5324	7,741.5324	0.2704		7,747.2106
Total	**4.1450**	**6.1044**	**29.7919**	**0.1051**	**7.7080**	**0.1204**	**7.8284**	**2.0570**	**0.1123**	**2.1693**		**7,966.0409**	**7,966.0409**	**0.2747**	**4.1200e-003**	**7,973.0859**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.1488	4.0000e-005	4.4900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.6100e-003	9.6100e-003	3.0000e-005		0.0101
Energy	0.0206	0.1871	0.1572	1.1200e-003		0.0142	0.0142		0.0142	0.0142		224.4989	224.4989	4.3000e-003	4.1200e-003	225.8651
Mobile	2.9756	5.9173	29.6303	0.1040	7.7080	0.1062	7.8141	2.0570	0.0981	2.1550		7,741.5324	7,741.5324	0.2704		7,747.2106

Total	4.1450	6.1044	29.7919	0.1051	7.7080	0.1204	7.8284	2.0570	0.1123	2.1693		7,966.0409	7,966.0409	0.2747	4.1200e-003	7,973.0859

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2020	9/14/2020	5	10	
2	Site Preparation	Site Preparation	9/15/2020	9/15/2020	5	1	
3	Grading	Grading	9/16/2020	9/17/2020	5	2	
4	Trenching	Trenching	9/18/2020	10/1/2020	5	10	
5	Building Construction	Building Construction	10/2/2020	2/18/2021	5	100	
6	Paving	Paving	2/19/2021	2/25/2021	5	5	
7	Architectural Coating	Architectural Coating	2/26/2021	3/11/2021	5	10	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 65,874; Non-Residential Outdoor: 21,958 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	174	0.41

Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Trenching	Plate Compactors	1	8.00	8	0.43
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Trenching	Trenchers	1	8.00	80	0.50
Building Construction	Cranes	1	4.00	226	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	125	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	114.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	18.00	7.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	4.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.4609	0.0000	2.4609	0.3726	0.0000	0.3726			0.0000			0.0000
Off-Road	0.8527	7.7248	8.0981	0.0120		0.4561	0.4561		0.4355	0.4355		1,151.7011	1,151.7011	0.2184		1,156.2863
Total	**0.8527**	**7.7248**	**8.0981**	**0.0120**	**2.4609**	**0.4561**	**2.9170**	**0.3726**	**0.4355**	**0.8081**		**1,151.7011**	**1,151.7011**	**0.2184**		**1,156.2863**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1858	2.3210	2.3100	8.3600e-003	0.1987	0.0422	0.2408	0.0544	0.0388	0.0932		785.5936	785.5936	6.2100e-003		785.7240
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0268	0.0353	0.3748	1.2900e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		92.4588	92.4588	4.2000e-003		92.5470
Total	**0.2126**	**2.3563**	**2.6848**	**9.6500e-003**	**0.3105**	**0.0429**	**0.3534**	**0.0841**	**0.0395**	**0.1235**		**878.0524**	**878.0524**	**0.0104**		**878.2710**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Fugitive Dust					0.9598	0.0000	0.9598	0.1453	0.0000	0.1453			0.0000			0.0000
Off-Road	0.8527	7.7248	8.0981	0.0120		0.4561	0.4561		0.4355	0.4355	0.0000	1,151.7011	1,151.7011	0.2184		1,156.2863
Total	**0.8527**	**7.7248**	**8.0981**	**0.0120**	**0.9598**	**0.4561**	**1.4158**	**0.1453**	**0.4355**	**0.5808**	**0.0000**	**1,151.7011**	**1,151.7011**	**0.2184**		**1,156.2863**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1858	2.3210	2.3100	8.3600e-003	0.1987	0.0422	0.2408	0.0544	0.0388	0.0932		785.5936	785.5936	6.2100e-003		785.7240
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0268	0.0353	0.3748	1.2900e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		92.4588	92.4588	4.2000e-003		92.5470
Total	**0.2126**	**2.3563**	**2.6848**	**9.6500e-003**	**0.3105**	**0.0429**	**0.3534**	**0.0841**	**0.0395**	**0.1235**		**878.0524**	**878.0524**	**0.0104**		**878.2710**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.9225	9.0637	6.8357	9.3100e-003		0.5213	0.5213		0.4796	0.4796		902.2494	902.2494	0.2918		908.3773

Total	**0.9225**	**9.0637**	**6.8357**	**9.3100e-003**	**0.5303**	**0.5213**	**1.0516**	**0.0573**	**0.4796**	**0.5369**		**902.2494**	**902.2494**	**0.2918**		**908.3773**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0134	0.0177	0.1874	6.4000e-004	0.0559	3.8000e-004	0.0563	0.0148	3.5000e-004	0.0152		46.2294	46.2294	2.1000e-003		46.2735
Total	**0.0134**	**0.0177**	**0.1874**	**6.4000e-004**	**0.0559**	**3.8000e-004**	**0.0563**	**0.0148**	**3.5000e-004**	**0.0152**		**46.2294**	**46.2294**	**2.1000e-003**		**46.2735**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2068	0.0000	0.2068	0.0223	0.0000	0.0223			0.0000			0.0000
Off-Road	0.9225	9.0637	6.8357	9.3100e-003		0.5213	0.5213		0.4796	0.4796	0.0000	902.2494	902.2494	0.2918		908.3773
Total	**0.9225**	**9.0637**	**6.8357**	**9.3100e-003**	**0.2068**	**0.5213**	**0.7281**	**0.0223**	**0.4796**	**0.5019**	**0.0000**	**902.2494**	**902.2494**	**0.2918**		**908.3773**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0134	0.0177	0.1874	6.4000e-004	0.0559	3.8000e-004	0.0563	0.0148	3.5000e-004	0.0152		46.2294	46.2294	2.1000e-003		46.2735
Total	**0.0134**	**0.0177**	**0.1874**	**6.4000e-004**	**0.0559**	**3.8000e-004**	**0.0563**	**0.0148**	**3.5000e-004**	**0.0152**		**46.2294**	**46.2294**	**2.1000e-003**		**46.2735**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	0.8527	7.7248	8.0981	0.0120		0.4561	0.4561		0.4355	0.4355		1,151.7011	1,151.7011	0.2184		1,156.2863
Total	**0.8527**	**7.7248**	**8.0981**	**0.0120**	**0.7528**	**0.4561**	**1.2089**	**0.4138**	**0.4355**	**0.8492**		**1,151.7011**	**1,151.7011**	**0.2184**		**1,156.2863**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0268	0.0353	0.3748	1.2900e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		92.4588	92.4588	4.2000e-003		92.5470
Total	**0.0268**	**0.0353**	**0.3748**	**1.2900e-003**	**0.1118**	**7.6000e-004**	**0.1125**	**0.0296**	**7.1000e-004**	**0.0304**		**92.4588**	**92.4588**	**4.2000e-003**		**92.5470**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2936	0.0000	0.2936	0.1614	0.0000	0.1614			0.0000			0.0000
Off-Road	0.8527	7.7248	8.0981	0.0120		0.4561	0.4561		0.4355	0.4355	0.0000	1,151.7011	1,151.7011	0.2184		1,156.2863
Total	**0.8527**	**7.7248**	**8.0981**	**0.0120**	**0.2936**	**0.4561**	**0.7497**	**0.1614**	**0.4355**	**0.5968**	**0.0000**	**1,151.7011**	**1,151.7011**	**0.2184**		**1,156.2863**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0268	0.0353	0.3748	1.2900e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		92.4588	92.4588	4.2000e-003		92.5470
Total	**0.0268**	**0.0353**	**0.3748**	**1.2900e-003**	**0.1118**	**7.6000e-004**	**0.1125**	**0.0296**	**7.1000e-004**	**0.0304**		**92.4588**	**92.4588**	**4.2000e-003**		**92.5470**

3.5 Trenching - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6801	6.2504	5.1941	7.0500e-003		0.4344	0.4344		0.4005	0.4005		670.4398	670.4398	0.2093		674.8343
Total	**0.6801**	**6.2504**	**5.1941**	**7.0500e-003**		**0.4344**	**0.4344**		**0.4005**	**0.4005**		**670.4398**	**670.4398**	**0.2093**		**674.8343**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0214	0.0283	0.2999	1.0300e-003	0.0894	6.1000e-004	0.0900	0.0237	5.7000e-004	0.0243		73.9670	73.9670	3.3600e-003		74.0376
Total	**0.0214**	**0.0283**	**0.2999**	**1.0300e-003**	**0.0894**	**6.1000e-004**	**0.0900**	**0.0237**	**5.7000e-004**	**0.0243**		**73.9670**	**73.9670**	**3.3600e-003**		**74.0376**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6801	6.2504	5.1941	7.0500e-003		0.4344	0.4344		0.4005	0.4005	0.0000	670.4398	670.4398	0.2093		674.8343
Total	**0.6801**	**6.2504**	**5.1941**	**7.0500e-003**		**0.4344**	**0.4344**		**0.4005**	**0.4005**	**0.0000**	**670.4398**	**670.4398**	**0.2093**		**674.8343**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0214	0.0283	0.2999	1.0300e-003	0.0894	6.1000e-004	0.0900	0.0237	5.7000e-004	0.0243		73.9670	73.9670	3.3600e-003		74.0376
Total	**0.0214**	**0.0283**	**0.2999**	**1.0300e-003**	**0.0894**	**6.1000e-004**	**0.0900**	**0.0237**	**5.7000e-004**	**0.0243**		**73.9670**	**73.9670**	**3.3600e-003**		**74.0376**

3.6 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8568	8.7940	7.3646	0.0113		0.5200	0.5200		0.4784	0.4784		1,096.9306	1,096.9306	0.3548		1,104.3807

Total	0.8568	8.7940	7.3646	0.0113		0.5200	0.5200		0.4784	0.4784		1,096.9306	1,096.9306	0.3548		1,104.3807

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0500	0.4182	0.7129	1.5000e-003	0.0438	6.9400e-003	0.0507	0.0125	6.3900e-003	0.0189		140.2693	140.2693	1.0600e-003		140.2916
Worker	0.0482	0.0636	0.6747	2.3200e-003	0.2012	1.3800e-003	0.2026	0.0534	1.2800e-003	0.0546		166.4258	166.4258	7.5600e-003		166.5846
Total	**0.0981**	**0.4818**	**1.3876**	**3.8200e-003**	**0.2450**	**8.3200e-003**	**0.2533**	**0.0658**	**7.6700e-003**	**0.0735**		**306.6951**	**306.6951**	**8.6200e-003**		**306.8762**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8568	8.7940	7.3646	0.0113		0.5200	0.5200		0.4784	0.4784	0.0000	1,096.9306	1,096.9306	0.3548		1,104.3807
Total	**0.8568**	**8.7940**	**7.3646**	**0.0113**		**0.5200**	**0.5200**		**0.4784**	**0.4784**	**0.0000**	**1,096.9306**	**1,096.9306**	**0.3548**		**1,104.3807**

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0500	0.4182	0.7129	1.5000e-003	0.0438	6.9400e-003	0.0507	0.0125	6.3900e-003	0.0189		140.2693	140.2693	1.0600e-003		140.2916
Worker	0.0482	0.0636	0.6747	2.3200e-003	0.2012	1.3800e-003	0.2026	0.0534	1.2800e-003	0.0546		166.4258	166.4258	7.5600e-003		166.5846
Total	**0.0981**	**0.4818**	**1.3876**	**3.8200e-003**	**0.2450**	**8.3200e-003**	**0.2533**	**0.0658**	**7.6700e-003**	**0.0735**		**306.6951**	**306.6951**	**8.6200e-003**		**306.8762**

3.6 Building Construction - 2021

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Off-Road	0.7705	7.9325	7.2422	0.0113		0.4454	0.4454		0.4098	0.4098		1,097.1688	1,097.1688	0.3549		1,104.6206
Total	**0.7705**	**7.9325**	**7.2422**	**0.0113**		**0.4454**	**0.4454**		**0.4098**	**0.4098**		**1,097.1688**	**1,097.1688**	**0.3549**		**1,104.6206**

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0483	0.3550	0.6963	1.5000e-003	0.0438	6.3000e-003	0.0501	0.0125	5.8000e-003	0.0183		140.1512	140.1512	1.0700e-003		140.1736
Worker	0.0458	0.0597	0.6365	2.3200e-003	0.2012	1.3900e-003	0.2026	0.0534	1.2900e-003	0.0547		163.6825	163.6825	7.2600e-003		163.8349
Total	**0.0941**	**0.4147**	**1.3328**	**3.8200e-003**	**0.2450**	**7.6900e-003**	**0.2527**	**0.0658**	**7.0900e-003**	**0.0729**		**303.8337**	**303.8337**	**8.3300e-003**		**304.0085**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7705	7.9325	7.2422	0.0113		0.4454	0.4454		0.4098	0.4098	0.0000	1,097.1688	1,097.1688	0.3549		1,104.6206
Total	**0.7705**	**7.9325**	**7.2422**	**0.0113**		**0.4454**	**0.4454**		**0.4098**	**0.4098**	**0.0000**	**1,097.1688**	**1,097.1688**	**0.3549**		**1,104.6206**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0483	0.3550	0.6963	1.5000e-003	0.0438	6.3000e-003	0.0501	0.0125	5.8000e-003	0.0183		140.1512	140.1512	1.0700e-003		140.1736
Worker	0.0458	0.0597	0.6365	2.3200e-003	0.2012	1.3900e-003	0.2026	0.0534	1.2900e-003	0.0547		163.6825	163.6825	7.2600e-003		163.8349
Total	**0.0941**	**0.4147**	**1.3328**	**3.8200e-003**	**0.2450**	**7.6900e-003**	**0.2527**	**0.0658**	**7.0900e-003**	**0.0729**		**303.8337**	**303.8337**	**8.3300e-003**		**304.0085**

3.7 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7131	6.6304	6.9921	0.0111		0.3492	0.3492		0.3247	0.3247		1,020.0280	1,020.0280	0.2966		1,026.2569
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7131**	**6.6304**	**6.9921**	**0.0111**		**0.3492**	**0.3492**		**0.3247**	**0.3247**		**1,020.0280**	**1,020.0280**	**0.2966**		**1,026.2569**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0458	0.0597	0.6365	2.3200e-003	0.2012	1.3900e-003	0.2026	0.0534	1.2900e-003	0.0547		163.6825	163.6825	7.2600e-003		163.8349
Total	**0.0458**	**0.0597**	**0.6365**	**2.3200e-003**	**0.2012**	**1.3900e-003**	**0.2026**	**0.0534**	**1.2900e-003**	**0.0547**		**163.6825**	**163.6825**	**7.2600e-003**		**163.8349**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7131	6.6304	6.9921	0.0111		0.3492	0.3492		0.3247	0.3247	0.0000	1,020.0280	1,020.0280	0.2966		1,026.2569
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7131**	**6.6304**	**6.9921**	**0.0111**		**0.3492**	**0.3492**		**0.3247**	**0.3247**	**0.0000**	**1,020.0280**	**1,020.0280**	**0.2966**		**1,026.2569**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0458	0.0597	0.6365	2.3200e-003	0.2012	1.3900e-003	0.2026	0.0534	1.2900e-003	0.0547		163.6825	163.6825	7.2600e-003		163.8349
Total	**0.0458**	**0.0597**	**0.6365**	**2.3200e-003**	**0.2012**	**1.3900e-003**	**0.2026**	**0.0534**	**1.2900e-003**	**0.0547**		**163.6825**	**163.6825**	**7.2600e-003**		**163.8349**

3.8 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	25.4438					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.8537
Total	**25.6627**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.8537**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0102	0.0133	0.1415	5.2000e-004	0.0447	3.1000e-004	0.0450	0.0119	2.9000e-004	0.0121		36.3739	36.3739	1.6100e-003		36.4078
Total	**0.0102**	**0.0133**	**0.1415**	**5.2000e-004**	**0.0447**	**3.1000e-004**	**0.0450**	**0.0119**	**2.9000e-004**	**0.0121**		**36.3739**	**36.3739**	**1.6100e-003**		**36.4078**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	25.4438					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.8537
Total	**25.6627**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.8537**

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0102	0.0133	0.1415	5.2000e-004	0.0447	3.1000e-004	0.0450	0.0119	2.9000e-004	0.0121		36.3739	36.3739	1.6100e-003		36.4078
Total	**0.0102**	**0.0133**	**0.1415**	**5.2000e-004**	**0.0447**	**3.1000e-004**	**0.0450**	**0.0119**	**2.9000e-004**	**0.0121**		**36.3739**	**36.3739**	**1.6100e-003**		**36.4078**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Mitigated	2.9756	5.9173	29.6303	0.1040	7.7080	0.1062	7.8141	2.0570	0.0981	2.1550		7,741.5324	7,741.5324	0.2704		7,747.2106
Unmitigated	2.9756	5.9173	29.6303	0.1040	7.7080	0.1062	7.8141	2.0570	0.0981	2.1550		7,741.5324	7,741.5324	0.2704		7,747.2106

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	1,207.36	493.22	53.14	2,840,504	2,840,504
Total	1,207.36	493.22	53.14	2,840,504	2,840,504

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.505043	0.056653	0.194832	0.151784	0.042126	0.005989	0.016072	0.016505	0.001461	0.002178	0.004464	0.000494	0.002401

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0206	0.1871	0.1572	1.1200e-003		0.0142	0.0142		0.0142	0.0142		224.4989	224.4989	4.3000e-003	4.1200e-003	225.8651
NaturalGas Unmitigated	0.0206	0.1871	0.1572	1.1200e-003		0.0142	0.0142		0.0142	0.0142		224.4989	224.4989	4.3000e-003	4.1200e-003	225.8651

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	1908.24	0.0206	0.1871	0.1572	1.1200e-003		0.0142	0.0142		0.0142	0.0142		224.4989	224.4989	4.3000e-003	4.1200e-003	225.8651
Total		**0.0206**	**0.1871**	**0.1572**	**1.1200e-003**		**0.0142**	**0.0142**		**0.0142**	**0.0142**		**224.4989**	**224.4989**	**4.3000e-003**	**4.1200e-003**	**225.8651**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	1.90824	0.0206	0.1871	0.1572	1.1200e-003		0.0142	0.0142		0.0142	0.0142		224.4989	224.4989	4.3000e-003	4.1200e-003	225.8651
Total		**0.0206**	**0.1871**	**0.1572**	**1.1200e-003**		**0.0142**	**0.0142**		**0.0142**	**0.0142**		**224.4989**	**224.4989**	**4.3000e-003**	**4.1200e-003**	**225.8651**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.1488	4.0000e-005	4.4900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.6100e-003	9.6100e-003	3.0000e-005		0.0101
Unmitigated	1.1488	4.0000e-005	4.4900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.6100e-003	9.6100e-003	3.0000e-005		0.0101

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2788					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.8695					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.2000e-004	4.0000e-005	4.4900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.6100e-003	9.6100e-003	3.0000e-005		0.0101
Total	**1.1488**	**4.0000e-005**	**4.4900e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**9.6100e-003**	**9.6100e-003**	**3.0000e-005**		**0.0101**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2788					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.8695					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.2000e-004	4.0000e-005	4.4900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.6100e-003	9.6100e-003	3.0000e-005		0.0101
Total	**1.1488**	**4.0000e-005**	**4.4900e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**9.6100e-003**	**9.6100e-003**	**3.0000e-005**		**0.0101**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Phase 3 - Dance Building

Orange County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	32.00	1000sqft	0.73	32,000.00	0

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 2.2 **Precipitation Freq (Days)** 30

Climate Zone 8 **Operational Year** 2022

Utility Company Southern California Edison

CO2 Intensity (lb/MWhr) 630.89 **CH4 Intensity (lb/MWhr)** 0.029 **N2O Intensity (lb/MWhr)** 0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Modified

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - modified

Demolition -

Architectural Coating - SCAQMD Rule 1113

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value

tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblConstructionPhase	NumDays	5.00	10.00
tblProjectCharacteristics	OperationalYear	2014	2022

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0404	0.3945	0.3671	6.4000e-004	0.0244	0.0225	0.0469	4.9300e-003	0.0208	0.0258	0.0000	53.9442	53.9442	0.0130	0.0000	54.2169
2021	0.1103	0.1685	0.1720	3.0000e-004	3.6900e-003	9.2400e-003	0.0129	9.9000e-004	8.5500e-003	9.5400e-003	0.0000	25.0132	25.0132	6.5100e-003	0.0000	25.1499
Total	**0.1507**	**0.5630**	**0.5391**	**9.4000e-004**	**0.0281**	**0.0318**	**0.0599**	**5.9200e-003**	**0.0294**	**0.0353**	**0.0000**	**78.9574**	**78.9574**	**0.0195**	**0.0000**	**79.3668**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0404	0.3945	0.3671	6.4000e-004	0.0144	0.0225	0.0369	3.2300e-003	0.0208	0.0241	0.0000	53.9441	53.9441	0.0130	0.0000	54.2168
2021	0.1103	0.1685	0.1720	3.0000e-004	3.6900e-003	9.2400e-003	0.0129	9.9000e-004	8.5500e-003	9.5400e-003	0.0000	25.0132	25.0132	6.5100e-003	0.0000	25.1499
Total	**0.1507**	**0.5630**	**0.5391**	**9.4000e-004**	**0.0181**	**0.0318**	**0.0499**	**4.2200e-003**	**0.0294**	**0.0336**	**0.0000**	**78.9573**	**78.9573**	**0.0195**	**0.0000**	**79.3667**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**35.66**	**0.00**	**16.74**	**28.72**	**0.00**	**4.79**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1528	0.0000	4.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.9000e-004	7.9000e-004	0.0000	0.0000	8.4000e-004
Energy	2.7400e-003	0.0249	0.0209	1.5000e-004		1.8900e-003	1.8900e-003		1.8900e-003	1.8900e-003	0.0000	155.7438	155.7438	6.4300e-003	1.7200e-003	156.4122
Mobile	0.2899	0.6230	3.0749	0.0109	0.7821	0.0109	0.7930	0.2090	0.0101	0.2191	0.0000	733.4858	733.4858	0.0253	0.0000	734.0169
Waste						0.0000	0.0000		0.0000	0.0000	8.4444	0.0000	8.4444	0.4991	0.0000	18.9245
Water						0.0000	0.0000		0.0000	0.0000	0.4980	13.6536	14.1516	0.0518	1.3400e-003	15.6534
Total	**0.4454**	**0.6479**	**3.0962**	**0.0110**	**0.7821**	**0.0128**	**0.7949**	**0.2090**	**0.0120**	**0.2210**	**8.9424**	**902.8840**	**911.8264**	**0.5825**	**3.0600e-003**	**925.0078**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1528	0.0000	4.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.9000e-004	7.9000e-004	0.0000	0.0000	8.4000e-004
Energy	2.7400e-003	0.0249	0.0209	1.5000e-004		1.8900e-003	1.8900e-003		1.8900e-003	1.8900e-003	0.0000	155.7438	155.7438	6.4300e-003	1.7200e-003	156.4122
Mobile	0.2899	0.6230	3.0749	0.0109	0.7821	0.0109	0.7930	0.2090	0.0101	0.2191	0.0000	733.4858	733.4858	0.0253	0.0000	734.0169

Waste						0.0000	0.0000		0.0000	0.0000	8.4444	0.0000	8.4444	0.4991	0.0000	18.9245
Water						0.0000	0.0000		0.0000	0.0000	0.4980	13.6536	14.1516	0.0518	1.3400e-003	15.6526
Total	**0.4454**	**0.6479**	**3.0962**	**0.0110**	**0.7821**	**0.0128**	**0.7949**	**0.2090**	**0.0120**	**0.2210**	**8.9424**	**902.8840**	**911.8264**	**0.5825**	**3.0600e-003**	**925.0070**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2020	9/14/2020	5	10	
2	Site Preparation	Site Preparation	9/15/2020	9/15/2020	5	1	
3	Grading	Grading	9/16/2020	9/17/2020	5	2	
4	Trenching	Trenching	9/18/2020	10/1/2020	5	10	
5	Building Construction	Building Construction	10/2/2020	2/18/2021	5	100	
6	Paving	Paving	2/19/2021	2/25/2021	5	5	
7	Architectural Coating	Architectural Coating	2/26/2021	3/11/2021	5	10	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 48,000; Non-Residential Outdoor: 16,000 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	255	0.40

Demolition	Tractors/Loaders/Backhoes		2	6.00	97	0.37
Site Preparation	Graders		1	8.00	174	0.41
Site Preparation	Tractors/Loaders/Backhoes		1	8.00	97	0.37
Grading	Concrete/Industrial Saws		1	8.00	81	0.73
Grading	Rubber Tired Dozers		1	1.00	255	0.40
Grading	Tractors/Loaders/Backhoes		2	6.00	97	0.37
Trenching	Plate Compactors		1	8.00	8	0.43
Trenching	Tractors/Loaders/Backhoes		1	8.00	97	0.37
Trenching	Trenchers		1	8.00	80	0.50
Building Construction	Cranes		1	4.00	226	0.29
Building Construction	Forklifts		2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes		2	8.00	97	0.37
Paving	Cement and Mortar Mixers		4	6.00	9	0.56
Paving	Pavers		1	7.00	125	0.42
Paving	Rollers		1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes		1	7.00	97	0.37
Architectural Coating	Air Compressors		1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	142.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	13.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0154	0.0000	0.0154	2.3300e-003	0.0000	2.3300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.2600e-003	0.0386	0.0405	6.0000e-005		2.2800e-003	2.2800e-003		2.1800e-003	2.1800e-003	0.0000	5.2240	5.2240	9.9000e-004	0.0000	5.2448
Total	**4.2600e-003**	**0.0386**	**0.0405**	**6.0000e-005**	**0.0154**	**2.2800e-003**	**0.0177**	**2.3300e-003**	**2.1800e-003**	**4.5100e-003**	**0.0000**	**5.2240**	**5.2240**	**9.9000e-004**	**0.0000**	**5.2448**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.1400e-003	0.0147	0.0139	5.0000e-005	1.2200e-003	2.6000e-004	1.4800e-003	3.3000e-004	2.4000e-004	5.8000e-004	0.0000	4.4448	4.4448	3.0000e-005	0.0000	4.4455
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	1.8000e-004	1.9200e-003	1.0000e-005	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4257	0.4257	2.0000e-005	0.0000	0.4261
Total	**1.2600e-003**	**0.0149**	**0.0158**	**6.0000e-005**	**1.7700e-003**	**2.6000e-004**	**2.0300e-003**	**4.8000e-004**	**2.4000e-004**	**7.3000e-004**	**0.0000**	**4.8705**	**4.8705**	**5.0000e-005**	**0.0000**	**4.8716**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					6.0100e-003	0.0000	6.0100e-003	9.1000e-004	0.0000	9.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.2600e-003	0.0386	0.0405	6.0000e-005		2.2800e-003	2.2800e-003		2.1800e-003	2.1800e-003	0.0000	5.2240	5.2240	9.9000e-004	0.0000	5.2448
Total	**4.2600e-003**	**0.0386**	**0.0405**	**6.0000e-005**	**6.0100e-003**	**2.2800e-003**	**8.2900e-003**	**9.1000e-004**	**2.1800e-003**	**3.0900e-003**	**0.0000**	**5.2240**	**5.2240**	**9.9000e-004**	**0.0000**	**5.2448**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.1400e-003	0.0147	0.0139	5.0000e-005	1.2200e-003	2.6000e-004	1.4800e-003	3.3000e-004	2.4000e-004	5.8000e-004	0.0000	4.4448	4.4448	3.0000e-005	0.0000	4.4455
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	1.8000e-004	1.9200e-003	1.0000e-005	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4257	0.4257	2.0000e-005	0.0000	0.4261
Total	**1.2600e-003**	**0.0149**	**0.0158**	**6.0000e-005**	**1.7700e-003**	**2.6000e-004**	**2.0300e-003**	**4.8000e-004**	**2.4000e-004**	**7.3000e-004**	**0.0000**	**4.8705**	**4.8705**	**5.0000e-005**	**0.0000**	**4.8716**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.6000e-004	4.5300e-003	3.4200e-003	0.0000		2.6000e-004	2.6000e-004		2.4000e-004	2.4000e-004	0.0000	0.4093	0.4093	1.3000e-004	0.0000	0.4120
Total	**4.6000e-004**	**4.5300e-003**	**3.4200e-003**	**0.0000**	**2.7000e-004**	**2.6000e-004**	**5.3000e-004**	**3.0000e-005**	**2.4000e-004**	**2.7000e-004**	**0.0000**	**0.4093**	**0.4093**	**1.3000e-004**	**0.0000**	**0.4120**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	1.0000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0213	0.0213	0.0000	0.0000	0.0213
Total	**1.0000e-005**	**1.0000e-005**	**1.0000e-004**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0213**	**0.0213**	**0.0000**	**0.0000**	**0.0213**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.0000e-004	0.0000	1.0000e-004	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.6000e-004	4.5300e-003	3.4200e-003	0.0000		2.6000e-004	2.6000e-004		2.4000e-004	2.4000e-004	0.0000	0.4093	0.4093	1.3000e-004	0.0000	0.4120
Total	**4.6000e-004**	**4.5300e-003**	**3.4200e-003**	**0.0000**	**1.0000e-004**	**2.6000e-004**	**3.6000e-004**	**1.0000e-005**	**2.4000e-004**	**2.5000e-004**	**0.0000**	**0.4093**	**0.4093**	**1.3000e-004**	**0.0000**	**0.4120**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	1.0000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0213	0.0213	0.0000	0.0000	0.0213
Total	**1.0000e-005**	**1.0000e-005**	**1.0000e-004**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0213**	**0.0213**	**0.0000**	**0.0000**	**0.0213**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.5000e-004	0.0000	7.5000e-004	4.1000e-004	0.0000	4.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.5000e-004	7.7200e-003	8.1000e-003	1.0000e-005		4.6000e-004	4.6000e-004		4.4000e-004	4.4000e-004	0.0000	1.0448	1.0448	2.0000e-004	0.0000	1.0490
Total	**8.5000e-004**	**7.7200e-003**	**8.1000e-003**	**1.0000e-005**	**7.5000e-004**	**4.6000e-004**	**1.2100e-003**	**4.1000e-004**	**4.4000e-004**	**8.5000e-004**	**0.0000**	**1.0448**	**1.0448**	**2.0000e-004**	**0.0000**	**1.0490**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	4.0000e-005	3.8000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0852	0.0852	0.0000	0.0000	0.0852
Total	**2.0000e-005**	**4.0000e-005**	**3.8000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0852**	**0.0852**	**0.0000**	**0.0000**	**0.0852**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.9000e-004	0.0000	2.9000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.5000e-004	7.7200e-003	8.1000e-003	1.0000e-005		4.6000e-004	4.6000e-004		4.4000e-004	4.4000e-004	0.0000	1.0448	1.0448	2.0000e-004	0.0000	1.0490
Total	**8.5000e-004**	**7.7200e-003**	**8.1000e-003**	**1.0000e-005**	**2.9000e-004**	**4.6000e-004**	**7.5000e-004**	**1.6000e-004**	**4.4000e-004**	**6.0000e-004**	**0.0000**	**1.0448**	**1.0448**	**2.0000e-004**	**0.0000**	**1.0490**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	4.0000e-005	3.8000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0852	0.0852	0.0000	0.0000	0.0852

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Total	**2.0000e-005**	**4.0000e-005**	**3.8000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0852**	**0.0852**	**0.0000**	**0.0000**	**0.0852**

3.5 Trenching - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.4000e-003	0.0313	0.0260	4.0000e-005		2.1700e-003	2.1700e-003		2.0000e-003	2.0000e-003	0.0000	3.0411	3.0411	9.5000e-004	0.0000	3.0610
Total	**3.4000e-003**	**0.0313**	**0.0260**	**4.0000e-005**		**2.1700e-003**	**2.1700e-003**		**2.0000e-003**	**2.0000e-003**	**0.0000**	**3.0411**	**3.0411**	**9.5000e-004**	**0.0000**	**3.0610**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-004	1.5000e-004	1.5300e-003	1.0000e-005	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3406	0.3406	2.0000e-005	0.0000	0.3409
Total	**1.0000e-004**	**1.5000e-004**	**1.5300e-003**	**1.0000e-005**	**4.4000e-004**	**0.0000**	**4.4000e-004**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**0.3406**	**0.3406**	**2.0000e-005**	**0.0000**	**0.3409**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.4000e-003	0.0313	0.0260	4.0000e-005		2.1700e-003	2.1700e-003		2.0000e-003	2.0000e-003	0.0000	3.0411	3.0411	9.5000e-004	0.0000	3.0610
Total	**3.4000e-003**	**0.0313**	**0.0260**	**4.0000e-005**		**2.1700e-003**	**2.1700e-003**		**2.0000e-003**	**2.0000e-003**	**0.0000**	**3.0411**	**3.0411**	**9.5000e-004**	**0.0000**	**3.0610**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-004	1.5000e-004	1.5300e-003	1.0000e-005	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3406	0.3406	2.0000e-005	0.0000	0.3409
Total	**1.0000e-004**	**1.5000e-004**	**1.5300e-003**	**1.0000e-005**	**4.4000e-004**	**0.0000**	**4.4000e-004**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**0.3406**	**0.3406**	**2.0000e-005**	**0.0000**	**0.3409**

3.6 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.0279	0.2858	0.2394	3.7000e-004		0.0169	0.0169		0.0156	0.0156	0.0000	32.3414	32.3414	0.0105	0.0000	32.5610
Total	**0.0279**	**0.2858**	**0.2394**	**3.7000e-004**		**0.0169**	**0.0169**		**0.0156**	**0.0156**	**0.0000**	**32.3414**	**32.3414**	**0.0105**	**0.0000**	**32.5610**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.1200e-003	9.9000e-003	0.0157	3.0000e-005	1.0000e-003	1.6000e-004	1.1600e-003	2.9000e-004	1.5000e-004	4.3000e-004	0.0000	2.9687	2.9687	2.0000e-005	0.0000	2.9692
Worker	1.0600e-003	1.5300e-003	0.0162	6.0000e-005	4.6400e-003	3.0000e-005	4.6700e-003	1.2300e-003	3.0000e-005	1.2600e-003	0.0000	3.5974	3.5974	1.6000e-004	0.0000	3.6008
Total	**2.1800e-003**	**0.0114**	**0.0319**	**9.0000e-005**	**5.6400e-003**	**1.9000e-004**	**5.8300e-003**	**1.5200e-003**	**1.8000e-004**	**1.6900e-003**	**0.0000**	**6.5661**	**6.5661**	**1.8000e-004**	**0.0000**	**6.5700**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0279	0.2858	0.2394	3.7000e-004		0.0169	0.0169		0.0156	0.0156	0.0000	32.3413	32.3413	0.0105	0.0000	32.5610
Total	**0.0279**	**0.2858**	**0.2394**	**3.7000e-004**		**0.0169**	**0.0169**		**0.0156**	**0.0156**	**0.0000**	**32.3413**	**32.3413**	**0.0105**	**0.0000**	**32.5610**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.1200e-003	9.9000e-003	0.0157	3.0000e-005	1.0000e-003	1.6000e-004	1.1600e-003	2.9000e-004	1.5000e-004	4.3000e-004	0.0000	2.9687	2.9687	2.0000e-005	0.0000	2.9692
Worker	1.0600e-003	1.5300e-003	0.0162	6.0000e-005	4.6400e-003	3.0000e-005	4.6700e-003	1.2300e-003	3.0000e-005	1.2600e-003	0.0000	3.5974	3.5974	1.6000e-004	0.0000	3.6008
Total	**2.1800e-003**	**0.0114**	**0.0319**	**9.0000e-005**	**5.6400e-003**	**1.9000e-004**	**5.8300e-003**	**1.5200e-003**	**1.8000e-004**	**1.6900e-003**	**0.0000**	**6.5661**	**6.5661**	**1.8000e-004**	**0.0000**	**6.5700**

3.6 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0135	0.1388	0.1267	2.0000e-004		7.7900e-003	7.7900e-003		7.1700e-003	7.1700e-003	0.0000	17.4184	17.4184	5.6300e-003	0.0000	17.5367
Total	**0.0135**	**0.1388**	**0.1267**	**2.0000e-004**		**7.7900e-003**	**7.7900e-003**		**7.1700e-003**	**7.1700e-003**	**0.0000**	**17.4184**	**17.4184**	**5.6300e-003**	**0.0000**	**17.5367**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.8000e-004	4.5200e-003	8.2600e-003	2.0000e-005	5.4000e-004	8.0000e-005	6.2000e-004	1.5000e-004	7.0000e-005	2.3000e-004	0.0000	1.5972	1.5972	1.0000e-005	0.0000	1.5974
Worker	5.4000e-004	7.8000e-004	8.2300e-003	3.0000e-005	2.5000e-003	2.0000e-005	2.5200e-003	6.6000e-004	2.0000e-005	6.8000e-004	0.0000	1.9052	1.9052	8.0000e-005	0.0000	1.9069
Total	**1.1200e-003**	**5.3000e-003**	**0.0165**	**5.0000e-005**	**3.0400e-003**	**1.0000e-004**	**3.1400e-003**	**8.1000e-004**	**9.0000e-005**	**9.1000e-004**	**0.0000**	**3.5024**	**3.5024**	**9.0000e-005**	**0.0000**	**3.5044**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0135	0.1388	0.1267	2.0000e-004		7.7900e-003	7.7900e-003		7.1700e-003	7.1700e-003	0.0000	17.4183	17.4183	5.6300e-003	0.0000	17.5366
Total	**0.0135**	**0.1388**	**0.1267**	**2.0000e-004**		**7.7900e-003**	**7.7900e-003**		**7.1700e-003**	**7.1700e-003**	**0.0000**	**17.4183**	**17.4183**	**5.6300e-003**	**0.0000**	**17.5366**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.8000e-004	4.5200e-003	8.2600e-003	2.0000e-005	5.4000e-004	8.0000e-005	6.2000e-004	1.5000e-004	7.0000e-005	2.3000e-004	0.0000	1.5972	1.5972	1.0000e-005	0.0000	1.5974
Worker	5.4000e-004	7.8000e-004	8.2300e-003	3.0000e-005	2.5000e-003	2.0000e-005	2.5200e-003	6.6000e-004	2.0000e-005	6.8000e-004	0.0000	1.9052	1.9052	8.0000e-005	0.0000	1.9069

Total	**1.1200e-003**	**5.3000e-003**	**0.0165**	**5.0000e-005**	**3.0400e-003**	**1.0000e-004**	**3.1400e-003**	**8.1000e-004**	**9.0000e-005**	**9.1000e-004**	**0.0000**	**3.5024**	**3.5024**	**9.0000e-005**	**0.0000**	**3.5044**

3.7 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.7800e-003	0.0166	0.0175	3.0000e-005		8.7000e-004	8.7000e-004		8.1000e-004	8.1000e-004	0.0000	2.3134	2.3134	6.7000e-004	0.0000	2.3275
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.7800e-003**	**0.0166**	**0.0175**	**3.0000e-005**		**8.7000e-004**	**8.7000e-004**		**8.1000e-004**	**8.1000e-004**	**0.0000**	**2.3134**	**2.3134**	**6.7000e-004**	**0.0000**	**2.3275**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	1.5000e-004	1.6300e-003	1.0000e-005	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3769	0.3769	2.0000e-005	0.0000	0.3772
Total	**1.1000e-004**	**1.5000e-004**	**1.6300e-003**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.3769**	**0.3769**	**2.0000e-005**	**0.0000**	**0.3772**

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Off-Road	1.7800e-003	0.0166	0.0175	3.0000e-005		8.7000e-004	8.7000e-004		8.1000e-004	8.1000e-004	0.0000	2.3134	2.3134	6.7000e-004	0.0000	2.3275
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.7800e-003**	**0.0166**	**0.0175**	**3.0000e-005**		**8.7000e-004**	**8.7000e-004**		**8.1000e-004**	**8.1000e-004**	**0.0000**	**2.3134**	**2.3134**	**6.7000e-004**	**0.0000**	**2.3275**

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	1.5000e-004	1.6300e-003	1.0000e-005	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3769	0.3769	2.0000e-005	0.0000	0.3772
Total	**1.1000e-004**	**1.5000e-004**	**1.6300e-003**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.3769**	**0.3769**	**2.0000e-005**	**0.0000**	**0.3772**

3.8 Architectural Coating - 2021

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					

Archit. Coating	0.0927					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0900e-003	7.6300e-003	9.0900e-003	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004	0.0000	1.2766	1.2766	9.0000e-005	0.0000	1.2785
Total	**0.0938**	**7.6300e-003**	**9.0900e-003**	**1.0000e-005**		**4.7000e-004**	**4.7000e-004**		**4.7000e-004**	**4.7000e-004**	**0.0000**	**1.2766**	**1.2766**	**9.0000e-005**	**0.0000**	**1.2785**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	5.0000e-005	5.4000e-004	0.0000	1.6000e-004	0.0000	1.7000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1256	0.1256	1.0000e-005	0.0000	0.1257
Total	**4.0000e-005**	**5.0000e-005**	**5.4000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**1.7000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1256**	**0.1256**	**1.0000e-005**	**0.0000**	**0.1257**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0927					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0900e-003	7.6300e-003	9.0900e-003	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004	0.0000	1.2766	1.2766	9.0000e-005	0.0000	1.2785
Total	**0.0938**	**7.6300e-003**	**9.0900e-003**	**1.0000e-005**		**4.7000e-004**	**4.7000e-004**		**4.7000e-004**	**4.7000e-004**	**0.0000**	**1.2766**	**1.2766**	**9.0000e-005**	**0.0000**	**1.2785**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	5.0000e-005	5.4000e-004	0.0000	1.6000e-004	0.0000	1.7000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1256	0.1256	1.0000e-005	0.0000	0.1257
Total	**4.0000e-005**	**5.0000e-005**	**5.4000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**1.7000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1256**	**0.1256**	**1.0000e-005**	**0.0000**	**0.1257**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2899	0.6230	3.0749	0.0109	0.7821	0.0109	0.7930	0.2090	0.0101	0.2191	0.0000	733.4858	733.4858	0.0253	0.0000	734.0169
Unmitigated	0.2899	0.6230	3.0749	0.0109	0.7821	0.0109	0.7930	0.2090	0.0101	0.2191	0.0000	733.4858	733.4858	0.0253	0.0000	734.0169

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT

Junior College (2Yr)	879.68	359.36	38.72	2,069,584	2,069,584
Total	879.68	359.36	38.72	2,069,584	2,069,584

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.505043	0.056653	0.194832	0.151784	0.042126	0.005989	0.016072	0.016505	0.001461	0.002178	0.004464	0.000494	0.002401

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	128.6606	128.6606	5.9100e-003	1.2200e-003	129.1642
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	128.6606	128.6606	5.9100e-003	1.2200e-003	129.1642
NaturalGas Mitigated	2.7400e-003	0.0249	0.0209	1.5000e-004		1.8900e-003	1.8900e-003		1.8900e-003	1.8900e-003	0.0000	27.0832	27.0832	5.2000e-004	5.0000e-004	27.2480
NaturalGas Unmitigated	2.7400e-003	0.0249	0.0209	1.5000e-004		1.8900e-003	1.8900e-003		1.8900e-003	1.8900e-003	0.0000	27.0832	27.0832	5.2000e-004	5.0000e-004	27.2480

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Junior College (2Yr)	507520	2.7400e-003	0.0249	0.0209	1.5000e-004		1.8900e-003	1.8900e-003		1.8900e-003	1.8900e-003	0.0000	27.0832	27.0832	5.2000e-004	5.0000e-004	27.2480
Total		**2.7400e-003**	**0.0249**	**0.0209**	**1.5000e-004**		**1.8900e-003**	**1.8900e-003**		**1.8900e-003**	**1.8900e-003**	**0.0000**	**27.0832**	**27.0832**	**5.2000e-004**	**5.0000e-004**	**27.2480**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Junior College (2Yr)	507520	2.7400e-003	0.0249	0.0209	1.5000e-004		1.8900e-003	1.8900e-003		1.8900e-003	1.8900e-003	0.0000	27.0832	27.0832	5.2000e-004	5.0000e-004	27.2480
Total		**2.7400e-003**	**0.0249**	**0.0209**	**1.5000e-004**		**1.8900e-003**	**1.8900e-003**		**1.8900e-003**	**1.8900e-003**	**0.0000**	**27.0832**	**27.0832**	**5.2000e-004**	**5.0000e-004**	**27.2480**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	449600	128.6606	5.9100e-003	1.2200e-003	129.1642

Total		**128.6606**	**5.9100e-003**	**1.2200e-003**	**129.1642**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	449600	128.6606	5.9100e-003	1.2200e-003	129.1642
Total		**128.6606**	**5.9100e-003**	**1.2200e-003**	**129.1642**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1528	0.0000	4.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.9000e-004	7.9000e-004	0.0000	0.0000	8.4000e-004
Unmitigated	0.1528	0.0000	4.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.9000e-004	7.9000e-004	0.0000	0.0000	8.4000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0371					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1156					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.0000e-005	0.0000	4.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.9000e-004	7.9000e-004	0.0000	0.0000	8.4000e-004
Total	**0.1528**	**0.0000**	**4.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**7.9000e-004**	**7.9000e-004**	**0.0000**	**0.0000**	**8.4000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0371					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1156					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.0000e-005	0.0000	4.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.9000e-004	7.9000e-004	0.0000	0.0000	8.4000e-004
Total	**0.1528**	**0.0000**	**4.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**7.9000e-004**	**7.9000e-004**	**0.0000**	**0.0000**	**8.4000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	14.1516	0.0518	1.3400e-003	15.6526
Unmitigated	14.1516	0.0518	1.3400e-003	15.6534

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	1.56957 / 2.45497	14.1516	0.0518	1.3400e-003	15.6534
Total		**14.1516**	**0.0518**	**1.3400e-003**	**15.6534**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	1.56957 / 2.45497	14.1516	0.0518	1.3400e-003	15.6526
Total		**14.1516**	**0.0518**	**1.3400e-003**	**15.6526**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	8.4444	0.4991	0.0000	18.9245
Unmitigated	8.4444	0.4991	0.0000	18.9245

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior College (2Yr)	41.6	8.4444	0.4991	0.0000	18.9245
Total		**8.4444**	**0.4991**	**0.0000**	**18.9245**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior College (2Yr)	41.6	8.4444	0.4991	0.0000	18.9245
Total		**8.4444**	**0.4991**	**0.0000**	**18.9245**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Phase 3 - Dance Building

Orange County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	32.00	1000sqft	0.73	32,000.00	0

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 2.2 **Precipitation Freq (Days)** 30

Climate Zone 8 **Operational Year** 2022

Utility Company Southern California Edison

CO2 Intensity (lb/MWhr) 630.89 **CH4 Intensity (lb/MWhr)** 0.029 **N2O Intensity (lb/MWhr)** 0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Modified

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - modified

Demolition -

Architectural Coating - SCAQMD Rule 1113

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value

tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblConstructionPhase	NumDays	5.00	10.00
tblProjectCharacteristics	OperationalYear	2014	2022

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	1.0993	10.5533	10.9493	0.0238	3.4414	0.5259	3.9506	0.5641	0.4844	1.0484	0.0000	2,230.2347	2,230.2347	0.3610	0.0000	2,237.8149
2021	18.7662	8.2200	8.1344	0.0142	0.2012	0.4509	0.6274	0.0534	0.4148	0.4623	0.0000	1,322.9909	1,322.9909	0.3608	0.0000	1,330.5682
Total	**19.8655**	**18.7733**	**19.0837**	**0.0380**	**3.6426**	**0.9767**	**4.5781**	**0.6174**	**0.8992**	**1.5107**	**0.0000**	**3,553.2256**	**3,553.2256**	**0.7218**	**0.0000**	**3,568.3831**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	1.0993	10.5533	10.9493	0.0238	1.5613	0.5259	2.0705	0.2794	0.4844	0.7638	0.0000	2,230.2347	2,230.2347	0.3610	0.0000	2,237.8149
2021	18.7662	8.2200	8.1344	0.0142	0.2012	0.4509	0.6274	0.0534	0.4148	0.4623	0.0000	1,322.9909	1,322.9909	0.3608	0.0000	1,330.5682
Total	**19.8655**	**18.7733**	**19.0837**	**0.0380**	**1.7625**	**0.9767**	**2.6980**	**0.3328**	**0.8992**	**1.2260**	**0.0000**	**3,553.2256**	**3,553.2256**	**0.7218**	**0.0000**	**3,568.3831**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**51.61**	**0.00**	**41.07**	**46.10**	**0.00**	**18.84**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.8371	3.0000e-005	3.2700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.0000e-003	7.0000e-003	2.0000e-005		7.3900e-003
Energy	0.0150	0.1363	0.1145	8.2000e-004		0.0104	0.0104		0.0104	0.0104		163.5842	163.5842	3.1400e-003	3.0000e-003	164.5798
Mobile	2.0575	4.0808	21.6841	0.0793	5.6160	0.0772	5.6932	1.4987	0.0713	1.5699		5,892.6617	5,892.6617	0.1968		5,896.7953
Total	**2.9096**	**4.2172**	**21.8019**	**0.0801**	**5.6160**	**0.0875**	**5.7035**	**1.4987**	**0.0816**	**1.5803**		**6,056.2529**	**6,056.2529**	**0.2000**	**3.0000e-003**	**6,061.3824**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.8371	3.0000e-005	3.2700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.0000e-003	7.0000e-003	2.0000e-005		7.3900e-003
Energy	0.0150	0.1363	0.1145	8.2000e-004		0.0104	0.0104		0.0104	0.0104		163.5842	163.5842	3.1400e-003	3.0000e-003	164.5798
Mobile	2.0575	4.0808	21.6841	0.0793	5.6160	0.0772	5.6932	1.4987	0.0713	1.5699		5,892.6617	5,892.6617	0.1968		5,896.7953
Total	**2.9096**	**4.2172**	**21.8019**	**0.0801**	**5.6160**	**0.0875**	**5.7035**	**1.4987**	**0.0816**	**1.5803**		**6,056.2529**	**6,056.2529**	**0.2000**	**3.0000e-003**	**6,061.3824**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2020	9/14/2020	5	10	
2	Site Preparation	Site Preparation	9/15/2020	9/15/2020	5	1	
3	Grading	Grading	9/16/2020	9/17/2020	5	2	
4	Trenching	Trenching	9/18/2020	10/1/2020	5	10	
5	Building Construction	Building Construction	10/2/2020	2/18/2021	5	100	
6	Paving	Paving	2/19/2021	2/25/2021	5	5	
7	Architectural Coating	Architectural Coating	2/26/2021	3/11/2021	5	10	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 48,000; Non-Residential Outdoor: 16,000 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	255	0.40

Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Trenching	Plate Compactors	1	8.00	8	0.43
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Trenching	Trenchers	1	8.00	80	0.50
Building Construction	Cranes	1	4.00	226	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	125	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	142.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	13.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.0821	0.0000	3.0821	0.4667	0.0000	0.4667			0.0000			0.0000
Off-Road	0.8527	7.7248	8.0981	0.0120		0.4561	0.4561		0.4355	0.4355		1,151.7011	1,151.7011	0.2184		1,156.2863
Total	**0.8527**	**7.7248**	**8.0981**	**0.0120**	**3.0821**	**0.4561**	**3.5382**	**0.4667**	**0.4355**	**0.9021**		**1,151.7011**	**1,151.7011**	**0.2184**		**1,156.2863**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2211	2.7963	2.4492	0.0104	0.2475	0.0524	0.2999	0.0678	0.0482	0.1160		980.8856	980.8856	7.6200e-003		981.0457
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0255	0.0321	0.4020	1.3600e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		97.6480	97.6480	4.2000e-003		97.7363
Total	**0.2466**	**2.8285**	**2.8512**	**0.0118**	**0.3593**	**0.0532**	**0.4124**	**0.0974**	**0.0489**	**0.1463**		**1,078.5336**	**1,078.5336**	**0.0118**		**1,078.7819**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					1.2020	0.0000	1.2020	0.1820	0.0000	0.1820			0.0000			0.0000
Off-Road	0.8527	7.7248	8.0981	0.0120		0.4561	0.4561		0.4355	0.4355	0.0000	1,151.7011	1,151.7011	0.2184		1,156.2863
Total	**0.8527**	**7.7248**	**8.0981**	**0.0120**	**1.2020**	**0.4561**	**1.6581**	**0.1820**	**0.4355**	**0.6175**	**0.0000**	**1,151.7011**	**1,151.7011**	**0.2184**		**1,156.2863**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2211	2.7963	2.4492	0.0104	0.2475	0.0524	0.2999	0.0678	0.0482	0.1160		980.8856	980.8856	7.6200e-003		981.0457
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0255	0.0321	0.4020	1.3600e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		97.6480	97.6480	4.2000e-003		97.7363
Total	**0.2466**	**2.8285**	**2.8512**	**0.0118**	**0.3593**	**0.0532**	**0.4124**	**0.0974**	**0.0489**	**0.1463**		**1,078.5336**	**1,078.5336**	**0.0118**		**1,078.7819**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.9225	9.0637	6.8357	9.3100e-003		0.5213	0.5213		0.4796	0.4796		902.2494	902.2494	0.2918		908.3773
Total	**0.9225**	**9.0637**	**6.8357**	**9.3100e-003**	**0.5303**	**0.5213**	**1.0516**	**0.0573**	**0.4796**	**0.5369**		**902.2494**	**902.2494**	**0.2918**		**908.3773**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0128	0.0161	0.2010	6.8000e-004	0.0559	3.8000e-004	0.0563	0.0148	3.5000e-004	0.0152		48.8240	48.8240	2.1000e-003		48.8681
Total	**0.0128**	**0.0161**	**0.2010**	**6.8000e-004**	**0.0559**	**3.8000e-004**	**0.0563**	**0.0148**	**3.5000e-004**	**0.0152**		**48.8240**	**48.8240**	**2.1000e-003**		**48.8681**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2068	0.0000	0.2068	0.0223	0.0000	0.0223			0.0000			0.0000
Off-Road	0.9225	9.0637	6.8357	9.3100e-003		0.5213	0.5213		0.4796	0.4796	0.0000	902.2494	902.2494	0.2918		908.3773
Total	**0.9225**	**9.0637**	**6.8357**	**9.3100e-003**	**0.2068**	**0.5213**	**0.7281**	**0.0223**	**0.4796**	**0.5019**	**0.0000**	**902.2494**	**902.2494**	**0.2918**		**908.3773**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0128	0.0161	0.2010	6.8000e-004	0.0559	3.8000e-004	0.0563	0.0148	3.5000e-004	0.0152		48.8240	48.8240	2.1000e-003		48.8681
Total	**0.0128**	**0.0161**	**0.2010**	**6.8000e-004**	**0.0559**	**3.8000e-004**	**0.0563**	**0.0148**	**3.5000e-004**	**0.0152**		**48.8240**	**48.8240**	**2.1000e-003**		**48.8681**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	0.8527	7.7248	8.0981	0.0120		0.4561	0.4561		0.4355	0.4355		1,151.7011	1,151.7011	0.2184		1,156.2863
Total	**0.8527**	**7.7248**	**8.0981**	**0.0120**	**0.7528**	**0.4561**	**1.2089**	**0.4138**	**0.4355**	**0.8492**		**1,151.7011**	**1,151.7011**	**0.2184**		**1,156.2863**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0255	0.0321	0.4020	1.3600e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		97.6480	97.6480	4.2000e-003		97.7363

Total	**0.0255**	**0.0321**	**0.4020**	**1.3600e-003**	**0.1118**	**7.6000e-004**	**0.1125**	**0.0296**	**7.1000e-004**	**0.0304**		**97.6480**	**97.6480**	**4.2000e-003**		**97.7363**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2936	0.0000	0.2936	0.1614	0.0000	0.1614			0.0000			0.0000
Off-Road	0.8527	7.7248	8.0981	0.0120		0.4561	0.4561		0.4355	0.4355	0.0000	1,151.7011	1,151.7011	0.2184		1,156.2863
Total	**0.8527**	**7.7248**	**8.0981**	**0.0120**	**0.2936**	**0.4561**	**0.7497**	**0.1614**	**0.4355**	**0.5968**	**0.0000**	**1,151.7011**	**1,151.7011**	**0.2184**		**1,156.2863**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0255	0.0321	0.4020	1.3600e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		97.6480	97.6480	4.2000e-003		97.7363
Total	**0.0255**	**0.0321**	**0.4020**	**1.3600e-003**	**0.1118**	**7.6000e-004**	**0.1125**	**0.0296**	**7.1000e-004**	**0.0304**		**97.6480**	**97.6480**	**4.2000e-003**		**97.7363**

3.5 Trenching - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6801	6.2504	5.1941	7.0500e-003		0.4344	0.4344		0.4005	0.4005		670.4398	670.4398	0.2093		674.8343
Total	**0.6801**	**6.2504**	**5.1941**	**7.0500e-003**		**0.4344**	**0.4344**		**0.4005**	**0.4005**		**670.4398**	**670.4398**	**0.2093**		**674.8343**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0204	0.0257	0.3216	1.0900e-003	0.0894	6.1000e-004	0.0900	0.0237	5.7000e-004	0.0243		78.1184	78.1184	3.3600e-003		78.1890
Total	**0.0204**	**0.0257**	**0.3216**	**1.0900e-003**	**0.0894**	**6.1000e-004**	**0.0900**	**0.0237**	**5.7000e-004**	**0.0243**		**78.1184**	**78.1184**	**3.3600e-003**		**78.1890**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.6801	6.2504	5.1941	7.0500e-003		0.4344	0.4344		0.4005	0.4005	0.0000	670.4398	670.4398	0.2093		674.8343
Total	**0.6801**	**6.2504**	**5.1941**	**7.0500e-003**		**0.4344**	**0.4344**		**0.4005**	**0.4005**	**0.0000**	**670.4398**	**670.4398**	**0.2093**		**674.8343**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0204	0.0257	0.3216	1.0900e-003	0.0894	6.1000e-004	0.0900	0.0237	5.7000e-004	0.0243		78.1184	78.1184	3.3600e-003		78.1890
Total	**0.0204**	**0.0257**	**0.3216**	**1.0900e-003**	**0.0894**	**6.1000e-004**	**0.0900**	**0.0237**	**5.7000e-004**	**0.0243**		**78.1184**	**78.1184**	**3.3600e-003**		**78.1890**

3.6 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8568	8.7940	7.3646	0.0113		0.5200	0.5200		0.4784	0.4784		1,096.9306	1,096.9306	0.3548		1,104.3807
Total	**0.8568**	**8.7940**	**7.3646**	**0.0113**		**0.5200**	**0.5200**		**0.4784**	**0.4784**		**1,096.9306**	**1,096.9306**	**0.3548**		**1,104.3807**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0328	0.2925	0.4090	1.0800e-003	0.0313	4.9100e-003	0.0362	8.9000e-003	4.5200e-003	0.0134		101.0502	101.0502	7.3000e-004		101.0655
Worker	0.0332	0.0418	0.5226	1.7700e-003	0.1453	9.9000e-004	0.1463	0.0385	9.2000e-004	0.0395		126.9424	126.9424	5.4600e-003		127.0572
Total	**0.0659**	**0.3343**	**0.9316**	**2.8500e-003**	**0.1766**	**5.9000e-003**	**0.1825**	**0.0474**	**5.4400e-003**	**0.0529**		**227.9926**	**227.9926**	**6.1900e-003**		**228.1227**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8568	8.7940	7.3646	0.0113		0.5200	0.5200		0.4784	0.4784	0.0000	1,096.9306	1,096.9306	0.3548		1,104.3807
Total	**0.8568**	**8.7940**	**7.3646**	**0.0113**		**0.5200**	**0.5200**		**0.4784**	**0.4784**	**0.0000**	**1,096.9306**	**1,096.9306**	**0.3548**		**1,104.3807**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0328	0.2925	0.4090	1.0800e-003	0.0313	4.9100e-003	0.0362	8.9000e-003	4.5200e-003	0.0134		101.0502	101.0502	7.3000e-004		101.0655
Worker	0.0332	0.0418	0.5226	1.7700e-003	0.1453	9.9000e-004	0.1463	0.0385	9.2000e-004	0.0395		126.9424	126.9424	5.4600e-003		127.0572
Total	**0.0659**	**0.3343**	**0.9316**	**2.8500e-003**	**0.1766**	**5.9000e-003**	**0.1825**	**0.0474**	**5.4400e-003**	**0.0529**		**227.9926**	**227.9926**	**6.1900e-003**		**228.1227**

3.6 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7705	7.9325	7.2422	0.0113		0.4454	0.4454		0.4098	0.4098		1,097.1688	1,097.1688	0.3549		1,104.6206
Total	**0.7705**	**7.9325**	**7.2422**	**0.0113**		**0.4454**	**0.4454**		**0.4098**	**0.4098**		**1,097.1688**	**1,097.1688**	**0.3549**		**1,104.6206**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0317	0.2483	0.3983	1.0800e-003	0.0313	4.4700e-003	0.0357	8.9000e-003	4.1100e-003	0.0130		100.9659	100.9659	7.4000e-004		100.9813
Worker	0.0316	0.0393	0.4939	1.7700e-003	0.1453	1.0000e-003	0.1463	0.0385	9.3000e-004	0.0395		124.8562	124.8562	5.2400e-003		124.9663

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Total	**0.0633**	**0.2875**	**0.8922**	**2.8500e-003**	**0.1766**	**5.4700e-003**	**0.1820**	**0.0474**	**5.0400e-003**	**0.0525**		**225.8221**	**225.8221**	**5.9800e-003**		**225.9476**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7705	7.9325	7.2422	0.0113		0.4454	0.4454		0.4098	0.4098	0.0000	1,097.1688	1,097.1688	0.3549		1,104.6206
Total	**0.7705**	**7.9325**	**7.2422**	**0.0113**		**0.4454**	**0.4454**		**0.4098**	**0.4098**	**0.0000**	**1,097.1688**	**1,097.1688**	**0.3549**		**1,104.6206**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0317	0.2483	0.3983	1.0800e-003	0.0313	4.4700e-003	0.0357	8.9000e-003	4.1100e-003	0.0130		100.9659	100.9659	7.4000e-004		100.9813
Worker	0.0316	0.0393	0.4939	1.7700e-003	0.1453	1.0000e-003	0.1463	0.0385	9.3000e-004	0.0395		124.8562	124.8562	5.2400e-003		124.9663
Total	**0.0633**	**0.2875**	**0.8922**	**2.8500e-003**	**0.1766**	**5.4700e-003**	**0.1820**	**0.0474**	**5.0400e-003**	**0.0525**		**225.8221**	**225.8221**	**5.9800e-003**		**225.9476**

3.7 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7131	6.6304	6.9921	0.0111		0.3492	0.3492		0.3247	0.3247		1,020.0280	1,020.0280	0.2966		1,026.2569
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7131**	**6.6304**	**6.9921**	**0.0111**		**0.3492**	**0.3492**		**0.3247**	**0.3247**		**1,020.0280**	**1,020.0280**	**0.2966**		**1,026.2569**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0437	0.0544	0.6838	2.4600e-003	0.2012	1.3900e-003	0.2026	0.0534	1.2900e-003	0.0547		172.8779	172.8779	7.2600e-003		173.0302
Total	**0.0437**	**0.0544**	**0.6838**	**2.4600e-003**	**0.2012**	**1.3900e-003**	**0.2026**	**0.0534**	**1.2900e-003**	**0.0547**		**172.8779**	**172.8779**	**7.2600e-003**		**173.0302**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Off-Road	0.7131	6.6304	6.9921	0.0111		0.3492	0.3492		0.3247	0.3247	0.0000	1,020.0280	1,020.0280	0.2966		1,026.2569
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7131**	**6.6304**	**6.9921**	**0.0111**		**0.3492**	**0.3492**		**0.3247**	**0.3247**	**0.0000**	**1,020.0280**	**1,020.0280**	**0.2966**		**1,026.2569**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0437	0.0544	0.6838	2.4600e-003	0.2012	1.3900e-003	0.2026	0.0534	1.2900e-003	0.0547		172.8779	172.8779	7.2600e-003		173.0302
Total	**0.0437**	**0.0544**	**0.6838**	**2.4600e-003**	**0.2012**	**1.3900e-003**	**0.2026**	**0.0534**	**1.2900e-003**	**0.0547**		**172.8779**	**172.8779**	**7.2600e-003**		**173.0302**

3.8 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	18.5400					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.8537
Total	**18.7589**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.8537**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	7.2800e-003	9.0600e-003	0.1140	4.1000e-004	0.0335	2.3000e-004	0.0338	8.8900e-003	2.1000e-004	9.1100e-003		28.8130	28.8130	1.2100e-003		28.8384
Total	**7.2800e-003**	**9.0600e-003**	**0.1140**	**4.1000e-004**	**0.0335**	**2.3000e-004**	**0.0338**	**8.8900e-003**	**2.1000e-004**	**9.1100e-003**		**28.8130**	**28.8130**	**1.2100e-003**		**28.8384**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	18.5400					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.8537
Total	**18.7589**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.8537**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	7.2800e-003	9.0600e-003	0.1140	4.1000e-004	0.0335	2.3000e-004	0.0338	8.8900e-003	2.1000e-004	9.1100e-003		28.8130	28.8130	1.2100e-003		28.8384
Total	**7.2800e-003**	**9.0600e-003**	**0.1140**	**4.1000e-004**	**0.0335**	**2.3000e-004**	**0.0338**	**8.8900e-003**	**2.1000e-004**	**9.1100e-003**		**28.8130**	**28.8130**	**1.2100e-003**		**28.8384**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.0575	4.0808	21.6841	0.0793	5.6160	0.0772	5.6932	1.4987	0.0713	1.5699		5,892.6617	5,892.6617	0.1968		5,896.7953
Unmitigated	2.0575	4.0808	21.6841	0.0793	5.6160	0.0772	5.6932	1.4987	0.0713	1.5699		5,892.6617	5,892.6617	0.1968		5,896.7953

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	879.68	359.36	38.72	2,069,584	2,069,584
Total	879.68	359.36	38.72	2,069,584	2,069,584

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by

Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.505043	0.056653	0.194832	0.151784	0.042126	0.005989	0.016072	0.016505	0.001461	0.002178	0.004464	0.000494	0.002401

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0150	0.1363	0.1145	8.2000e-004		0.0104	0.0104		0.0104	0.0104		163.5842	163.5842	3.1400e-003	3.0000e-003	164.5798
NaturalGas Unmitigated	0.0150	0.1363	0.1145	8.2000e-004		0.0104	0.0104		0.0104	0.0104		163.5842	163.5842	3.1400e-003	3.0000e-003	164.5798

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	1390.47	0.0150	0.1363	0.1145	8.2000e-004		0.0104	0.0104		0.0104	0.0104		163.5842	163.5842	3.1400e-003	3.0000e-003	164.5798

Total		**0.0150**	**0.1363**	**0.1145**	**8.2000e-004**		**0.0104**	**0.0104**		**0.0104**	**0.0104**		**163.5842**	**163.5842**	**3.1400e-003**	**3.0000e-003**	**164.5798**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	1.39047	0.0150	0.1363	0.1145	8.2000e-004		0.0104	0.0104		0.0104	0.0104		163.5842	163.5842	3.1400e-003	3.0000e-003	164.5798
Total		**0.0150**	**0.1363**	**0.1145**	**8.2000e-004**		**0.0104**	**0.0104**		**0.0104**	**0.0104**		**163.5842**	**163.5842**	**3.1400e-003**	**3.0000e-003**	**164.5798**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.8371	3.0000e-005	3.2700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.0000e-003	7.0000e-003	2.0000e-005		7.3900e-003
Unmitigated	0.8371	3.0000e-005	3.2700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.0000e-003	7.0000e-003	2.0000e-005		7.3900e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2032					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.6336					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.0000e-004	3.0000e-005	3.2700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.0000e-003	7.0000e-003	2.0000e-005		7.3900e-003
Total	**0.8371**	**3.0000e-005**	**3.2700e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**7.0000e-003**	**7.0000e-003**	**2.0000e-005**		**7.3900e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2032					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.6336					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.0000e-004	3.0000e-005	3.2700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.0000e-003	7.0000e-003	2.0000e-005		7.3900e-003
Total	**0.8371**	**3.0000e-005**	**3.2700e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**7.0000e-003**	**7.0000e-003**	**2.0000e-005**		**7.3900e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Phase 3 - Dance Building

Orange County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	32.00	1000sqft	0.73	32,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Modified

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - modified

Demolition -

Architectural Coating - SCAQMD Rule 1113

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value

tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblConstructionPhase	NumDays	5.00	10.00
tblProjectCharacteristics	OperationalYear	2014	2022

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	1.1109	10.6512	11.3503	0.0237	3.4414	0.5259	3.9507	0.5641	0.4845	1.0486	0.0000	2,222.7063	2,222.7063	0.3610	0.0000	2,230.2871
2021	18.7665	8.2292	8.1993	0.0141	0.2012	0.4509	0.6275	0.0534	0.4148	0.4623	0.0000	1,315.4920	1,315.4920	0.3609	0.0000	1,323.0698
Total	**19.8775**	**18.8804**	**19.5495**	**0.0378**	**3.6426**	**0.9768**	**4.5782**	**0.6174**	**0.8993**	**1.5108**	**0.0000**	**3,538.1982**	**3,538.1982**	**0.7218**	**0.0000**	**3,553.3568**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	1.1109	10.6512	11.3503	0.0237	1.5613	0.5259	2.0706	0.2794	0.4845	0.7639	0.0000	2,222.7063	2,222.7063	0.3610	0.0000	2,230.2871
2021	18.7665	8.2292	8.1993	0.0141	0.2012	0.4509	0.6275	0.0534	0.4148	0.4623	0.0000	1,315.4920	1,315.4920	0.3609	0.0000	1,323.0698
Total	**19.8775**	**18.8804**	**19.5495**	**0.0378**	**1.7625**	**0.9768**	**2.6981**	**0.3328**	**0.8993**	**1.2262**	**0.0000**	**3,538.1982**	**3,538.1982**	**0.7218**	**0.0000**	**3,553.3568**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**51.61**	**0.00**	**41.07**	**46.10**	**0.00**	**18.84**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.8371	3.0000e-005	3.2700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.0000e-003	7.0000e-003	2.0000e-005		7.3900e-003
Energy	0.0150	0.1363	0.1145	8.2000e-004		0.0104	0.0104		0.0104	0.0104		163.5842	163.5842	3.1400e-003	3.0000e-003	164.5798
Mobile	2.1680	4.3113	21.5885	0.0758	5.6160	0.0774	5.6934	1.4987	0.0715	1.5701		5,640.4607	5,640.4607	0.1970		5,644.5979
Total	**3.0201**	**4.4477**	**21.7063**	**0.0766**	**5.6160**	**0.0877**	**5.7037**	**1.4987**	**0.0818**	**1.5805**		**5,804.0520**	**5,804.0520**	**0.2002**	**3.0000e-003**	**5,809.1850**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.8371	3.0000e-005	3.2700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.0000e-003	7.0000e-003	2.0000e-005		7.3900e-003
Energy	0.0150	0.1363	0.1145	8.2000e-004		0.0104	0.0104		0.0104	0.0104		163.5842	163.5842	3.1400e-003	3.0000e-003	164.5798
Mobile	2.1680	4.3113	21.5885	0.0758	5.6160	0.0774	5.6934	1.4987	0.0715	1.5701		5,640.4607	5,640.4607	0.1970		5,644.5979
Total	**3.0201**	**4.4477**	**21.7063**	**0.0766**	**5.6160**	**0.0877**	**5.7037**	**1.4987**	**0.0818**	**1.5805**		**5,804.0520**	**5,804.0520**	**0.2002**	**3.0000e-003**	**5,809.1850**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2020	9/14/2020	5	10	
2	Site Preparation	Site Preparation	9/15/2020	9/15/2020	5	1	
3	Grading	Grading	9/16/2020	9/17/2020	5	2	
4	Trenching	Trenching	9/18/2020	10/1/2020	5	10	
5	Building Construction	Building Construction	10/2/2020	2/18/2021	5	100	
6	Paving	Paving	2/19/2021	2/25/2021	5	5	
7	Architectural Coating	Architectural Coating	2/26/2021	3/11/2021	5	10	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 48,000; Non-Residential Outdoor: 16,000 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	255	0.40

Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Trenching	Plate Compactors	1	8.00	8	0.43
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Trenching	Trenchers	1	8.00	80	0.50
Building Construction	Cranes	1	4.00	226	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	125	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	142.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	13.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2020

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Fugitive Dust					3.0821	0.0000	3.0821	0.4667	0.0000	0.4667			0.0000			0.0000
Off-Road	0.8527	7.7248	8.0981	0.0120		0.4561	0.4561		0.4355	0.4355		1,151.7011	1,151.7011	0.2184		1,156.2863
Total	**0.8527**	**7.7248**	**8.0981**	**0.0120**	**3.0821**	**0.4561**	**3.5382**	**0.4667**	**0.4355**	**0.9021**		**1,151.7011**	**1,151.7011**	**0.2184**		**1,156.2863**

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Hauling	0.2314	2.8911	2.8774	0.0104	0.2475	0.0525	0.3000	0.0678	0.0483	0.1161		978.5464	978.5464	7.7300e-003		978.7089
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0268	0.0353	0.3748	1.2900e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		92.4588	92.4588	4.2000e-003		92.5470
Total	**0.2582**	**2.9264**	**3.2522**	**0.0117**	**0.3593**	**0.0533**	**0.4125**	**0.0974**	**0.0490**	**0.1464**		**1,071.0052**	**1,071.0052**	**0.0119**		**1,071.2559**

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					1.2020	0.0000	1.2020	0.1820	0.0000	0.1820			0.0000			0.0000
Off-Road	0.8527	7.7248	8.0981	0.0120		0.4561	0.4561		0.4355	0.4355	0.0000	1,151.7011	1,151.7011	0.2184		1,156.2863
Total	**0.8527**	**7.7248**	**8.0981**	**0.0120**	**1.2020**	**0.4561**	**1.6581**	**0.1820**	**0.4355**	**0.6175**	**0.0000**	**1,151.7011**	**1,151.7011**	**0.2184**		**1,156.2863**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2314	2.8911	2.8774	0.0104	0.2475	0.0525	0.3000	0.0678	0.0483	0.1161		978.5464	978.5464	7.7300e-003		978.7089
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0268	0.0353	0.3748	1.2900e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		92.4588	92.4588	4.2000e-003		92.5470
Total	**0.2582**	**2.9264**	**3.2522**	**0.0117**	**0.3593**	**0.0533**	**0.4125**	**0.0974**	**0.0490**	**0.1464**		**1,071.0052**	**1,071.0052**	**0.0119**		**1,071.2559**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.9225	9.0637	6.8357	9.3100e-003		0.5213	0.5213		0.4796	0.4796		902.2494	902.2494	0.2918		908.3773
Total	**0.9225**	**9.0637**	**6.8357**	**9.3100e-003**	**0.5303**	**0.5213**	**1.0516**	**0.0573**	**0.4796**	**0.5369**		**902.2494**	**902.2494**	**0.2918**		**908.3773**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0134	0.0177	0.1874	6.4000e-004	0.0559	3.8000e-004	0.0563	0.0148	3.5000e-004	0.0152		46.2294	46.2294	2.1000e-003		46.2735
Total	**0.0134**	**0.0177**	**0.1874**	**6.4000e-004**	**0.0559**	**3.8000e-004**	**0.0563**	**0.0148**	**3.5000e-004**	**0.0152**		**46.2294**	**46.2294**	**2.1000e-003**		**46.2735**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2068	0.0000	0.2068	0.0223	0.0000	0.0223			0.0000			0.0000
Off-Road	0.9225	9.0637	6.8357	9.3100e-003		0.5213	0.5213		0.4796	0.4796	0.0000	902.2494	902.2494	0.2918		908.3773
Total	**0.9225**	**9.0637**	**6.8357**	**9.3100e-003**	**0.2068**	**0.5213**	**0.7281**	**0.0223**	**0.4796**	**0.5019**	**0.0000**	**902.2494**	**902.2494**	**0.2918**		**908.3773**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0134	0.0177	0.1874	6.4000e-004	0.0559	3.8000e-004	0.0563	0.0148	3.5000e-004	0.0152		46.2294	46.2294	2.1000e-003		46.2735
Total	**0.0134**	**0.0177**	**0.1874**	**6.4000e-004**	**0.0559**	**3.8000e-004**	**0.0563**	**0.0148**	**3.5000e-004**	**0.0152**		**46.2294**	**46.2294**	**2.1000e-003**		**46.2735**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	0.8527	7.7248	8.0981	0.0120		0.4561	0.4561		0.4355	0.4355		1,151.7011	1,151.7011	0.2184		1,156.2863
Total	**0.8527**	**7.7248**	**8.0981**	**0.0120**	**0.7528**	**0.4561**	**1.2089**	**0.4138**	**0.4355**	**0.8492**		**1,151.7011**	**1,151.7011**	**0.2184**		**1,156.2863**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0268	0.0353	0.3748	1.2900e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		92.4588	92.4588	4.2000e-003		92.5470

Total	0.0268	0.0353	0.3748	1.2900e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		92.4588	92.4588	4.2000e-003		92.5470

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2936	0.0000	0.2936	0.1614	0.0000	0.1614			0.0000			0.0000
Off-Road	0.8527	7.7248	8.0981	0.0120		0.4561	0.4561		0.4355	0.4355	0.0000	1,151.7011	1,151.7011	0.2184		1,156.2863
Total	**0.8527**	**7.7248**	**8.0981**	**0.0120**	**0.2936**	**0.4561**	**0.7497**	**0.1614**	**0.4355**	**0.5968**	**0.0000**	**1,151.7011**	**1,151.7011**	**0.2184**		**1,156.2863**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0268	0.0353	0.3748	1.2900e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		92.4588	92.4588	4.2000e-003		92.5470
Total	**0.0268**	**0.0353**	**0.3748**	**1.2900e-003**	**0.1118**	**7.6000e-004**	**0.1125**	**0.0296**	**7.1000e-004**	**0.0304**		**92.4588**	**92.4588**	**4.2000e-003**		**92.5470**

3.5 Trenching - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6801	6.2504	5.1941	7.0500e-003		0.4344	0.4344		0.4005	0.4005		670.4398	670.4398	0.2093		674.8343
Total	**0.6801**	**6.2504**	**5.1941**	**7.0500e-003**		**0.4344**	**0.4344**		**0.4005**	**0.4005**		**670.4398**	**670.4398**	**0.2093**		**674.8343**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0214	0.0283	0.2999	1.0300e-003	0.0894	6.1000e-004	0.0900	0.0237	5.7000e-004	0.0243		73.9670	73.9670	3.3600e-003		74.0376
Total	**0.0214**	**0.0283**	**0.2999**	**1.0300e-003**	**0.0894**	**6.1000e-004**	**0.0900**	**0.0237**	**5.7000e-004**	**0.0243**		**73.9670**	**73.9670**	**3.3600e-003**		**74.0376**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.6801	6.2504	5.1941	7.0500e-003		0.4344	0.4344		0.4005	0.4005	0.0000	670.4398	670.4398	0.2093		674.8343
Total	**0.6801**	**6.2504**	**5.1941**	**7.0500e-003**		**0.4344**	**0.4344**		**0.4005**	**0.4005**	**0.0000**	**670.4398**	**670.4398**	**0.2093**		**674.8343**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0214	0.0283	0.2999	1.0300e-003	0.0894	6.1000e-004	0.0900	0.0237	5.7000e-004	0.0243		73.9670	73.9670	3.3600e-003		74.0376
Total	**0.0214**	**0.0283**	**0.2999**	**1.0300e-003**	**0.0894**	**6.1000e-004**	**0.0900**	**0.0237**	**5.7000e-004**	**0.0243**		**73.9670**	**73.9670**	**3.3600e-003**		**74.0376**

3.6 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8568	8.7940	7.3646	0.0113		0.5200	0.5200		0.4784	0.4784		1,096.9306	1,096.9306	0.3548		1,104.3807
Total	**0.8568**	**8.7940**	**7.3646**	**0.0113**		**0.5200**	**0.5200**		**0.4784**	**0.4784**		**1,096.9306**	**1,096.9306**	**0.3548**		**1,104.3807**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0357	0.2988	0.5093	1.0700e-003	0.0313	4.9600e-003	0.0362	8.9000e-003	4.5600e-003	0.0135		100.1924	100.1924	7.6000e-004		100.2083
Worker	0.0348	0.0459	0.4873	1.6800e-003	0.1453	9.9000e-004	0.1463	0.0385	9.2000e-004	0.0395		120.1964	120.1964	5.4600e-003		120.3111
Total	**0.0705**	**0.3447**	**0.9965**	**2.7500e-003**	**0.1766**	**5.9500e-003**	**0.1825**	**0.0474**	**5.4800e-003**	**0.0529**		**220.3888**	**220.3888**	**6.2200e-003**		**220.5194**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8568	8.7940	7.3646	0.0113		0.5200	0.5200		0.4784	0.4784	0.0000	1,096.9306	1,096.9306	0.3548		1,104.3807
Total	**0.8568**	**8.7940**	**7.3646**	**0.0113**		**0.5200**	**0.5200**		**0.4784**	**0.4784**	**0.0000**	**1,096.9306**	**1,096.9306**	**0.3548**		**1,104.3807**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0357	0.2988	0.5093	1.0700e-003	0.0313	4.9600e-003	0.0362	8.9000e-003	4.5600e-003	0.0135		100.1924	100.1924	7.6000e-004		100.2083
Worker	0.0348	0.0459	0.4873	1.6800e-003	0.1453	9.9000e-004	0.1463	0.0385	9.2000e-004	0.0395		120.1964	120.1964	5.4600e-003		120.3111
Total	**0.0705**	**0.3447**	**0.9965**	**2.7500e-003**	**0.1766**	**5.9500e-003**	**0.1825**	**0.0474**	**5.4800e-003**	**0.0529**		**220.3888**	**220.3888**	**6.2200e-003**		**220.5194**

3.6 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7705	7.9325	7.2422	0.0113		0.4454	0.4454		0.4098	0.4098		1,097.1688	1,097.1688	0.3549		1,104.6206
Total	**0.7705**	**7.9325**	**7.2422**	**0.0113**		**0.4454**	**0.4454**		**0.4098**	**0.4098**		**1,097.1688**	**1,097.1688**	**0.3549**		**1,104.6206**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0345	0.2536	0.4973	1.0700e-003	0.0313	4.5000e-003	0.0358	8.9000e-003	4.1400e-003	0.0131		100.1080	100.1080	7.6000e-004		100.1240
Worker	0.0331	0.0431	0.4597	1.6800e-003	0.1453	1.0000e-003	0.1463	0.0385	9.3000e-004	0.0395		118.2152	118.2152	5.2400e-003		118.3252

Total	0.0676	0.2967	0.9570	2.7500e-003	0.1766	5.5000e-003	0.1821	0.0474	5.0700e-003	0.0525		218.3231	218.3231	6.0000e-003		218.4492

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7705	7.9325	7.2422	0.0113		0.4454	0.4454		0.4098	0.4098	0.0000	1,097.1688	1,097.1688	0.3549		1,104.6206
Total	**0.7705**	**7.9325**	**7.2422**	**0.0113**		**0.4454**	**0.4454**		**0.4098**	**0.4098**	**0.0000**	**1,097.1688**	**1,097.1688**	**0.3549**		**1,104.6206**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0345	0.2536	0.4973	1.0700e-003	0.0313	4.5000e-003	0.0358	8.9000e-003	4.1400e-003	0.0131		100.1080	100.1080	7.6000e-004		100.1240
Worker	0.0331	0.0431	0.4597	1.6800e-003	0.1453	1.0000e-003	0.1463	0.0385	9.3000e-004	0.0395		118.2152	118.2152	5.2400e-003		118.3252
Total	**0.0676**	**0.2967**	**0.9570**	**2.7500e-003**	**0.1766**	**5.5000e-003**	**0.1821**	**0.0474**	**5.0700e-003**	**0.0525**		**218.3231**	**218.3231**	**6.0000e-003**		**218.4492**

3.7 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7131	6.6304	6.9921	0.0111		0.3492	0.3492		0.3247	0.3247		1,020.0280	1,020.0280	0.2966		1,026.2569
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7131**	**6.6304**	**6.9921**	**0.0111**		**0.3492**	**0.3492**		**0.3247**	**0.3247**		**1,020.0280**	**1,020.0280**	**0.2966**		**1,026.2569**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0458	0.0597	0.6365	2.3200e-003	0.2012	1.3900e-003	0.2026	0.0534	1.2900e-003	0.0547		163.6825	163.6825	7.2600e-003		163.8349
Total	**0.0458**	**0.0597**	**0.6365**	**2.3200e-003**	**0.2012**	**1.3900e-003**	**0.2026**	**0.0534**	**1.2900e-003**	**0.0547**		**163.6825**	**163.6825**	**7.2600e-003**		**163.8349**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.7131	6.6304	6.9921	0.0111		0.3492	0.3492		0.3247	0.3247	0.0000	1,020.0280	1,020.0280	0.2966		1,026.2569
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7131**	**6.6304**	**6.9921**	**0.0111**		**0.3492**	**0.3492**		**0.3247**	**0.3247**	**0.0000**	**1,020.0280**	**1,020.0280**	**0.2966**		**1,026.2569**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0458	0.0597	0.6365	2.3200e-003	0.2012	1.3900e-003	0.2026	0.0534	1.2900e-003	0.0547		163.6825	163.6825	7.2600e-003		163.8349
Total	**0.0458**	**0.0597**	**0.6365**	**2.3200e-003**	**0.2012**	**1.3900e-003**	**0.2026**	**0.0534**	**1.2900e-003**	**0.0547**		**163.6825**	**163.6825**	**7.2600e-003**		**163.8349**

3.8 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	18.5400					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.8537
Total	**18.7589**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.8537**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	7.6300e-003	9.9500e-003	0.1061	3.9000e-004	0.0335	2.3000e-004	0.0338	8.8900e-003	2.1000e-004	9.1100e-003		27.2804	27.2804	1.2100e-003		27.3058
Total	**7.6300e-003**	**9.9500e-003**	**0.1061**	**3.9000e-004**	**0.0335**	**2.3000e-004**	**0.0338**	**8.8900e-003**	**2.1000e-004**	**9.1100e-003**		**27.2804**	**27.2804**	**1.2100e-003**		**27.3058**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	18.5400					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.8537
Total	**18.7589**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.8537**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	7.6300e-003	9.9500e-003	0.1061	3.9000e-004	0.0335	2.3000e-004	0.0338	8.8900e-003	2.1000e-004	9.1100e-003		27.2804	27.2804	1.2100e-003		27.3058
Total	**7.6300e-003**	**9.9500e-003**	**0.1061**	**3.9000e-004**	**0.0335**	**2.3000e-004**	**0.0338**	**8.8900e-003**	**2.1000e-004**	**9.1100e-003**		**27.2804**	**27.2804**	**1.2100e-003**		**27.3058**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.1680	4.3113	21.5885	0.0758	5.6160	0.0774	5.6934	1.4987	0.0715	1.5701		5,640.4607	5,640.4607	0.1970		5,644.5979
Unmitigated	2.1680	4.3113	21.5885	0.0758	5.6160	0.0774	5.6934	1.4987	0.0715	1.5701		5,640.4607	5,640.4607	0.1970		5,644.5979

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	879.68	359.36	38.72	2,069,584	2,069,584
Total	879.68	359.36	38.72	2,069,584	2,069,584

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by

Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.505043	0.056653	0.194832	0.151784	0.042126	0.005989	0.016072	0.016505	0.001461	0.002178	0.004464	0.000494	0.002401

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0150	0.1363	0.1145	8.2000e-004		0.0104	0.0104		0.0104	0.0104		163.5842	163.5842	3.1400e-003	3.0000e-003	164.5798
NaturalGas Unmitigated	0.0150	0.1363	0.1145	8.2000e-004		0.0104	0.0104		0.0104	0.0104		163.5842	163.5842	3.1400e-003	3.0000e-003	164.5798

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	1390.47	0.0150	0.1363	0.1145	8.2000e-004		0.0104	0.0104		0.0104	0.0104		163.5842	163.5842	3.1400e-003	3.0000e-003	164.5798

Total		**0.0150**	**0.1363**	**0.1145**	**8.2000e-004**		**0.0104**	**0.0104**		**0.0104**	**0.0104**		**163.5842**	**163.5842**	**3.1400e-003**	**3.0000e-003**	**164.5798**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	1.39047	0.0150	0.1363	0.1145	8.2000e-004		0.0104	0.0104		0.0104	0.0104		163.5842	163.5842	3.1400e-003	3.0000e-003	164.5798
Total		**0.0150**	**0.1363**	**0.1145**	**8.2000e-004**		**0.0104**	**0.0104**		**0.0104**	**0.0104**		**163.5842**	**163.5842**	**3.1400e-003**	**3.0000e-003**	**164.5798**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.8371	3.0000e-005	3.2700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.0000e-003	7.0000e-003	2.0000e-005		7.3900e-003
Unmitigated	0.8371	3.0000e-005	3.2700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.0000e-003	7.0000e-003	2.0000e-005		7.3900e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2032					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.6336					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.0000e-004	3.0000e-005	3.2700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.0000e-003	7.0000e-003	2.0000e-005		7.3900e-003
Total	**0.8371**	**3.0000e-005**	**3.2700e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**7.0000e-003**	**7.0000e-003**	**2.0000e-005**		**7.3900e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2032					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.6336					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.0000e-004	3.0000e-005	3.2700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.0000e-003	7.0000e-003	2.0000e-005		7.3900e-003
Total	**0.8371**	**3.0000e-005**	**3.2700e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**7.0000e-003**	**7.0000e-003**	**2.0000e-005**		**7.3900e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Phase 3 - Language Arts

Orange County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	107.76	1000sqft	0.83	107,760.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - modified

Construction Phase - modified

Off-road Equipment -

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Demolition - Demolition of Social and Behavioral Sciences, Virgil D Sessions Lit and Lang Bldg, Writer's Row, Journalism, and 150 Annex

Grading - modified

Architectural Coating - scaqmd rule 1113

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblConstructionPhase	NumDays	5.00	10.00
tblConstructionPhase	NumDays	10.00	20.00
tblLandUse	LotAcreage	2.47	0.83
tblProjectCharacteristics	OperationalYear	2014	2022
tblTripsAndVMT	HaulingTripNumber	287.00	331.00
tblTripsAndVMT	VendorTripNumber	0.00	18.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.3872	0.6905	0.7387	1.4500e-003	0.0699	0.0368	0.1067	0.0153	0.0341	0.0494	0.0000	118.2994	118.2994	0.0213	0.0000	118.7468
Total	**0.3872**	**0.6905**	**0.7387**	**1.4500e-003**	**0.0699**	**0.0368**	**0.1067**	**0.0153**	**0.0341**	**0.0494**	**0.0000**	**118.2994**	**118.2994**	**0.0213**	**0.0000**	**118.7468**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.3872	0.6905	0.7387	1.4500e-003	0.0504	0.0368	0.0872	0.0122	0.0341	0.0462	0.0000	118.2993	118.2993	0.0213	0.0000	118.7467
Total	**0.3872**	**0.6905**	**0.7387**	**1.4500e-003**	**0.0504**	**0.0368**	**0.0872**	**0.0122**	**0.0341**	**0.0462**	**0.0000**	**118.2993**	**118.2993**	**0.0213**	**0.0000**	**118.7467**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**27.94**	**0.00**	**18.32**	**20.48**	**0.00**	**6.36**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5144	1.0000e-005	1.3800e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.6700e-003	2.6700e-003	1.0000e-005	0.0000	2.8200e-003
Energy	9.2200e-003	0.0838	0.0704	5.0000e-004		6.3700e-003	6.3700e-003		6.3700e-003	6.3700e-003	0.0000	524.4674	524.4674	0.0217	5.7900e-003	526.7180
Mobile	0.9764	2.0979	10.3546	0.0366	2.6337	0.0368	2.6706	0.7039	0.0340	0.7379	0.0000	2,470.0133	2,470.0133	0.0852	0.0000	2,471.8020
Waste						0.0000	0.0000		0.0000	0.0000	28.4370	0.0000	28.4370	1.6806	0.0000	63.7292
Water						0.0000	0.0000		0.0000	0.0000	1.6769	45.9785	47.6554	0.1743	4.5000e-003	52.7128
Total	**1.5000**	**2.1817**	**10.4264**	**0.0371**	**2.6337**	**0.0432**	**2.6769**	**0.7039**	**0.0404**	**0.7442**	**30.1139**	**3,040.4618**	**3,070.5757**	**1.9618**	**0.0103**	**3,114.9647**

Mitigated Operational

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Area	0.5144	1.0000e-005	1.3800e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.6700e-003	2.6700e-003	1.0000e-005	0.0000	2.8200e-003
Energy	9.2200e-003	0.0838	0.0704	5.0000e-004		6.3700e-003	6.3700e-003		6.3700e-003	6.3700e-003	0.0000	524.4674	524.4674	0.0217	5.7900e-003	526.7180
Mobile	0.9764	2.0979	10.3546	0.0366	2.6337	0.0368	2.6706	0.7039	0.0340	0.7379	0.0000	2,470.0133	2,470.0133	0.0852	0.0000	2,471.8020
Waste						0.0000	0.0000		0.0000	0.0000	28.4370	0.0000	28.4370	1.6806	0.0000	63.7292
Water						0.0000	0.0000		0.0000	0.0000	1.6769	45.9785	47.6554	0.1743	4.5000e-003	52.7101
Total	**1.5000**	**2.1817**	**10.4264**	**0.0371**	**2.6337**	**0.0432**	**2.6769**	**0.7039**	**0.0404**	**0.7442**	**30.1139**	**3,040.4618**	**3,070.5757**	**1.9617**	**0.0103**	**3,114.9621**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2020	1/28/2020	5	20	
2	Site Preparation	Site Preparation	1/29/2020	1/29/2020	5	1	
3	Grading	Grading	1/30/2020	1/31/2020	5	2	
4	Trenching	Trenching	2/1/2020	2/14/2020	5	10	
5	Building Construction	Building Construction	2/15/2020	7/3/2020	5	100	
6	Paving	Paving	7/4/2020	7/10/2020	5	5	
7	Architectural Coating	Architectural Coating	7/11/2020	7/24/2020	5	10	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 161,640; Non-Residential Outdoor: 53,880 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Trenching	Cranes	0	4.00	226	0.29
Trenching	Forklifts	0	6.00	89	0.20
Trenching	Plate Compactors	1	8.00	8	0.43
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Trenching	Trenchers	1	8.00	80	0.50
Building Construction	Cranes	1	4.00	226	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	125	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	331.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	3	8.00	18.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	45.00	18.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	9.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0310	0.0000	0.0310	4.7000e-003	0.0000	4.7000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.5300e-003	0.0773	0.0810	1.2000e-004		4.5600e-003	4.5600e-003		4.3500e-003	4.3500e-003	0.0000	10.4481	10.4481	1.9800e-003	0.0000	10.4897
Total	**8.5300e-003**	**0.0773**	**0.0810**	**1.2000e-004**	**0.0310**	**4.5600e-003**	**0.0356**	**4.7000e-003**	**4.3500e-003**	**9.0500e-003**	**0.0000**	**10.4481**	**10.4481**	**1.9800e-003**	**0.0000**	**10.4897**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.6600e-003	0.0343	0.0324	1.2000e-004	2.8400e-003	6.1000e-004	3.4500e-003	7.8000e-004	5.6000e-004	1.3400e-003	0.0000	10.3607	10.3607	8.0000e-005	0.0000	10.3624
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5000e-004	3.6000e-004	3.8300e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1100e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	0.8515	0.8515	4.0000e-005	0.0000	0.8523
Total	**2.9100e-003**	**0.0346**	**0.0362**	**1.3000e-004**	**3.9400e-003**	**6.2000e-004**	**4.5600e-003**	**1.0700e-003**	**5.7000e-004**	**1.6400e-003**	**0.0000**	**11.2122**	**11.2122**	**1.2000e-004**	**0.0000**	**11.2147**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0121	0.0000	0.0121	1.8300e-003	0.0000	1.8300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.5300e-003	0.0773	0.0810	1.2000e-004		4.5600e-003	4.5600e-003		4.3500e-003	4.3500e-003	0.0000	10.4480	10.4480	1.9800e-003	0.0000	10.4896
Total	**8.5300e-003**	**0.0773**	**0.0810**	**1.2000e-004**	**0.0121**	**4.5600e-003**	**0.0167**	**1.8300e-003**	**4.3500e-003**	**6.1800e-003**	**0.0000**	**10.4480**	**10.4480**	**1.9800e-003**	**0.0000**	**10.4896**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Hauling	2.6600e-003	0.0343	0.0324	1.2000e-004	2.8400e-003	6.1000e-004	3.4500e-003	7.8000e-004	5.6000e-004	1.3400e-003	0.0000	10.3607	10.3607	8.0000e-005	0.0000	10.3624
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5000e-004	3.6000e-004	3.8300e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1100e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	0.8515	0.8515	4.0000e-005	0.0000	0.8523
Total	**2.9100e-003**	**0.0346**	**0.0362**	**1.3000e-004**	**3.9400e-003**	**6.2000e-004**	**4.5600e-003**	**1.0700e-003**	**5.7000e-004**	**1.6400e-003**	**0.0000**	**11.2122**	**11.2122**	**1.2000e-004**	**0.0000**	**11.2147**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.6000e-004	4.5300e-003	3.4200e-003	0.0000		2.6000e-004	2.6000e-004		2.4000e-004	2.4000e-004	0.0000	0.4093	0.4093	1.3000e-004	0.0000	0.4120
Total	**4.6000e-004**	**4.5300e-003**	**3.4200e-003**	**0.0000**	**2.7000e-004**	**2.6000e-004**	**5.3000e-004**	**3.0000e-005**	**2.4000e-004**	**2.7000e-004**	**0.0000**	**0.4093**	**0.4093**	**1.3000e-004**	**0.0000**	**0.4120**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	1.0000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0213	0.0213	0.0000	0.0000	0.0213
Total	**1.0000e-005**	**1.0000e-005**	**1.0000e-004**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0213**	**0.0213**	**0.0000**	**0.0000**	**0.0213**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.0000e-004	0.0000	1.0000e-004	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.6000e-004	4.5300e-003	3.4200e-003	0.0000		2.6000e-004	2.6000e-004		2.4000e-004	2.4000e-004	0.0000	0.4093	0.4093	1.3000e-004	0.0000	0.4120
Total	**4.6000e-004**	**4.5300e-003**	**3.4200e-003**	**0.0000**	**1.0000e-004**	**2.6000e-004**	**3.6000e-004**	**1.0000e-005**	**2.4000e-004**	**2.5000e-004**	**0.0000**	**0.4093**	**0.4093**	**1.3000e-004**	**0.0000**	**0.4120**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	1.0000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0213	0.0213	0.0000	0.0000	0.0213
Total	**1.0000e-005**	**1.0000e-005**	**1.0000e-004**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0213**	**0.0213**	**0.0000**	**0.0000**	**0.0213**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.5000e-004	0.0000	7.5000e-004	4.1000e-004	0.0000	4.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.5000e-004	7.7200e-003	8.1000e-003	1.0000e-005		4.6000e-004	4.6000e-004		4.4000e-004	4.4000e-004	0.0000	1.0448	1.0448	2.0000e-004	0.0000	1.0490
Total	**8.5000e-004**	**7.7200e-003**	**8.1000e-003**	**1.0000e-005**	**7.5000e-004**	**4.6000e-004**	**1.2100e-003**	**4.1000e-004**	**4.4000e-004**	**8.5000e-004**	**0.0000**	**1.0448**	**1.0448**	**2.0000e-004**	**0.0000**	**1.0490**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	4.0000e-005	3.8000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0852	0.0852	0.0000	0.0000	0.0852
Total	**2.0000e-005**	**4.0000e-005**	**3.8000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0852**	**0.0852**	**0.0000**	**0.0000**	**0.0852**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.9000e-004	0.0000	2.9000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	8.5000e-004	7.7200e-003	8.1000e-003	1.0000e-005		4.6000e-004	4.6000e-004		4.4000e-004	4.4000e-004	0.0000	1.0448	1.0448	2.0000e-004	0.0000	1.0490
Total	**8.5000e-004**	**7.7200e-003**	**8.1000e-003**	**1.0000e-005**	**2.9000e-004**	**4.6000e-004**	**7.5000e-004**	**1.6000e-004**	**4.4000e-004**	**6.0000e-004**	**0.0000**	**1.0448**	**1.0448**	**2.0000e-004**	**0.0000**	**1.0490**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	4.0000e-005	3.8000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0852	0.0852	0.0000	0.0000	0.0852
Total	**2.0000e-005**	**4.0000e-005**	**3.8000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0852**	**0.0852**	**0.0000**	**0.0000**	**0.0852**

3.5 Trenching - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.4000e-003	0.0313	0.0260	4.0000e-005		2.1700e-003	2.1700e-003		2.0000e-003	2.0000e-003	0.0000	3.0411	3.0411	9.5000e-004	0.0000	3.0610
Total	**3.4000e-003**	**0.0313**	**0.0260**	**4.0000e-005**		**2.1700e-003**	**2.1700e-003**		**2.0000e-003**	**2.0000e-003**	**0.0000**	**3.0411**	**3.0411**	**9.5000e-004**	**0.0000**	**3.0610**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.2000e-004	5.4800e-003	8.7200e-003	2.0000e-005	9.6000e-004	9.0000e-005	1.0500e-003	2.6000e-004	8.0000e-005	3.4000e-004	0.0000	1.6442	1.6442	1.0000e-005	0.0000	1.6445
Worker	2.0000e-004	2.9000e-004	3.0700e-003	1.0000e-005	1.6400e-003	1.0000e-005	1.6500e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	0.6812	0.6812	3.0000e-005	0.0000	0.6818
Total	**8.2000e-004**	**5.7700e-003**	**0.0118**	**3.0000e-005**	**2.6000e-003**	**1.0000e-004**	**2.7000e-003**	**6.8000e-004**	**9.0000e-005**	**7.7000e-004**	**0.0000**	**2.3254**	**2.3254**	**4.0000e-005**	**0.0000**	**2.3263**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.4000e-003	0.0313	0.0260	4.0000e-005		2.1700e-003	2.1700e-003		2.0000e-003	2.0000e-003	0.0000	3.0411	3.0411	9.5000e-004	0.0000	3.0610
Total	**3.4000e-003**	**0.0313**	**0.0260**	**4.0000e-005**		**2.1700e-003**	**2.1700e-003**		**2.0000e-003**	**2.0000e-003**	**0.0000**	**3.0411**	**3.0411**	**9.5000e-004**	**0.0000**	**3.0610**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.2000e-004	5.4800e-003	8.7200e-003	2.0000e-005	9.6000e-004	9.0000e-005	1.0500e-003	2.6000e-004	8.0000e-005	3.4000e-004	0.0000	1.6442	1.6442	1.0000e-005	0.0000	1.6445
Worker	2.0000e-004	2.9000e-004	3.0700e-003	1.0000e-005	1.6400e-003	1.0000e-005	1.6500e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	0.6812	0.6812	3.0000e-005	0.0000	0.6818
Total	**8.2000e-004**	**5.7700e-003**	**0.0118**	**3.0000e-005**	**2.6000e-003**	**1.0000e-004**	**2.7000e-003**	**6.8000e-004**	**9.0000e-005**	**7.7000e-004**	**0.0000**	**2.3254**	**2.3254**	**4.0000e-005**	**0.0000**	**2.3263**

3.6 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0428	0.4397	0.3682	5.7000e-004		0.0260	0.0260		0.0239	0.0239	0.0000	49.7559	49.7559	0.0161	0.0000	50.0939
Total	**0.0428**	**0.4397**	**0.3682**	**5.7000e-004**		**0.0260**	**0.0260**		**0.0239**	**0.0239**	**0.0000**	**49.7559**	**49.7559**	**0.0161**	**0.0000**	**50.0939**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.2300e-003	0.0548	0.0872	1.9000e-004	5.5400e-003	8.9000e-004	6.4300e-003	1.5800e-003	8.2000e-004	2.4000e-003	0.0000	16.4420	16.4420	1.2000e-004	0.0000	16.4445
Worker	5.6200e-003	8.1700e-003	0.0863	2.9000e-004	0.0247	1.7000e-004	0.0249	6.5600e-003	1.6000e-004	6.7200e-003	0.0000	19.1579	19.1579	8.6000e-004	0.0000	19.1760
Total	**0.0119**	**0.0630**	**0.1735**	**4.8000e-004**	**0.0302**	**1.0600e-003**	**0.0313**	**8.1400e-003**	**9.8000e-004**	**9.1200e-003**	**0.0000**	**35.5999**	**35.5999**	**9.8000e-004**	**0.0000**	**35.6205**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0428	0.4397	0.3682	5.7000e-004		0.0260	0.0260		0.0239	0.0239	0.0000	49.7559	49.7559	0.0161	0.0000	50.0938
Total	**0.0428**	**0.4397**	**0.3682**	**5.7000e-004**		**0.0260**	**0.0260**		**0.0239**	**0.0239**	**0.0000**	**49.7559**	**49.7559**	**0.0161**	**0.0000**	**50.0938**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.2300e-003	0.0548	0.0872	1.9000e-004	5.5400e-003	8.9000e-004	6.4300e-003	1.5800e-003	8.2000e-004	2.4000e-003	0.0000	16.4420	16.4420	1.2000e-004	0.0000	16.4445
Worker	5.6200e-003	8.1700e-003	0.0863	2.9000e-004	0.0247	1.7000e-004	0.0249	6.5600e-003	1.6000e-004	6.7200e-003	0.0000	19.1579	19.1579	8.6000e-004	0.0000	19.1760
Total	**0.0119**	**0.0630**	**0.1735**	**4.8000e-004**	**0.0302**	**1.0600e-003**	**0.0313**	**8.1400e-003**	**9.8000e-004**	**9.1200e-003**	**0.0000**	**35.5999**	**35.5999**	**9.8000e-004**	**0.0000**	**35.6205**

3.7 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.9100e-003	0.0178	0.0175	3.0000e-005		9.8000e-004	9.8000e-004		9.1000e-004	9.1000e-004	0.0000	2.3135	2.3135	6.7000e-004	0.0000	2.3276
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.9100e-003**	**0.0178**	**0.0175**	**3.0000e-005**		**9.8000e-004**	**9.8000e-004**		**9.1000e-004**	**9.1000e-004**	**0.0000**	**2.3135**	**2.3135**	**6.7000e-004**	**0.0000**	**2.3276**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	1.6000e-004	1.7300e-003	1.0000e-005	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3832	0.3832	2.0000e-005	0.0000	0.3835
Total	**1.1000e-004**	**1.6000e-004**	**1.7300e-003**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.3832**	**0.3832**	**2.0000e-005**	**0.0000**	**0.3835**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.9100e-003	0.0178	0.0175	3.0000e-005		9.8000e-004	9.8000e-004		9.1000e-004	9.1000e-004	0.0000	2.3135	2.3135	6.7000e-004	0.0000	2.3276

Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.9100e-003**	**0.0178**	**0.0175**	**3.0000e-005**		**9.8000e-004**	**9.8000e-004**		**9.1000e-004**	**9.1000e-004**	**0.0000**	**2.3135**	**2.3135**	**6.7000e-004**	**0.0000**	**2.3276**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	1.6000e-004	1.7300e-003	1.0000e-005	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3832	0.3832	2.0000e-005	0.0000	0.3835
Total	**1.1000e-004**	**1.6000e-004**	**1.7300e-003**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.3832**	**0.3832**	**2.0000e-005**	**0.0000**	**0.3835**

3.8 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.3122					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.2100e-003	8.4200e-003	9.1600e-003	1.0000e-005		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004	0.0000	1.2766	1.2766	1.0000e-004	0.0000	1.2787
Total	**0.3134**	**8.4200e-003**	**9.1600e-003**	**1.0000e-005**		**5.5000e-004**	**5.5000e-004**		**5.5000e-004**	**5.5000e-004**	**0.0000**	**1.2766**	**1.2766**	**1.0000e-004**	**0.0000**	**1.2787**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	1.6000e-004	1.7300e-003	1.0000e-005	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3832	0.3832	2.0000e-005	0.0000	0.3835
Total	**1.1000e-004**	**1.6000e-004**	**1.7300e-003**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.3832**	**0.3832**	**2.0000e-005**	**0.0000**	**0.3835**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.3122					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.2100e-003	8.4200e-003	9.1600e-003	1.0000e-005		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004	0.0000	1.2766	1.2766	1.0000e-004	0.0000	1.2787
Total	**0.3134**	**8.4200e-003**	**9.1600e-003**	**1.0000e-005**		**5.5000e-004**	**5.5000e-004**		**5.5000e-004**	**5.5000e-004**	**0.0000**	**1.2766**	**1.2766**	**1.0000e-004**	**0.0000**	**1.2787**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	1.6000e-004	1.7300e-003	1.0000e-005	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3832	0.3832	2.0000e-005	0.0000	0.3835
Total	**1.1000e-004**	**1.6000e-004**	**1.7300e-003**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.3832**	**0.3832**	**2.0000e-005**	**0.0000**	**0.3835**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.9764	2.0979	10.3546	0.0366	2.6337	0.0368	2.6706	0.7039	0.0340	0.7379	0.0000	2,470.0133	2,470.0133	0.0852	0.0000	2,471.8020
Unmitigated	0.9764	2.0979	10.3546	0.0366	2.6337	0.0368	2.6706	0.7039	0.0340	0.7379	0.0000	2,470.0133	2,470.0133	0.0852	0.0000	2,471.8020

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	2,962.32	1,210.14	130.39	6,969,324	6,969,324
Total	2,962.32	1,210.14	130.39	6,969,324	6,969,324

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.505043	0.056653	0.194832	0.151784	0.042126	0.005989	0.016072	0.016505	0.001461	0.002178	0.004464	0.000494	0.002401

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	433.2647	433.2647	0.0199	4.1200e-003	434.9603
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	433.2647	433.2647	0.0199	4.1200e-003	434.9603
NaturalGas Mitigated	9.2200e-003	0.0838	0.0704	5.0000e-004		6.3700e-003	6.3700e-003		6.3700e-003	6.3700e-003	0.0000	91.2027	91.2027	1.7500e-003	1.6700e-003	91.7577
NaturalGas Unmitigated	9.2200e-003	0.0838	0.0704	5.0000e-004		6.3700e-003	6.3700e-003		6.3700e-003	6.3700e-003	0.0000	91.2027	91.2027	1.7500e-003	1.6700e-003	91.7577

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Junior College (2Yr)	1.70907e+006	9.2200e-003	0.0838	0.0704	5.0000e-004		6.3700e-003	6.3700e-003		6.3700e-003	6.3700e-003	0.0000	91.2027	91.2027	1.7500e-003	1.6700e-003	91.7577

Total		**9.2200e-003**	**0.0838**	**0.0704**	**5.0000e-004**		**6.3700e-003**	**6.3700e-003**		**6.3700e-003**	**6.3700e-003**	**0.0000**	**91.2027**	**91.2027**	**1.7500e-003**	**1.6700e-003**	**91.7577**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Junior College (2Yr)	1.70907e+006	9.2200e-003	0.0838	0.0704	5.0000e-004		6.3700e-003	6.3700e-003		6.3700e-003	6.3700e-003	0.0000	91.2027	91.2027	1.7500e-003	1.6700e-003	91.7577
Total		**9.2200e-003**	**0.0838**	**0.0704**	**5.0000e-004**		**6.3700e-003**	**6.3700e-003**		**6.3700e-003**	**6.3700e-003**	**0.0000**	**91.2027**	**91.2027**	**1.7500e-003**	**1.6700e-003**	**91.7577**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	1.51403e+006	433.2647	0.0199	4.1200e-003	434.9603
Total		**433.2647**	**0.0199**	**4.1200e-003**	**434.9603**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	1.51403e+006	433.2647	0.0199	4.1200e-003	434.9603
Total		**433.2647**	**0.0199**	**4.1200e-003**	**434.9603**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.5144	1.0000e-005	1.3800e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.6700e-003	2.6700e-003	1.0000e-005	0.0000	2.8200e-003
Unmitigated	0.5144	1.0000e-005	1.3800e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.6700e-003	2.6700e-003	1.0000e-005	0.0000	2.8200e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					

Architectural Coating	0.1249					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3894					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.3000e-004	1.0000e-005	1.3800e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.6700e-003	2.6700e-003	1.0000e-005	0.0000	2.8200e-003
Total	**0.5144**	**1.0000e-005**	**1.3800e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.6700e-003**	**2.6700e-003**	**1.0000e-005**	**0.0000**	**2.8200e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1249					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3894					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.3000e-004	1.0000e-005	1.3800e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.6700e-003	2.6700e-003	1.0000e-005	0.0000	2.8200e-003
Total	**0.5144**	**1.0000e-005**	**1.3800e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.6700e-003**	**2.6700e-003**	**1.0000e-005**	**0.0000**	**2.8200e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	47.6554	0.1743	4.5000e-003	52.7101
Unmitigated	47.6554	0.1743	4.5000e-003	52.7128

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	5.28552 / 8.2671	47.6554	0.1743	4.5000e-003	52.7128
Total		**47.6554**	**0.1743**	**4.5000e-003**	**52.7128**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	5.28552 / 8.2671	47.6554	0.1743	4.5000e-003	52.7101
Total		**47.6554**	**0.1743**	**4.5000e-003**	**52.7101**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	28.4370	1.6806	0.0000	63.7292
Unmitigated	28.4370	1.6806	0.0000	63.7292

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior College (2Yr)	140.09	28.4370	1.6806	0.0000	63.7292
Total		**28.4370**	**1.6806**	**0.0000**	**63.7292**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			

Junior College (2Yr)	140.09	28.4370	1.6806	0.0000	63.7292
Total		**28.4370**	**1.6806**	**0.0000**	**63.7292**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Phase 3 - Language Arts

Orange County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	107.76	1000sqft	0.83	107,760.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - modified

Construction Phase - modified

Off-road Equipment -

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Demolition - Demolition of Social and Behavioral Sciences, Virgil D Sessions Lit and Lang Bldg, Writer's Row, Journalism, and 150 Annex

Grading - modified

Architectural Coating - scaqmd rule 1113

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblConstructionPhase	NumDays	5.00	10.00
tblConstructionPhase	NumDays	10.00	20.00
tblLandUse	LotAcreage	2.47	0.83
tblProjectCharacteristics	OperationalYear	2014	2022
tblTripsAndVMT	HaulingTripNumber	287.00	331.00
tblTripsAndVMT	VendorTripNumber	0.00	18.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	62.6986	11.0160	11.3546	0.0256	3.5028	0.5411	4.0208	0.5784	0.4978	1.0708	0.0000	2,392.5643	2,392.5643	0.3763	0.0000	2,400.4669
Total	**62.6986**	**11.0160**	**11.3546**	**0.0256**	**3.5028**	**0.5411**	**4.0208**	**0.5784**	**0.4978**	**1.0708**	**0.0000**	**2,392.5643**	**2,392.5643**	**0.3763**	**0.0000**	**2,400.4669**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	62.6986	11.0160	11.3546	0.0256	1.6102	0.5411	2.1282	0.2918	0.4978	0.7842	0.0000	2,392.5643	2,392.5643	0.3763	0.0000	2,400.4669
Total	**62.6986**	**11.0160**	**11.3546**	**0.0256**	**1.6102**	**0.5411**	**2.1282**	**0.2918**	**0.4978**	**0.7842**	**0.0000**	**2,392.5643**	**2,392.5643**	**0.3763**	**0.0000**	**2,400.4669**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**54.03**	**0.00**	**47.07**	**49.54**	**0.00**	**26.76**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.8189	1.0000e-004	0.0110	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0236	0.0236	6.0000e-005		0.0249
Energy	0.0505	0.4591	0.3856	2.7500e-003		0.0349	0.0349		0.0349	0.0349		550.8698	550.8698	0.0106	0.0101	554.2223
Mobile	6.9286	13.7421	73.0213	0.2671	18.9119	0.2598	19.1717	5.0468	0.2400	5.2868		19,843.5383	19,843.5383	0.6629		19,857.4582
Total	**9.7980**	**14.2013**	**73.4179**	**0.2699**	**18.9119**	**0.2947**	**19.2066**	**5.0468**	**0.2749**	**5.3217**		**20,394.4317**	**20,394.4317**	**0.6735**	**0.0101**	**20,411.7054**

Mitigated Operational

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Area	2.8189	1.0000e-004	0.0110	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0236	0.0236	6.0000e-005		0.0249
Energy	0.0505	0.4591	0.3856	2.7500e-003		0.0349	0.0349		0.0349	0.0349		550.8698	550.8698	0.0106	0.0101	554.2223
Mobile	6.9286	13.7421	73.0213	0.2671	18.9119	0.2598	19.1717	5.0468	0.2400	5.2868		19,843.5383	19,843.5383	0.6629		19,857.4582
Total	**9.7980**	**14.2013**	**73.4179**	**0.2699**	**18.9119**	**0.2947**	**19.2066**	**5.0468**	**0.2749**	**5.3217**		**20,394.4317**	**20,394.4317**	**0.6735**	**0.0101**	**20,411.7054**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2020	1/28/2020	5	20	
2	Site Preparation	Site Preparation	1/29/2020	1/29/2020	5	1	
3	Grading	Grading	1/30/2020	1/31/2020	5	2	
4	Trenching	Trenching	2/1/2020	2/14/2020	5	10	
5	Building Construction	Building Construction	2/15/2020	7/3/2020	5	100	
6	Paving	Paving	7/4/2020	7/10/2020	5	5	
7	Architectural Coating	Architectural Coating	7/11/2020	7/24/2020	5	10	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 161,640; Non-Residential Outdoor: 53,880 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Trenching	Cranes	0	4.00	226	0.29
Trenching	Forklifts	0	6.00	89	0.20
Trenching	Plate Compactors	1	8.00	8	0.43
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Trenching	Trenchers	1	8.00	80	0.50
Building Construction	Cranes	1	4.00	226	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	125	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class

Demolition	4	10.00	0.00	331.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	3	8.00	18.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	45.00	18.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	9.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.1026	0.0000	3.1026	0.4698	0.0000	0.4698			0.0000			0.0000
Off-Road	0.8527	7.7248	8.0981	0.0120		0.4561	0.4561		0.4355	0.4355		1,151.7011	1,151.7011	0.2184		1,156.2863
Total	**0.8527**	**7.7248**	**8.0981**	**0.0120**	**3.1026**	**0.4561**	**3.5587**	**0.4698**	**0.4355**	**0.9052**		**1,151.7011**	**1,151.7011**	**0.2184**		**1,156.2863**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.2576	3.2591	2.8545	0.0122	0.2884	0.0611	0.3495	0.0790	0.0562	0.1352		1,143.2153	1,143.2153	8.8800e-003		1,143.4018
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0255	0.0321	0.4020	1.3600e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		97.6480	97.6480	4.2000e-003		97.7363
Total	**0.2832**	**3.2912**	**3.2565**	**0.0135**	**0.4002**	**0.0618**	**0.4620**	**0.1086**	**0.0569**	**0.1655**		**1,240.8633**	**1,240.8633**	**0.0131**		**1,241.1381**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.2100	0.0000	1.2100	0.1832	0.0000	0.1832			0.0000			0.0000
Off-Road	0.8527	7.7248	8.0981	0.0120		0.4561	0.4561		0.4355	0.4355	0.0000	1,151.7011	1,151.7011	0.2184		1,156.2863
Total	**0.8527**	**7.7248**	**8.0981**	**0.0120**	**1.2100**	**0.4561**	**1.6661**	**0.1832**	**0.4355**	**0.6187**	**0.0000**	**1,151.7011**	**1,151.7011**	**0.2184**		**1,156.2863**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2576	3.2591	2.8545	0.0122	0.2884	0.0611	0.3495	0.0790	0.0562	0.1352		1,143.2153	1,143.2153	8.8800e-003		1,143.4018
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0255	0.0321	0.4020	1.3600e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		97.6480	97.6480	4.2000e-003		97.7363

Total	**0.2832**	**3.2912**	**3.2565**	**0.0135**	**0.4002**	**0.0618**	**0.4620**	**0.1086**	**0.0569**	**0.1655**		**1,240.8633**	**1,240.8633**	**0.0131**		**1,241.1381**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.9225	9.0637	6.8357	9.3100e-003		0.5213	0.5213		0.4796	0.4796		902.2494	902.2494	0.2918		908.3773
Total	**0.9225**	**9.0637**	**6.8357**	**9.3100e-003**	**0.5303**	**0.5213**	**1.0516**	**0.0573**	**0.4796**	**0.5369**		**902.2494**	**902.2494**	**0.2918**		**908.3773**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0128	0.0161	0.2010	6.8000e-004	0.0559	3.8000e-004	0.0563	0.0148	3.5000e-004	0.0152		48.8240	48.8240	2.1000e-003		48.8681
Total	**0.0128**	**0.0161**	**0.2010**	**6.8000e-004**	**0.0559**	**3.8000e-004**	**0.0563**	**0.0148**	**3.5000e-004**	**0.0152**		**48.8240**	**48.8240**	**2.1000e-003**		**48.8681**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2068	0.0000	0.2068	0.0223	0.0000	0.0223			0.0000			0.0000
Off-Road	0.9225	9.0637	6.8357	9.3100e-003		0.5213	0.5213		0.4796	0.4796	0.0000	902.2494	902.2494	0.2918		908.3773
Total	**0.9225**	**9.0637**	**6.8357**	**9.3100e-003**	**0.2068**	**0.5213**	**0.7281**	**0.0223**	**0.4796**	**0.5019**	**0.0000**	**902.2494**	**902.2494**	**0.2918**		**908.3773**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0128	0.0161	0.2010	6.8000e-004	0.0559	3.8000e-004	0.0563	0.0148	3.5000e-004	0.0152		48.8240	48.8240	2.1000e-003		48.8681
Total	**0.0128**	**0.0161**	**0.2010**	**6.8000e-004**	**0.0559**	**3.8000e-004**	**0.0563**	**0.0148**	**3.5000e-004**	**0.0152**		**48.8240**	**48.8240**	**2.1000e-003**		**48.8681**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	0.8527	7.7248	8.0981	0.0120		0.4561	0.4561		0.4355	0.4355		1,151.7011	1,151.7011	0.2184		1,156.2863
Total	**0.8527**	**7.7248**	**8.0981**	**0.0120**	**0.7528**	**0.4561**	**1.2089**	**0.4138**	**0.4355**	**0.8492**		**1,151.7011**	**1,151.7011**	**0.2184**		**1,156.2863**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0255	0.0321	0.4020	1.3600e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		97.6480	97.6480	4.2000e-003		97.7363
Total	**0.0255**	**0.0321**	**0.4020**	**1.3600e-003**	**0.1118**	**7.6000e-004**	**0.1125**	**0.0296**	**7.1000e-004**	**0.0304**		**97.6480**	**97.6480**	**4.2000e-003**		**97.7363**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2936	0.0000	0.2936	0.1614	0.0000	0.1614			0.0000			0.0000
Off-Road	0.8527	7.7248	8.0981	0.0120		0.4561	0.4561		0.4355	0.4355	0.0000	1,151.7011	1,151.7011	0.2184		1,156.2863
Total	**0.8527**	**7.7248**	**8.0981**	**0.0120**	**0.2936**	**0.4561**	**0.7497**	**0.1614**	**0.4355**	**0.5968**	**0.0000**	**1,151.7011**	**1,151.7011**	**0.2184**		**1,156.2863**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0255	0.0321	0.4020	1.3600e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		97.6480	97.6480	4.2000e-003		97.7363
Total	**0.0255**	**0.0321**	**0.4020**	**1.3600e-003**	**0.1118**	**7.6000e-004**	**0.1125**	**0.0296**	**7.1000e-004**	**0.0304**		**97.6480**	**97.6480**	**4.2000e-003**		**97.7363**

3.5 Trenching - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6801	6.2504	5.1941	7.0500e-003		0.4344	0.4344		0.4005	0.4005		670.4398	670.4398	0.2093		674.8343
Total	**0.6801**	**6.2504**	**5.1941**	**7.0500e-003**		**0.4344**	**0.4344**		**0.4005**	**0.4005**		**670.4398**	**670.4398**	**0.2093**		**674.8343**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1179	1.0530	1.4723	3.8800e-003	0.1946	0.0177	0.2123	0.0522	0.0163	0.0685		363.7806	363.7806	2.6300e-003		363.8360
Worker	0.0408	0.0514	0.6432	2.1800e-003	0.3343	1.2200e-003	0.3356	0.0856	1.1300e-003	0.0867		156.2368	156.2368	6.7200e-003		156.3780
Total	**0.1588**	**1.1044**	**2.1156**	**6.0600e-003**	**0.5290**	**0.0189**	**0.5479**	**0.1378**	**0.0174**	**0.1552**		**520.0175**	**520.0175**	**9.3500e-003**		**520.2140**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6801	6.2504	5.1941	7.0500e-003		0.4344	0.4344		0.4005	0.4005	0.0000	670.4398	670.4398	0.2093		674.8343
Total	**0.6801**	**6.2504**	**5.1941**	**7.0500e-003**		**0.4344**	**0.4344**		**0.4005**	**0.4005**	**0.0000**	**670.4398**	**670.4398**	**0.2093**		**674.8343**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1179	1.0530	1.4723	3.8800e-003	0.1946	0.0177	0.2123	0.0522	0.0163	0.0685		363.7806	363.7806	2.6300e-003		363.8360
Worker	0.0408	0.0514	0.6432	2.1800e-003	0.3343	1.2200e-003	0.3356	0.0856	1.1300e-003	0.0867		156.2368	156.2368	6.7200e-003		156.3780

Total	**0.1588**	**1.1044**	**2.1156**	**6.0600e-003**	**0.5290**	**0.0189**	**0.5479**	**0.1378**	**0.0174**	**0.1552**		**520.0175**	**520.0175**	**9.3500e-003**		**520.2140**

3.6 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8568	8.7940	7.3646	0.0113		0.5200	0.5200		0.4784	0.4784		1,096.9306	1,096.9306	0.3548		1,104.3807
Total	**0.8568**	**8.7940**	**7.3646**	**0.0113**		**0.5200**	**0.5200**		**0.4784**	**0.4784**		**1,096.9306**	**1,096.9306**	**0.3548**		**1,104.3807**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1179	1.0530	1.4723	3.8800e-003	0.1125	0.0177	0.1302	0.0321	0.0163	0.0483		363.7806	363.7806	2.6300e-003		363.8360
Worker	0.1149	0.1446	1.8091	6.1300e-003	0.5030	3.4400e-003	0.5064	0.1334	3.1900e-003	0.1366		439.4161	439.4161	0.0189		439.8132
Total	**0.2328**	**1.1976**	**3.2815**	**0.0100**	**0.6155**	**0.0211**	**0.6367**	**0.1655**	**0.0195**	**0.1849**		**803.1968**	**803.1968**	**0.0215**		**803.6492**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8568	8.7940	7.3646	0.0113		0.5200	0.5200		0.4784	0.4784	0.0000	1,096.9306	1,096.9306	0.3548		1,104.3807
Total	**0.8568**	**8.7940**	**7.3646**	**0.0113**		**0.5200**	**0.5200**		**0.4784**	**0.4784**	**0.0000**	**1,096.9306**	**1,096.9306**	**0.3548**		**1,104.3807**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1179	1.0530	1.4723	3.8800e-003	0.1125	0.0177	0.1302	0.0321	0.0163	0.0483		363.7806	363.7806	2.6300e-003		363.8360
Worker	0.1149	0.1446	1.8091	6.1300e-003	0.5030	3.4400e-003	0.5064	0.1334	3.1900e-003	0.1366		439.4161	439.4161	0.0189		439.8132
Total	**0.2328**	**1.1976**	**3.2815**	**0.0100**	**0.6155**	**0.0211**	**0.6367**	**0.1655**	**0.0195**	**0.1849**		**803.1968**	**803.1968**	**0.0215**		**803.6492**

3.7 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Off-Road	0.7627	7.1320	7.0153	0.0111		0.3905	0.3905		0.3626	0.3626		1,020.0710	1,020.0710	0.2966		1,026.3002
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7627**	**7.1320**	**7.0153**	**0.0111**		**0.3905**	**0.3905**		**0.3626**	**0.3626**		**1,020.0710**	**1,020.0710**	**0.2966**		**1,026.3002**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0459	0.0579	0.7237	2.4500e-003	0.2012	1.3800e-003	0.2026	0.0534	1.2800e-003	0.0546		175.7665	175.7665	7.5600e-003		175.9253
Total	**0.0459**	**0.0579**	**0.7237**	**2.4500e-003**	**0.2012**	**1.3800e-003**	**0.2026**	**0.0534**	**1.2800e-003**	**0.0546**		**175.7665**	**175.7665**	**7.5600e-003**		**175.9253**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7627	7.1320	7.0153	0.0111		0.3905	0.3905		0.3626	0.3626	0.0000	1,020.0710	1,020.0710	0.2966		1,026.3002
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7627**	**7.1320**	**7.0153**	**0.0111**		**0.3905**	**0.3905**		**0.3626**	**0.3626**	**0.0000**	**1,020.0710**	**1,020.0710**	**0.2966**		**1,026.3002**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0459	0.0579	0.7237	2.4500e-003	0.2012	1.3800e-003	0.2026	0.0534	1.2800e-003	0.0546		175.7665	175.7665	7.5600e-003		175.9253
Total	**0.0459**	**0.0579**	**0.7237**	**2.4500e-003**	**0.2012**	**1.3800e-003**	**0.2026**	**0.0534**	**1.2800e-003**	**0.0546**		**175.7665**	**175.7665**	**7.5600e-003**		**175.9253**

3.8 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	62.4335					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9057
Total	**62.6756**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9057**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0230	0.0289	0.3618	1.2300e-003	0.1006	6.9000e-004	0.1013	0.0267	6.4000e-004	0.0273		87.8832	87.8832	3.7800e-003		87.9627
Total	**0.0230**	**0.0289**	**0.3618**	**1.2300e-003**	**0.1006**	**6.9000e-004**	**0.1013**	**0.0267**	**6.4000e-004**	**0.0273**		**87.8832**	**87.8832**	**3.7800e-003**		**87.9627**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	62.4335					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9057
Total	**62.6756**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9057**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0230	0.0289	0.3618	1.2300e-003	0.1006	6.9000e-004	0.1013	0.0267	6.4000e-004	0.0273		87.8832	87.8832	3.7800e-003		87.9627

Total	0.0230	0.0289	0.3618	1.2300e-003	0.1006	6.9000e-004	0.1013	0.0267	6.4000e-004	0.0273		87.8832	87.8832	3.7800e-003		87.9627

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	6.9286	13.7421	73.0213	0.2671	18.9119	0.2598	19.1717	5.0468	0.2400	5.2868		19,843.5383	19,843.5383	0.6629		19,857.4582
Unmitigated	6.9286	13.7421	73.0213	0.2671	18.9119	0.2598	19.1717	5.0468	0.2400	5.2868		19,843.5383	19,843.5383	0.6629		19,857.4582

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	2,962.32	1,210.14	130.39	6,969,324	6,969,324
Total	2,962.32	1,210.14	130.39	6,969,324	6,969,324

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.505043	0.056653	0.194832	0.151784	0.042126	0.005989	0.016072	0.016505	0.001461	0.002178	0.004464	0.000494	0.002401

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
NaturalGas Mitigated	0.0505	0.4591	0.3856	2.7500e-003		0.0349	0.0349		0.0349	0.0349		550.8698	550.8698	0.0106	0.0101	554.2223
NaturalGas Unmitigated	0.0505	0.4591	0.3856	2.7500e-003		0.0349	0.0349		0.0349	0.0349		550.8698	550.8698	0.0106	0.0101	554.2223

5.2 Energy by Land Use - NaturalGas

Unmitigated

Land Use	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	4682.39	0.0505	0.4591	0.3856	2.7500e-003		0.0349	0.0349		0.0349	0.0349		550.8698	550.8698	0.0106	0.0101	554.2223
Total		**0.0505**	**0.4591**	**0.3856**	**2.7500e-003**		**0.0349**	**0.0349**		**0.0349**	**0.0349**		**550.8698**	**550.8698**	**0.0106**	**0.0101**	**554.2223**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	4.68239	0.0505	0.4591	0.3856	2.7500e-003		0.0349	0.0349		0.0349	0.0349		550.8698	550.8698	0.0106	0.0101	554.2223
Total		**0.0505**	**0.4591**	**0.3856**	**2.7500e-003**		**0.0349**	**0.0349**		**0.0349**	**0.0349**		**550.8698**	**550.8698**	**0.0106**	**0.0101**	**554.2223**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.8189	1.0000e-004	0.0110	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0236	0.0236	6.0000e-005		0.0249
Unmitigated	2.8189	1.0000e-004	0.0110	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0236	0.0236	6.0000e-005		0.0249

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					

Architectural Coating	0.6842					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.1337					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0200e-003	1.0000e-004	0.0110	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0236	0.0236	6.0000e-005		0.0249
Total	**2.8189**	**1.0000e-004**	**0.0110**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.0236**	**0.0236**	**6.0000e-005**		**0.0249**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.6842					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.1337					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0200e-003	1.0000e-004	0.0110	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0236	0.0236	6.0000e-005		0.0249
Total	**2.8189**	**1.0000e-004**	**0.0110**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.0236**	**0.0236**	**6.0000e-005**		**0.0249**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Phase 3 - Language Arts

Orange County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	107.76	1000sqft	0.83	107,760.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - modified

Construction Phase - modified

Off-road Equipment -

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Demolition - Demolition of Social and Behavioral Sciences, Virgil D Sessions Lit and Lang Bldg, Writer's Row, Journalism, and 150 Annex

Grading - modified

Architectural Coating - scaqmd rule 1113

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblConstructionPhase	NumDays	5.00	10.00
tblConstructionPhase	NumDays	10.00	20.00
tblLandUse	LotAcreage	2.47	0.83
tblProjectCharacteristics	OperationalYear	2014	2022
tblTripsAndVMT	HaulingTripNumber	287.00	331.00
tblTripsAndVMT	VendorTripNumber	0.00	18.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	62.6997	11.1297	11.8265	0.0255	3.5028	0.5413	4.0209	0.5784	0.4980	1.0709	0.0000	2,384.6488	2,384.6488	0.3764	0.0000	2,392.5533
Total	**62.6997**	**11.1297**	**11.8265**	**0.0255**	**3.5028**	**0.5413**	**4.0209**	**0.5784**	**0.4980**	**1.0709**	**0.0000**	**2,384.6488**	**2,384.6488**	**0.3764**	**0.0000**	**2,392.5533**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	62.6997	11.1297	11.8265	0.0255	1.6102	0.5413	2.1283	0.2918	0.4980	0.7843	0.0000	2,384.6488	2,384.6488	0.3764	0.0000	2,392.5533
Total	**62.6997**	**11.1297**	**11.8265**	**0.0255**	**1.6102**	**0.5413**	**2.1283**	**0.2918**	**0.4980**	**0.7843**	**0.0000**	**2,384.6488**	**2,384.6488**	**0.3764**	**0.0000**	**2,392.5533**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**54.03**	**0.00**	**47.07**	**49.54**	**0.00**	**26.76**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.8189	1.0000e-004	0.0110	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0236	0.0236	6.0000e-005		0.0249
Energy	0.0505	0.4591	0.3856	2.7500e-003		0.0349	0.0349		0.0349	0.0349		550.8698	550.8698	0.0106	0.0101	554.2223
Mobile	7.3009	14.5185	72.6994	0.2551	18.9119	0.2606	19.1724	5.0468	0.2406	5.2875		18,994.2515	18,994.2515	0.6634		19,008.1833
Total	**10.1703**	**14.9776**	**73.0960**	**0.2579**	**18.9119**	**0.2955**	**19.2073**	**5.0468**	**0.2756**	**5.3224**		**19,545.1449**	**19,545.1449**	**0.6740**	**0.0101**	**19,562.4305**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.8189	1.0000e-004	0.0110	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0236	0.0236	6.0000e-005		0.0249
Energy	0.0505	0.4591	0.3856	2.7500e-003		0.0349	0.0349		0.0349	0.0349		550.8698	550.8698	0.0106	0.0101	554.2223
Mobile	7.3009	14.5185	72.6994	0.2551	18.9119	0.2606	19.1724	5.0468	0.2406	5.2875		18,994.2515	18,994.2515	0.6634		19,008.1833
Total	**10.1703**	**14.9776**	**73.0960**	**0.2579**	**18.9119**	**0.2955**	**19.2073**	**5.0468**	**0.2756**	**5.3224**		**19,545.1449**	**19,545.1449**	**0.6740**	**0.0101**	**19,562.4305**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2020	1/28/2020	5	20	
2	Site Preparation	Site Preparation	1/29/2020	1/29/2020	5	1	
3	Grading	Grading	1/30/2020	1/31/2020	5	2	
4	Trenching	Trenching	2/1/2020	2/14/2020	5	10	
5	Building Construction	Building Construction	2/15/2020	7/3/2020	5	100	
6	Paving	Paving	7/4/2020	7/10/2020	5	5	
7	Architectural Coating	Architectural Coating	7/11/2020	7/24/2020	5	10	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 161,640; Non-Residential Outdoor: 53,880 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Trenching	Cranes	0	4.00	226	0.29
Trenching	Forklifts	0	6.00	89	0.20
Trenching	Plate Compactors	1	8.00	8	0.43
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Trenching	Trenchers	1	8.00	80	0.50
Building Construction	Cranes	1	4.00	226	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	125	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class

Demolition	4	10.00	0.00	331.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	3	8.00	18.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	45.00	18.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	9.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.1026	0.0000	3.1026	0.4698	0.0000	0.4698			0.0000			0.0000
Off-Road	0.8527	7.7248	8.0981	0.0120		0.4561	0.4561		0.4355	0.4355		1,151.7011	1,151.7011	0.2184		1,156.2863
Total	**0.8527**	**7.7248**	**8.0981**	**0.0120**	**3.1026**	**0.4561**	**3.5587**	**0.4698**	**0.4355**	**0.9052**		**1,151.7011**	**1,151.7011**	**0.2184**		**1,156.2863**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.2698	3.3695	3.3536	0.0121	0.2884	0.0612	0.3496	0.0790	0.0563	0.1353		1,140.4890	1,140.4890	9.0100e-003		1,140.6783
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0268	0.0353	0.3748	1.2900e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		92.4588	92.4588	4.2000e-003		92.5470
Total	**0.2965**	**3.4049**	**3.7284**	**0.0134**	**0.4002**	**0.0620**	**0.4622**	**0.1086**	**0.0570**	**0.1656**		**1,232.9478**	**1,232.9478**	**0.0132**		**1,233.2253**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.2100	0.0000	1.2100	0.1832	0.0000	0.1832			0.0000			0.0000
Off-Road	0.8527	7.7248	8.0981	0.0120		0.4561	0.4561		0.4355	0.4355	0.0000	1,151.7011	1,151.7011	0.2184		1,156.2863
Total	**0.8527**	**7.7248**	**8.0981**	**0.0120**	**1.2100**	**0.4561**	**1.6661**	**0.1832**	**0.4355**	**0.6187**	**0.0000**	**1,151.7011**	**1,151.7011**	**0.2184**		**1,156.2863**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2698	3.3695	3.3536	0.0121	0.2884	0.0612	0.3496	0.0790	0.0563	0.1353		1,140.4890	1,140.4890	9.0100e-003		1,140.6783
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0268	0.0353	0.3748	1.2900e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		92.4588	92.4588	4.2000e-003		92.5470

Total	**0.2965**	**3.4049**	**3.7284**	**0.0134**	**0.4002**	**0.0620**	**0.4622**	**0.1086**	**0.0570**	**0.1656**		**1,232.9478**	**1,232.9478**	**0.0132**		**1,233.2253**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.9225	9.0637	6.8357	9.3100e-003		0.5213	0.5213		0.4796	0.4796		902.2494	902.2494	0.2918		908.3773
Total	**0.9225**	**9.0637**	**6.8357**	**9.3100e-003**	**0.5303**	**0.5213**	**1.0516**	**0.0573**	**0.4796**	**0.5369**		**902.2494**	**902.2494**	**0.2918**		**908.3773**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0134	0.0177	0.1874	6.4000e-004	0.0559	3.8000e-004	0.0563	0.0148	3.5000e-004	0.0152		46.2294	46.2294	2.1000e-003		46.2735
Total	**0.0134**	**0.0177**	**0.1874**	**6.4000e-004**	**0.0559**	**3.8000e-004**	**0.0563**	**0.0148**	**3.5000e-004**	**0.0152**		**46.2294**	**46.2294**	**2.1000e-003**		**46.2735**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2068	0.0000	0.2068	0.0223	0.0000	0.0223			0.0000			0.0000
Off-Road	0.9225	9.0637	6.8357	9.3100e-003		0.5213	0.5213		0.4796	0.4796	0.0000	902.2494	902.2494	0.2918		908.3773
Total	**0.9225**	**9.0637**	**6.8357**	**9.3100e-003**	**0.2068**	**0.5213**	**0.7281**	**0.0223**	**0.4796**	**0.5019**	**0.0000**	**902.2494**	**902.2494**	**0.2918**		**908.3773**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0134	0.0177	0.1874	6.4000e-004	0.0559	3.8000e-004	0.0563	0.0148	3.5000e-004	0.0152		46.2294	46.2294	2.1000e-003		46.2735
Total	**0.0134**	**0.0177**	**0.1874**	**6.4000e-004**	**0.0559**	**3.8000e-004**	**0.0563**	**0.0148**	**3.5000e-004**	**0.0152**		**46.2294**	**46.2294**	**2.1000e-003**		**46.2735**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	0.8527	7.7248	8.0981	0.0120		0.4561	0.4561		0.4355	0.4355		1,151.7011	1,151.7011	0.2184		1,156.2863
Total	**0.8527**	**7.7248**	**8.0981**	**0.0120**	**0.7528**	**0.4561**	**1.2089**	**0.4138**	**0.4355**	**0.8492**		**1,151.7011**	**1,151.7011**	**0.2184**		**1,156.2863**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0268	0.0353	0.3748	1.2900e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		92.4588	92.4588	4.2000e-003		92.5470
Total	**0.0268**	**0.0353**	**0.3748**	**1.2900e-003**	**0.1118**	**7.6000e-004**	**0.1125**	**0.0296**	**7.1000e-004**	**0.0304**		**92.4588**	**92.4588**	**4.2000e-003**		**92.5470**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2936	0.0000	0.2936	0.1614	0.0000	0.1614			0.0000			0.0000
Off-Road	0.8527	7.7248	8.0981	0.0120		0.4561	0.4561		0.4355	0.4355	0.0000	1,151.7011	1,151.7011	0.2184		1,156.2863
Total	**0.8527**	**7.7248**	**8.0981**	**0.0120**	**0.2936**	**0.4561**	**0.7497**	**0.1614**	**0.4355**	**0.5968**	**0.0000**	**1,151.7011**	**1,151.7011**	**0.2184**		**1,156.2863**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0268	0.0353	0.3748	1.2900e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		92.4588	92.4588	4.2000e-003		92.5470
Total	**0.0268**	**0.0353**	**0.3748**	**1.2900e-003**	**0.1118**	**7.6000e-004**	**0.1125**	**0.0296**	**7.1000e-004**	**0.0304**		**92.4588**	**92.4588**	**4.2000e-003**		**92.5470**

3.5 Trenching - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6801	6.2504	5.1941	7.0500e-003		0.4344	0.4344		0.4005	0.4005		670.4398	670.4398	0.2093		674.8343
Total	**0.6801**	**6.2504**	**5.1941**	**7.0500e-003**		**0.4344**	**0.4344**		**0.4005**	**0.4005**		**670.4398**	**670.4398**	**0.2093**		**674.8343**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category					lb/day								lb/day			
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1285	1.0755	1.8333	3.8600e-003	0.1946	0.0179	0.2125	0.0522	0.0164	0.0686		360.6926	360.6926	2.7300e-003		360.7498
Worker	0.0428	0.0565	0.5997	2.0600e-003	0.3343	1.2200e-003	0.3356	0.0856	1.1300e-003	0.0867		147.9340	147.9340	6.7200e-003		148.0752
Total	**0.1713**	**1.1320**	**2.4330**	**5.9200e-003**	**0.5290**	**0.0191**	**0.5480**	**0.1378**	**0.0176**	**0.1554**		**508.6266**	**508.6266**	**9.4500e-003**		**508.8251**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/day								lb/day			
Off-Road	0.6801	6.2504	5.1941	7.0500e-003		0.4344	0.4344		0.4005	0.4005	0.0000	670.4398	670.4398	0.2093		674.8343
Total	**0.6801**	**6.2504**	**5.1941**	**7.0500e-003**		**0.4344**	**0.4344**		**0.4005**	**0.4005**	**0.0000**	**670.4398**	**670.4398**	**0.2093**		**674.8343**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/day								lb/day			
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1285	1.0755	1.8333	3.8600e-003	0.1946	0.0179	0.2125	0.0522	0.0164	0.0686		360.6926	360.6926	2.7300e-003		360.7498
Worker	0.0428	0.0565	0.5997	2.0600e-003	0.3343	1.2200e-003	0.3356	0.0856	1.1300e-003	0.0867		147.9340	147.9340	6.7200e-003		148.0752

Total	0.1713	1.1320	2.4330	5.9200e-003	0.5290	0.0191	0.5480	0.1378	0.0176	0.1554		508.6266	508.6266	9.4500e-003		508.8251

3.6 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8568	8.7940	7.3646	0.0113		0.5200	0.5200		0.4784	0.4784		1,096.9306	1,096.9306	0.3548		1,104.3807
Total	**0.8568**	**8.7940**	**7.3646**	**0.0113**		**0.5200**	**0.5200**		**0.4784**	**0.4784**		**1,096.9306**	**1,096.9306**	**0.3548**		**1,104.3807**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1285	1.0755	1.8333	3.8600e-003	0.1125	0.0179	0.1304	0.0321	0.0164	0.0485		360.6926	360.6926	2.7300e-003		360.7498
Worker	0.1204	0.1590	1.6867	5.8000e-003	0.5030	3.4400e-003	0.5064	0.1334	3.1900e-003	0.1366		416.0645	416.0645	0.0189		416.4616
Total	**0.2489**	**1.2345**	**3.5199**	**9.6600e-003**	**0.6155**	**0.0213**	**0.6368**	**0.1655**	**0.0196**	**0.1851**		**776.7571**	**776.7571**	**0.0216**		**777.2114**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8568	8.7940	7.3646	0.0113		0.5200	0.5200		0.4784	0.4784	0.0000	1,096.9306	1,096.9306	0.3548		1,104.3807
Total	**0.8568**	**8.7940**	**7.3646**	**0.0113**		**0.5200**	**0.5200**		**0.4784**	**0.4784**	**0.0000**	**1,096.9306**	**1,096.9306**	**0.3548**		**1,104.3807**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1285	1.0755	1.8333	3.8600e-003	0.1125	0.0179	0.1304	0.0321	0.0164	0.0485		360.6926	360.6926	2.7300e-003		360.7498
Worker	0.1204	0.1590	1.6867	5.8000e-003	0.5030	3.4400e-003	0.5064	0.1334	3.1900e-003	0.1366		416.0645	416.0645	0.0189		416.4616
Total	**0.2489**	**1.2345**	**3.5199**	**9.6600e-003**	**0.6155**	**0.0213**	**0.6368**	**0.1655**	**0.0196**	**0.1851**		**776.7571**	**776.7571**	**0.0216**		**777.2114**

3.7 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Off-Road	0.7627	7.1320	7.0153	0.0111		0.3905	0.3905		0.3626	0.3626		1,020.0710	1,020.0710	0.2966		1,026.3002
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7627**	**7.1320**	**7.0153**	**0.0111**		**0.3905**	**0.3905**		**0.3626**	**0.3626**		**1,020.0710**	**1,020.0710**	**0.2966**		**1,026.3002**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0482	0.0636	0.6747	2.3200e-003	0.2012	1.3800e-003	0.2026	0.0534	1.2800e-003	0.0546		166.4258	166.4258	7.5600e-003		166.5846
Total	**0.0482**	**0.0636**	**0.6747**	**2.3200e-003**	**0.2012**	**1.3800e-003**	**0.2026**	**0.0534**	**1.2800e-003**	**0.0546**		**166.4258**	**166.4258**	**7.5600e-003**		**166.5846**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7627	7.1320	7.0153	0.0111		0.3905	0.3905		0.3626	0.3626	0.0000	1,020.0710	1,020.0710	0.2966		1,026.3002
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7627**	**7.1320**	**7.0153**	**0.0111**		**0.3905**	**0.3905**		**0.3626**	**0.3626**	**0.0000**	**1,020.0710**	**1,020.0710**	**0.2966**		**1,026.3002**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0482	0.0636	0.6747	2.3200e-003	0.2012	1.3800e-003	0.2026	0.0534	1.2800e-003	0.0546		166.4258	166.4258	7.5600e-003		166.5846
Total	**0.0482**	**0.0636**	**0.6747**	**2.3200e-003**	**0.2012**	**1.3800e-003**	**0.2026**	**0.0534**	**1.2800e-003**	**0.0546**		**166.4258**	**166.4258**	**7.5600e-003**		**166.5846**

3.8 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	62.4335					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9057
Total	**62.6756**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9057**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0241	0.0318	0.3373	1.1600e-003	0.1006	6.9000e-004	0.1013	0.0267	6.4000e-004	0.0273		83.2129	83.2129	3.7800e-003		83.2923
Total	**0.0241**	**0.0318**	**0.3373**	**1.1600e-003**	**0.1006**	**6.9000e-004**	**0.1013**	**0.0267**	**6.4000e-004**	**0.0273**		**83.2129**	**83.2129**	**3.7800e-003**		**83.2923**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	62.4335					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9057
Total	**62.6756**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9057**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0241	0.0318	0.3373	1.1600e-003	0.1006	6.9000e-004	0.1013	0.0267	6.4000e-004	0.0273		83.2129	83.2129	3.7800e-003		83.2923

Total	0.0241	0.0318	0.3373	1.1600e-003	0.1006	6.9000e-004	0.1013	0.0267	6.4000e-004	0.0273		83.2129	83.2129	3.7800e-003		83.2923

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	7.3009	14.5185	72.6994	0.2551	18.9119	0.2606	19.1724	5.0468	0.2406	5.2875		18,994.2515	18,994.2515	0.6634		19,008.1833
Unmitigated	7.3009	14.5185	72.6994	0.2551	18.9119	0.2606	19.1724	5.0468	0.2406	5.2875		18,994.2515	18,994.2515	0.6634		19,008.1833

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	2,962.32	1,210.14	130.39	6,969,324	6,969,324
Total	2,962.32	1,210.14	130.39	6,969,324	6,969,324

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.505043	0.056653	0.194832	0.151784	0.042126	0.005989	0.016072	0.016505	0.001461	0.002178	0.004464	0.000494	0.002401

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0505	0.4591	0.3856	2.7500e-003		0.0349	0.0349		0.0349	0.0349		550.8698	550.8698	0.0106	0.0101	554.2223
NaturalGas Unmitigated	0.0505	0.4591	0.3856	2.7500e-003		0.0349	0.0349		0.0349	0.0349		550.8698	550.8698	0.0106	0.0101	554.2223

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	4682.39	0.0505	0.4591	0.3856	2.7500e-003		0.0349	0.0349		0.0349	0.0349		550.8698	550.8698	0.0106	0.0101	554.2223
Total		**0.0505**	**0.4591**	**0.3856**	**2.7500e-003**		**0.0349**	**0.0349**		**0.0349**	**0.0349**		**550.8698**	**550.8698**	**0.0106**	**0.0101**	**554.2223**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	4.68239	0.0505	0.4591	0.3856	2.7500e-003		0.0349	0.0349		0.0349	0.0349		550.8698	550.8698	0.0106	0.0101	554.2223
Total		**0.0505**	**0.4591**	**0.3856**	**2.7500e-003**		**0.0349**	**0.0349**		**0.0349**	**0.0349**		**550.8698**	**550.8698**	**0.0106**	**0.0101**	**554.2223**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.8189	1.0000e-004	0.0110	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0236	0.0236	6.0000e-005		0.0249
Unmitigated	2.8189	1.0000e-004	0.0110	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0236	0.0236	6.0000e-005		0.0249

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					

Architectural Coating	0.6842					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.1337					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0200e-003	1.0000e-004	0.0110	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0236	0.0236	6.0000e-005		0.0249
Total	**2.8189**	**1.0000e-004**	**0.0110**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.0236**	**0.0236**	**6.0000e-005**		**0.0249**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.6842					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.1337					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0200e-003	1.0000e-004	0.0110	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0236	0.0236	6.0000e-005		0.0249
Total	**2.8189**	**1.0000e-004**	**0.0110**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.0236**	**0.0236**	**6.0000e-005**		**0.0249**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Phase 2 - Student Housing Project

Orange County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	303.69	Dwelling Unit	3.50	303,688.00	869

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - modified; Student Housing Project is multiple stories - according to HPI will be 3.5 acres

Construction Phase - modified

Off-road Equipment -

Off-road Equipment - modified

Off-road Equipment - modified to account for 3.5 acre footprint

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Trips and VMT -

Demolition - Assuming denisty of pavement is 150 lbs/ft3, and pavement is 1 foot deep

Architectural Coating - scaqmd rule 1113

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	18.00	35.00
tblGrading	AcresOfGrading	7.50	0.00
tblLandUse	LandUseSquareFeet	303,690.00	303,688.00
tblLandUse	LotAcreage	18.98	3.50
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblProjectCharacteristics	OperationalYear	2014	2020

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.5273	3.5408	3.7945	7.4400e-003	0.4433	0.1976	0.6409	0.1108	0.1880	0.2988	0.0000	603.0221	603.0221	0.0738	0.0000	604.5710
2018	1.2301	0.2983	0.3469	6.9000e-004	0.0267	0.0172	0.0439	7.1000e-003	0.0164	0.0235	0.0000	55.3610	55.3610	8.0500e-003	0.0000	55.5301
Total	**1.7574**	**3.8391**	**4.1414**	**8.1300e-003**	**0.4699**	**0.2148**	**0.6847**	**0.1179**	**0.2043**	**0.3222**	**0.0000**	**658.3831**	**658.3831**	**0.0818**	**0.0000**	**660.1011**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.5273	3.5408	3.7945	7.4400e-003	0.3527	0.1976	0.5503	0.0913	0.1880	0.2792	0.0000	603.0218	603.0218	0.0738	0.0000	604.5707
2018	1.2301	0.2983	0.3469	6.9000e-004	0.0267	0.0172	0.0439	7.1000e-003	0.0164	0.0235	0.0000	55.3610	55.3610	8.0500e-003	0.0000	55.5300
Total	**1.7574**	**3.8391**	**4.1414**	**8.1300e-003**	**0.3793**	**0.2148**	**0.5941**	**0.0984**	**0.2043**	**0.3027**	**0.0000**	**658.3828**	**658.3828**	**0.0818**	**0.0000**	**660.1008**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**19.28**	**0.00**	**13.23**	**16.55**	**0.00**	**6.06**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.3063	0.0616	5.0498	3.2000e-003		0.3072	0.3072		0.3071	0.3071	32.2481	67.1048	99.3529	0.1012	2.1900e-003	102.1559
Energy	0.0180	0.1542	0.0656	9.8000e-004		0.0125	0.0125		0.0125	0.0125	0.0000	491.4725	491.4725	0.0178	6.2500e-003	493.7837
Mobile	0.9504	2.3716	10.8754	0.0357	2.5867	0.0366	2.6233	0.6912	0.0338	0.7250	0.0000	2,468.1116	2,468.1116	0.0898	0.0000	2,469.9967
Waste						0.0000	0.0000		0.0000	0.0000	28.3578	0.0000	28.3578	1.6759	0.0000	63.5517
Water						0.0000	0.0000		0.0000	0.0000	6.2774	113.3878	119.6652	0.6500	0.0163	138.3681
Total	**3.2747**	**2.5874**	**15.9908**	**0.0399**	**2.5867**	**0.3562**	**2.9429**	**0.6912**	**0.3534**	**1.0446**	**66.8833**	**3,140.0767**	**3,206.9601**	**2.5346**	**0.0247**	**3,267.8562**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.3063	0.0616	5.0498	3.2000e-003		0.3072	0.3072		0.3071	0.3071	32.2481	67.1048	99.3529	0.1012	2.1900e-003	102.1559
Energy	0.0180	0.1542	0.0656	9.8000e-004		0.0125	0.0125		0.0125	0.0125	0.0000	491.4725	491.4725	0.0178	6.2500e-003	493.7837
Mobile	0.9504	2.3716	10.8754	0.0357	2.5867	0.0366	2.6233	0.6912	0.0338	0.7250	0.0000	2,468.1116	2,468.1116	0.0898	0.0000	2,469.9967
Waste						0.0000	0.0000		0.0000	0.0000	28.3578	0.0000	28.3578	1.6759	0.0000	63.5517
Water						0.0000	0.0000		0.0000	0.0000	6.2774	113.3878	119.6652	0.6498	0.0163	138.3581
Total	**3.2747**	**2.5874**	**15.9908**	**0.0399**	**2.5867**	**0.3562**	**2.9429**	**0.6912**	**0.3534**	**1.0446**	**66.8833**	**3,140.0767**	**3,206.9601**	**2.5345**	**0.0247**	**3,267.8462**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2017	1/27/2017	5	20	
2	Site Preparation	Site Preparation	1/28/2017	2/3/2017	5	5	
3	Grading	Grading	2/4/2017	2/15/2017	5	8	
4	Trenching	Trenching	2/16/2017	3/1/2017	5	10	
5	Building Construction	Building Construction	3/2/2017	1/17/2018	5	230	
6	Paving	Paving	1/18/2018	2/12/2018	5	18	
7	Architectural Coating	Architectural Coating	2/13/2018	4/2/2018	5	35	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 614,968; Residential Outdoor: 204,989; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	0	8.00	162	0.38
Demolition	Rubber Tired Dozers	1	8.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Rubber Tired Dozers	0	8.00	255	0.40

Site Preparation	Scrapers	1	8.00	361	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Excavators	0	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Trenching	Plate Compactors	2	8.00	8	0.43
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Trenching	Trenchers	2	8.00	80	0.50
Building Construction	Cranes	1	8.00	226	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	1,131.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	219.00	32.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Architectural Coating		1	44.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1224	0.0000	0.1224	0.0185	0.0000	0.0185	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0272	0.2659	0.2087	2.4000e-004		0.0161	0.0161		0.0150	0.0150	0.0000	22.2938	22.2938	5.6600e-003	0.0000	22.4126
Total	**0.0272**	**0.2659**	**0.2087**	**2.4000e-004**	**0.1224**	**0.0161**	**0.1384**	**0.0185**	**0.0150**	**0.0335**	**0.0000**	**22.2938**	**22.2938**	**5.6600e-003**	**0.0000**	**22.4126**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0102	0.1504	0.1209	4.2000e-004	9.7000e-003	2.1500e-003	0.0119	2.6600e-003	1.9700e-003	4.6300e-003	0.0000	37.3667	37.3667	2.7000e-004	0.0000	37.3723
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-004	6.0000e-004	6.2400e-003	2.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.2366	1.2366	6.0000e-005	0.0000	1.2378
Total	**0.0106**	**0.1510**	**0.1271**	**4.4000e-004**	**0.0111**	**2.1600e-003**	**0.0133**	**3.0400e-003**	**1.9800e-003**	**5.0200e-003**	**0.0000**	**38.6033**	**38.6033**	**3.3000e-004**	**0.0000**	**38.6101**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0477	0.0000	0.0477	7.2200e-003	0.0000	7.2200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0272	0.2659	0.2087	2.4000e-004		0.0161	0.0161		0.0150	0.0150	0.0000	22.2938	22.2938	5.6600e-003	0.0000	22.4125
Total	**0.0272**	**0.2659**	**0.2087**	**2.4000e-004**	**0.0477**	**0.0161**	**0.0638**	**7.2200e-003**	**0.0150**	**0.0222**	**0.0000**	**22.2938**	**22.2938**	**5.6600e-003**	**0.0000**	**22.4125**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0102	0.1504	0.1209	4.2000e-004	9.7000e-003	2.1500e-003	0.0119	2.6600e-003	1.9700e-003	4.6300e-003	0.0000	37.3667	37.3667	2.7000e-004	0.0000	37.3723
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-004	6.0000e-004	6.2400e-003	2.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.2366	1.2366	6.0000e-005	0.0000	1.2378
Total	**0.0106**	**0.1510**	**0.1271**	**4.4000e-004**	**0.0111**	**2.1600e-003**	**0.0133**	**3.0400e-003**	**1.9800e-003**	**5.0200e-003**	**0.0000**	**38.6033**	**38.6033**	**3.3000e-004**	**0.0000**	**38.6101**

3.3 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.3200e-003	0.0716	0.0428	6.0000e-005		3.4900e-003	3.4900e-003		3.2100e-003	3.2100e-003	0.0000	5.5326	5.5326	1.7000e-003	0.0000	5.5682
Total	**6.3200e-003**	**0.0716**	**0.0428**	**6.0000e-005**	**0.0000**	**3.4900e-003**	**3.4900e-003**	**0.0000**	**3.2100e-003**	**3.2100e-003**	**0.0000**	**5.5326**	**5.5326**	**1.7000e-003**	**0.0000**	**5.5682**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	9.0000e-005	9.6000e-004	0.0000	2.2000e-004	0.0000	2.2000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1902	0.1902	1.0000e-005	0.0000	0.1904
Total	**6.0000e-005**	**9.0000e-005**	**9.6000e-004**	**0.0000**	**2.2000e-004**	**0.0000**	**2.2000e-004**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.1902**	**0.1902**	**1.0000e-005**	**0.0000**	**0.1904**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.3200e-003	0.0716	0.0428	6.0000e-005		3.4900e-003	3.4900e-003		3.2100e-003	3.2100e-003	0.0000	5.5325	5.5325	1.7000e-003	0.0000	5.5681

Total	**6.3200e-003**	**0.0716**	**0.0428**	**6.0000e-005**	**0.0000**	**3.4900e-003**	**3.4900e-003**	**0.0000**	**3.2100e-003**	**3.2100e-003**	**0.0000**	**5.5325**	**5.5325**	**1.7000e-003**	**0.0000**	**5.5681**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	9.0000e-005	9.6000e-004	0.0000	2.2000e-004	0.0000	2.2000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1902	0.1902	1.0000e-005	0.0000	0.1904
Total	**6.0000e-005**	**9.0000e-005**	**9.6000e-004**	**0.0000**	**2.2000e-004**	**0.0000**	**2.2000e-004**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.1902**	**0.1902**	**1.0000e-005**	**0.0000**	**0.1904**

3.4 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0262	0.0000	0.0262	0.0135	0.0000	0.0135	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0108	0.1126	0.0759	8.0000e-005		6.2200e-003	6.2200e-003		5.7200e-003	5.7200e-003	0.0000	7.6370	7.6370	2.3400e-003	0.0000	7.6861
Total	**0.0108**	**0.1126**	**0.0759**	**8.0000e-005**	**0.0262**	**6.2200e-003**	**0.0324**	**0.0135**	**5.7200e-003**	**0.0192**	**0.0000**	**7.6370**	**7.6370**	**2.3400e-003**	**0.0000**	**7.6861**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	1.8000e-004	1.9200e-003	1.0000e-005	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3805	0.3805	2.0000e-005	0.0000	0.3809
Total	**1.2000e-004**	**1.8000e-004**	**1.9200e-003**	**1.0000e-005**	**4.4000e-004**	**0.0000**	**4.4000e-004**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**0.3805**	**0.3805**	**2.0000e-005**	**0.0000**	**0.3809**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0102	0.0000	0.0102	5.2500e-003	0.0000	5.2500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0108	0.1126	0.0759	8.0000e-005		6.2200e-003	6.2200e-003		5.7200e-003	5.7200e-003	0.0000	7.6369	7.6369	2.3400e-003	0.0000	7.6861
Total	**0.0108**	**0.1126**	**0.0759**	**8.0000e-005**	**0.0102**	**6.2200e-003**	**0.0164**	**5.2500e-003**	**5.7200e-003**	**0.0110**	**0.0000**	**7.6369**	**7.6369**	**2.3400e-003**	**0.0000**	**7.6861**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	1.8000e-004	1.9200e-003	1.0000e-005	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3805	0.3805	2.0000e-005	0.0000	0.3809
Total	**1.2000e-004**	**1.8000e-004**	**1.9200e-003**	**1.0000e-005**	**4.4000e-004**	**0.0000**	**4.4000e-004**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**0.3805**	**0.3805**	**2.0000e-005**	**0.0000**	**0.3809**

3.5 Trenching - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.3600e-003	0.0649	0.0421	5.0000e-005		4.9300e-003	4.9300e-003		4.5500e-003	4.5500e-003	0.0000	4.9692	4.9692	1.4600e-003	0.0000	4.9998
Total	**7.3600e-003**	**0.0649**	**0.0421**	**5.0000e-005**		**4.9300e-003**	**4.9300e-003**		**4.5500e-003**	**4.5500e-003**	**0.0000**	**4.9692**	**4.9692**	**1.4600e-003**	**0.0000**	**4.9998**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-004	3.0000e-004	3.1200e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.6183	0.6183	3.0000e-005	0.0000	0.6189
Total	**2.0000e-004**	**3.0000e-004**	**3.1200e-003**	**1.0000e-005**	**7.1000e-004**	**0.0000**	**7.2000e-004**	**1.9000e-004**	**0.0000**	**1.9000e-004**	**0.0000**	**0.6183**	**0.6183**	**3.0000e-005**	**0.0000**	**0.6189**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.3600e-003	0.0649	0.0421	5.0000e-005		4.9300e-003	4.9300e-003		4.5500e-003	4.5500e-003	0.0000	4.9692	4.9692	1.4600e-003	0.0000	4.9998
Total	**7.3600e-003**	**0.0649**	**0.0421**	**5.0000e-005**		**4.9300e-003**	**4.9300e-003**		**4.5500e-003**	**4.5500e-003**	**0.0000**	**4.9692**	**4.9692**	**1.4600e-003**	**0.0000**	**4.9998**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-004	3.0000e-004	3.1200e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.6183	0.6183	3.0000e-005	0.0000	0.6189
Total	**2.0000e-004**	**3.0000e-004**	**3.1200e-003**	**1.0000e-005**	**7.1000e-004**	**0.0000**	**7.2000e-004**	**1.9000e-004**	**0.0000**	**1.9000e-004**	**0.0000**	**0.6183**	**0.6183**	**3.0000e-005**	**0.0000**	**0.6189**

3.6 Building Construction - 2017

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Off-Road	0.3610	2.4802	1.7630	2.7000e-003		0.1586	0.1586		0.1519	0.1519	0.0000	229.8183	229.8183	0.0511	0.0000	230.8909
Total	**0.3610**	**2.4802**	**1.7630**	**2.7000e-003**		**0.1586**	**0.1586**		**0.1519**	**0.1519**	**0.0000**	**229.8183**	**229.8183**	**0.0511**	**0.0000**	**230.8909**

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0299	0.2850	0.3875	7.5000e-004	0.0214	4.2700e-003	0.0256	6.1000e-003	3.9200e-003	0.0100	0.0000	66.9547	66.9547	4.8000e-004	0.0000	66.9647
Worker	0.0738	0.1092	1.1414	3.1000e-003	0.2609	1.8100e-003	0.2627	0.0693	1.6800e-003	0.0710	0.0000	226.0244	226.0244	0.0107	0.0000	226.2485
Total	**0.1036**	**0.3942**	**1.5289**	**3.8500e-003**	**0.2822**	**6.0800e-003**	**0.2883**	**0.0754**	**5.6000e-003**	**0.0810**	**0.0000**	**292.9791**	**292.9791**	**0.0112**	**0.0000**	**293.2132**

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Off-Road	0.3610	2.4801	1.7630	2.7000e-003		0.1586	0.1586		0.1519	0.1519	0.0000	229.8180	229.8180	0.0511	0.0000	230.8906

Total	**0.3610**	**2.4801**	**1.7630**	**2.7000e-003**		**0.1586**	**0.1586**		**0.1519**	**0.1519**	**0.0000**	**229.8180**	**229.8180**	**0.0511**	**0.0000**	**230.8906**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0299	0.2850	0.3875	7.5000e-004	0.0214	4.2700e-003	0.0256	6.1000e-003	3.9200e-003	0.0100	0.0000	66.9547	66.9547	4.8000e-004	0.0000	66.9647
Worker	0.0738	0.1092	1.1414	3.1000e-003	0.2609	1.8100e-003	0.2627	0.0693	1.6800e-003	0.0710	0.0000	226.0244	226.0244	0.0107	0.0000	226.2485
Total	**0.1036**	**0.3942**	**1.5289**	**3.8500e-003**	**0.2822**	**6.0800e-003**	**0.2883**	**0.0754**	**5.6000e-003**	**0.0810**	**0.0000**	**292.9791**	**292.9791**	**0.0112**	**0.0000**	**293.2132**

3.6 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0189	0.1336	0.1018	1.6000e-004		8.1300e-003	8.1300e-003		7.7900e-003	7.7900e-003	0.0000	13.6639	13.6639	2.9400e-003	0.0000	13.7256
Total	**0.0189**	**0.1336**	**0.1018**	**1.6000e-004**		**8.1300e-003**	**8.1300e-003**		**7.7900e-003**	**7.7900e-003**	**0.0000**	**13.6639**	**13.6639**	**2.9400e-003**	**0.0000**	**13.7256**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.6700e-003	0.0157	0.0222	4.0000e-005	1.2800e-003	2.4000e-004	1.5200e-003	3.7000e-004	2.2000e-004	5.9000e-004	0.0000	3.9430	3.9430	3.0000e-005	0.0000	3.9436
Worker	4.0200e-003	5.9700e-003	0.0625	1.9000e-004	0.0156	1.1000e-004	0.0157	4.1500e-003	1.0000e-004	4.2500e-003	0.0000	13.0329	13.0329	6.0000e-004	0.0000	13.0455
Total	**5.6900e-003**	**0.0216**	**0.0846**	**2.3000e-004**	**0.0169**	**3.5000e-004**	**0.0173**	**4.5200e-003**	**3.2000e-004**	**4.8400e-003**	**0.0000**	**16.9759**	**16.9759**	**6.3000e-004**	**0.0000**	**16.9890**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0189	0.1336	0.1018	1.6000e-004		8.1300e-003	8.1300e-003		7.7900e-003	7.7900e-003	0.0000	13.6639	13.6639	2.9400e-003	0.0000	13.7255
Total	**0.0189**	**0.1336**	**0.1018**	**1.6000e-004**		**8.1300e-003**	**8.1300e-003**		**7.7900e-003**	**7.7900e-003**	**0.0000**	**13.6639**	**13.6639**	**2.9400e-003**	**0.0000**	**13.7255**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.6700e-003	0.0157	0.0222	4.0000e-005	1.2800e-003	2.4000e-004	1.5200e-003	3.7000e-004	2.2000e-004	5.9000e-004	0.0000	3.9430	3.9430	3.0000e-005	0.0000	3.9436
Worker	4.0200e-003	5.9700e-003	0.0625	1.9000e-004	0.0156	1.1000e-004	0.0157	4.1500e-003	1.0000e-004	4.2500e-003	0.0000	13.0329	13.0329	6.0000e-004	0.0000	13.0455
Total	**5.6900e-003**	**0.0216**	**0.0846**	**2.3000e-004**	**0.0169**	**3.5000e-004**	**0.0173**	**4.5200e-003**	**3.2000e-004**	**4.8400e-003**	**0.0000**	**16.9759**	**16.9759**	**6.3000e-004**	**0.0000**	**16.9890**

3.7 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0102	0.1042	0.0890	1.3000e-004		6.0300e-003	6.0300e-003		5.5600e-003	5.5600e-003	0.0000	12.1321	12.1321	3.6900e-003	0.0000	12.2096
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0102**	**0.1042**	**0.0890**	**1.3000e-004**		**6.0300e-003**	**6.0300e-003**		**5.5600e-003**	**5.5600e-003**	**0.0000**	**12.1321**	**12.1321**	**3.6900e-003**	**0.0000**	**12.2096**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.3000e-004	4.9000e-004	5.1300e-003	2.0000e-005	1.2800e-003	1.0000e-005	1.2900e-003	3.4000e-004	1.0000e-005	3.5000e-004	0.0000	1.0712	1.0712	5.0000e-005	0.0000	1.0722
Total	**3.3000e-004**	**4.9000e-004**	**5.1300e-003**	**2.0000e-005**	**1.2800e-003**	**1.0000e-005**	**1.2900e-003**	**3.4000e-004**	**1.0000e-005**	**3.5000e-004**	**0.0000**	**1.0712**	**1.0712**	**5.0000e-005**	**0.0000**	**1.0722**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0102	0.1042	0.0890	1.3000e-004		6.0300e-003	6.0300e-003		5.5600e-003	5.5600e-003	0.0000	12.1321	12.1321	3.6900e-003	0.0000	12.2096
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0102**	**0.1042**	**0.0890**	**1.3000e-004**		**6.0300e-003**	**6.0300e-003**		**5.5600e-003**	**5.5600e-003**	**0.0000**	**12.1321**	**12.1321**	**3.6900e-003**	**0.0000**	**12.2096**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.3000e-004	4.9000e-004	5.1300e-003	2.0000e-005	1.2800e-003	1.0000e-005	1.2900e-003	3.4000e-004	1.0000e-005	3.5000e-004	0.0000	1.0712	1.0712	5.0000e-005	0.0000	1.0722
Total	**3.3000e-004**	**4.9000e-004**	**5.1300e-003**	**2.0000e-005**	**1.2800e-003**	**1.0000e-005**	**1.2900e-003**	**3.4000e-004**	**1.0000e-005**	**3.5000e-004**	**0.0000**	**1.0712**	**1.0712**	**5.0000e-005**	**0.0000**	**1.0722**

3.8 Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.1877					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.2300e-003	0.0351	0.0325	5.0000e-005		2.6300e-003	2.6300e-003		2.6300e-003	2.6300e-003	0.0000	4.4682	4.4682	4.2000e-004	0.0000	4.4771
Total	**1.1929**	**0.0351**	**0.0325**	**5.0000e-005**		**2.6300e-003**	**2.6300e-003**		**2.6300e-003**	**2.6300e-003**	**0.0000**	**4.4682**	**4.4682**	**4.2000e-004**	**0.0000**	**4.4771**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1800e-003	3.2300e-003	0.0338	1.0000e-004	8.4500e-003	6.0000e-005	8.5100e-003	2.2400e-003	5.0000e-005	2.3000e-003	0.0000	7.0498	7.0498	3.2000e-004	0.0000	7.0566
Total	**2.1800e-003**	**3.2300e-003**	**0.0338**	**1.0000e-004**	**8.4500e-003**	**6.0000e-005**	**8.5100e-003**	**2.2400e-003**	**5.0000e-005**	**2.3000e-003**	**0.0000**	**7.0498**	**7.0498**	**3.2000e-004**	**0.0000**	**7.0566**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.1877					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	5.2300e-003	0.0351	0.0325	5.0000e-005		2.6300e-003	2.6300e-003		2.6300e-003	2.6300e-003	0.0000	4.4682	4.4682	4.2000e-004	0.0000	4.4771
Total	**1.1929**	**0.0351**	**0.0325**	**5.0000e-005**		**2.6300e-003**	**2.6300e-003**		**2.6300e-003**	**2.6300e-003**	**0.0000**	**4.4682**	**4.4682**	**4.2000e-004**	**0.0000**	**4.4771**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1800e-003	3.2300e-003	0.0338	1.0000e-004	8.4500e-003	6.0000e-005	8.5100e-003	2.2400e-003	5.0000e-005	2.3000e-003	0.0000	7.0498	7.0498	3.2000e-004	0.0000	7.0566
Total	**2.1800e-003**	**3.2300e-003**	**0.0338**	**1.0000e-004**	**8.4500e-003**	**6.0000e-005**	**8.5100e-003**	**2.2400e-003**	**5.0000e-005**	**2.3000e-003**	**0.0000**	**7.0498**	**7.0498**	**3.2000e-004**	**0.0000**	**7.0566**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.9504	2.3716	10.8754	0.0357	2.5867	0.0366	2.6233	0.6912	0.0338	0.7250	0.0000	2,468.1116	2,468.1116	0.0898	0.0000	2,469.9967
Unmitigated	0.9504	2.3716	10.8754	0.0357	2.5867	0.0366	2.6233	0.6912	0.0338	0.7250	0.0000	2,468.1116	2,468.1116	0.0898	0.0000	2,469.9967

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	2,001.32	2,174.42	1843.40	6,846,217	6,846,217
Total	2,001.32	2,174.42	1,843.40	6,846,217	6,846,217

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.508857	0.056420	0.193204	0.150829	0.041936	0.005921	0.015893	0.015805	0.001454	0.002159	0.004747	0.000498	0.002277

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	312.9408	312.9408	0.0144	2.9800e-003	314.1655
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	312.9408	312.9408	0.0144	2.9800e-003	314.1655
NaturalGas Mitigated	0.0180	0.1542	0.0656	9.8000e-004		0.0125	0.0125		0.0125	0.0125	0.0000	178.5317	178.5317	3.4200e-003	3.2700e-003	179.6183
NaturalGas Unmitigated	0.0180	0.1542	0.0656	9.8000e-004		0.0125	0.0125		0.0125	0.0125	0.0000	178.5317	178.5317	3.4200e-003	3.2700e-003	179.6183

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	3.34556e+006	0.0180	0.1542	0.0656	9.8000e-004		0.0125	0.0125		0.0125	0.0125	0.0000	178.5317	178.5317	3.4200e-003	3.2700e-003	179.6183
Total		**0.0180**	**0.1542**	**0.0656**	**9.8000e-004**		**0.0125**	**0.0125**		**0.0125**	**0.0125**	**0.0000**	**178.5317**	**178.5317**	**3.4200e-003**	**3.2700e-003**	**179.6183**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	3.34556e+006	0.0180	0.1542	0.0656	9.8000e-004		0.0125	0.0125		0.0125	0.0125	0.0000	178.5317	178.5317	3.4200e-003	3.2700e-003	179.6183
Total		**0.0180**	**0.1542**	**0.0656**	**9.8000e-004**		**0.0125**	**0.0125**		**0.0125**	**0.0125**	**0.0000**	**178.5317**	**178.5317**	**3.4200e-003**	**3.2700e-003**	**179.6183**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	1.09356e+006	312.9408	0.0144	2.9800e-003	314.1655
Total		**312.9408**	**0.0144**	**2.9800e-003**	**314.1655**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	1.09356e+006	312.9408	0.0144	2.9800e-003	314.1655
Total		**312.9408**	**0.0144**	**2.9800e-003**	**314.1655**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.3063	0.0616	5.0498	3.2000e-003		0.3072	0.3072		0.3071	0.3071	32.2481	67.1048	99.3529	0.1012	2.1900e-003	102.1559

Unmitigated	2.3063	0.0616	5.0498	3.2000e-003		0.3072	0.3072		0.3071	0.3071	32.2481	67.1048	99.3529	0.1012	2.1900e-003	102.1559

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1188					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.0974					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.9944	0.0252	1.9075	3.0300e-003		0.2899	0.2899		0.2899	0.2899	32.2481	61.9890	94.2371	0.0962	2.1900e-003	96.9353
Landscaping	0.0957	0.0363	3.1423	1.7000e-004		0.0173	0.0173		0.0173	0.0173	0.0000	5.1158	5.1158	4.9900e-003	0.0000	5.2206
Total	**2.3063**	**0.0616**	**5.0498**	**3.2000e-003**		**0.3072**	**0.3072**		**0.3071**	**0.3071**	**32.2481**	**67.1048**	**99.3529**	**0.1012**	**2.1900e-003**	**102.1559**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1188					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.0974					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.9944	0.0252	1.9075	3.0300e-003		0.2899	0.2899		0.2899	0.2899	32.2481	61.9890	94.2371	0.0962	2.1900e-003	96.9353
Landscaping	0.0957	0.0363	3.1423	1.7000e-004		0.0173	0.0173		0.0173	0.0173	0.0000	5.1158	5.1158	4.9900e-003	0.0000	5.2206

Total	2.3063	0.0616	5.0498	3.2000e-003		0.3072	0.3072		0.3071	0.3071	32.2481	67.1048	99.3529	0.1012	2.1900e-003	102.1559

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	119.6652	0.6498	0.0163	138.3581
Unmitigated	119.6652	0.6500	0.0163	138.3681

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	19.7866 / 12.4742	119.6652	0.6500	0.0163	138.3681
Total		**119.6652**	**0.6500**	**0.0163**	**138.3681**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	19.7866 / 12.4742	119.6652	0.6498	0.0163	138.3581
Total		**119.6652**	**0.6498**	**0.0163**	**138.3581**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	28.3578	1.6759	0.0000	63.5517
Unmitigated	28.3578	1.6759	0.0000	63.5517

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e

Land Use	tons	MT/yr			
Apartments Low Rise	139.7	28.3578	1.6759	0.0000	63.5517
Total		**28.3578**	**1.6759**	**0.0000**	**63.5517**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	139.7	28.3578	1.6759	0.0000	63.5517
Total		**28.3578**	**1.6759**	**0.0000**	**63.5517**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Phase 2 - Student Housing Project

Orange County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	303.69	Dwelling Unit	3.50	303,688.00	869

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - modified; Student Housing Project is multiple stories - according to HPI will be 3.5 acres

Construction Phase - modified

Off-road Equipment -

Off-road Equipment - modified

Off-road Equipment - modified to account for 3.5 acre footprint

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Trips and VMT -

Demolition - Assuming denisty of pavement is 150 lbs/ft3, and pavement is 1 foot deep

Architectural Coating - scaqmd rule 1113

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	18.00	35.00
tblGrading	AcresOfGrading	7.50	0.00
tblLandUse	LandUseSquareFeet	303,690.00	303,688.00
tblLandUse	LotAcreage	18.98	3.50
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblProjectCharacteristics	OperationalYear	2014	2020

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	4.2774	40.9299	32.3219	0.0678	13.3655	1.8217	15.1871	3.3971	1.7004	4.8285	0.0000	6,722.3668	6,722.3668	0.7514	0.0000	6,738.1462
2018	68.2916	23.6851	28.6279	0.0615	2.6479	1.3045	3.9524	0.7062	1.2484	1.9546	0.0000	5,287.4787	5,287.4787	0.6039	0.0000	5,300.1610
Total	**72.5690**	**64.6150**	**60.9498**	**0.1293**	**16.0134**	**3.1262**	**19.1395**	**4.1033**	**2.9489**	**6.7831**	**0.0000**	**12,009.8454**	**12,009.8454**	**1.3553**	**0.0000**	**12,038.3071**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	4.2774	40.9299	32.3219	0.0678	5.9022	1.8217	7.7239	1.3430	1.7004	2.7743	0.0000	6,722.3668	6,722.3668	0.7514	0.0000	6,738.1461
2018	68.2916	23.6851	28.6279	0.0615	2.6479	1.3045	3.9524	0.7062	1.2484	1.9546	0.0000	5,287.4787	5,287.4787	0.6039	0.0000	5,300.1610
Total	**72.5690**	**64.6150**	**60.9498**	**0.1293**	**8.5501**	**3.1262**	**11.6763**	**2.0491**	**2.9489**	**4.7289**	**0.0000**	**12,009.8454**	**12,009.8454**	**1.3553**	**0.0000**	**12,038.3071**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**46.61**	**0.00**	**38.99**	**50.06**	**0.00**	**30.28**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Area	86.9836	2.3092	177.7402	0.2441		23.3298	23.3298		23.3262	23.3262	2,843.7964	5,511.6080	8,355.4044	8.5248	0.1931	8,594.2695
Energy	0.0989	0.8447	0.3595	5.3900e-003		0.0683	0.0683		0.0683	0.0683		1,078.3428	1,078.3428	0.0207	0.0198	1,084.9054
Mobile	5.6984	13.1361	65.2045	0.2202	15.7025	0.2183	15.9208	4.1901	0.2015	4.3916		16,768.0222	16,768.0222	0.5906		16,780.4257
Total	**92.7808**	**16.2900**	**243.3042**	**0.4697**	**15.7025**	**23.6164**	**39.3189**	**4.1901**	**23.5960**	**27.7860**	**2,843.7964**	**23,357.9729**	**26,201.7693**	**9.1361**	**0.2128**	**26,459.6005**

Mitigated Operational

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Area	86.9836	2.3092	177.7402	0.2441		23.3298	23.3298		23.3262	23.3262	2,843.7964	5,511.6080	8,355.4044	8.5248	0.1931	8,594.2695
Energy	0.0989	0.8447	0.3595	5.3900e-003		0.0683	0.0683		0.0683	0.0683		1,078.3428	1,078.3428	0.0207	0.0198	1,084.9054
Mobile	5.6984	13.1361	65.2045	0.2202	15.7025	0.2183	15.9208	4.1901	0.2015	4.3916		16,768.0222	16,768.0222	0.5906		16,780.4257
Total	**92.7808**	**16.2900**	**243.3042**	**0.4697**	**15.7025**	**23.6164**	**39.3189**	**4.1901**	**23.5960**	**27.7860**	**2,843.7964**	**23,357.9729**	**26,201.7693**	**9.1361**	**0.2128**	**26,459.6005**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2017	1/27/2017	5	20	
2	Site Preparation	Site Preparation	1/28/2017	2/3/2017	5	5	
3	Grading	Grading	2/4/2017	2/15/2017	5	8	
4	Trenching	Trenching	2/16/2017	3/1/2017	5	10	
5	Building Construction	Building Construction	3/2/2017	1/17/2018	5	230	
6	Paving	Paving	1/18/2018	2/12/2018	5	18	
7	Architectural Coating	Architectural Coating	2/13/2018	4/2/2018	5	35	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 614,968; Residential Outdoor: 204,989; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	0	8.00	162	0.38
Demolition	Rubber Tired Dozers	1	8.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Rubber Tired Dozers	0	8.00	255	0.40
Site Preparation	Scrapers	1	8.00	361	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Excavators	0	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40

Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Trenching	Plate Compactors	2	8.00	8	0.43
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Trenching	Trenchers	2	8.00	80	0.50
Building Construction	Cranes	1	8.00	226	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	1,131.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	219.00	32.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	44.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2017

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Fugitive Dust					12.2349	0.0000	12.2349	1.8525	0.0000	1.8525			0.0000			0.0000
Off-Road	2.7216	26.5855	20.8712	0.0245		1.6062	1.6062		1.5022	1.5022		2,457.4682	2,457.4682	0.6235		2,470.5620
Total	**2.7216**	**26.5855**	**20.8712**	**0.0245**	**12.2349**	**1.6062**	**13.8411**	**1.8525**	**1.5022**	**3.3547**		**2,457.4682**	**2,457.4682**	**0.6235**		**2,470.5620**

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Hauling	0.9747	14.2915	10.7997	0.0416	0.9853	0.2145	1.1997	0.2698	0.1973	0.4671		4,123.1038	4,123.1038	0.0292		4,123.7175
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0411	0.0529	0.6510	1.7600e-003	0.1453	9.9000e-004	0.1463	0.0385	9.2000e-004	0.0395		141.7948	141.7948	6.4400e-003		141.9300
Total	**1.0158**	**14.3444**	**11.4507**	**0.0433**	**1.1306**	**0.2155**	**1.3460**	**0.3083**	**0.1982**	**0.5065**		**4,264.8986**	**4,264.8986**	**0.0357**		**4,265.6474**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Fugitive Dust					4.7716	0.0000	4.7716	0.7225	0.0000	0.7225			0.0000			0.0000
Off-Road	2.7216	26.5855	20.8712	0.0245		1.6062	1.6062		1.5022	1.5022	0.0000	2,457.4682	2,457.4682	0.6235		2,470.5620
Total	**2.7216**	**26.5855**	**20.8712**	**0.0245**	**4.7716**	**1.6062**	**6.3778**	**0.7225**	**1.5022**	**2.2247**	**0.0000**	**2,457.4682**	**2,457.4682**	**0.6235**		**2,470.5620**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.9747	14.2915	10.7997	0.0416	0.9853	0.2145	1.1997	0.2698	0.1973	0.4671		4,123.1038	4,123.1038	0.0292		4,123.7175
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0411	0.0529	0.6510	1.7600e-003	0.1453	9.9000e-004	0.1463	0.0385	9.2000e-004	0.0395		141.7948	141.7948	6.4400e-003		141.9300
Total	**1.0158**	**14.3444**	**11.4507**	**0.0433**	**1.1306**	**0.2155**	**1.3460**	**0.3083**	**0.1982**	**0.5065**		**4,264.8986**	**4,264.8986**	**0.0357**		**4,265.6474**

3.3 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	2.5289	28.6230	17.1310	0.0238		1.3967	1.3967		1.2850	1.2850		2,439.4360	2,439.4360	0.7474		2,455.1322

Total	**2.5289**	**28.6230**	**17.1310**	**0.0238**	**0.0000**	**1.3967**	**1.3967**	**0.0000**	**1.2850**	**1.2850**		**2,439.4360**	**2,439.4360**	**0.7474**		**2,455.1322**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0253	0.0326	0.4006	1.0900e-003	0.0894	6.1000e-004	0.0900	0.0237	5.6000e-004	0.0243		87.2583	87.2583	3.9600e-003		87.3415
Total	**0.0253**	**0.0326**	**0.4006**	**1.0900e-003**	**0.0894**	**6.1000e-004**	**0.0900**	**0.0237**	**5.6000e-004**	**0.0243**		**87.2583**	**87.2583**	**3.9600e-003**		**87.3415**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	2.5289	28.6230	17.1310	0.0238		1.3967	1.3967		1.2850	1.2850	0.0000	2,439.4360	2,439.4360	0.7474		2,455.1322
Total	**2.5289**	**28.6230**	**17.1310**	**0.0238**	**0.0000**	**1.3967**	**1.3967**	**0.0000**	**1.2850**	**1.2850**	**0.0000**	**2,439.4360**	**2,439.4360**	**0.7474**		**2,455.1322**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0253	0.0326	0.4006	1.0900e-003	0.0894	6.1000e-004	0.0900	0.0237	5.6000e-004	0.0243		87.2583	87.2583	3.9600e-003		87.3415
Total	**0.0253**	**0.0326**	**0.4006**	**1.0900e-003**	**0.0894**	**6.1000e-004**	**0.0900**	**0.0237**	**5.6000e-004**	**0.0243**		**87.2583**	**87.2583**	**3.9600e-003**		**87.3415**

3.4 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.6973	28.1608	18.9679	0.0206		1.5550	1.5550		1.4306	1.4306		2,104.5737	2,104.5737	0.6448		2,118.1153
Total	**2.6973**	**28.1608**	**18.9679**	**0.0206**	**6.5523**	**1.5550**	**8.1074**	**3.3675**	**1.4306**	**4.7981**		**2,104.5737**	**2,104.5737**	**0.6448**		**2,118.1153**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0316	0.0407	0.5007	1.3600e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		109.0729	109.0729	4.9500e-003		109.1769
Total	**0.0316**	**0.0407**	**0.5007**	**1.3600e-003**	**0.1118**	**7.6000e-004**	**0.1125**	**0.0296**	**7.1000e-004**	**0.0304**		**109.0729**	**109.0729**	**4.9500e-003**		**109.1769**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000			0.0000
Off-Road	2.6973	28.1608	18.9679	0.0206		1.5550	1.5550		1.4306	1.4306	0.0000	2,104.5737	2,104.5737	0.6448		2,118.1153
Total	**2.6973**	**28.1608**	**18.9679**	**0.0206**	**2.5554**	**1.5550**	**4.1104**	**1.3133**	**1.4306**	**2.7440**	**0.0000**	**2,104.5737**	**2,104.5737**	**0.6448**		**2,118.1153**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0316	0.0407	0.5007	1.3600e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		109.0729	109.0729	4.9500e-003		109.1769
Total	**0.0316**	**0.0407**	**0.5007**	**1.3600e-003**	**0.1118**	**7.6000e-004**	**0.1125**	**0.0296**	**7.1000e-004**	**0.0304**		**109.0729**	**109.0729**	**4.9500e-003**		**109.1769**

3.5 Trenching - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4715	12.9699	8.4138	0.0110		0.9866	0.9866		0.9093	0.9093		1,095.5131	1,095.5131	0.3217		1,102.2686
Total	**1.4715**	**12.9699**	**8.4138**	**0.0110**		**0.9866**	**0.9866**		**0.9093**	**0.9093**		**1,095.5131**	**1,095.5131**	**0.3217**		**1,102.2686**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0411	0.0529	0.6510	1.7600e-003	0.1453	9.9000e-004	0.1463	0.0385	9.2000e-004	0.0395		141.7948	141.7948	6.4400e-003		141.9300
Total	**0.0411**	**0.0529**	**0.6510**	**1.7600e-003**	**0.1453**	**9.9000e-004**	**0.1463**	**0.0385**	**9.2000e-004**	**0.0395**		**141.7948**	**141.7948**	**6.4400e-003**		**141.9300**

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Off-Road	1.4715	12.9699	8.4138	0.0110		0.9866	0.9866		0.9093	0.9093	0.0000	1,095.5131	1,095.5131	0.3217		1,102.2686
Total	**1.4715**	**12.9699**	**8.4138**	**0.0110**		**0.9866**	**0.9866**		**0.9093**	**0.9093**	**0.0000**	**1,095.5131**	**1,095.5131**	**0.3217**		**1,102.2686**

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0411	0.0529	0.6510	1.7600e-003	0.1453	9.9000e-004	0.1463	0.0385	9.2000e-004	0.0395		141.7948	141.7948	6.4400e-003		141.9300
Total	**0.0411**	**0.0529**	**0.6510**	**1.7600e-003**	**0.1453**	**9.9000e-004**	**0.1463**	**0.0385**	**9.2000e-004**	**0.0395**		**141.7948**	**141.7948**	**6.4400e-003**		**141.9300**

3.6 Building Construction - 2017

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Off-Road	3.3275	22.8585	16.2492	0.0249		1.4621	1.4621		1.3998	1.3998		2,334.8503	2,334.8503	0.5189		2,345.7479

Total	**3.3275**	**22.8585**	**16.2492**	**0.0249**		**1.4621**	**1.4621**		**1.3998**	**1.3998**		**2,334.8503**	**2,334.8503**	**0.5189**		**2,345.7479**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2581	2.5184	3.0771	6.9100e-003	0.2000	0.0392	0.2392	0.0570	0.0360	0.0930		682.6535	682.6535	4.7700e-003		682.7537
Worker	0.6918	0.8913	10.9663	0.0297	2.4479	0.0167	2.4646	0.6492	0.0155	0.6646		2,388.6968	2,388.6968	0.1084		2,390.9739
Total	**0.9499**	**3.4097**	**14.0433**	**0.0366**	**2.6479**	**0.0559**	**2.7038**	**0.7062**	**0.0515**	**0.7576**		**3,071.3502**	**3,071.3502**	**0.1132**		**3,073.7276**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.3275	22.8585	16.2492	0.0249		1.4621	1.4621		1.3998	1.3998	0.0000	2,334.8503	2,334.8503	0.5189		2,345.7479
Total	**3.3275**	**22.8585**	**16.2492**	**0.0249**		**1.4621**	**1.4621**		**1.3998**	**1.3998**	**0.0000**	**2,334.8503**	**2,334.8503**	**0.5189**		**2,345.7479**

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2581	2.5184	3.0771	6.9100e-003	0.2000	0.0392	0.2392	0.0570	0.0360	0.0930		682.6535	682.6535	4.7700e-003		682.7537
Worker	0.6918	0.8913	10.9663	0.0297	2.4479	0.0167	2.4646	0.6492	0.0155	0.6646		2,388.6968	2,388.6968	0.1084		2,390.9739
Total	**0.9499**	**3.4097**	**14.0433**	**0.0366**	**2.6479**	**0.0559**	**2.7038**	**0.7062**	**0.0515**	**0.7576**		**3,071.3502**	**3,071.3502**	**0.1132**		**3,073.7276**

3.6 Building Construction - 2018

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Off-Road	2.9004	20.5600	15.6637	0.0249		1.2511	1.2511		1.1992	1.1992		2,317.2089	2,317.2089	0.4980		2,327.6664
Total	**2.9004**	**20.5600**	**15.6637**	**0.0249**		**1.2511**	**1.2511**		**1.1992**	**1.1992**		**2,317.2089**	**2,317.2089**	**0.4980**		**2,327.6664**

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2417	2.3117	2.9210	6.9000e-003	0.2000	0.0369	0.2369	0.0570	0.0339	0.0909		671.0637	671.0637	4.7500e-003		671.1633
Worker	0.6314	0.8133	10.0432	0.0297	2.4479	0.0165	2.4644	0.6492	0.0153	0.6645		2,299.2062	2,299.2062	0.1012		2,301.3312
Total	**0.8731**	**3.1251**	**12.9641**	**0.0366**	**2.6479**	**0.0534**	**2.7013**	**0.7062**	**0.0492**	**0.7554**		**2,970.2698**	**2,970.2698**	**0.1059**		**2,972.4946**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category						lb/day								lb/day		
Off-Road	2.9004	20.5600	15.6637	0.0249		1.2511	1.2511		1.1992	1.1992	0.0000	2,317.2089	2,317.2089	0.4980		2,327.6664
Total	**2.9004**	**20.5600**	**15.6637**	**0.0249**		**1.2511**	**1.2511**		**1.1992**	**1.1992**	**0.0000**	**2,317.2089**	**2,317.2089**	**0.4980**		**2,327.6664**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category						lb/day								lb/day		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2417	2.3117	2.9210	6.9000e-003	0.2000	0.0369	0.2369	0.0570	0.0339	0.0909		671.0637	671.0637	4.7500e-003		671.1633
Worker	0.6314	0.8133	10.0432	0.0297	2.4479	0.0165	2.4644	0.6492	0.0153	0.6645		2,299.2062	2,299.2062	0.1012		2,301.3312
Total	**0.8731**	**3.1251**	**12.9641**	**0.0366**	**2.6479**	**0.0534**	**2.7013**	**0.7062**	**0.0492**	**0.7554**		**2,970.2698**	**2,970.2698**	**0.1059**		**2,972.4946**

3.7 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1306	11.5793	9.8923	0.0150		0.6701	0.6701		0.6177	0.6177		1,485.9270	1,485.9270	0.4521		1,495.4213
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1306**	**11.5793**	**9.8923**	**0.0150**		**0.6701**	**0.6701**		**0.6177**	**0.6177**		**1,485.9270**	**1,485.9270**	**0.4521**		**1,495.4213**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0375	0.0483	0.5962	1.7600e-003	0.1453	9.8000e-004	0.1463	0.0385	9.1000e-004	0.0395		136.4826	136.4826	6.0100e-003		136.6087
Total	**0.0375**	**0.0483**	**0.5962**	**1.7600e-003**	**0.1453**	**9.8000e-004**	**0.1463**	**0.0385**	**9.1000e-004**	**0.0395**		**136.4826**	**136.4826**	**6.0100e-003**		**136.6087**

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Off-Road	1.1306	11.5793	9.8923	0.0150		0.6701	0.6701		0.6177	0.6177	0.0000	1,485.9270	1,485.9270	0.4521		1,495.4213
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1306**	**11.5793**	**9.8923**	**0.0150**		**0.6701**	**0.6701**		**0.6177**	**0.6177**	**0.0000**	**1,485.9270**	**1,485.9270**	**0.4521**		**1,495.4213**

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0375	0.0483	0.5962	1.7600e-003	0.1453	9.8000e-004	0.1463	0.0385	9.1000e-004	0.0395		136.4826	136.4826	6.0100e-003		136.6087
Total	**0.0375**	**0.0483**	**0.5962**	**1.7600e-003**	**0.1453**	**9.8000e-004**	**0.1463**	**0.0385**	**9.1000e-004**	**0.0395**		**136.4826**	**136.4826**	**6.0100e-003**		**136.6087**

3.8 Architectural Coating - 2018

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Archit. Coating	67.8661					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.0102
Total	**68.1647**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**		**281.4485**	**281.4485**	**0.0267**		**282.0102**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1269	0.1634	2.0178	5.9700e-003	0.4918	3.3200e-003	0.4951	0.1304	3.0700e-003	0.1335		461.9410	461.9410	0.0203		462.3679
Total	**0.1269**	**0.1634**	**2.0178**	**5.9700e-003**	**0.4918**	**3.3200e-003**	**0.4951**	**0.1304**	**3.0700e-003**	**0.1335**		**461.9410**	**461.9410**	**0.0203**		**462.3679**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	67.8661					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.0102
Total	**68.1647**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**	**0.0000**	**281.4485**	**281.4485**	**0.0267**		**282.0102**

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1269	0.1634	2.0178	5.9700e-003	0.4918	3.3200e-003	0.4951	0.1304	3.0700e-003	0.1335		461.9410	461.9410	0.0203		462.3679
Total	**0.1269**	**0.1634**	**2.0178**	**5.9700e-003**	**0.4918**	**3.3200e-003**	**0.4951**	**0.1304**	**3.0700e-003**	**0.1335**		**461.9410**	**461.9410**	**0.0203**		**462.3679**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Mitigated	5.6984	13.1361	65.2045	0.2202	15.7025	0.2183	15.9208	4.1901	0.2015	4.3916		16,768.0222	16,768.0222	0.5906		16,780.4257
Unmitigated	5.6984	13.1361	65.2045	0.2202	15.7025	0.2183	15.9208	4.1901	0.2015	4.3916		16,768.0222	16,768.0222	0.5906		16,780.4257

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	2,001.32	2,174.42	1843.40	6,846,217	6,846,217
Total	2,001.32	2,174.42	1,843.40	6,846,217	6,846,217

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.508857	0.056420	0.193204	0.150829	0.041936	0.005921	0.015893	0.015805	0.001454	0.002159	0.004747	0.000498	0.002277

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0989	0.8447	0.3595	5.3900e-003		0.0683	0.0683		0.0683	0.0683		1,078.3428	1,078.3428	0.0207	0.0198	1,084.9054
NaturalGas Unmitigated	0.0989	0.8447	0.3595	5.3900e-003		0.0683	0.0683		0.0683	0.0683		1,078.3428	1,078.3428	0.0207	0.0198	1,084.9054

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	9165.91	0.0989	0.8447	0.3595	5.3900e-003		0.0683	0.0683		0.0683	0.0683		1,078.3428	1,078.3428	0.0207	0.0198	1,084.9054
Total		**0.0989**	**0.8447**	**0.3595**	**5.3900e-003**		**0.0683**	**0.0683**		**0.0683**	**0.0683**		**1,078.3428**	**1,078.3428**	**0.0207**	**0.0198**	**1,084.9054**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	9.16591	0.0989	0.8447	0.3595	5.3900e-003		0.0683	0.0683		0.0683	0.0683		1,078.3428	1,078.3428	0.0207	0.0198	1,084.9054
Total		**0.0989**	**0.8447**	**0.3595**	**5.3900e-003**		**0.0683**	**0.0683**		**0.0683**	**0.0683**		**1,078.3428**	**1,078.3428**	**0.0207**	**0.0198**	**1,084.9054**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	86.9836	2.3092	177.7402	0.2441		23.3298	23.3298		23.3262	23.3262	2,843.7964	5,511.6080	8,355.4044	8.5248	0.1931	8,594.2695
Unmitigated	86.9836	2.3092	177.7402	0.2441		23.3298	23.3298		23.3262	23.3262	2,843.7964	5,511.6080	8,355.4044	8.5248	0.1931	8,594.2695

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.6508					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.0130					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	79.5543	2.0185	152.6021	0.2428		23.1916	23.1916		23.1880	23.1880	2,843.7964	5,466.4941	8,310.2905	8.4808	0.1931	8,548.2318
Landscaping	0.7655	0.2907	25.1381	1.3200e-003		0.1382	0.1382		0.1382	0.1382		45.1139	45.1139	0.0440		46.0377
Total	**86.9836**	**2.3092**	**177.7402**	**0.2441**		**23.3298**	**23.3298**		**23.3262**	**23.3262**	**2,843.7964**	**5,511.6080**	**8,355.4044**	**8.5248**	**0.1931**	**8,594.2695**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.6508					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.0130					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	79.5543	2.0185	152.6021	0.2428		23.1916	23.1916		23.1880	23.1880	2,843.7964	5,466.4941	8,310.2905	8.4808	0.1931	8,548.2318
Landscaping	0.7655	0.2907	25.1381	1.3200e-003		0.1382	0.1382		0.1382	0.1382		45.1139	45.1139	0.0440		46.0377
Total	**86.9836**	**2.3092**	**177.7402**	**0.2441**		**23.3298**	**23.3298**		**23.3262**	**23.3262**	**2,843.7964**	**5,511.6080**	**8,355.4044**	**8.5248**	**0.1931**	**8,594.2695**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Phase 2 - Student Housing Project

Orange County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	303.69	Dwelling Unit	3.50	303,688.00	869

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 2.2 **Precipitation Freq (Days)** 30

Climate Zone 8 **Operational Year** 2020

Utility Company Southern California Edison

CO2 Intensity (lb/MWhr) 630.89 **CH4 Intensity (lb/MWhr)** 0.029 **N2O Intensity (lb/MWhr)** 0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - modified; Student Housing Project is multiple stories - according to HPI will be 3.5 acres

Construction Phase - modified

Off-road Equipment -

Off-road Equipment - modified

Off-road Equipment - modified to account for 3.5 acre footprint

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Trips and VMT -

Demolition - Assuming denisty of pavement is 150 lbs/ft3, and pavement is 1 foot deep

Architectural Coating - scaqmd rule 1113

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	18.00	35.00
tblGrading	AcresOfGrading	7.50	0.00
tblLandUse	LandUseSquareFeet	303,690.00	303,688.00
tblLandUse	LotAcreage	18.98	3.50
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblProjectCharacteristics	OperationalYear	2014	2020

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	4.3399	41.4239	33.9546	0.0676	13.3655	1.8222	15.1876	3.3971	1.7009	4.8285	0.0000	6,705.0214	6,705.0214	0.7514	0.0000	6,720.8008
2018	68.2979	23.8181	28.6348	0.0599	2.6479	1.3049	3.9528	0.7062	1.2488	1.9549	0.0000	5,159.9408	5,159.9408	0.6041	0.0000	5,172.6263
Total	**72.6378**	**65.2420**	**62.5895**	**0.1275**	**16.0134**	**3.1270**	**19.1404**	**4.1033**	**2.9497**	**6.7834**	**0.0000**	**11,864.9621**	**11,864.9621**	**1.3555**	**0.0000**	**11,893.4271**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	4.3399	41.4239	33.9546	0.0676	5.9022	1.8222	7.7243	1.3430	1.7009	2.7743	0.0000	6,705.0214	6,705.0214	0.7514	0.0000	6,720.8008
2018	68.2979	23.8181	28.6348	0.0599	2.6479	1.3049	3.9528	0.7062	1.2488	1.9549	0.0000	5,159.9408	5,159.9408	0.6041	0.0000	5,172.6263
Total	**72.6378**	**65.2420**	**62.5895**	**0.1275**	**8.5501**	**3.1270**	**11.6771**	**2.0491**	**2.9497**	**4.7292**	**0.0000**	**11,864.9621**	**11,864.9621**	**1.3555**	**0.0000**	**11,893.4271**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**46.61**	**0.00**	**38.99**	**50.06**	**0.00**	**30.28**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	86.9836	2.3092	177.7402	0.2441		23.3298	23.3298		23.3262	23.3262	2,843.7964	5,511.6080	8,355.4044	8.5248	0.1931	8,594.2695
Energy	0.0989	0.8447	0.3595	5.3900e-003		0.0683	0.0683		0.0683	0.0683		1,078.3428	1,078.3428	0.0207	0.0198	1,084.9054
Mobile	5.9903	13.8709	64.4048	0.2103	15.7025	0.2189	15.9214	4.1901	0.2021	4.3921		16,044.1493	16,044.1493	0.5910		16,056.5605
Total	**93.0727**	**17.0248**	**242.5044**	**0.4598**	**15.7025**	**23.6171**	**39.3195**	**4.1901**	**23.5966**	**27.7866**	**2,843.7964**	**22,634.1000**	**25,477.8964**	**9.1365**	**0.2128**	**25,735.7354**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	86.9836	2.3092	177.7402	0.2441		23.3298	23.3298		23.3262	23.3262	2,843.7964	5,511.6080	8,355.4044	8.5248	0.1931	8,594.2695
Energy	0.0989	0.8447	0.3595	5.3900e-003		0.0683	0.0683		0.0683	0.0683		1,078.3428	1,078.3428	0.0207	0.0198	1,084.9054
Mobile	5.9903	13.8709	64.4048	0.2103	15.7025	0.2189	15.9214	4.1901	0.2021	4.3921		16,044.1493	16,044.1493	0.5910		16,056.5605
Total	**93.0727**	**17.0248**	**242.5044**	**0.4598**	**15.7025**	**23.6171**	**39.3195**	**4.1901**	**23.5966**	**27.7866**	**2,843.7964**	**22,634.1000**	**25,477.8964**	**9.1365**	**0.2128**	**25,735.7354**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2017	1/27/2017	5	20	
2	Site Preparation	Site Preparation	1/28/2017	2/3/2017	5	5	
3	Grading	Grading	2/4/2017	2/15/2017	5	8	
4	Trenching	Trenching	2/16/2017	3/1/2017	5	10	
5	Building Construction	Building Construction	3/2/2017	1/17/2018	5	230	
6	Paving	Paving	1/18/2018	2/12/2018	5	18	
7	Architectural Coating	Architectural Coating	2/13/2018	4/2/2018	5	35	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 614,968; Residential Outdoor: 204,989; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	0	8.00	162	0.38
Demolition	Rubber Tired Dozers	1	8.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Rubber Tired Dozers	0	8.00	255	0.40
Site Preparation	Scrapers	1	8.00	361	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Excavators	0	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40

Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Trenching	Plate Compactors	2	8.00	8	0.43
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Trenching	Trenchers	2	8.00	80	0.50
Building Construction	Cranes	1	8.00	226	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	1,131.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	219.00	32.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	44.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					12.2349	0.0000	12.2349	1.8525	0.0000	1.8525			0.0000			0.0000
Off-Road	2.7216	26.5855	20.8712	0.0245		1.6062	1.6062		1.5022	1.5022		2,457.4682	2,457.4682	0.6235		2,470.5620
Total	**2.7216**	**26.5855**	**20.8712**	**0.0245**	**12.2349**	**1.6062**	**13.8411**	**1.8525**	**1.5022**	**3.3547**		**2,457.4682**	**2,457.4682**	**0.6235**		**2,470.5620**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.0379	14.7803	12.4720	0.0415	0.9853	0.2150	1.2002	0.2698	0.1977	0.4675		4,113.2670	4,113.2670	0.0296		4,113.8893
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0432	0.0582	0.6114	1.6700e-003	0.1453	9.9000e-004	0.1463	0.0385	9.2000e-004	0.0395		134.2862	134.2862	6.4400e-003		134.4213
Total	**1.0811**	**14.8385**	**13.0834**	**0.0432**	**1.1306**	**0.2160**	**1.3465**	**0.3083**	**0.1986**	**0.5070**		**4,247.5532**	**4,247.5532**	**0.0361**		**4,248.3106**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Fugitive Dust					4.7716	0.0000	4.7716	0.7225	0.0000	0.7225			0.0000			0.0000
Off-Road	2.7216	26.5855	20.8712	0.0245		1.6062	1.6062		1.5022	1.5022	0.0000	2,457.4682	2,457.4682	0.6235		2,470.5620
Total	**2.7216**	**26.5855**	**20.8712**	**0.0245**	**4.7716**	**1.6062**	**6.3778**	**0.7225**	**1.5022**	**2.2247**	**0.0000**	**2,457.4682**	**2,457.4682**	**0.6235**		**2,470.5620**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.0379	14.7803	12.4720	0.0415	0.9853	0.2150	1.2002	0.2698	0.1977	0.4675		4,113.2670	4,113.2670	0.0296		4,113.8893
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0432	0.0582	0.6114	1.6700e-003	0.1453	9.9000e-004	0.1463	0.0385	9.2000e-004	0.0395		134.2862	134.2862	6.4400e-003		134.4213
Total	**1.0811**	**14.8385**	**13.0834**	**0.0432**	**1.1306**	**0.2160**	**1.3465**	**0.3083**	**0.1986**	**0.5070**		**4,247.5532**	**4,247.5532**	**0.0361**		**4,248.3106**

3.3 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	2.5289	28.6230	17.1310	0.0238		1.3967	1.3967		1.2850	1.2850		2,439.4360	2,439.4360	0.7474		2,455.1322

Total	**2.5289**	**28.6230**	**17.1310**	**0.0238**	**0.0000**	**1.3967**	**1.3967**	**0.0000**	**1.2850**	**1.2850**		**2,439.4360**	**2,439.4360**	**0.7474**		**2,455.1322**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0266	0.0358	0.3762	1.0300e-003	0.0894	6.1000e-004	0.0900	0.0237	5.6000e-004	0.0243		82.6376	82.6376	3.9600e-003		82.7208
Total	**0.0266**	**0.0358**	**0.3762**	**1.0300e-003**	**0.0894**	**6.1000e-004**	**0.0900**	**0.0237**	**5.6000e-004**	**0.0243**		**82.6376**	**82.6376**	**3.9600e-003**		**82.7208**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	2.5289	28.6230	17.1310	0.0238		1.3967	1.3967		1.2850	1.2850	0.0000	2,439.4360	2,439.4360	0.7474		2,455.1322
Total	**2.5289**	**28.6230**	**17.1310**	**0.0238**	**0.0000**	**1.3967**	**1.3967**	**0.0000**	**1.2850**	**1.2850**	**0.0000**	**2,439.4360**	**2,439.4360**	**0.7474**		**2,455.1322**

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0266	0.0358	0.3762	1.0300e-003	0.0894	6.1000e-004	0.0900	0.0237	5.6000e-004	0.0243		82.6376	82.6376	3.9600e-003		82.7208
Total	**0.0266**	**0.0358**	**0.3762**	**1.0300e-003**	**0.0894**	**6.1000e-004**	**0.0900**	**0.0237**	**5.6000e-004**	**0.0243**		**82.6376**	**82.6376**	**3.9600e-003**		**82.7208**

3.4 Grading - 2017

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.6973	28.1608	18.9679	0.0206		1.5550	1.5550		1.4306	1.4306		2,104.5737	2,104.5737	0.6448		2,118.1153
Total	**2.6973**	**28.1608**	**18.9679**	**0.0206**	**6.5523**	**1.5550**	**8.1074**	**3.3675**	**1.4306**	**4.7981**		**2,104.5737**	**2,104.5737**	**0.6448**		**2,118.1153**

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0332	0.0448	0.4703	1.2800e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		103.2970	103.2970	4.9500e-003		103.4010
Total	**0.0332**	**0.0448**	**0.4703**	**1.2800e-003**	**0.1118**	**7.6000e-004**	**0.1125**	**0.0296**	**7.1000e-004**	**0.0304**		**103.2970**	**103.2970**	**4.9500e-003**		**103.4010**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000			0.0000
Off-Road	2.6973	28.1608	18.9679	0.0206		1.5550	1.5550		1.4306	1.4306	0.0000	2,104.5737	2,104.5737	0.6448		2,118.1153
Total	**2.6973**	**28.1608**	**18.9679**	**0.0206**	**2.5554**	**1.5550**	**4.1104**	**1.3133**	**1.4306**	**2.7440**	**0.0000**	**2,104.5737**	**2,104.5737**	**0.6448**		**2,118.1153**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0332	0.0448	0.4703	1.2800e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		103.2970	103.2970	4.9500e-003		103.4010
Total	**0.0332**	**0.0448**	**0.4703**	**1.2800e-003**	**0.1118**	**7.6000e-004**	**0.1125**	**0.0296**	**7.1000e-004**	**0.0304**		**103.2970**	**103.2970**	**4.9500e-003**		**103.4010**

3.5 Trenching - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4715	12.9699	8.4138	0.0110		0.9866	0.9866		0.9093	0.9093		1,095.5131	1,095.5131	0.3217		1,102.2686
Total	**1.4715**	**12.9699**	**8.4138**	**0.0110**		**0.9866**	**0.9866**		**0.9093**	**0.9093**		**1,095.5131**	**1,095.5131**	**0.3217**		**1,102.2686**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0432	0.0582	0.6114	1.6700e-003	0.1453	9.9000e-004	0.1463	0.0385	9.2000e-004	0.0395		134.2862	134.2862	6.4400e-003		134.4213
Total	**0.0432**	**0.0582**	**0.6114**	**1.6700e-003**	**0.1453**	**9.9000e-004**	**0.1463**	**0.0385**	**9.2000e-004**	**0.0395**		**134.2862**	**134.2862**	**6.4400e-003**		**134.4213**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4715	12.9699	8.4138	0.0110		0.9866	0.9866		0.9093	0.9093	0.0000	1,095.5131	1,095.5131	0.3217		1,102.2686
Total	**1.4715**	**12.9699**	**8.4138**	**0.0110**		**0.9866**	**0.9866**		**0.9093**	**0.9093**	**0.0000**	**1,095.5131**	**1,095.5131**	**0.3217**		**1,102.2686**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0432	0.0582	0.6114	1.6700e-003	0.1453	9.9000e-004	0.1463	0.0385	9.2000e-004	0.0395		134.2862	134.2862	6.4400e-003		134.4213
Total	**0.0432**	**0.0582**	**0.6114**	**1.6700e-003**	**0.1453**	**9.9000e-004**	**0.1463**	**0.0385**	**9.2000e-004**	**0.0395**		**134.2862**	**134.2862**	**6.4400e-003**		**134.4213**

3.6 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.3275	22.8585	16.2492	0.0249		1.4621	1.4621		1.3998	1.3998		2,334.8503	2,334.8503	0.5189		2,345.7479

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Total	**3.3275**	**22.8585**	**16.2492**	**0.0249**		**1.4621**	**1.4621**		**1.3998**	**1.3998**		**2,334.8503**	**2,334.8503**	**0.5189**		**2,345.7479**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2853	2.5762	3.7294	6.8700e-003	0.2000	0.0396	0.2396	0.0570	0.0364	0.0933		676.8829	676.8829	4.9200e-003		676.9863
Worker	0.7271	0.9802	10.2993	0.0281	2.4479	0.0167	2.4646	0.6492	0.0155	0.6646		2,262.2051	2,262.2051	0.1084		2,264.4822
Total	**1.0124**	**3.5564**	**14.0287**	**0.0350**	**2.6479**	**0.0563**	**2.7042**	**0.7062**	**0.0518**	**0.7580**		**2,939.0880**	**2,939.0880**	**0.1134**		**2,941.4685**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.3275	22.8585	16.2492	0.0249		1.4621	1.4621		1.3998	1.3998	0.0000	2,334.8503	2,334.8503	0.5189		2,345.7479
Total	**3.3275**	**22.8585**	**16.2492**	**0.0249**		**1.4621**	**1.4621**		**1.3998**	**1.3998**	**0.0000**	**2,334.8503**	**2,334.8503**	**0.5189**		**2,345.7479**

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2853	2.5762	3.7294	6.8700e-003	0.2000	0.0396	0.2396	0.0570	0.0364	0.0933		676.8829	676.8829	4.9200e-003		676.9863
Worker	0.7271	0.9802	10.2993	0.0281	2.4479	0.0167	2.4646	0.6492	0.0155	0.6646		2,262.2051	2,262.2051	0.1084		2,264.4822
Total	**1.0124**	**3.5564**	**14.0287**	**0.0350**	**2.6479**	**0.0563**	**2.7042**	**0.7062**	**0.0518**	**0.7580**		**2,939.0880**	**2,939.0880**	**0.1134**		**2,941.4685**

3.6 Building Construction - 2018

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Off-Road	2.9004	20.5600	15.6637	0.0249		1.2511	1.2511		1.1992	1.1992		2,317.2089	2,317.2089	0.4980		2,327.6664
Total	**2.9004**	**20.5600**	**15.6637**	**0.0249**		**1.2511**	**1.2511**		**1.1992**	**1.1992**		**2,317.2089**	**2,317.2089**	**0.4980**		**2,327.6664**

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2660	2.3637	3.5684	6.8500e-003	0.2000	0.0373	0.2373	0.0570	0.0343	0.0912		665.3779	665.3779	4.9000e-003		665.4808
Worker	0.6627	0.8944	9.4027	0.0281	2.4479	0.0165	2.4644	0.6492	0.0153	0.6645		2,177.3540	2,177.3540	0.1012		2,179.4791
Total	**0.9288**	**3.2581**	**12.9711**	**0.0350**	**2.6479**	**0.0538**	**2.7017**	**0.7062**	**0.0496**	**0.7557**		**2,842.7319**	**2,842.7319**	**0.1061**		**2,844.9599**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9004	20.5600	15.6637	0.0249		1.2511	1.2511		1.1992	1.1992	0.0000	2,317.2089	2,317.2089	0.4980		2,327.6664
Total	**2.9004**	**20.5600**	**15.6637**	**0.0249**		**1.2511**	**1.2511**		**1.1992**	**1.1992**	**0.0000**	**2,317.2089**	**2,317.2089**	**0.4980**		**2,327.6664**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2660	2.3637	3.5684	6.8500e-003	0.2000	0.0373	0.2373	0.0570	0.0343	0.0912		665.3779	665.3779	4.9000e-003		665.4808
Worker	0.6627	0.8944	9.4027	0.0281	2.4479	0.0165	2.4644	0.6492	0.0153	0.6645		2,177.3540	2,177.3540	0.1012		2,179.4791
Total	**0.9288**	**3.2581**	**12.9711**	**0.0350**	**2.6479**	**0.0538**	**2.7017**	**0.7062**	**0.0496**	**0.7557**		**2,842.7319**	**2,842.7319**	**0.1061**		**2,844.9599**

3.7 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1306	11.5793	9.8923	0.0150		0.6701	0.6701		0.6177	0.6177		1,485.9270	1,485.9270	0.4521		1,495.4213
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1306**	**11.5793**	**9.8923**	**0.0150**		**0.6701**	**0.6701**		**0.6177**	**0.6177**		**1,485.9270**	**1,485.9270**	**0.4521**		**1,495.4213**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0393	0.0531	0.5582	1.6700e-003	0.1453	9.8000e-004	0.1463	0.0385	9.1000e-004	0.0395		129.2493	129.2493	6.0100e-003		129.3755
Total	**0.0393**	**0.0531**	**0.5582**	**1.6700e-003**	**0.1453**	**9.8000e-004**	**0.1463**	**0.0385**	**9.1000e-004**	**0.0395**		**129.2493**	**129.2493**	**6.0100e-003**		**129.3755**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1306	11.5793	9.8923	0.0150		0.6701	0.6701		0.6177	0.6177	0.0000	1,485.9270	1,485.9270	0.4521		1,495.4213
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1306**	**11.5793**	**9.8923**	**0.0150**		**0.6701**	**0.6701**		**0.6177**	**0.6177**	**0.0000**	**1,485.9270**	**1,485.9270**	**0.4521**		**1,495.4213**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0393	0.0531	0.5582	1.6700e-003	0.1453	9.8000e-004	0.1463	0.0385	9.1000e-004	0.0395		129.2493	129.2493	6.0100e-003		129.3755
Total	**0.0393**	**0.0531**	**0.5582**	**1.6700e-003**	**0.1453**	**9.8000e-004**	**0.1463**	**0.0385**	**9.1000e-004**	**0.0395**		**129.2493**	**129.2493**	**6.0100e-003**		**129.3755**

3.8 Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	67.8661					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.0102
Total	**68.1647**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**		**281.4485**	**281.4485**	**0.0267**		**282.0102**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1332	0.1797	1.8891	5.6500e-003	0.4918	3.3200e-003	0.4951	0.1304	3.0700e-003	0.1335		437.4593	437.4593	0.0203		437.8862
Total	**0.1332**	**0.1797**	**1.8891**	**5.6500e-003**	**0.4918**	**3.3200e-003**	**0.4951**	**0.1304**	**3.0700e-003**	**0.1335**		**437.4593**	**437.4593**	**0.0203**		**437.8862**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	67.8661					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.0102
Total	**68.1647**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**	**0.0000**	**281.4485**	**281.4485**	**0.0267**		**282.0102**

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1332	0.1797	1.8891	5.6500e-003	0.4918	3.3200e-003	0.4951	0.1304	3.0700e-003	0.1335		437.4593	437.4593	0.0203		437.8862
Total	**0.1332**	**0.1797**	**1.8891**	**5.6500e-003**	**0.4918**	**3.3200e-003**	**0.4951**	**0.1304**	**3.0700e-003**	**0.1335**		**437.4593**	**437.4593**	**0.0203**		**437.8862**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Mitigated	5.9903	13.8709	64.4048	0.2103	15.7025	0.2189	15.9214	4.1901	0.2021	4.3921		16,044.1493	16,044.1493	0.5910		16,056.5605
Unmitigated	5.9903	13.8709	64.4048	0.2103	15.7025	0.2189	15.9214	4.1901	0.2021	4.3921		16,044.1493	16,044.1493	0.5910		16,056.5605

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	2,001.32	2,174.42	1843.40	6,846,217	6,846,217
Total	2,001.32	2,174.42	1,843.40	6,846,217	6,846,217

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.508857	0.056420	0.193204	0.150829	0.041936	0.005921	0.015893	0.015805	0.001454	0.002159	0.004747	0.000498	0.002277

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0989	0.8447	0.3595	5.3900e-003		0.0683	0.0683		0.0683	0.0683		1,078.3428	1,078.3428	0.0207	0.0198	1,084.9054
NaturalGas Unmitigated	0.0989	0.8447	0.3595	5.3900e-003		0.0683	0.0683		0.0683	0.0683		1,078.3428	1,078.3428	0.0207	0.0198	1,084.9054

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	9165.91	0.0989	0.8447	0.3595	5.3900e-003		0.0683	0.0683		0.0683	0.0683		1,078.3428	1,078.3428	0.0207	0.0198	1,084.9054
Total		**0.0989**	**0.8447**	**0.3595**	**5.3900e-003**		**0.0683**	**0.0683**		**0.0683**	**0.0683**		**1,078.3428**	**1,078.3428**	**0.0207**	**0.0198**	**1,084.9054**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	9.16591	0.0989	0.8447	0.3595	5.3900e-003		0.0683	0.0683		0.0683	0.0683		1,078.3428	1,078.3428	0.0207	0.0198	1,084.9054
Total		**0.0989**	**0.8447**	**0.3595**	**5.3900e-003**		**0.0683**	**0.0683**		**0.0683**	**0.0683**		**1,078.3428**	**1,078.3428**	**0.0207**	**0.0198**	**1,084.9054**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	86.9836	2.3092	177.7402	0.2441		23.3298	23.3298		23.3262	23.3262	2,843.7964	5,511.6080	8,355.4044	8.5248	0.1931	8,594.2695
Unmitigated	86.9836	2.3092	177.7402	0.2441		23.3298	23.3298		23.3262	23.3262	2,843.7964	5,511.6080	8,355.4044	8.5248	0.1931	8,594.2695

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.6508					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.0130					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	79.5543	2.0185	152.6021	0.2428		23.1916	23.1916		23.1880	23.1880	2,843.7964	5,466.4941	8,310.2905	8.4808	0.1931	8,548.2318
Landscaping	0.7655	0.2907	25.1381	1.3200e-003		0.1382	0.1382		0.1382	0.1382		45.1139	45.1139	0.0440		46.0377
Total	**86.9836**	**2.3092**	**177.7402**	**0.2441**		**23.3298**	**23.3298**		**23.3262**	**23.3262**	**2,843.7964**	**5,511.6080**	**8,355.4044**	**8.5248**	**0.1931**	**8,594.2695**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.6508					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.0130					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	79.5543	2.0185	152.6021	0.2428		23.1916	23.1916		23.1880	23.1880	2,843.7964	5,466.4941	8,310.2905	8.4808	0.1931	8,548.2318
Landscaping	0.7655	0.2907	25.1381	1.3200e-003		0.1382	0.1382		0.1382	0.1382		45.1139	45.1139	0.0440		46.0377
Total	**86.9836**	**2.3092**	**177.7402**	**0.2441**		**23.3298**	**23.3298**		**23.3262**	**23.3262**	**2,843.7964**	**5,511.6080**	**8,355.4044**	**8.5248**	**0.1931**	**8,594.2695**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Phase 2 - Student Union

Orange County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	189.81	1000sqft	4.36	189,806.00	0

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 2.2 **Precipitation Freq (Days)** 30

Climate Zone 8 **Operational Year** 2020

Utility Company Southern California Edison

CO2 Intensity (lb/MWhr) 630.89 **CH4 Intensity (lb/MWhr)** 0.029 **N2O Intensity (lb/MWhr)** 0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - modified

Construction Phase - modified

Off-road Equipment -

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Trips and VMT - modified

Demolition - Assuming density of pavement is 150 lbs/ft3 and pavement is 1 ft deep

Architectural Coating - modified per SCAQMD Rule 1113

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblConstructionPhase	NumDays	18.00	30.00
tblLandUse	LandUseSquareFeet	189,810.00	189,806.00
tblProjectCharacteristics	OperationalYear	2014	2020

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.2502	2.3111	2.0698	3.4500e-003	0.2404	0.1235	0.3638	0.0711	0.1154	0.1865	0.0000	297.7261	297.7261	0.0555	0.0000	298.8917
2019	0.7633	1.7950	1.8137	3.3700e-003	0.0800	0.1018	0.1817	0.0215	0.0956	0.1171	0.0000	278.3206	278.3206	0.0478	0.0000	279.3237
Total	**1.0135**	**4.1062**	**3.8835**	**6.8200e-003**	**0.3204**	**0.2252**	**0.5456**	**0.0926**	**0.2110**	**0.3036**	**0.0000**	**576.0467**	**576.0467**	**0.1033**	**0.0000**	**578.2154**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Year	tons/yr										MT/yr					
2018	0.2502	2.3111	2.0698	3.4500e-003	0.1311	0.1235	0.2546	0.0378	0.1154	0.1532	0.0000	297.7259	297.7259	0.0555	0.0000	298.8915
2019	0.7633	1.7950	1.8137	3.3700e-003	0.0800	0.1018	0.1817	0.0215	0.0956	0.1171	0.0000	278.3203	278.3203	0.0478	0.0000	279.3235
Total	**1.0135**	**4.1061**	**3.8835**	**6.8200e-003**	**0.2111**	**0.2252**	**0.4363**	**0.0593**	**0.2110**	**0.2703**	**0.0000**	**576.0462**	**576.0462**	**0.1033**	**0.0000**	**578.2149**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**34.10**	**0.00**	**20.02**	**35.96**	**0.00**	**10.97**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.9060	2.0000e-005	2.4400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.7100e-003	4.7100e-003	1.0000e-005	0.0000	4.9800e-003
Energy	0.0162	0.1476	0.1240	8.9000e-004		0.0112	0.0112		0.0112	0.0112	0.0000	923.7848	923.7848	0.0382	0.0102	927.7490
Mobile	1.8577	4.3357	20.1175	0.0642	4.6382	0.0663	4.7045	1.2394	0.0612	1.3007	0.0000	4,439.9298	4,439.9298	0.1625	0.0000	4,443.3426
Waste						0.0000	0.0000		0.0000	0.0000	50.0880	0.0000	50.0880	2.9601	0.0000	112.2505
Water						0.0000	0.0000		0.0000	0.0000	2.9536	80.9872	83.9409	0.3071	7.9300e-003	92.8491
Total	**2.7799**	**4.4833**	**20.2439**	**0.0651**	**4.6382**	**0.0775**	**4.7157**	**1.2394**	**0.0724**	**1.3119**	**53.0417**	**5,444.7065**	**5,497.7482**	**3.4679**	**0.0181**	**5,576.1961**

Mitigated Operational

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Area	0.9060	2.0000e-005	2.4400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.7100e-003	4.7100e-003	1.0000e-005	0.0000	4.9800e-003
Energy	0.0162	0.1476	0.1240	8.9000e-004		0.0112	0.0112		0.0112	0.0112	0.0000	923.7848	923.7848	0.0382	0.0102	927.7490
Mobile	1.8577	4.3357	20.1175	0.0642	4.6382	0.0663	4.7045	1.2394	0.0612	1.3007	0.0000	4,439.9298	4,439.9298	0.1625	0.0000	4,443.3426
Waste						0.0000	0.0000		0.0000	0.0000	50.0880	0.0000	50.0880	2.9601	0.0000	112.2505
Water						0.0000	0.0000		0.0000	0.0000	2.9536	80.9872	83.9409	0.3070	7.9200e-003	92.8444
Total	**2.7799**	**4.4833**	**20.2439**	**0.0651**	**4.6382**	**0.0775**	**4.7157**	**1.2394**	**0.0724**	**1.3119**	**53.0417**	**5,444.7065**	**5,497.7482**	**3.4678**	**0.0181**	**5,576.1914**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.06**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition - Pavement Removal	Demolition	6/1/2018	6/28/2018	5	20	
2	Demolition	Demolition	6/29/2018	7/26/2018	5	20	
3	Site Preparation	Site Preparation	7/27/2018	8/2/2018	5	5	
4	Grading	Grading	8/3/2018	8/14/2018	5	8	
5	Trenching	Trenching	8/15/2018	8/28/2018	5	10	
6	Building Construction	Building Construction	8/29/2018	7/16/2019	5	230	
7	Paving	Paving	7/17/2019	8/9/2019	5	18	
8	Architectural Coating	Architectural Coating	8/10/2019	9/20/2019	5	30	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 284,709; Non-Residential Outdoor: 94,903 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition - Pavement Removal	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition - Pavement Removal	Excavators	3	8.00	162	0.38
Demolition - Pavement Removal	Rubber Tired Dozers	2	8.00	255	0.40
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Trenching	Plate Compactors	2	8.00	8	0.43
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Trenching	Trenchers	2	8.00	80	0.50
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	125	0.42
Paving	Paving Equipment	2	6.00	130	0.36
Paving	Rollers	2	6.00	80	0.38

Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition - Pavement Removal	6	15.00	0.00	704.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	6	15.00	0.00	292.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	80.00	31.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	16.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - Pavement Removal - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0762	0.0000	0.0762	0.0115	0.0000	0.0115	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0356	0.3683	0.3173	4.0000e-004		0.0181	0.0181		0.0169	0.0169	0.0000	36.1362	36.1362	9.9900e-003	0.0000	36.3460
Total	**0.0356**	**0.3683**	**0.3173**	**4.0000e-004**	**0.0762**	**0.0181**	**0.0943**	**0.0115**	**0.0169**	**0.0284**	**0.0000**	**36.1362**	**36.1362**	**9.9900e-003**	**0.0000**	**36.3460**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.1100e-003	0.0869	0.0733	2.6000e-004	6.0400e-003	1.3400e-003	7.3700e-003	1.6600e-003	1.2300e-003	2.8800e-003	0.0000	22.8701	22.8701	1.7000e-004	0.0000	22.8737
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.2000e-004	6.3000e-004	6.5800e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3733	1.3733	6.0000e-005	0.0000	1.3747
Total	**6.5300e-003**	**0.0875**	**0.0798**	**2.8000e-004**	**7.6900e-003**	**1.3500e-003**	**9.0300e-003**	**2.1000e-003**	**1.2400e-003**	**3.3300e-003**	**0.0000**	**24.2435**	**24.2435**	**2.3000e-004**	**0.0000**	**24.2483**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0297	0.0000	0.0297	4.5000e-003	0.0000	4.5000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0356	0.3683	0.3173	4.0000e-004		0.0181	0.0181		0.0169	0.0169	0.0000	36.1361	36.1361	9.9900e-003	0.0000	36.3459
Total	**0.0356**	**0.3683**	**0.3173**	**4.0000e-004**	**0.0297**	**0.0181**	**0.0478**	**4.5000e-003**	**0.0169**	**0.0214**	**0.0000**	**36.1361**	**36.1361**	**9.9900e-003**	**0.0000**	**36.3459**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	6.1100e-003	0.0869	0.0733	2.6000e-004	6.0400e-003	1.3400e-003	7.3700e-003	1.6600e-003	1.2300e-003	2.8800e-003	0.0000	22.8701	22.8701	1.7000e-004	0.0000	22.8737
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.2000e-004	6.3000e-004	6.5800e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3733	1.3733	6.0000e-005	0.0000	1.3747
Total	**6.5300e-003**	**0.0875**	**0.0798**	**2.8000e-004**	**7.6900e-003**	**1.3500e-003**	**9.0300e-003**	**2.1000e-003**	**1.2400e-003**	**3.3300e-003**	**0.0000**	**24.2435**	**24.2435**	**2.3000e-004**	**0.0000**	**24.2483**

3.3 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0316	0.0000	0.0316	4.7800e-003	0.0000	4.7800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0356	0.3683	0.3173	4.0000e-004		0.0181	0.0181		0.0169	0.0169	0.0000	36.1362	36.1362	9.9900e-003	0.0000	36.3460
Total	**0.0356**	**0.3683**	**0.3173**	**4.0000e-004**	**0.0316**	**0.0181**	**0.0497**	**4.7800e-003**	**0.0169**	**0.0216**	**0.0000**	**36.1362**	**36.1362**	**9.9900e-003**	**0.0000**	**36.3460**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.5400e-003	0.0360	0.0304	1.1000e-004	2.5000e-003	5.5000e-004	3.0600e-003	6.9000e-004	5.1000e-004	1.2000e-003	0.0000	9.4859	9.4859	7.0000e-005	0.0000	9.4874
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.2000e-004	6.3000e-004	6.5800e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3733	1.3733	6.0000e-005	0.0000	1.3747

Total	**2.9600e-003**	**0.0367**	**0.0370**	**1.3000e-004**	**4.1500e-003**	**5.6000e-004**	**4.7200e-003**	**1.1300e-003**	**5.2000e-004**	**1.6500e-003**	**0.0000**	**10.8592**	**10.8592**	**1.3000e-004**	**0.0000**	**10.8620**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0123	0.0000	0.0123	1.8600e-003	0.0000	1.8600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0356	0.3683	0.3173	4.0000e-004		0.0181	0.0181		0.0169	0.0169	0.0000	36.1361	36.1361	9.9900e-003	0.0000	36.3459
Total	**0.0356**	**0.3683**	**0.3173**	**4.0000e-004**	**0.0123**	**0.0181**	**0.0304**	**1.8600e-003**	**0.0169**	**0.0187**	**0.0000**	**36.1361**	**36.1361**	**9.9900e-003**	**0.0000**	**36.3459**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.5400e-003	0.0360	0.0304	1.1000e-004	2.5000e-003	5.5000e-004	3.0600e-003	6.9000e-004	5.1000e-004	1.2000e-003	0.0000	9.4859	9.4859	7.0000e-005	0.0000	9.4874
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.2000e-004	6.3000e-004	6.5800e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3733	1.3733	6.0000e-005	0.0000	1.3747
Total	**2.9600e-003**	**0.0367**	**0.0370**	**1.3000e-004**	**4.1500e-003**	**5.6000e-004**	**4.7200e-003**	**1.1300e-003**	**5.2000e-004**	**1.6500e-003**	**0.0000**	**10.8592**	**10.8592**	**1.3000e-004**	**0.0000**	**10.8620**

3.4 Site Preparation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0452	0.0000	0.0452	0.0248	0.0000	0.0248	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0107	0.1140	0.0906	1.0000e-004		5.9100e-003	5.9100e-003		5.4400e-003	5.4400e-003	0.0000	8.9353	8.9353	2.7800e-003	0.0000	8.9937
Total	**0.0107**	**0.1140**	**0.0906**	**1.0000e-004**	**0.0452**	**5.9100e-003**	**0.0511**	**0.0248**	**5.4400e-003**	**0.0303**	**0.0000**	**8.9353**	**8.9353**	**2.7800e-003**	**0.0000**	**8.9937**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3000e-004	1.9000e-004	1.9700e-003	1.0000e-005	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4120	0.4120	2.0000e-005	0.0000	0.4124
Total	**1.3000e-004**	**1.9000e-004**	**1.9700e-003**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.4120**	**0.4120**	**2.0000e-005**	**0.0000**	**0.4124**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.0176	0.0000	0.0176	9.6800e-003	0.0000	9.6800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0107	0.1140	0.0906	1.0000e-004		5.9100e-003	5.9100e-003		5.4400e-003	5.4400e-003	0.0000	8.9352	8.9352	2.7800e-003	0.0000	8.9937
Total	**0.0107**	**0.1140**	**0.0906**	**1.0000e-004**	**0.0176**	**5.9100e-003**	**0.0235**	**9.6800e-003**	**5.4400e-003**	**0.0151**	**0.0000**	**8.9352**	**8.9352**	**2.7800e-003**	**0.0000**	**8.9937**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3000e-004	1.9000e-004	1.9700e-003	1.0000e-005	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4120	0.4120	2.0000e-005	0.0000	0.4124
Total	**1.3000e-004**	**1.9000e-004**	**1.9700e-003**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.4120**	**0.4120**	**2.0000e-005**	**0.0000**	**0.4124**

3.5 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0262	0.0000	0.0262	0.0135	0.0000	0.0135	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0120	0.1243	0.0960	1.2000e-004		6.8800e-003	6.8800e-003		6.3300e-003	6.3300e-003	0.0000	10.8612	10.8612	3.3800e-003	0.0000	10.9322
Total	**0.0120**	**0.1243**	**0.0960**	**1.2000e-004**	**0.0262**	**6.8800e-003**	**0.0331**	**0.0135**	**6.3300e-003**	**0.0198**	**0.0000**	**10.8612**	**10.8612**	**3.3800e-003**	**0.0000**	**10.9322**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	2.5000e-004	2.6300e-003	1.0000e-005	6.6000e-004	0.0000	6.6000e-004	1.7000e-004	0.0000	1.8000e-004	0.0000	0.5493	0.5493	3.0000e-005	0.0000	0.5499
Total	**1.7000e-004**	**2.5000e-004**	**2.6300e-003**	**1.0000e-005**	**6.6000e-004**	**0.0000**	**6.6000e-004**	**1.7000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**0.5493**	**0.5493**	**3.0000e-005**	**0.0000**	**0.5499**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0102	0.0000	0.0102	5.2500e-003	0.0000	5.2500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0120	0.1243	0.0960	1.2000e-004		6.8800e-003	6.8800e-003		6.3300e-003	6.3300e-003	0.0000	10.8612	10.8612	3.3800e-003	0.0000	10.9322
Total	**0.0120**	**0.1243**	**0.0960**	**1.2000e-004**	**0.0102**	**6.8800e-003**	**0.0171**	**5.2500e-003**	**6.3300e-003**	**0.0116**	**0.0000**	**10.8612**	**10.8612**	**3.3800e-003**	**0.0000**	**10.9322**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	2.5000e-004	2.6300e-003	1.0000e-005	6.6000e-004	0.0000	6.6000e-004	1.7000e-004	0.0000	1.8000e-004	0.0000	0.5493	0.5493	3.0000e-005	0.0000	0.5499
Total	**1.7000e-004**	**2.5000e-004**	**2.6300e-003**	**1.0000e-005**	**6.6000e-004**	**0.0000**	**6.6000e-004**	**1.7000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**0.5493**	**0.5493**	**3.0000e-005**	**0.0000**	**0.5499**

3.6 Trenching - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.3700e-003	0.0574	0.0410	5.0000e-005		4.2000e-003	4.2000e-003		3.8800e-003	3.8800e-003	0.0000	4.8913	4.8913	1.4600e-003	0.0000	4.9219
Total	**6.3700e-003**	**0.0574**	**0.0410**	**5.0000e-005**		**4.2000e-003**	**4.2000e-003**		**3.8800e-003**	**3.8800e-003**	**0.0000**	**4.8913**	**4.8913**	**1.4600e-003**	**0.0000**	**4.9219**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8000e-004	2.7000e-004	2.8500e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5951	0.5951	3.0000e-005	0.0000	0.5957

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Total	**1.8000e-004**	**2.7000e-004**	**2.8500e-003**	**1.0000e-005**	**7.1000e-004**	**0.0000**	**7.2000e-004**	**1.9000e-004**	**0.0000**	**1.9000e-004**	**0.0000**	**0.5951**	**0.5951**	**3.0000e-005**	**0.0000**	**0.5957**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.3700e-003	0.0574	0.0410	5.0000e-005		4.2000e-003	4.2000e-003		3.8800e-003	3.8800e-003	0.0000	4.8913	4.8913	1.4600e-003	0.0000	4.9219
Total	**6.3700e-003**	**0.0574**	**0.0410**	**5.0000e-005**		**4.2000e-003**	**4.2000e-003**		**3.8800e-003**	**3.8800e-003**	**0.0000**	**4.8913**	**4.8913**	**1.4600e-003**	**0.0000**	**4.9219**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8000e-004	2.7000e-004	2.8500e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5951	0.5951	3.0000e-005	0.0000	0.5957
Total	**1.8000e-004**	**2.7000e-004**	**2.8500e-003**	**1.0000e-005**	**7.1000e-004**	**0.0000**	**7.2000e-004**	**1.9000e-004**	**0.0000**	**1.9000e-004**	**0.0000**	**0.5951**	**0.5951**	**3.0000e-005**	**0.0000**	**0.5957**

3.7 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1188	1.0351	0.7802	1.1900e-003		0.0665	0.0665		0.0625	0.0625	0.0000	105.3625	105.3625	0.0258	0.0000	105.9040
Total	**0.1188**	**1.0351**	**0.7802**	**1.1900e-003**		**0.0665**	**0.0665**		**0.0625**	**0.0625**	**0.0000**	**105.3625**	**105.3625**	**0.0258**	**0.0000**	**105.9040**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0111	0.1039	0.1470	3.0000e-004	8.4900e-003	1.6000e-003	0.0101	2.4200e-003	1.4700e-003	3.8900e-003	0.0000	26.1507	26.1507	1.9000e-004	0.0000	26.1546
Worker	0.0101	0.0149	0.1562	4.6000e-004	0.0391	2.7000e-004	0.0394	0.0104	2.5000e-004	0.0106	0.0000	32.5937	32.5937	1.4900e-003	0.0000	32.6251
Total	**0.0211**	**0.1188**	**0.3032**	**7.6000e-004**	**0.0476**	**1.8700e-003**	**0.0494**	**0.0128**	**1.7200e-003**	**0.0145**	**0.0000**	**58.7444**	**58.7444**	**1.6800e-003**	**0.0000**	**58.7797**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.1188	1.0351	0.7802	1.1900e-003		0.0665	0.0665		0.0625	0.0625	0.0000	105.3624	105.3624	0.0258	0.0000	105.9039
Total	**0.1188**	**1.0351**	**0.7802**	**1.1900e-003**		**0.0665**	**0.0665**		**0.0625**	**0.0625**	**0.0000**	**105.3624**	**105.3624**	**0.0258**	**0.0000**	**105.9039**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0111	0.1039	0.1470	3.0000e-004	8.4900e-003	1.6000e-003	0.0101	2.4200e-003	1.4700e-003	3.8900e-003	0.0000	26.1507	26.1507	1.9000e-004	0.0000	26.1546
Worker	0.0101	0.0149	0.1562	4.6000e-004	0.0391	2.7000e-004	0.0394	0.0104	2.5000e-004	0.0106	0.0000	32.5937	32.5937	1.4900e-003	0.0000	32.6251
Total	**0.0211**	**0.1188**	**0.3032**	**7.6000e-004**	**0.0476**	**1.8700e-003**	**0.0494**	**0.0128**	**1.7200e-003**	**0.0145**	**0.0000**	**58.7444**	**58.7444**	**1.6800e-003**	**0.0000**	**58.7797**

3.7 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1658	1.4780	1.2070	1.8900e-003		0.0906	0.0906		0.0852	0.0852	0.0000	165.0566	165.0566	0.0402	0.0000	165.8999
Total	**0.1658**	**1.4780**	**1.2070**	**1.8900e-003**		**0.0906**	**0.0906**		**0.0852**	**0.0852**	**0.0000**	**165.0566**	**165.0566**	**0.0402**	**0.0000**	**165.8999**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0164	0.1526	0.2221	4.7000e-004	0.0135	2.3600e-003	0.0158	3.8400e-003	2.1700e-003	6.0100e-003	0.0000	40.8539	40.8539	3.0000e-004	0.0000	40.8602
Worker	0.0149	0.0219	0.2306	7.4000e-004	0.0619	4.3000e-004	0.0623	0.0164	4.0000e-004	0.0168	0.0000	50.0258	50.0258	2.2600e-003	0.0000	50.0732
Total	**0.0313**	**0.1745**	**0.4526**	**1.2100e-003**	**0.0754**	**2.7900e-003**	**0.0782**	**0.0203**	**2.5700e-003**	**0.0229**	**0.0000**	**90.8797**	**90.8797**	**2.5600e-003**	**0.0000**	**90.9334**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1658	1.4780	1.2070	1.8900e-003		0.0906	0.0906		0.0852	0.0852	0.0000	165.0564	165.0564	0.0402	0.0000	165.8997
Total	**0.1658**	**1.4780**	**1.2070**	**1.8900e-003**		**0.0906**	**0.0906**		**0.0852**	**0.0852**	**0.0000**	**165.0564**	**165.0564**	**0.0402**	**0.0000**	**165.8997**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0164	0.1526	0.2221	4.7000e-004	0.0135	2.3600e-003	0.0158	3.8400e-003	2.1700e-003	6.0100e-003	0.0000	40.8539	40.8539	3.0000e-004	0.0000	40.8602
Worker	0.0149	0.0219	0.2306	7.4000e-004	0.0619	4.3000e-004	0.0623	0.0164	4.0000e-004	0.0168	0.0000	50.0258	50.0258	2.2600e-003	0.0000	50.0732
Total	**0.0313**	**0.1745**	**0.4526**	**1.2100e-003**	**0.0754**	**2.7900e-003**	**0.0782**	**0.0203**	**2.5700e-003**	**0.0229**	**0.0000**	**90.8797**	**90.8797**	**2.5600e-003**	**0.0000**	**90.9334**

3.8 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0113	0.1133	0.1093	1.7000e-004		6.4000e-003	6.4000e-003		5.9000e-003	5.9000e-003	0.0000	14.8291	14.8291	4.5600e-003	0.0000	14.9248
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0113**	**0.1133**	**0.1093**	**1.7000e-004**		**6.4000e-003**	**6.4000e-003**		**5.9000e-003**	**5.9000e-003**	**0.0000**	**14.8291**	**14.8291**	**4.5600e-003**	**0.0000**	**14.9248**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.8000e-004	7.0000e-004	7.3600e-003	2.0000e-005	1.9800e-003	1.0000e-005	1.9900e-003	5.2000e-004	1.0000e-005	5.4000e-004	0.0000	1.5966	1.5966	7.0000e-005	0.0000	1.5981

Total	4.8000e-004	7.0000e-004	7.3600e-003	2.0000e-005	1.9800e-003	1.0000e-005	1.9900e-003	5.2000e-004	1.0000e-005	5.4000e-004	0.0000	1.5966	1.5966	7.0000e-005	0.0000	1.5981

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0113	0.1133	0.1093	1.7000e-004		6.4000e-003	6.4000e-003		5.9000e-003	5.9000e-003	0.0000	14.8290	14.8290	4.5600e-003	0.0000	14.9248
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0113**	**0.1133**	**0.1093**	**1.7000e-004**		**6.4000e-003**	**6.4000e-003**		**5.9000e-003**	**5.9000e-003**	**0.0000**	**14.8290**	**14.8290**	**4.5600e-003**	**0.0000**	**14.9248**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.8000e-004	7.0000e-004	7.3600e-003	2.0000e-005	1.9800e-003	1.0000e-005	1.9900e-003	5.2000e-004	1.0000e-005	5.4000e-004	0.0000	1.5966	1.5966	7.0000e-005	0.0000	1.5981
Total	**4.8000e-004**	**7.0000e-004**	**7.3600e-003**	**2.0000e-005**	**1.9800e-003**	**1.0000e-005**	**1.9900e-003**	**5.2000e-004**	**1.0000e-005**	**5.4000e-004**	**0.0000**	**1.5966**	**1.5966**	**7.0000e-005**	**0.0000**	**1.5981**

3.9 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.5498					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.0000e-003	0.0275	0.0276	4.0000e-005		1.9300e-003	1.9300e-003		1.9300e-003	1.9300e-003	0.0000	3.8299	3.8299	3.2000e-004	0.0000	3.8367
Total	**0.5538**	**0.0275**	**0.0276**	**4.0000e-005**		**1.9300e-003**	**1.9300e-003**		**1.9300e-003**	**1.9300e-003**	**0.0000**	**3.8299**	**3.8299**	**3.2000e-004**	**0.0000**	**3.8367**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.3000e-004	9.3000e-004	9.8100e-003	3.0000e-005	2.6300e-003	2.0000e-005	2.6500e-003	7.0000e-004	2.0000e-005	7.2000e-004	0.0000	2.1288	2.1288	1.0000e-004	0.0000	2.1308
Total	**6.3000e-004**	**9.3000e-004**	**9.8100e-003**	**3.0000e-005**	**2.6300e-003**	**2.0000e-005**	**2.6500e-003**	**7.0000e-004**	**2.0000e-005**	**7.2000e-004**	**0.0000**	**2.1288**	**2.1288**	**1.0000e-004**	**0.0000**	**2.1308**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Archit. Coating	0.5498					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.0000e-003	0.0275	0.0276	4.0000e-005		1.9300e-003	1.9300e-003		1.9300e-003	1.9300e-003	0.0000	3.8299	3.8299	3.2000e-004	0.0000	3.8367
Total	**0.5538**	**0.0275**	**0.0276**	**4.0000e-005**		**1.9300e-003**	**1.9300e-003**		**1.9300e-003**	**1.9300e-003**	**0.0000**	**3.8299**	**3.8299**	**3.2000e-004**	**0.0000**	**3.8367**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.3000e-004	9.3000e-004	9.8100e-003	3.0000e-005	2.6300e-003	2.0000e-005	2.6500e-003	7.0000e-004	2.0000e-005	7.2000e-004	0.0000	2.1288	2.1288	1.0000e-004	0.0000	2.1308
Total	**6.3000e-004**	**9.3000e-004**	**9.8100e-003**	**3.0000e-005**	**2.6300e-003**	**2.0000e-005**	**2.6500e-003**	**7.0000e-004**	**2.0000e-005**	**7.2000e-004**	**0.0000**	**2.1288**	**2.1288**	**1.0000e-004**	**0.0000**	**2.1308**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.8577	4.3357	20.1175	0.0642	4.6382	0.0663	4.7045	1.2394	0.0612	1.3007	0.0000	4,439.9298	4,439.9298	0.1625	0.0000	4,443.3426
Unmitigated	1.8577	4.3357	20.1175	0.0642	4.6382	0.0663	4.7045	1.2394	0.0612	1.3007	0.0000	4,439.9298	4,439.9298	0.1625	0.0000	4,443.3426

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	5,217.88	2,131.57	229.67	12,275,867	12,275,867
Total	5,217.88	2,131.57	229.67	12,275,867	12,275,867

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.508857	0.056420	0.193204	0.150829	0.041936	0.005921	0.015893	0.015805	0.001454	0.002159	0.004747	0.000498	0.002277

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	763.1425	763.1425	0.0351	7.2600e-003	766.1291
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	763.1425	763.1425	0.0351	7.2600e-003	766.1291
NaturalGas Mitigated	0.0162	0.1476	0.1240	8.9000e-004		0.0112	0.0112		0.0112	0.0112	0.0000	160.6423	160.6423	3.0800e-003	2.9500e-003	161.6200

NaturalGas Unmitigated	0.0162	0.1476	0.1240	8.9000e-004		0.0112	0.0112		0.0112	0.0112	0.0000	160.6423	160.6423	3.0800e-003	2.9500e-003	161.6200

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Junior College (2Yr)	3.01032e+006	0.0162	0.1476	0.1240	8.9000e-004		0.0112	0.0112		0.0112	0.0112	0.0000	160.6423	160.6423	3.0800e-003	2.9500e-003	161.6200
Total		**0.0162**	**0.1476**	**0.1240**	**8.9000e-004**		**0.0112**	**0.0112**		**0.0112**	**0.0112**	**0.0000**	**160.6423**	**160.6423**	**3.0800e-003**	**2.9500e-003**	**161.6200**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Junior College (2Yr)	3.01032e+006	0.0162	0.1476	0.1240	8.9000e-004		0.0112	0.0112		0.0112	0.0112	0.0000	160.6423	160.6423	3.0800e-003	2.9500e-003	161.6200
Total		**0.0162**	**0.1476**	**0.1240**	**8.9000e-004**		**0.0112**	**0.0112**		**0.0112**	**0.0112**	**0.0000**	**160.6423**	**160.6423**	**3.0800e-003**	**2.9500e-003**	**161.6200**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	2.66677e+006	763.1425	0.0351	7.2600e-003	766.1291
Total		**763.1425**	**0.0351**	**7.2600e-003**	**766.1291**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	2.66677e+006	763.1425	0.0351	7.2600e-003	766.1291
Total		**763.1425**	**0.0351**	**7.2600e-003**	**766.1291**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Mitigated	0.9060	2.0000e-005	2.4400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.7100e-003	4.7100e-003	1.0000e-005	0.0000	4.9800e-003
Unmitigated	0.9060	2.0000e-005	2.4400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.7100e-003	4.7100e-003	1.0000e-005	0.0000	4.9800e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.2199					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6859					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.3000e-004	2.0000e-005	2.4400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.7100e-003	4.7100e-003	1.0000e-005	0.0000	4.9800e-003
Total	**0.9060**	**2.0000e-005**	**2.4400e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**4.7100e-003**	**4.7100e-003**	**1.0000e-005**	**0.0000**	**4.9800e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.2199					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6859					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.3000e-004	2.0000e-005	2.4400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.7100e-003	4.7100e-003	1.0000e-005	0.0000	4.9800e-003

Total	**0.9060**	**2.0000e-005**	**2.4400e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**4.7100e-003**	**4.7100e-003**	**1.0000e-005**	**0.0000**	**4.9800e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	83.9409	0.3070	7.9200e-003	92.8444
Unmitigated	83.9409	0.3071	7.9300e-003	92.8491

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	9.31 / 14.5618	83.9409	0.3071	7.9300e-003	92.8491
Total		**83.9409**	**0.3071**	**7.9300e-003**	**92.8491**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	9.31 / 14.5618	83.9409	0.3070	7.9200e-003	92.8444
Total		**83.9409**	**0.3070**	**7.9200e-003**	**92.8444**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	50.0880	2.9601	0.0000	112.2505
Unmitigated	50.0880	2.9601	0.0000	112.2505

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e

Land Use	tons	MT/yr			
Junior College (2Yr)	246.75	50.0880	2.9601	0.0000	112.2505
Total		**50.0880**	**2.9601**	**0.0000**	**112.2505**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior College (2Yr)	246.75	50.0880	2.9601	0.0000	112.2505
Total		**50.0880**	**2.9601**	**0.0000**	**112.2505**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Phase 2 - Student Union

Orange County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	189.81	1000sqft	4.36	189,806.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - modified

Construction Phase - modified

Off-road Equipment -

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Trips and VMT - modified

Demolition - Assuming density of pavement is 150 lbs/ft3 and pavement is 1 ft deep

Architectural Coating - modified per SCAQMD Rule 1113

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblConstructionPhase	NumDays	18.00	30.00
tblLandUse	LandUseSquareFeet	189,810.00	189,806.00
tblProjectCharacteristics	OperationalYear	2014	2020

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	4.3440	45.6756	38.9340	0.0678	18.2675	2.3668	20.6342	9.9840	2.1774	12.1615	0.0000	6,664.3402	6,664.3402	1.2348	0.0000	6,690.2715
2019	36.9659	23.3175	23.2251	0.0444	1.0880	1.3245	2.4125	0.2923	1.2446	1.5369	0.0000	4,035.5674	4,035.5674	0.6678	0.0000	4,049.5918
Total	**41.3099**	**68.9932**	**62.1591**	**0.1122**	**19.3555**	**3.6912**	**23.0467**	**10.2764**	**3.4220**	**13.6984**	**0.0000**	**10,699.9076**	**10,699.9076**	**1.9027**	**0.0000**	**10,739.8633**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Year	lb/day										lb/day					
2018	4.3440	45.6756	38.9340	0.0678	7.2470	2.3668	9.6138	3.9263	2.1774	6.1038	0.0000	6,664.3402	6,664.3402	1.2348	0.0000	6,690.2714
2019	36.9659	23.3175	23.2251	0.0444	1.0880	1.3245	2.4125	0.2923	1.2446	1.5369	0.0000	4,035.5674	4,035.5674	0.6678	0.0000	4,049.5918
Total	**41.3099**	**68.9932**	**62.1591**	**0.1122**	**8.3350**	**3.6912**	**12.0263**	**4.2187**	**3.4220**	**7.6407**	**0.0000**	**10,699.9076**	**10,699.9076**	**1.9027**	**0.0000**	**10,739.8632**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**56.94**	**0.00**	**47.82**	**58.95**	**0.00**	**44.22**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.9651	1.8000e-004	0.0195	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0415	0.0415	1.1000e-004		0.0439
Energy	0.0889	0.8086	0.6792	4.8500e-003		0.0615	0.0615		0.0615	0.0615		970.2895	970.2895	0.0186	0.0178	976.1945
Mobile	13.1675	28.4355	141.8142	0.4686	33.3052	0.4677	33.7729	8.8872	0.4317	9.3189		35,678.7757	35,678.7757	1.2648		35,705.3361
Total	**18.2216**	**29.2443**	**142.5129**	**0.4734**	**33.3052**	**0.5292**	**33.8344**	**8.8872**	**0.4932**	**9.3804**		**36,649.1068**	**36,649.1068**	**1.2835**	**0.0178**	**36,681.5745**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Area	4.9651	1.8000e-004	0.0195	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0415	0.0415	1.1000e-004		0.0439
Energy	0.0889	0.8086	0.6792	4.8500e-003		0.0615	0.0615		0.0615	0.0615		970.2895	970.2895	0.0186	0.0178	976.1945
Mobile	13.1675	28.4355	141.8142	0.4686	33.3052	0.4677	33.7729	8.8872	0.4317	9.3189		35,678.7757	35,678.7757	1.2648		35,705.3361
Total	**18.2216**	**29.2443**	**142.5129**	**0.4734**	**33.3052**	**0.5292**	**33.8344**	**8.8872**	**0.4932**	**9.3804**		**36,649.1068**	**36,649.1068**	**1.2835**	**0.0178**	**36,681.5745**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition - Pavement Removal	Demolition	6/1/2018	6/28/2018	5	20	
2	Demolition	Demolition	6/29/2018	7/26/2018	5	20	
3	Site Preparation	Site Preparation	7/27/2018	8/2/2018	5	5	
4	Grading	Grading	8/3/2018	8/14/2018	5	8	
5	Trenching	Trenching	8/15/2018	8/28/2018	5	10	
6	Building Construction	Building Construction	8/29/2018	7/16/2019	5	230	
7	Paving	Paving	7/17/2019	8/9/2019	5	18	
8	Architectural Coating	Architectural Coating	8/10/2019	9/20/2019	5	30	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 284,709; Non-Residential Outdoor: 94,903 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition - Pavement Removal	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition - Pavement Removal	Excavators	3	8.00	162	0.38
Demolition - Pavement Removal	Rubber Tired Dozers	2	8.00	255	0.40
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Trenching	Plate Compactors	2	8.00	8	0.43
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Trenching	Trenchers	2	8.00	80	0.50
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	125	0.42
Paving	Paving Equipment	2	6.00	130	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition - Pavement Removal	6	15.00	0.00	704.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	6	15.00	0.00	292.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	80.00	31.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	16.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - Pavement Removal - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.6159	0.0000	7.6159	1.1531	0.0000	1.1531			0.0000			0.0000
Off-Road	3.5606	36.8310	31.7250	0.0399		1.8090	1.8090		1.6856	1.6856		3,983.3282	3,983.3282	1.1015		4,006.4585
Total	**3.5606**	**36.8310**	**31.7250**	**0.0399**	**7.6159**	**1.8090**	**9.4249**	**1.1531**	**1.6856**	**2.8387**		**3,983.3282**	**3,983.3282**	**1.1015**		**4,006.4585**

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Hauling	0.5885	8.2571	6.5211	0.0258	0.6134	0.1334	0.7468	0.1680	0.1227	0.2907		2,523.5321	2,523.5321	0.0184		2,523.9192
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0433	0.0557	0.6879	2.0300e-003	0.1677	1.1300e-003	0.1688	0.0445	1.0500e-003	0.0455		157.4799	157.4799	6.9300e-003		157.6254
Total	**0.6318**	**8.3129**	**7.2090**	**0.0279**	**0.7810**	**0.1345**	**0.9156**	**0.2124**	**0.1238**	**0.3362**		**2,681.0120**	**2,681.0120**	**0.0254**		**2,681.5447**

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Fugitive Dust					2.9702	0.0000	2.9702	0.4497	0.0000	0.4497			0.0000			0.0000
Off-Road	3.5606	36.8310	31.7250	0.0399		1.8090	1.8090		1.6856	1.6856	0.0000	3,983.3282	3,983.3282	1.1015		4,006.4585
Total	**3.5606**	**36.8310**	**31.7250**	**0.0399**	**2.9702**	**1.8090**	**4.7792**	**0.4497**	**1.6856**	**2.1353**	**0.0000**	**3,983.3282**	**3,983.3282**	**1.1015**		**4,006.4585**

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Hauling	0.5885	8.2571	6.5211	0.0258	0.6134	0.1334	0.7468	0.1680	0.1227	0.2907		2,523.5321	2,523.5321	0.0184		2,523.9192

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0433	0.0557	0.6879	2.0300e-003	0.1677	1.1300e-003	0.1688	0.0445	1.0500e-003	0.0455		157.4799	157.4799	6.9300e-003		157.6254
Total	**0.6318**	**8.3129**	**7.2090**	**0.0279**	**0.7810**	**0.1345**	**0.9156**	**0.2124**	**0.1238**	**0.3362**		**2,681.0120**	**2,681.0120**	**0.0254**		**2,681.5447**

3.3 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/day								lb/day			
Fugitive Dust					3.1562	0.0000	3.1562	0.4779	0.0000	0.4779			0.0000			0.0000
Off-Road	3.5606	36.8310	31.7250	0.0399		1.8090	1.8090		1.6856	1.6856		3,983.3282	3,983.3282	1.1015		4,006.4585
Total	**3.5606**	**36.8310**	**31.7250**	**0.0399**	**3.1562**	**1.8090**	**4.9651**	**0.4779**	**1.6856**	**2.1635**		**3,983.3282**	**3,983.3282**	**1.1015**		**4,006.4585**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/day								lb/day			
Hauling	0.2441	3.4248	2.7048	0.0107	0.2544	0.0553	0.3097	0.0697	0.0509	0.1206		1,046.6923	1,046.6923	7.6500e-003		1,046.8529
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0433	0.0557	0.6879	2.0300e-003	0.1677	1.1300e-003	0.1688	0.0445	1.0500e-003	0.0455		157.4799	157.4799	6.9300e-003		157.6254
Total	**0.2874**	**3.4806**	**3.3927**	**0.0128**	**0.4221**	**0.0565**	**0.4785**	**0.1141**	**0.0520**	**0.1661**		**1,204.1722**	**1,204.1722**	**0.0146**		**1,204.4783**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.2309	0.0000	1.2309	0.1864	0.0000	0.1864			0.0000			0.0000
Off-Road	3.5606	36.8310	31.7250	0.0399		1.8090	1.8090		1.6856	1.6856	0.0000	3,983.3282	3,983.3282	1.1015		4,006.4585
Total	**3.5606**	**36.8310**	**31.7250**	**0.0399**	**1.2309**	**1.8090**	**3.0399**	**0.1864**	**1.6856**	**1.8720**	**0.0000**	**3,983.3282**	**3,983.3282**	**1.1015**		**4,006.4585**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2441	3.4248	2.7048	0.0107	0.2544	0.0553	0.3097	0.0697	0.0509	0.1206		1,046.6923	1,046.6923	7.6500e-003		1,046.8529
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0433	0.0557	0.6879	2.0300e-003	0.1677	1.1300e-003	0.1688	0.0445	1.0500e-003	0.0455		157.4799	157.4799	6.9300e-003		157.6254
Total	**0.2874**	**3.4806**	**3.3927**	**0.0128**	**0.4221**	**0.0565**	**0.4785**	**0.1141**	**0.0520**	**0.1661**		**1,204.1722**	**1,204.1722**	**0.0146**		**1,204.4783**

3.4 Site Preparation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.2921	45.6088	36.2346	0.0391		2.3654	2.3654		2.1762	2.1762		3,939.7731	3,939.7731	1.2265		3,965.5297
Total	**4.2921**	**45.6088**	**36.2346**	**0.0391**	**18.0663**	**2.3654**	**20.4317**	**9.9307**	**2.1762**	**12.1069**		**3,939.7731**	**3,939.7731**	**1.2265**		**3,965.5297**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0519	0.0669	0.8255	2.4400e-003	0.2012	1.3600e-003	0.2026	0.0534	1.2600e-003	0.0546		188.9759	188.9759	8.3200e-003		189.1505
Total	**0.0519**	**0.0669**	**0.8255**	**2.4400e-003**	**0.2012**	**1.3600e-003**	**0.2026**	**0.0534**	**1.2600e-003**	**0.0546**		**188.9759**	**188.9759**	**8.3200e-003**		**189.1505**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0458	0.0000	7.0458	3.8730	0.0000	3.8730			0.0000			0.0000
Off-Road	4.2921	45.6088	36.2346	0.0391		2.3654	2.3654		2.1762	2.1762	0.0000	3,939.7731	3,939.7731	1.2265		3,965.5297

Total	**4.2921**	**45.6088**	**36.2346**	**0.0391**	**7.0458**	**2.3654**	**9.4113**	**3.8730**	**2.1762**	**6.0491**	**0.0000**	**3,939.7731**	**3,939.7731**	**1.2265**		**3,965.5297**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0519	0.0669	0.8255	2.4400e-003	0.2012	1.3600e-003	0.2026	0.0534	1.2600e-003	0.0546		188.9759	188.9759	8.3200e-003		189.1505
Total	**0.0519**	**0.0669**	**0.8255**	**2.4400e-003**	**0.2012**	**1.3600e-003**	**0.2026**	**0.0534**	**1.2600e-003**	**0.0546**		**188.9759**	**188.9759**	**8.3200e-003**		**189.1505**

3.5 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	3.0028	31.0702	23.9988	0.0297		1.7201	1.7201		1.5825	1.5825		2,993.1005	2,993.1005	0.9318		3,012.6681
Total	**3.0028**	**31.0702**	**23.9988**	**0.0297**	**6.5523**	**1.7201**	**8.2724**	**3.3675**	**1.5825**	**4.9500**		**2,993.1005**	**2,993.1005**	**0.9318**		**3,012.6681**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0433	0.0557	0.6879	2.0300e-003	0.1677	1.1300e-003	0.1688	0.0445	1.0500e-003	0.0455		157.4799	157.4799	6.9300e-003		157.6254
Total	**0.0433**	**0.0557**	**0.6879**	**2.0300e-003**	**0.1677**	**1.1300e-003**	**0.1688**	**0.0445**	**1.0500e-003**	**0.0455**		**157.4799**	**157.4799**	**6.9300e-003**		**157.6254**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000			0.0000
Off-Road	3.0028	31.0702	23.9988	0.0297		1.7201	1.7201		1.5825	1.5825	0.0000	2,993.1005	2,993.1005	0.9318		3,012.6681
Total	**3.0028**	**31.0702**	**23.9988**	**0.0297**	**2.5554**	**1.7201**	**4.2755**	**1.3133**	**1.5825**	**2.8958**	**0.0000**	**2,993.1005**	**2,993.1005**	**0.9318**		**3,012.6681**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0433	0.0557	0.6879	2.0300e-003	0.1677	1.1300e-003	0.1688	0.0445	1.0500e-003	0.0455		157.4799	157.4799	6.9300e-003		157.6254
Total	**0.0433**	**0.0557**	**0.6879**	**2.0300e-003**	**0.1677**	**1.1300e-003**	**0.1688**	**0.0445**	**1.0500e-003**	**0.0455**		**157.4799**	**157.4799**	**6.9300e-003**		**157.6254**

3.6 Trenching - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2748	11.4785	8.1968	0.0110		0.8407	0.8407		0.7750	0.7750		1,078.3462	1,078.3462	0.3214		1,085.0955
Total	**1.2748**	**11.4785**	**8.1968**	**0.0110**		**0.8407**	**0.8407**		**0.7750**	**0.7750**		**1,078.3462**	**1,078.3462**	**0.3214**		**1,085.0955**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0375	0.0483	0.5962	1.7600e-003	0.1453	9.8000e-004	0.1463	0.0385	9.1000e-004	0.0395		136.4826	136.4826	6.0100e-003		136.6087
Total	**0.0375**	**0.0483**	**0.5962**	**1.7600e-003**	**0.1453**	**9.8000e-004**	**0.1463**	**0.0385**	**9.1000e-004**	**0.0395**		**136.4826**	**136.4826**	**6.0100e-003**		**136.6087**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2748	11.4785	8.1968	0.0110		0.8407	0.8407		0.7750	0.7750	0.0000	1,078.3462	1,078.3462	0.3214		1,085.0955
Total	**1.2748**	**11.4785**	**8.1968**	**0.0110**		**0.8407**	**0.8407**		**0.7750**	**0.7750**	**0.0000**	**1,078.3462**	**1,078.3462**	**0.3214**		**1,085.0955**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0375	0.0483	0.5962	1.7600e-003	0.1453	9.8000e-004	0.1463	0.0385	9.1000e-004	0.0395		136.4826	136.4826	6.0100e-003		136.6087
Total	**0.0375**	**0.0483**	**0.5962**	**1.7600e-003**	**0.1453**	**9.8000e-004**	**0.1463**	**0.0385**	**9.1000e-004**	**0.0395**		**136.4826**	**136.4826**	**6.0100e-003**		**136.6087**

3.7 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048		2,609.9390	2,609.9390	0.6387		2,623.3517
Total	**2.6687**	**23.2608**	**17.5327**	**0.0268**		**1.4943**	**1.4943**		**1.4048**	**1.4048**		**2,609.9390**	**2,609.9390**	**0.6387**		**2,623.3517**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2342	2.2395	2.8297	6.6900e-003	0.1938	0.0357	0.2295	0.0552	0.0329	0.0881		650.0929	650.0929	4.6000e-003		650.1895
Worker	0.2307	0.2971	3.6687	0.0109	0.8942	6.0400e-003	0.9003	0.2372	5.5900e-003	0.2427		839.8927	839.8927	0.0370		840.6689
Total	**0.4648**	**2.5366**	**6.4984**	**0.0175**	**1.0880**	**0.0418**	**1.1298**	**0.2923**	**0.0385**	**0.3308**		**1,489.9856**	**1,489.9856**	**0.0416**		**1,490.8584**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048	0.0000	2,609.9389	2,609.9389	0.6387		2,623.3517

Total	**2.6687**	**23.2608**	**17.5327**	**0.0268**		**1.4943**	**1.4943**		**1.4048**	**1.4048**	**0.0000**	**2,609.9389**	**2,609.9389**	**0.6387**		**2,623.3517**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2342	2.2395	2.8297	6.6900e-003	0.1938	0.0357	0.2295	0.0552	0.0329	0.0881		650.0929	650.0929	4.6000e-003		650.1895
Worker	0.2307	0.2971	3.6687	0.0109	0.8942	6.0400e-003	0.9003	0.2372	5.5900e-003	0.2427		839.8927	839.8927	0.0370		840.6689
Total	**0.4648**	**2.5366**	**6.4984**	**0.0175**	**1.0880**	**0.0418**	**1.1298**	**0.2923**	**0.0385**	**0.3308**		**1,489.9856**	**1,489.9856**	**0.0416**		**1,490.8584**

3.7 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083		2,580.7618	2,580.7618	0.6279		2,593.9479
Total	**2.3516**	**20.9650**	**17.1204**	**0.0268**		**1.2850**	**1.2850**		**1.2083**	**1.2083**		**2,580.7618**	**2,580.7618**	**0.6279**		**2,593.9479**

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2196	2.0771	2.6797	6.7000e-003	0.1938	0.0333	0.2271	0.0552	0.0307	0.0859		641.0554	641.0554	4.6300e-003		641.1526
Worker	0.2158	0.2754	3.4250	0.0109	0.8942	6.0900e-003	0.9003	0.2372	5.6400e-003	0.2428		813.7503	813.7503	0.0353		814.4913
Total	**0.4354**	**2.3525**	**6.1047**	**0.0176**	**1.0880**	**0.0394**	**1.1274**	**0.2923**	**0.0363**	**0.3287**		**1,454.8057**	**1,454.8057**	**0.0399**		**1,455.6439**

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083	0.0000	2,580.7618	2,580.7618	0.6279		2,593.9479
Total	**2.3516**	**20.9650**	**17.1204**	**0.0268**		**1.2850**	**1.2850**		**1.2083**	**1.2083**	**0.0000**	**2,580.7618**	**2,580.7618**	**0.6279**		**2,593.9479**

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2196	2.0771	2.6797	6.7000e-003	0.1938	0.0333	0.2271	0.0552	0.0307	0.0859		641.0554	641.0554	4.6300e-003		641.1526
Worker	0.2158	0.2754	3.4250	0.0109	0.8942	6.0900e-003	0.9003	0.2372	5.6400e-003	0.2428		813.7503	813.7503	0.0353		814.4913
Total	**0.4354**	**2.3525**	**6.1047**	**0.0176**	**1.0880**	**0.0394**	**1.1274**	**0.2923**	**0.0363**	**0.3287**		**1,454.8057**	**1,454.8057**	**0.0399**		**1,455.6439**

3.8 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2520	12.5889	12.1441	0.0187		0.7111	0.7111		0.6560	0.6560		1,816.2490	1,816.2490	0.5585		1,827.9782
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2520**	**12.5889**	**12.1441**	**0.0187**		**0.7111**	**0.7111**		**0.6560**	**0.6560**		**1,816.2490**	**1,816.2490**	**0.5585**		**1,827.9782**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0540	0.0688	0.8563	2.7300e-003	0.2236	1.5200e-003	0.2251	0.0593	1.4100e-003	0.0607		203.4376	203.4376	8.8200e-003		203.6228
Total	**0.0540**	**0.0688**	**0.8563**	**2.7300e-003**	**0.2236**	**1.5200e-003**	**0.2251**	**0.0593**	**1.4100e-003**	**0.0607**		**203.4376**	**203.4376**	**8.8200e-003**		**203.6228**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2520	12.5889	12.1441	0.0187		0.7111	0.7111		0.6560	0.6560	0.0000	1,816.2490	1,816.2490	0.5585		1,827.9782
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2520**	**12.5889**	**12.1441**	**0.0187**		**0.7111**	**0.7111**		**0.6560**	**0.6560**	**0.0000**	**1,816.2490**	**1,816.2490**	**0.5585**		**1,827.9782**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0540	0.0688	0.8563	2.7300e-003	0.2236	1.5200e-003	0.2251	0.0593	1.4100e-003	0.0607		203.4376	203.4376	8.8200e-003		203.6228
Total	**0.0540**	**0.0688**	**0.8563**	**2.7300e-003**	**0.2236**	**1.5200e-003**	**0.2251**	**0.0593**	**1.4100e-003**	**0.0607**		**203.4376**	**203.4376**	**8.8200e-003**		**203.6228**

3.9 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	36.6563					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		281.9473
Total	**36.9227**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**		**281.4481**	**281.4481**	**0.0238**		**281.9473**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0432	0.0551	0.6850	2.1800e-003	0.1788	1.2200e-003	0.1801	0.0474	1.1300e-003	0.0486		162.7501	162.7501	7.0600e-003		162.8983
Total	**0.0432**	**0.0551**	**0.6850**	**2.1800e-003**	**0.1788**	**1.2200e-003**	**0.1801**	**0.0474**	**1.1300e-003**	**0.0486**		**162.7501**	**162.7501**	**7.0600e-003**		**162.8983**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	36.6563					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		281.9473
Total	**36.9227**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**	**0.0000**	**281.4481**	**281.4481**	**0.0238**		**281.9473**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0432	0.0551	0.6850	2.1800e-003	0.1788	1.2200e-003	0.1801	0.0474	1.1300e-003	0.0486		162.7501	162.7501	7.0600e-003		162.8983
Total	**0.0432**	**0.0551**	**0.6850**	**2.1800e-003**	**0.1788**	**1.2200e-003**	**0.1801**	**0.0474**	**1.1300e-003**	**0.0486**		**162.7501**	**162.7501**	**7.0600e-003**		**162.8983**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	13.1675	28.4355	141.8142	0.4686	33.3052	0.4677	33.7729	8.8872	0.4317	9.3189		35,678.7757	35,678.7757	1.2648		35,705.3361
Unmitigated	13.1675	28.4355	141.8142	0.4686	33.3052	0.4677	33.7729	8.8872	0.4317	9.3189		35,678.7757	35,678.7757	1.2648		35,705.3361

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	5,217.88	2,131.57	229.67	12,275,867	12,275,867
Total	5,217.88	2,131.57	229.67	12,275,867	12,275,867

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.508857	0.056420	0.193204	0.150829	0.041936	0.005921	0.015893	0.015805	0.001454	0.002159	0.004747	0.000498	0.002277

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0889	0.8086	0.6792	4.8500e-003		0.0615	0.0615		0.0615	0.0615		970.2895	970.2895	0.0186	0.0178	976.1945
NaturalGas Unmitigated	0.0889	0.8086	0.6792	4.8500e-003		0.0615	0.0615		0.0615	0.0615		970.2895	970.2895	0.0186	0.0178	976.1945

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	8247.46	0.0889	0.8086	0.6792	4.8500e-003		0.0615	0.0615		0.0615	0.0615		970.2895	970.2895	0.0186	0.0178	976.1945
Total		**0.0889**	**0.8086**	**0.6792**	**4.8500e-003**		**0.0615**	**0.0615**		**0.0615**	**0.0615**		**970.2895**	**970.2895**	**0.0186**	**0.0178**	**976.1945**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	8.24746	0.0889	0.8086	0.6792	4.8500e-003		0.0615	0.0615		0.0615	0.0615		970.2895	970.2895	0.0186	0.0178	976.1945
Total		**0.0889**	**0.8086**	**0.6792**	**4.8500e-003**		**0.0615**	**0.0615**		**0.0615**	**0.0615**		**970.2895**	**970.2895**	**0.0186**	**0.0178**	**976.1945**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Mitigated	4.9651	1.8000e-004	0.0195	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0415	0.0415	1.1000e-004		0.0439
Unmitigated	4.9651	1.8000e-004	0.0195	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0415	0.0415	1.1000e-004		0.0439

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.2051					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.7582					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.8300e-003	1.8000e-004	0.0195	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0415	0.0415	1.1000e-004		0.0439
Total	**4.9651**	**1.8000e-004**	**0.0195**	**0.0000**		**7.0000e-005**	**7.0000e-005**		**7.0000e-005**	**7.0000e-005**		**0.0415**	**0.0415**	**1.1000e-004**		**0.0439**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Consumer Products	3.7582					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.8300e-003	1.8000e-004	0.0195	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0415	0.0415	1.1000e-004		0.0439
Architectural Coating	1.2051					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Total	**4.9651**	**1.8000e-004**	**0.0195**	**0.0000**		**7.0000e-005**	**7.0000e-005**		**7.0000e-005**	**7.0000e-005**		**0.0415**	**0.0415**	**1.1000e-004**		**0.0439**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Phase 2 - Student Union

Orange County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	189.81	1000sqft	4.36	189,806.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - modified

Construction Phase - modified

Off-road Equipment -

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Off-road Equipment - modified

Trips and VMT - modified

Demolition - Assuming density of pavement is 150 lbs/ft3 and pavement is 1 ft deep

Architectural Coating - modified per SCAQMD Rule 1113

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblConstructionPhase	NumDays	18.00	30.00
tblLandUse	LandUseSquareFeet	189,810.00	189,806.00
tblProjectCharacteristics	OperationalYear	2014	2020

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	4.3466	45.6823	39.9371	0.0677	18.2675	2.3668	20.6342	9.9840	2.1774	12.1615	0.0000	6,649.9696	6,649.9696	1.2348	0.0000	6,675.9009
2019	36.9680	23.3907	23.6218	0.0438	1.0880	1.3248	2.4128	0.2923	1.2449	1.5372	0.0000	3,986.9241	3,986.9241	0.6680	0.0000	4,000.9517
Total	**41.3146**	**69.0730**	**63.5589**	**0.1114**	**19.3555**	**3.6916**	**23.0470**	**10.2764**	**3.4223**	**13.6987**	**0.0000**	**10,636.8937**	**10,636.8937**	**1.9028**	**0.0000**	**10,676.8525**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Year	lb/day										lb/day					
2018	4.3466	45.6823	39.9371	0.0677	7.2470	2.3668	9.6138	3.9263	2.1774	6.1038	0.0000	6,649.9696	6,649.9696	1.2348	0.0000	6,675.9009
2019	36.9680	23.3907	23.6218	0.0438	1.0880	1.3248	2.4128	0.2923	1.2449	1.5372	0.0000	3,986.9241	3,986.9241	0.6680	0.0000	4,000.9517
Total	**41.3146**	**69.0730**	**63.5589**	**0.1114**	**8.3350**	**3.6916**	**12.0266**	**4.2187**	**3.4223**	**7.6410**	**0.0000**	**10,636.8937**	**10,636.8937**	**1.9028**	**0.0000**	**10,676.8525**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**56.94**	**0.00**	**47.82**	**58.95**	**0.00**	**44.22**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.9651	1.8000e-004	0.0195	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0415	0.0415	1.1000e-004		0.0439
Energy	0.0889	0.8086	0.6792	4.8500e-003		0.0615	0.0615		0.0615	0.0615		970.2895	970.2895	0.0186	0.0178	976.1945
Mobile	13.8822	30.0037	141.1828	0.4475	33.3052	0.4692	33.7744	8.8872	0.4331	9.3203		34,139.9342	34,139.9342	1.2657		34,166.5132
Total	**18.9363**	**30.8125**	**141.8815**	**0.4523**	**33.3052**	**0.5307**	**33.8359**	**8.8872**	**0.4946**	**9.3818**		**35,110.2652**	**35,110.2652**	**1.2844**	**0.0178**	**35,142.7516**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Area	4.9651	1.8000e-004	0.0195	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0415	0.0415	1.1000e-004		0.0439
Energy	0.0889	0.8086	0.6792	4.8500e-003		0.0615	0.0615		0.0615	0.0615		970.2895	970.2895	0.0186	0.0178	976.1945
Mobile	13.8822	30.0037	141.1828	0.4475	33.3052	0.4692	33.7744	8.8872	0.4331	9.3203		34,139.9342	34,139.9342	1.2657		34,166.5132
Total	**18.9363**	**30.8125**	**141.8815**	**0.4523**	**33.3052**	**0.5307**	**33.8359**	**8.8872**	**0.4946**	**9.3818**		**35,110.2652**	**35,110.2652**	**1.2844**	**0.0178**	**35,142.7516**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition - Pavement Removal	Demolition	6/1/2018	6/28/2018	5	20	
2	Demolition	Demolition	6/29/2018	7/26/2018	5	20	
3	Site Preparation	Site Preparation	7/27/2018	8/2/2018	5	5	
4	Grading	Grading	8/3/2018	8/14/2018	5	8	
5	Trenching	Trenching	8/15/2018	8/28/2018	5	10	
6	Building Construction	Building Construction	8/29/2018	7/16/2019	5	230	
7	Paving	Paving	7/17/2019	8/9/2019	5	18	
8	Architectural Coating	Architectural Coating	8/10/2019	9/20/2019	5	30	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 284,709; Non-Residential Outdoor: 94,903 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition - Pavement Removal	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition - Pavement Removal	Excavators	3	8.00	162	0.38
Demolition - Pavement Removal	Rubber Tired Dozers	2	8.00	255	0.40
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Trenching	Plate Compactors	2	8.00	8	0.43
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Trenching	Trenchers	2	8.00	80	0.50
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	125	0.42
Paving	Paving Equipment	2	6.00	130	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition - Pavement Removal	6	15.00	0.00	704.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	6	15.00	0.00	292.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	80.00	31.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	16.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - Pavement Removal - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.6159	0.0000	7.6159	1.1531	0.0000	1.1531			0.0000			0.0000
Off-Road	3.5606	36.8310	31.7250	0.0399		1.8090	1.8090		1.6856	1.6856		3,983.3282	3,983.3282	1.1015		4,006.4585
Total	**3.5606**	**36.8310**	**31.7250**	**0.0399**	**7.6159**	**1.8090**	**9.4249**	**1.1531**	**1.6856**	**2.8387**		**3,983.3282**	**3,983.3282**	**1.1015**		**4,006.4585**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.6236	8.5390	7.5681	0.0258	0.6134	0.1337	0.7471	0.1680	0.1230	0.2910		2,517.5076	2,517.5076	0.0187		2,517.9002
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0454	0.0613	0.6440	1.9300e-003	0.1677	1.1300e-003	0.1688	0.0445	1.0500e-003	0.0455		149.1338	149.1338	6.9300e-003		149.2794
Total	**0.6690**	**8.6003**	**8.2121**	**0.0277**	**0.7810**	**0.1348**	**0.9159**	**0.2124**	**0.1240**	**0.3365**		**2,666.6414**	**2,666.6414**	**0.0256**		**2,667.1796**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.9702	0.0000	2.9702	0.4497	0.0000	0.4497			0.0000			0.0000
Off-Road	3.5606	36.8310	31.7250	0.0399		1.8090	1.8090		1.6856	1.6856	0.0000	3,983.3282	3,983.3282	1.1015		4,006.4585
Total	**3.5606**	**36.8310**	**31.7250**	**0.0399**	**2.9702**	**1.8090**	**4.7792**	**0.4497**	**1.6856**	**2.1353**	**0.0000**	**3,983.3282**	**3,983.3282**	**1.1015**		**4,006.4585**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.6236	8.5390	7.5681	0.0258	0.6134	0.1337	0.7471	0.1680	0.1230	0.2910		2,517.5076	2,517.5076	0.0187		2,517.9002

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0454	0.0613	0.6440	1.9300e-003	0.1677	1.1300e-003	0.1688	0.0445	1.0500e-003	0.0455		149.1338	149.1338	6.9300e-003		149.2794
Total	**0.6690**	**8.6003**	**8.2121**	**0.0277**	**0.7810**	**0.1348**	**0.9159**	**0.2124**	**0.1240**	**0.3365**		**2,666.6414**	**2,666.6414**	**0.0256**		**2,667.1796**

3.3 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.1562	0.0000	3.1562	0.4779	0.0000	0.4779			0.0000			0.0000
Off-Road	3.5606	36.8310	31.7250	0.0399		1.8090	1.8090		1.6856	1.6856		3,983.3282	3,983.3282	1.1015		4,006.4585
Total	**3.5606**	**36.8310**	**31.7250**	**0.0399**	**3.1562**	**1.8090**	**4.9651**	**0.4779**	**1.6856**	**2.1635**		**3,983.3282**	**3,983.3282**	**1.1015**		**4,006.4585**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2586	3.5418	3.1390	0.0107	0.2544	0.0555	0.3099	0.0697	0.0510	0.1207		1,044.1935	1,044.1935	7.7500e-003		1,044.3563
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0454	0.0613	0.6440	1.9300e-003	0.1677	1.1300e-003	0.1688	0.0445	1.0500e-003	0.0455		149.1338	149.1338	6.9300e-003		149.2794
Total	**0.3040**	**3.6030**	**3.7831**	**0.0126**	**0.4221**	**0.0566**	**0.4787**	**0.1141**	**0.0521**	**0.1662**		**1,193.3273**	**1,193.3273**	**0.0147**		**1,193.6357**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.2309	0.0000	1.2309	0.1864	0.0000	0.1864			0.0000			0.0000
Off-Road	3.5606	36.8310	31.7250	0.0399		1.8090	1.8090		1.6856	1.6856	0.0000	3,983.3282	3,983.3282	1.1015		4,006.4585
Total	**3.5606**	**36.8310**	**31.7250**	**0.0399**	**1.2309**	**1.8090**	**3.0399**	**0.1864**	**1.6856**	**1.8720**	**0.0000**	**3,983.3282**	**3,983.3282**	**1.1015**		**4,006.4585**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2586	3.5418	3.1390	0.0107	0.2544	0.0555	0.3099	0.0697	0.0510	0.1207		1,044.1935	1,044.1935	7.7500e-003		1,044.3563
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0454	0.0613	0.6440	1.9300e-003	0.1677	1.1300e-003	0.1688	0.0445	1.0500e-003	0.0455		149.1338	149.1338	6.9300e-003		149.2794
Total	**0.3040**	**3.6030**	**3.7831**	**0.0126**	**0.4221**	**0.0566**	**0.4787**	**0.1141**	**0.0521**	**0.1662**		**1,193.3273**	**1,193.3273**	**0.0147**		**1,193.6357**

3.4 Site Preparation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.2921	45.6088	36.2346	0.0391		2.3654	2.3654		2.1762	2.1762		3,939.7731	3,939.7731	1.2265		3,965.5297
Total	**4.2921**	**45.6088**	**36.2346**	**0.0391**	**18.0663**	**2.3654**	**20.4317**	**9.9307**	**2.1762**	**12.1069**		**3,939.7731**	**3,939.7731**	**1.2265**		**3,965.5297**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0545	0.0735	0.7728	2.3100e-003	0.2012	1.3600e-003	0.2026	0.0534	1.2600e-003	0.0546		178.9606	178.9606	8.3200e-003		179.1353
Total	**0.0545**	**0.0735**	**0.7728**	**2.3100e-003**	**0.2012**	**1.3600e-003**	**0.2026**	**0.0534**	**1.2600e-003**	**0.0546**		**178.9606**	**178.9606**	**8.3200e-003**		**179.1353**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0458	0.0000	7.0458	3.8730	0.0000	3.8730			0.0000			0.0000
Off-Road	4.2921	45.6088	36.2346	0.0391		2.3654	2.3654		2.1762	2.1762	0.0000	3,939.7731	3,939.7731	1.2265		3,965.5297

Total	4.2921	45.6088	36.2346	0.0391	7.0458	2.3654	9.4113	3.8730	2.1762	6.0491	0.0000	3,939.7731	3,939.7731	1.2265		3,965.5297

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0545	0.0735	0.7728	2.3100e-003	0.2012	1.3600e-003	0.2026	0.0534	1.2600e-003	0.0546		178.9606	178.9606	8.3200e-003		179.1353
Total	**0.0545**	**0.0735**	**0.7728**	**2.3100e-003**	**0.2012**	**1.3600e-003**	**0.2026**	**0.0534**	**1.2600e-003**	**0.0546**		**178.9606**	**178.9606**	**8.3200e-003**		**179.1353**

3.5 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	3.0028	31.0702	23.9988	0.0297		1.7201	1.7201		1.5825	1.5825		2,993.1005	2,993.1005	0.9318		3,012.6681
Total	**3.0028**	**31.0702**	**23.9988**	**0.0297**	**6.5523**	**1.7201**	**8.2724**	**3.3675**	**1.5825**	**4.9500**		**2,993.1005**	**2,993.1005**	**0.9318**		**3,012.6681**

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0454	0.0613	0.6440	1.9300e-003	0.1677	1.1300e-003	0.1688	0.0445	1.0500e-003	0.0455		149.1338	149.1338	6.9300e-003		149.2794
Total	**0.0454**	**0.0613**	**0.6440**	**1.9300e-003**	**0.1677**	**1.1300e-003**	**0.1688**	**0.0445**	**1.0500e-003**	**0.0455**		**149.1338**	**149.1338**	**6.9300e-003**		**149.2794**

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Fugitive Dust					2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000			0.0000
Off-Road	3.0028	31.0702	23.9988	0.0297		1.7201	1.7201		1.5825	1.5825	0.0000	2,993.1005	2,993.1005	0.9318		3,012.6681
Total	**3.0028**	**31.0702**	**23.9988**	**0.0297**	**2.5554**	**1.7201**	**4.2755**	**1.3133**	**1.5825**	**2.8958**	**0.0000**	**2,993.1005**	**2,993.1005**	**0.9318**		**3,012.6681**

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0454	0.0613	0.6440	1.9300e-003	0.1677	1.1300e-003	0.1688	0.0445	1.0500e-003	0.0455		149.1338	149.1338	6.9300e-003		149.2794
Total	**0.0454**	**0.0613**	**0.6440**	**1.9300e-003**	**0.1677**	**1.1300e-003**	**0.1688**	**0.0445**	**1.0500e-003**	**0.0455**		**149.1338**	**149.1338**	**6.9300e-003**		**149.2794**

3.6 Trenching - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category						lb/day								lb/day		
Off-Road	1.2748	11.4785	8.1968	0.0110		0.8407	0.8407		0.7750	0.7750		1,078.3462	1,078.3462	0.3214		1,085.0955
Total	**1.2748**	**11.4785**	**8.1968**	**0.0110**		**0.8407**	**0.8407**		**0.7750**	**0.7750**		**1,078.3462**	**1,078.3462**	**0.3214**		**1,085.0955**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category						lb/day								lb/day		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0393	0.0531	0.5582	1.6700e-003	0.1453	9.8000e-004	0.1463	0.0385	9.1000e-004	0.0395		129.2493	129.2493	6.0100e-003		129.3755
Total	**0.0393**	**0.0531**	**0.5582**	**1.6700e-003**	**0.1453**	**9.8000e-004**	**0.1463**	**0.0385**	**9.1000e-004**	**0.0395**		**129.2493**	**129.2493**	**6.0100e-003**		**129.3755**

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Off-Road	1.2748	11.4785	8.1968	0.0110		0.8407	0.8407		0.7750	0.7750	0.0000	1,078.3462	1,078.3462	0.3214		1,085.0955
Total	**1.2748**	**11.4785**	**8.1968**	**0.0110**		**0.8407**	**0.8407**		**0.7750**	**0.7750**	**0.0000**	**1,078.3462**	**1,078.3462**	**0.3214**		**1,085.0955**

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0393	0.0531	0.5582	1.6700e-003	0.1453	9.8000e-004	0.1463	0.0385	9.1000e-004	0.0395		129.2493	129.2493	6.0100e-003		129.3755
Total	**0.0393**	**0.0531**	**0.5582**	**1.6700e-003**	**0.1453**	**9.8000e-004**	**0.1463**	**0.0385**	**9.1000e-004**	**0.0395**		**129.2493**	**129.2493**	**6.0100e-003**		**129.3755**

3.7 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048		2,609.9390	2,609.9390	0.6387		2,623.3517
Total	**2.6687**	**23.2608**	**17.5327**	**0.0268**		**1.4943**	**1.4943**		**1.4048**	**1.4048**		**2,609.9390**	**2,609.9390**	**0.6387**		**2,623.3517**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2577	2.2899	3.4569	6.6400e-003	0.1938	0.0361	0.2299	0.0552	0.0332	0.0884		644.5848	644.5848	4.7500e-003		644.6845
Worker	0.2421	0.3267	3.4348	0.0103	0.8942	6.0400e-003	0.9003	0.2372	5.5900e-003	0.2427		795.3805	795.3805	0.0370		796.1568
Total	**0.4998**	**2.6166**	**6.8917**	**0.0169**	**1.0880**	**0.0421**	**1.1301**	**0.2923**	**0.0388**	**0.3311**		**1,439.9653**	**1,439.9653**	**0.0417**		**1,440.8413**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048	0.0000	2,609.9389	2,609.9389	0.6387		2,623.3517

Total	**2.6687**	**23.2608**	**17.5327**	**0.0268**		**1.4943**	**1.4943**		**1.4048**	**1.4048**	**0.0000**	**2,609.9389**	**2,609.9389**	**0.6387**		**2,623.3517**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2577	2.2899	3.4569	6.6400e-003	0.1938	0.0361	0.2299	0.0552	0.0332	0.0884		644.5848	644.5848	4.7500e-003		644.6845
Worker	0.2421	0.3267	3.4348	0.0103	0.8942	6.0400e-003	0.9003	0.2372	5.5900e-003	0.2427		795.3805	795.3805	0.0370		796.1568
Total	**0.4998**	**2.6166**	**6.8917**	**0.0169**	**1.0880**	**0.0421**	**1.1301**	**0.2923**	**0.0388**	**0.3311**		**1,439.9653**	**1,439.9653**	**0.0417**		**1,440.8413**

3.7 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083		2,580.7618	2,580.7618	0.6279		2,593.9479
Total	**2.3516**	**20.9650**	**17.1204**	**0.0268**		**1.2850**	**1.2850**		**1.2083**	**1.2083**		**2,580.7618**	**2,580.7618**	**0.6279**		**2,593.9479**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2404	2.1229	3.3034	6.6500e-003	0.1938	0.0337	0.2274	0.0552	0.0310	0.0862		635.6297	635.6297	4.7800e-003		635.7301
Worker	0.2263	0.3028	3.1981	0.0103	0.8942	6.0900e-003	0.9003	0.2372	5.6400e-003	0.2428		770.5326	770.5326	0.0353		771.2736
Total	**0.4667**	**2.4256**	**6.5015**	**0.0170**	**1.0880**	**0.0398**	**1.1277**	**0.2923**	**0.0366**	**0.3289**		**1,406.1623**	**1,406.1623**	**0.0401**		**1,407.0038**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083	0.0000	2,580.7618	2,580.7618	0.6279		2,593.9479
Total	**2.3516**	**20.9650**	**17.1204**	**0.0268**		**1.2850**	**1.2850**		**1.2083**	**1.2083**	**0.0000**	**2,580.7618**	**2,580.7618**	**0.6279**		**2,593.9479**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2404	2.1229	3.3034	6.6500e-003	0.1938	0.0337	0.2274	0.0552	0.0310	0.0862		635.6297	635.6297	4.7800e-003		635.7301
Worker	0.2263	0.3028	3.1981	0.0103	0.8942	6.0900e-003	0.9003	0.2372	5.6400e-003	0.2428		770.5326	770.5326	0.0353		771.2736
Total	**0.4667**	**2.4256**	**6.5015**	**0.0170**	**1.0880**	**0.0398**	**1.1277**	**0.2923**	**0.0366**	**0.3289**		**1,406.1623**	**1,406.1623**	**0.0401**		**1,407.0038**

3.8 Paving - 2019

<u>Unmitigated Construction On-Site</u>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2520	12.5889	12.1441	0.0187		0.7111	0.7111		0.6560	0.6560		1,816.2490	1,816.2490	0.5585		1,827.9782
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2520**	**12.5889**	**12.1441**	**0.0187**		**0.7111**	**0.7111**		**0.6560**	**0.6560**		**1,816.2490**	**1,816.2490**	**0.5585**		**1,827.9782**

<u>Unmitigated Construction Off-Site</u>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0566	0.0757	0.7995	2.5800e-003	0.2236	1.5200e-003	0.2251	0.0593	1.4100e-003	0.0607		192.6332	192.6332	8.8200e-003		192.8184
Total	**0.0566**	**0.0757**	**0.7995**	**2.5800e-003**	**0.2236**	**1.5200e-003**	**0.2251**	**0.0593**	**1.4100e-003**	**0.0607**		**192.6332**	**192.6332**	**8.8200e-003**		**192.8184**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2520	12.5889	12.1441	0.0187		0.7111	0.7111		0.6560	0.6560	0.0000	1,816.2490	1,816.2490	0.5585		1,827.9782
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2520**	**12.5889**	**12.1441**	**0.0187**		**0.7111**	**0.7111**		**0.6560**	**0.6560**	**0.0000**	**1,816.2490**	**1,816.2490**	**0.5585**		**1,827.9782**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0566	0.0757	0.7995	2.5800e-003	0.2236	1.5200e-003	0.2251	0.0593	1.4100e-003	0.0607		192.6332	192.6332	8.8200e-003		192.8184
Total	**0.0566**	**0.0757**	**0.7995**	**2.5800e-003**	**0.2236**	**1.5200e-003**	**0.2251**	**0.0593**	**1.4100e-003**	**0.0607**		**192.6332**	**192.6332**	**8.8200e-003**		**192.8184**

3.9 Architectural Coating - 2019

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Archit. Coating	36.6563					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		281.9473
Total	**36.9227**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**		**281.4481**	**281.4481**	**0.0238**		**281.9473**

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0453	0.0606	0.6396	2.0600e-003	0.1788	1.2200e-003	0.1801	0.0474	1.1300e-003	0.0486		154.1065	154.1065	7.0600e-003		154.2547
Total	**0.0453**	**0.0606**	**0.6396**	**2.0600e-003**	**0.1788**	**1.2200e-003**	**0.1801**	**0.0474**	**1.1300e-003**	**0.0486**		**154.1065**	**154.1065**	**7.0600e-003**		**154.2547**

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Archit. Coating	36.6563					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		281.9473
Total	**36.9227**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**	**0.0000**	**281.4481**	**281.4481**	**0.0238**		**281.9473**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0453	0.0606	0.6396	2.0600e-003	0.1788	1.2200e-003	0.1801	0.0474	1.1300e-003	0.0486		154.1065	154.1065	7.0600e-003		154.2547
Total	**0.0453**	**0.0606**	**0.6396**	**2.0600e-003**	**0.1788**	**1.2200e-003**	**0.1801**	**0.0474**	**1.1300e-003**	**0.0486**		**154.1065**	**154.1065**	**7.0600e-003**		**154.2547**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	13.8822	30.0037	141.1828	0.4475	33.3052	0.4692	33.7744	8.8872	0.4331	9.3203		34,139.9342	34,139.9342	1.2657		34,166.5132
Unmitigated	13.8822	30.0037	141.1828	0.4475	33.3052	0.4692	33.7744	8.8872	0.4331	9.3203		34,139.9342	34,139.9342	1.2657		34,166.5132

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	5,217.88	2,131.57	229.67	12,275,867	12,275,867
Total	5,217.88	2,131.57	229.67	12,275,867	12,275,867

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.508857	0.056420	0.193204	0.150829	0.041936	0.005921	0.015893	0.015805	0.001454	0.002159	0.004747	0.000498	0.002277

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0889	0.8086	0.6792	4.8500e-003		0.0615	0.0615		0.0615	0.0615		970.2895	970.2895	0.0186	0.0178	976.1945
NaturalGas Unmitigated	0.0889	0.8086	0.6792	4.8500e-003		0.0615	0.0615		0.0615	0.0615		970.2895	970.2895	0.0186	0.0178	976.1945

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	8247.46	0.0889	0.8086	0.6792	4.8500e-003		0.0615	0.0615		0.0615	0.0615		970.2895	970.2895	0.0186	0.0178	976.1945
Total		**0.0889**	**0.8086**	**0.6792**	**4.8500e-003**		**0.0615**	**0.0615**		**0.0615**	**0.0615**		**970.2895**	**970.2895**	**0.0186**	**0.0178**	**976.1945**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	8.24746	0.0889	0.8086	0.6792	4.8500e-003		0.0615	0.0615		0.0615	0.0615		970.2895	970.2895	0.0186	0.0178	976.1945
Total		**0.0889**	**0.8086**	**0.6792**	**4.8500e-003**		**0.0615**	**0.0615**		**0.0615**	**0.0615**		**970.2895**	**970.2895**	**0.0186**	**0.0178**	**976.1945**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Mitigated	4.9651	1.8000e-004	0.0195	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0415	0.0415	1.1000e-004		0.0439
Unmitigated	4.9651	1.8000e-004	0.0195	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0415	0.0415	1.1000e-004		0.0439

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.2051					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.7582					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.8300e-003	1.8000e-004	0.0195	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0415	0.0415	1.1000e-004		0.0439
Total	**4.9651**	**1.8000e-004**	**0.0195**	**0.0000**		**7.0000e-005**	**7.0000e-005**		**7.0000e-005**	**7.0000e-005**		**0.0415**	**0.0415**	**1.1000e-004**		**0.0439**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Consumer Products	3.7582					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.8300e-003	1.8000e-004	0.0195	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0415	0.0415	1.1000e-004		0.0439
Architectural Coating	1.2051					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Total	4.9651	1.8000e-004	0.0195	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0415	0.0415	1.1000e-004		0.0439

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

PROPOSED PROJECT OPERATION

Annual, Summer, and Winter Emissions

OCC Operation 2024 Existing Facilities

Orange County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	668.23	1000sqft	15.34	668,231.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	511.48	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - modified per 33%RPS

Land Use - modified

Vehicle Trips - modified

Woodstoves -

Area Coating - modified per SCAQMD Rule 1113

Energy Use - modified

Water And Wastewater - modified

Solid Waste - modified

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblEnergyUse	LightingElect	5.23	4.03

tblEnergyUse	NT24E	2.72	2.55
tblEnergyUse	NT24NG	5.21	8.53
tblEnergyUse	T24E	6.10	5.73
tblEnergyUse	T24NG	10.65	17.45
tblProjectCharacteristics	CO2IntensityFactor	630.89	511.48
tblProjectCharacteristics	OperationalYear	2014	2024
tblSolidWaste	SolidWasteGenerationRate	868.70	320.00
tblVehicleTrips	ST_TR	11.23	16.63
tblVehicleTrips	SU_TR	1.21	1.79
tblVehicleTrips	WD_TR	27.49	40.71
tblWater	IndoorWaterUseRate	32,776,034.99	52,808,052.00
tblWater	OutdoorWaterUseRate	51,265,080.37	30,392,736.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	3.1898	8.0000e-005	8.5100e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0166	0.0166	4.0000e-005	0.0000	0.0175
Energy	0.0936	0.8510	0.7149	5.1100e-003		0.0647	0.0647		0.0647	0.0647	0.0000	2,834.8724	2,834.8724	0.1260	0.0394	2,849.7229
Mobile	8.3404	16.8234	87.2710	0.3369	24.1900	0.3469	24.5369	6.4651	0.3204	6.7856	0.0000	22,282.1097	22,282.1097	0.7282	0.0000	22,297.4025
Waste						0.0000	0.0000		0.0000	0.0000	64.9571	0.0000	64.9571	3.8389	0.0000	145.5731
Water						0.0000	0.0000		0.0000	0.0000	16.7536	237.8678	254.6213	1.7342	0.0434	304.5008
Total	**11.6237**	**17.6744**	**87.9944**	**0.3420**	**24.1900**	**0.4116**	**24.6016**	**6.4651**	**0.3851**	**6.8503**	**81.7107**	**25,354.8665**	**25,436.5771**	**6.4273**	**0.0828**	**25,597.2168**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	3.1898	8.0000e-005	8.5100e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0166	0.0166	4.0000e-005	0.0000	0.0175
Energy	0.0936	0.8510	0.7149	5.1100e-003		0.0647	0.0647		0.0647	0.0647	0.0000	2,834.8724	2,834.8724	0.1260	0.0394	2,849.7229
Mobile	8.3404	16.8234	87.2710	0.3369	24.1900	0.3469	24.5369	6.4651	0.3204	6.7856	0.0000	22,282.1097	22,282.1097	0.7282	0.0000	22,297.4025
Waste						0.0000	0.0000		0.0000	0.0000	64.9571	0.0000	64.9571	3.8389	0.0000	145.5731
Water						0.0000	0.0000		0.0000	0.0000	16.7536	228.1159	244.8695	1.7334	0.0432	294.6752
Total	**11.6237**	**17.6744**	**87.9944**	**0.3420**	**24.1900**	**0.4116**	**24.6016**	**6.4651**	**0.3851**	**6.8503**	**81.7107**	**25,345.1146**	**25,426.8253**	**6.4265**	**0.0826**	**25,587.3911**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.04**	**0.04**	**0.01**	**0.22**	**0.04**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Mitigated	8.3404	16.8234	87.2710	0.3369	24.1900	0.3469	24.5369	6.4651	0.3204	6.7856	0.0000	22,282.1097	22,282.1097	0.7282	0.0000	22,297.4025
Unmitigated	8.3404	16.8234	87.2710	0.3369	24.1900	0.3469	24.5369	6.4651	0.3204	6.7856	0.0000	22,282.1097	22,282.1097	0.7282	0.0000	22,297.4025

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	27,203.68	11,112.68	1196.13	64,000,198	64,000,198
Total	27,203.68	11,112.68	1,196.13	64,000,198	64,000,198

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.501871	0.056875	0.196091	0.152579	0.042282	0.006031	0.016253	0.017122	0.001469	0.002194	0.004230	0.000489	0.002515

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,908.4425	1,908.4425	0.1082	0.0224	1,917.6548
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,908.4425	1,908.4425	0.1082	0.0224	1,917.6548
NaturalGas Mitigated	0.0936	0.8510	0.7149	5.1100e-003		0.0647	0.0647		0.0647	0.0647	0.0000	926.4299	926.4299	0.0178	0.0170	932.0680
NaturalGas Unmitigated	0.0936	0.8510	0.7149	5.1100e-003		0.0647	0.0647		0.0647	0.0647	0.0000	926.4299	926.4299	0.0178	0.0170	932.0680

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Junior College (2Yr)	1.73606e+007	0.0936	0.8510	0.7149	5.1100e-003		0.0647	0.0647		0.0647	0.0647	0.0000	926.4299	926.4299	0.0178	0.0170	932.0680
Total		**0.0936**	**0.8510**	**0.7149**	**5.1100e-003**		**0.0647**	**0.0647**		**0.0647**	**0.0647**	**0.0000**	**926.4299**	**926.4299**	**0.0178**	**0.0170**	**932.0680**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Junior College (2Yr)	1.73606e+007	0.0936	0.8510	0.7149	5.1100e-003		0.0647	0.0647		0.0647	0.0647	0.0000	926.4299	926.4299	0.0178	0.0170	932.0680
Total		**0.0936**	**0.8510**	**0.7149**	**5.1100e-003**		**0.0647**	**0.0647**		**0.0647**	**0.0647**	**0.0000**	**926.4299**	**926.4299**	**0.0178**	**0.0170**	**932.0680**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	8.22592e+006	1,908.4425	0.1082	0.0224	1,917.6548
Total		**1,908.4425**	**0.1082**	**0.0224**	**1,917.6548**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	8.22592e+006	1,908.4425	0.1082	0.0224	1,917.6548
Total		**1,908.4425**	**0.1082**	**0.0224**	**1,917.6548**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	3.1898	8.0000e-005	8.5100e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0166	0.0166	4.0000e-005	0.0000	0.0175
Unmitigated	3.1898	8.0000e-005	8.5100e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0166	0.0166	4.0000e-005	0.0000	0.0175

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.7743					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.4147					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	7.9000e-004	8.0000e-005	8.5100e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0166	0.0166	4.0000e-005	0.0000	0.0175
Total	**3.1898**	**8.0000e-005**	**8.5100e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0166**	**0.0166**	**4.0000e-005**	**0.0000**	**0.0175**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.7743					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.4147					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Landscaping	7.9000e-004	8.0000e-005	8.5100e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0166	0.0166	4.0000e-005	0.0000	0.0175
Total	**3.1898**	**8.0000e-005**	**8.5100e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0166**	**0.0166**	**4.0000e-005**	**0.0000**	**0.0175**

7.0 Water Detail

7.1 Mitigation Measures Water

Use Reclaimed Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	244.8695	1.7334	0.0432	294.6752
Unmitigated	254.6213	1.7342	0.0434	304.5008

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	52.8081 / 30.3927	254.6213	1.7342	0.0434	304.5008
Total		**254.6213**	**1.7342**	**0.0434**	**304.5008**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	52.8081 / 26.6094	244.8695	1.7334	0.0432	294.6752
Total		**244.8695**	**1.7334**	**0.0432**	**294.6752**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	64.9571	3.8389	0.0000	145.5731
Unmitigated	64.9571	3.8389	0.0000	145.5731

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior College (2Yr)	320	64.9571	3.8389	0.0000	145.5731
Total		**64.9571**	**3.8389**	**0.0000**	**145.5731**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior College (2Yr)	320	64.9571	3.8389	0.0000	145.5731
Total		**64.9571**	**3.8389**	**0.0000**	**145.5731**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

OCC Operation 2024 Existing Facilities

Orange County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	668.23	1000sqft	15.34	668,231.00	0

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 2.2 **Precipitation Freq (Days)** 30

Climate Zone 8 **Operational Year** 2024

Utility Company Southern California Edison

CO2 Intensity (lb/MWhr) 511.48 **CH4 Intensity (lb/MWhr)** 0.029 **N2O Intensity (lb/MWhr)** 0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - modified per 33%RPS

Land Use - modified

Vehicle Trips - modified

Woodstoves -

Area Coating - modified per SCAQMD Rule 1113

Energy Use - modified

Water And Wastewater - modified

Solid Waste - modified

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblEnergyUse	LightingElect	5.23	4.03

tblEnergyUse	NT24E	2.72	2.55
tblEnergyUse	NT24NG	5.21	8.53
tblEnergyUse	T24E	6.10	5.73
tblEnergyUse	T24NG	10.65	17.45
tblProjectCharacteristics	CO2IntensityFactor	630.89	511.48
tblProjectCharacteristics	OperationalYear	2014	2024
tblSolidWaste	SolidWasteGenerationRate	868.70	320.00
tblVehicleTrips	ST_TR	11.23	16.63
tblVehicleTrips	SU_TR	1.21	1.79
tblVehicleTrips	WD_TR	27.49	40.71
tblWater	IndoorWaterUseRate	32,776,034.99	52,808,052.00
tblWater	OutdoorWaterUseRate	51,265,080.37	30,392,736.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	17.4801	6.2000e-004	0.0681	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		0.1462	0.1462	3.8000e-004		0.1543
Energy	0.5129	4.6631	3.9170	0.0280		0.3544	0.3544		0.3544	0.3544		5,595.6942	5,595.6942	0.1073	0.1026	5,629.7487
Mobile	59.2188	110.1945	615.3631	2.4593	173.7018	2.4471	176.1489	46.3575	2.2604	48.6179		178,974.2790	178,974.2790	5.6669		179,093.2845
Total	**77.2118**	**114.8582**	**619.3482**	**2.4873**	**173.7018**	**2.8018**	**176.5036**	**46.3575**	**2.6150**	**48.9725**		**184,570.1195**	**184,570.1195**	**5.7746**	**0.1026**	**184,723.1874**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	17.4801	6.2000e-004	0.0681	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		0.1462	0.1462	3.8000e-004		0.1543
Energy	0.5129	4.6631	3.9170	0.0280		0.3544	0.3544		0.3544	0.3544		5,595.6942	5,595.6942	0.1073	0.1026	5,629.7487
Mobile	59.2188	110.1945	615.3631	2.4593	173.7018	2.4471	176.1489	46.3575	2.2604	48.6179		178,974.2790	178,974.2790	5.6669		179,093.2845
Total	**77.2118**	**114.8582**	**619.3482**	**2.4873**	**173.7018**	**2.8018**	**176.5036**	**46.3575**	**2.6150**	**48.9725**		**184,570.1195**	**184,570.1195**	**5.7746**	**0.1026**	**184,723.1874**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	59.2188	110.1945	615.3631	2.4593	173.7018	2.4471	176.1489	46.3575	2.2604	48.6179		178,974.2790	178,974.2790	5.6669		179,093.2845
Unmitigated	59.2188	110.1945	615.3631	2.4593	173.7018	2.4471	176.1489	46.3575	2.2604	48.6179		178,974.2790	178,974.2790	5.6669		179,093.2845

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	27,203.68	11,112.68	1196.13	64,000,198	64,000,198
Total	27,203.68	11,112.68	1,196.13	64,000,198	64,000,198

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.501871	0.056875	0.196091	0.152579	0.042282	0.006031	0.016253	0.017122	0.001469	0.002194	0.004230	0.000489	0.002515

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.5129	4.6631	3.9170	0.0280		0.3544	0.3544		0.3544	0.3544		5,595.6942	5,595.6942	0.1073	0.1026	5,629.7487
NaturalGas Unmitigated	0.5129	4.6631	3.9170	0.0280		0.3544	0.3544		0.3544	0.3544		5,595.6942	5,595.6942	0.1073	0.1026	5,629.7487

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	47563.4	0.5129	4.6631	3.9170	0.0280		0.3544	0.3544		0.3544	0.3544		5,595.6942	5,595.6942	0.1073	0.1026	5,629.7487
Total		**0.5129**	**4.6631**	**3.9170**	**0.0280**		**0.3544**	**0.3544**		**0.3544**	**0.3544**		**5,595.6942**	**5,595.6942**	**0.1073**	**0.1026**	**5,629.7487**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	47.5634	0.5129	4.6631	3.9170	0.0280		0.3544	0.3544		0.3544	0.3544		5,595.6942	5,595.6942	0.1073	0.1026	5,629.7487
Total		**0.5129**	**4.6631**	**3.9170**	**0.0280**		**0.3544**	**0.3544**		**0.3544**	**0.3544**		**5,595.6942**	**5,595.6942**	**0.1073**	**0.1026**	**5,629.7487**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	17.4801	6.2000e-004	0.0681	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		0.1462	0.1462	3.8000e-004		0.1543
Unmitigated	17.4801	6.2000e-004	0.0681	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		0.1462	0.1462	3.8000e-004		0.1543

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	4.2428					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	13.2310					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.2900e-003	6.2000e-004	0.0681	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		0.1462	0.1462	3.8000e-004		0.1543
Total	**17.4801**	**6.2000e-004**	**0.0681**	**1.0000e-005**		**2.4000e-004**	**2.4000e-004**		**2.4000e-004**	**2.4000e-004**		**0.1462**	**0.1462**	**3.8000e-004**		**0.1543**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	4.2428					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	13.2310					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Landscaping	6.2900e-003	6.2000e-004	0.0681	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		0.1462	0.1462	3.8000e-004		0.1543
Total	**17.4801**	**6.2000e-004**	**0.0681**	**1.0000e-005**		**2.4000e-004**	**2.4000e-004**		**2.4000e-004**	**2.4000e-004**		**0.1462**	**0.1462**	**3.8000e-004**		**0.1543**

7.0 Water Detail

7.1 Mitigation Measures Water

Use Reclaimed Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

OCC Operation 2024 Existing Facilities

Orange County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	668.23	1000sqft	15.34	668,231.00	0

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 2.2 **Precipitation Freq (Days)** 30

Climate Zone 8 **Operational Year** 2024

Utility Company Southern California Edison

CO2 Intensity (lb/MWhr) 511.48 **CH4 Intensity (lb/MWhr)** 0.029 **N2O Intensity (lb/MWhr)** 0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - modified per 33%RPS

Land Use - modified

Vehicle Trips - modified

Woodstoves -

Area Coating - modified per SCAQMD Rule 1113

Energy Use - modified

Water And Wastewater - modified

Solid Waste - modified

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblEnergyUse	LightingElect	5.23	4.03

tblEnergyUse	NT24E	2.72	2.55
tblEnergyUse	NT24NG	5.21	8.53
tblEnergyUse	T24E	6.10	5.73
tblEnergyUse	T24NG	10.65	17.45
tblProjectCharacteristics	CO2IntensityFactor	630.89	511.48
tblProjectCharacteristics	OperationalYear	2014	2024
tblSolidWaste	SolidWasteGenerationRate	868.70	320.00
tblVehicleTrips	ST_TR	11.23	16.63
tblVehicleTrips	SU_TR	1.21	1.79
tblVehicleTrips	WD_TR	27.49	40.71
tblWater	IndoorWaterUseRate	32,776,034.99	52,808,052.00
tblWater	OutdoorWaterUseRate	51,265,080.37	30,392,736.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	17.4801	6.2000e-004	0.0681	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		0.1462	0.1462	3.8000e-004		0.1543
Energy	0.5129	4.6631	3.9170	0.0280		0.3544	0.3544		0.3544	0.3544		5,595.6942	5,595.6942	0.1073	0.1026	5,629.7487
Mobile	62.4281	116.3895	612.9629	2.3488	173.7018	2.4539	176.1557	46.3575	2.2666	48.6241		171,360.9545	171,360.9545	5.6723		171,480.0736
Total	**80.4211**	**121.0532**	**616.9480**	**2.3768**	**173.7018**	**2.8085**	**176.5103**	**46.3575**	**2.6212**	**48.9787**		**176,956.7950**	**176,956.7950**	**5.7800**	**0.1026**	**177,109.9765**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	17.4801	6.2000e-004	0.0681	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		0.1462	0.1462	3.8000e-004		0.1543
Energy	0.5129	4.6631	3.9170	0.0280		0.3544	0.3544		0.3544	0.3544		5,595.6942	5,595.6942	0.1073	0.1026	5,629.7487
Mobile	62.4281	116.3895	612.9629	2.3488	173.7018	2.4539	176.1557	46.3575	2.2666	48.6241		171,360.9545	171,360.9545	5.6723		171,480.0736
Total	**80.4211**	**121.0532**	**616.9480**	**2.3768**	**173.7018**	**2.8085**	**176.5103**	**46.3575**	**2.6212**	**48.9787**		**176,956.7950**	**176,956.7950**	**5.7800**	**0.1026**	**177,109.9765**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	62.4281	116.3895	612.9629	2.3488	173.7018	2.4539	176.1557	46.3575	2.2666	48.6241		171,360.9545	171,360.9545	5.6723		171,480.0736
Unmitigated	62.4281	116.3895	612.9629	2.3488	173.7018	2.4539	176.1557	46.3575	2.2666	48.6241		171,360.9545	171,360.9545	5.6723		171,480.0736

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	27,203.68	11,112.68	1196.13	64,000,198	64,000,198
Total	27,203.68	11,112.68	1,196.13	64,000,198	64,000,198

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.501871	0.056875	0.196091	0.152579	0.042282	0.006031	0.016253	0.017122	0.001469	0.002194	0.004230	0.000489	0.002515

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.5129	4.6631	3.9170	0.0280		0.3544	0.3544		0.3544	0.3544		5,595.6942	5,595.6942	0.1073	0.1026	5,629.7487
NaturalGas Unmitigated	0.5129	4.6631	3.9170	0.0280		0.3544	0.3544		0.3544	0.3544		5,595.6942	5,595.6942	0.1073	0.1026	5,629.7487

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	47563.4	0.5129	4.6631	3.9170	0.0280		0.3544	0.3544		0.3544	0.3544		5,595.6942	5,595.6942	0.1073	0.1026	5,629.7487
Total		**0.5129**	**4.6631**	**3.9170**	**0.0280**		**0.3544**	**0.3544**		**0.3544**	**0.3544**		**5,595.6942**	**5,595.6942**	**0.1073**	**0.1026**	**5,629.7487**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	47.5634	0.5129	4.6631	3.9170	0.0280		0.3544	0.3544		0.3544	0.3544		5,595.6942	5,595.6942	0.1073	0.1026	5,629.7487
Total		**0.5129**	**4.6631**	**3.9170**	**0.0280**		**0.3544**	**0.3544**		**0.3544**	**0.3544**		**5,595.6942**	**5,595.6942**	**0.1073**	**0.1026**	**5,629.7487**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	17.4801	6.2000e-004	0.0681	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		0.1462	0.1462	3.8000e-004		0.1543
Unmitigated	17.4801	6.2000e-004	0.0681	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		0.1462	0.1462	3.8000e-004		0.1543

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	4.2428					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	13.2310					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.2900e-003	6.2000e-004	0.0681	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		0.1462	0.1462	3.8000e-004		0.1543
Total	**17.4801**	**6.2000e-004**	**0.0681**	**1.0000e-005**		**2.4000e-004**	**2.4000e-004**		**2.4000e-004**	**2.4000e-004**		**0.1462**	**0.1462**	**3.8000e-004**		**0.1543**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	4.2428					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	13.2310					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Landscaping	6.2900e-003	6.2000e-004	0.0681	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		0.1462	0.1462	3.8000e-004		0.1543
Total	**17.4801**	**6.2000e-004**	**0.0681**	**1.0000e-005**		**2.4000e-004**	**2.4000e-004**		**2.4000e-004**	**2.4000e-004**		**0.1462**	**0.1462**	**3.8000e-004**		**0.1543**

7.0 Water Detail

7.1 Mitigation Measures Water

Use Reclaimed Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

OCC 2024 Project Operation New Facilities

Orange County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	622.96	1000sqft	14.30	622,960.00	0
Enclosed Parking Structure	708.32	1000sqft	4.07	708,320.00	0
Parking Lot	10,919.00	Space	98.27	4,367,600.00	0
Apartments Mid Rise	298.00	Dwelling Unit	3.49	303,688.00	818

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	511.48	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - modified

Land Use - modified

Vehicle Trips - modified

Woodstoves - No fireplaces or woodstoves

Area Coating - modified per SCAQMD 1113

Energy Use -

Water And Wastewater - modified per historical water usage

Solid Waste - Modified per

Energy Mitigation - Assuming 2MW system is 15% efficient and there are 5 hours of sunlight (generation) a day operates 365 days a year

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceDayYear	25.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	253.30	0.00
tblFireplaces	NumberNoFireplace	29.80	0.00
tblFireplaces	NumberWood	14.90	0.00
tblLandUse	LandUseSquareFeet	298,000.00	303,688.00
tblLandUse	LotAcreage	16.26	4.07
tblLandUse	LotAcreage	7.84	3.49
tblLandUse	Population	852.00	818.00
tblProjectCharacteristics	CO2IntensityFactor	630.89	511.48
tblProjectCharacteristics	OperationalYear	2014	2024
tblSolidWaste	SolidWasteGenerationRate	809.85	320.00
tblVehicleTrips	ST_TR	7.16	0.00
tblVehicleTrips	ST_TR	11.23	9.51
tblVehicleTrips	SU_TR	6.07	0.00
tblVehicleTrips	SU_TR	1.21	1.02
tblVehicleTrips	WD_TR	6.59	0.00
tblVehicleTrips	WD_TR	27.49	23.27
tblWater	IndoorWaterUseRate	30,555,585.29	53,659,068.00
tblWater	OutdoorWaterUseRate	47,792,069.29	30,882,523.00
tblWoodstoves	NumberCatalytic	14.90	0.00
tblWoodstoves	NumberNoncatalytic	14.90	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	23.6103	0.0368	3.2280	1.7000e-004		0.0176	0.0176		0.0176	0.0176	0.0000	5.3240	5.3240	5.6100e-003	0.0000	5.4418
Energy	0.0671	0.6026	0.4572	3.6600e-003		0.0464	0.0464		0.0464	0.0464	0.0000	4,903.4508	4,903.4508	0.2531	0.0619	4,927.9566
Mobile	4.4444	8.9649	46.5053	0.1795	12.8905	0.1849	13.0753	3.4452	0.1708	3.6159	0.0000	11,873.7729	11,873.7729	0.3881	0.0000	11,881.9222
Waste						0.0000	0.0000		0.0000	0.0000	92.7831	0.0000	92.7831	5.4833	0.0000	207.9329
Water						0.0000	0.0000		0.0000	0.0000	23.1833	331.9054	355.0887	2.4000	0.0601	424.1244
Total	**28.1218**	**9.6043**	**50.1904**	**0.1834**	**12.8905**	**0.2488**	**13.1393**	**3.4452**	**0.2347**	**3.6799**	**115.9664**	**17,114.4531**	**17,230.4195**	**8.5301**	**0.1220**	**17,447.3780**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	23.6103	0.0368	3.2280	1.7000e-004		0.0176	0.0176		0.0176	0.0176	0.0000	5.3240	5.3240	5.6100e-003	0.0000	5.4418
Energy	0.0671	0.6026	0.4572	3.6600e-003		0.0464	0.0464		0.0464	0.0464	0.0000	2,607.3535	2,607.3535	0.1229	0.0350	2,620.7757
Mobile	4.4444	8.9649	46.5053	0.1795	12.8905	0.1849	13.0753	3.4452	0.1708	3.6159	0.0000	11,873.7729	11,873.7729	0.3881	0.0000	11,881.9222
Waste						0.0000	0.0000		0.0000	0.0000	92.7831	0.0000	92.7831	5.4833	0.0000	207.9329

Water						0.0000	0.0000		0.0000	0.0000	23.1833	318.0689	341.2522	2.3988	0.0599	410.1842
Total	**28.1218**	**9.6043**	**50.1904**	**0.1834**	**12.8905**	**0.2488**	**13.1393**	**3.4452**	**0.2347**	**3.6799**	**115.9664**	**14,804.5193**	**14,920.4858**	**8.3986**	**0.0948**	**15,126.2568**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**13.50**	**13.41**	**1.54**	**22.28**	**13.30**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	4.4444	8.9649	46.5053	0.1795	12.8905	0.1849	13.0753	3.4452	0.1708	3.6159	0.0000	11,873.7729	11,873.7729	0.3881	0.0000	11,881.9222
Unmitigated	4.4444	8.9649	46.5053	0.1795	12.8905	0.1849	13.0753	3.4452	0.1708	3.6159	0.0000	11,873.7729	11,873.7729	0.3881	0.0000	11,881.9222

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	0.00	0.00	0.00		
Enclosed Parking Structure	0.00	0.00	0.00		
Junior College (2Yr)	14,496.28	5,924.35	635.42	34,104,662	34,104,662
Parking Lot	0.00	0.00	0.00		
Total	14,496.28	5,924.35	635.42	34,104,662	34,104,662

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Enclosed Parking Structure	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.501871	0.056875	0.196091	0.152579	0.042282	0.006031	0.016253	0.017122	0.001469	0.002194	0.004230	0.000489	0.002515

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Kilowatt Hours of Renewable Electricity Generated

Percent of Electricity Use Generated with Renewable Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,943.1311	1,943.1311	0.1102	0.0228	1,952.5109
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	4,239.2284	4,239.2284	0.2404	0.0497	4,259.6918
NaturalGas Mitigated	0.0671	0.6026	0.4572	3.6600e-003		0.0464	0.0464		0.0464	0.0464	0.0000	664.2224	664.2224	0.0127	0.0122	668.2648
NaturalGas Unmitigated	0.0671	0.6026	0.4572	3.6600e-003		0.0464	0.0464		0.0464	0.0464	0.0000	664.2224	664.2224	0.0127	0.0122	668.2648

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	2.56691e+006	0.0138	0.1183	0.0503	7.5000e-004		9.5600e-003	9.5600e-003		9.5600e-003	9.5600e-003	0.0000	136.9802	136.9802	2.6300e-003	2.5100e-003	137.8139
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Junior College (2Yr)	9.88015e+006	0.0533	0.4843	0.4068	2.9100e-003		0.0368	0.0368		0.0368	0.0368	0.0000	527.2422	527.2422	0.0101	9.6700e-003	530.4509
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0671**	**0.6026**	**0.4572**	**3.6600e-003**		**0.0464**	**0.0464**		**0.0464**	**0.0464**	**0.0000**	**664.2224**	**664.2224**	**0.0127**	**0.0122**	**668.2648**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Junior College (2Yr)	9.88015e+006	0.0533	0.4843	0.4068	2.9100e-003		0.0368	0.0368		0.0368	0.0368	0.0000	527.2422	527.2422	0.0101	9.6700e-003	530.4509
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Apartments Mid Rise	2.56691e+006	0.0138	0.1183	0.0503	7.5000e-004		9.5600e-003	9.5600e-003		9.5600e-003	9.5600e-003	0.0000	136.9802	136.9802	2.6300e-003	2.5100e-003	137.8139
Total		**0.0671**	**0.6026**	**0.4572**	**3.6600e-003**		**0.0464**	**0.0464**		**0.0464**	**0.0464**	**0.0000**	**664.2224**	**664.2224**	**0.0127**	**0.0122**	**668.2648**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.03669e+006	240.5166	0.0136	2.8200e-003	241.6777
Enclosed Parking Structure	4.6395e+006	1,076.3790	0.0610	0.0126	1,081.5748
Junior College (2Yr)	8.75259e+006	2,030.6304	0.1151	0.0238	2,040.4326
Parking Lot	3.84349e+006	891.7024	0.0506	0.0105	896.0068
Total		**4,239.2284**	**0.2404**	**0.0497**	**4,259.6919**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	-484041	-112.2993	-0.0064	-0.0013	-112.8414
Enclosed Parking Structure	2.146e+006	497.8802	0.0282	5.8400e-003	500.2836
Junior College (2Yr)	5.14856e+006	1,194.4838	0.0677	0.0140	1,200.2498
Parking Lot	1.56492e+006	363.0663	0.0206	4.2600e-003	364.8189
Total		**1,943.1311**	**0.1102**	**0.0228**	**1,952.5109**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	23.6103	0.0368	3.2280	1.7000e-004		0.0176	0.0176		0.0176	0.0176	0.0000	5.3240	5.3240	5.6100e-003	0.0000	5.4418
Unmitigated	23.6103	0.0368	3.2280	1.7000e-004		0.0176	0.0176		0.0176	0.0176	0.0000	5.3240	5.3240	5.6100e-003	0.0000	5.4418

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.8132					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	21.6903					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1068	0.0368	3.2280	1.7000e-004		0.0176	0.0176		0.0176	0.0176	0.0000	5.3240	5.3240	5.6100e-003	0.0000	5.4418
Total	**23.6103**	**0.0368**	**3.2280**	**1.7000e-004**		**0.0176**	**0.0176**		**0.0176**	**0.0176**	**0.0000**	**5.3240**	**5.3240**	**5.6100e-003**	**0.0000**	**5.4418**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.8132					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	21.6903					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1068	0.0368	3.2280	1.7000e-004		0.0176	0.0176		0.0176	0.0176	0.0000	5.3240	5.3240	5.6100e-003	0.0000	5.4418
Total	**23.6103**	**0.0368**	**3.2280**	**1.7000e-004**		**0.0176**	**0.0176**		**0.0176**	**0.0176**	**0.0000**	**5.3240**	**5.3240**	**5.6100e-003**	**0.0000**	**5.4418**

7.0 Water Detail

7.1 Mitigation Measures Water

Use Reclaimed Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	341.2522	2.3988	0.0599	410.1842
Unmitigated	355.0887	2.4000	0.0601	424.1244

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e

Land Use	Mgal	MT/yr			
Apartments Mid Rise	19.4159 / 12.2405	96.3641	0.6378	0.0160	114.7165
Enclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
Junior College (2Yr)	53.6591 / 30.8825	258.7246	1.7622	0.0441	309.4079
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**355.0887**	**2.4000**	**0.0601**	**424.1244**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	19.4159 / 10.7167	92.4366	0.6374	0.0159	110.7602
Enclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
Junior College (2Yr)	53.6591 / 27.0382	248.8156	1.7613	0.0439	299.4240
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**341.2522**	**2.3987**	**0.0599**	**410.1842**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	92.7831	5.4833	0.0000	207.9329
Unmitigated	92.7831	5.4833	0.0000	207.9329

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	137.08	27.8260	1.6445	0.0000	62.3599
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
Junior College (2Yr)	320	64.9571	3.8389	0.0000	145.5731
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**92.7831**	**5.4833**	**0.0000**	**207.9329**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	137.08	27.8260	1.6445	0.0000	62.3599

Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
Junior College (2Yr)	320	64.9571	3.8389	0.0000	145.5731
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**92.7831**	**5.4833**	**0.0000**	**207.9329**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

OCC 2024 Project Operation New Facilities

Orange County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	622.96	1000sqft	14.30	622,960.00	0
Enclosed Parking Structure	708.32	1000sqft	4.07	708,320.00	0
Parking Lot	10,919.00	Space	98.27	4,367,600.00	0
Apartments Mid Rise	298.00	Dwelling Unit	3.49	303,688.00	818

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	511.48	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - modified

Land Use - modified

Vehicle Trips - modified

Woodstoves - No fireplaces or woodstoves

Area Coating - modified per SCAQMD 1113

Energy Use -

Water And Wastewater - modified per historical water usage

Solid Waste - Modified per

Energy Mitigation - Assuming 2MW system is 15% efficient and there are 5 hours of sunlight (generation) a day operates 365 days a year

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceDayYear	25.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	253.30	0.00
tblFireplaces	NumberNoFireplace	29.80	0.00
tblFireplaces	NumberWood	14.90	0.00
tblLandUse	LandUseSquareFeet	298,000.00	303,688.00
tblLandUse	LotAcreage	16.26	4.07
tblLandUse	LotAcreage	7.84	3.49
tblLandUse	Population	852.00	818.00
tblProjectCharacteristics	CO2IntensityFactor	630.89	511.48
tblProjectCharacteristics	OperationalYear	2014	2024
tblSolidWaste	SolidWasteGenerationRate	809.85	320.00
tblVehicleTrips	ST_TR	7.16	0.00
tblVehicleTrips	ST_TR	11.23	9.51
tblVehicleTrips	SU_TR	6.07	0.00
tblVehicleTrips	SU_TR	1.21	1.02
tblVehicleTrips	WD_TR	6.59	0.00
tblVehicleTrips	WD_TR	27.49	23.27
tblWater	IndoorWaterUseRate	30,555,585.29	53,659,068.00
tblWater	OutdoorWaterUseRate	47,792,069.29	30,882,523.00
tblWoodstoves	NumberCatalytic	14.90	0.00
tblWoodstoves	NumberNoncatalytic	14.90	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	129.6405	0.2945	25.8238	1.3900e-003		0.1407	0.1407		0.1407	0.1407	0.0000	46.9496	46.9496	0.0495	0.0000	47.9886
Energy	0.3678	3.3019	2.5050	0.0201		0.2541	0.2541		0.2541	0.2541		4,011.9446	4,011.9446	0.0769	0.0736	4,036.3606
Mobile	31.5565	58.7204	327.9143	1.3105	92.5621	1.3040	93.8661	24.7030	1.2045	25.9075		95,371.6826	95,371.6826	3.0198		95,435.0982
Total	**161.5647**	**62.3168**	**356.2430**	**1.3320**	**92.5621**	**1.6988**	**94.2609**	**24.7030**	**1.5993**	**26.3022**	**0.0000**	**99,430.5768**	**99,430.5768**	**3.1462**	**0.0736**	**99,519.4473**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	129.6405	0.2945	25.8238	1.3900e-003		0.1407	0.1407		0.1407	0.1407	0.0000	46.9496	46.9496	0.0495	0.0000	47.9886
Energy	0.3678	3.3019	2.5050	0.0201		0.2541	0.2541		0.2541	0.2541		4,011.9446	4,011.9446	0.0769	0.0736	4,036.3606
Mobile	31.5565	58.7204	327.9143	1.3105	92.5621	1.3040	93.8661	24.7030	1.2045	25.9075		95,371.6826	95,371.6826	3.0198		95,435.0982
Total	**161.5647**	**62.3168**	**356.2430**	**1.3320**	**92.5621**	**1.6988**	**94.2609**	**24.7030**	**1.5993**	**26.3022**	**0.0000**	**99,430.5768**	**99,430.5768**	**3.1462**	**0.0736**	**99,519.4473**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**

Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	31.5565	58.7204	327.9143	1.3105	92.5621	1.3040	93.8661	24.7030	1.2045	25.9075		95,371.6826	95,371.6826	3.0198		95,435.0982
Unmitigated	31.5565	58.7204	327.9143	1.3105	92.5621	1.3040	93.8661	24.7030	1.2045	25.9075		95,371.6826	95,371.6826	3.0198		95,435.0982

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	0.00	0.00	0.00		
Enclosed Parking Structure	0.00	0.00	0.00		
Junior College (2Yr)	14,496.28	5,924.35	635.42	34,104,662	34,104,662
Parking Lot	0.00	0.00	0.00		
Total	14,496.28	5,924.35	635.42	34,104,662	34,104,662

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Enclosed Parking Structure	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.501871	0.056875	0.196091	0.152579	0.042282	0.006031	0.016253	0.017122	0.001469	0.002194	0.004230	0.000489	0.002515

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Kilowatt Hours of Renewable Electricity Generated

Percent of Electricity Use Generated with Renewable Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.3678	3.3019	2.5050	0.0201		0.2541	0.2541		0.2541	0.2541		4,011.9446	4,011.9446	0.0769	0.0736	4,036.3606
NaturalGas Unmitigated	0.3678	3.3019	2.5050	0.0201		0.2541	0.2541		0.2541	0.2541		4,011.9446	4,011.9446	0.0769	0.0736	4,036.3606

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	7032.64	0.0758	0.6481	0.2758	4.1400e-003		0.0524	0.0524		0.0524	0.0524		827.3690	827.3690	0.0159	0.0152	832.4043

Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Junior College (2Yr)	27068.9	0.2919	2.6538	2.2292	0.0159		0.2017	0.2017		0.2017	0.2017		3,184.5755	3,184.5755	0.0610	0.0584	3,203.9563
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.3678**	**3.3019**	**2.5050**	**0.0201**		**0.2541**	**0.2541**		**0.2541**	**0.2541**		**4,011.9446**	**4,011.9446**	**0.0769**	**0.0736**	**4,036.3606**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	7.03264	0.0758	0.6481	0.2758	4.1400e-003		0.0524	0.0524		0.0524	0.0524		827.3690	827.3690	0.0159	0.0152	832.4043
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Junior College (2Yr)	27.0689	0.2919	2.6538	2.2292	0.0159		0.2017	0.2017		0.2017	0.2017		3,184.5755	3,184.5755	0.0610	0.0584	3,203.9563
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.3678**	**3.3019**	**2.5050**	**0.0201**		**0.2541**	**0.2541**		**0.2541**	**0.2541**		**4,011.9446**	**4,011.9446**	**0.0769**	**0.0736**	**4,036.3606**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	129.6405	0.2945	25.8238	1.3900e-003		0.1407	0.1407		0.1407	0.1407	0.0000	46.9496	46.9496	0.0495	0.0000	47.9886

Unmitigated	129.6405	0.2945	25.8238	1.3900e-003		0.1407	0.1407		0.1407	0.1407	0.0000	46.9496	46.9496	0.0495	0.0000	47.9886

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	9.9354					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	118.8509					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.8542	0.2945	25.8238	1.3900e-003		0.1407	0.1407		0.1407	0.1407		46.9496	46.9496	0.0495		47.9886
Total	**129.6405**	**0.2945**	**25.8238**	**1.3900e-003**		**0.1407**	**0.1407**		**0.1407**	**0.1407**	**0.0000**	**46.9496**	**46.9496**	**0.0495**	**0.0000**	**47.9886**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	9.9354					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	118.8509					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.8542	0.2945	25.8238	1.3900e-003		0.1407	0.1407		0.1407	0.1407		46.9496	46.9496	0.0495		47.9886

Total	**129.6405**	**0.2945**	**25.8238**	**1.3900e-003**		**0.1407**	**0.1407**		**0.1407**	**0.1407**	**0.0000**	**46.9496**	**46.9496**	**0.0495**	**0.0000**	**47.9886**

7.0 Water Detail

7.1 Mitigation Measures Water

Use Reclaimed Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

OCC 2024 Project Operation New Facilities

Orange County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	622.96	1000sqft	14.30	622,960.00	0
Enclosed Parking Structure	708.32	1000sqft	4.07	708,320.00	0
Parking Lot	10,919.00	Space	98.27	4,367,600.00	0
Apartments Mid Rise	298.00	Dwelling Unit	3.49	303,688.00	818

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	511.48	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - modified

Land Use - modified

Vehicle Trips - modified

Woodstoves - No fireplaces or woodstoves

Area Coating - modified per SCAQMD 1113

Energy Use -

Water And Wastewater - modified per historical water usage

Solid Waste - Modified per

Energy Mitigation - Assuming 2MW system is 15% efficient and there are 5 hours of sunlight (generation) a day operates 365 days a year

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceDayYear	25.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	253.30	0.00
tblFireplaces	NumberNoFireplace	29.80	0.00
tblFireplaces	NumberWood	14.90	0.00
tblLandUse	LandUseSquareFeet	298,000.00	303,688.00
tblLandUse	LotAcreage	16.26	4.07
tblLandUse	LotAcreage	7.84	3.49
tblLandUse	Population	852.00	818.00
tblProjectCharacteristics	CO2IntensityFactor	630.89	511.48
tblProjectCharacteristics	OperationalYear	2014	2024
tblSolidWaste	SolidWasteGenerationRate	809.85	320.00
tblVehicleTrips	ST_TR	7.16	0.00
tblVehicleTrips	ST_TR	11.23	9.51
tblVehicleTrips	SU_TR	6.07	0.00
tblVehicleTrips	SU_TR	1.21	1.02
tblVehicleTrips	WD_TR	6.59	0.00
tblVehicleTrips	WD_TR	27.49	23.27
tblWater	IndoorWaterUseRate	30,555,585.29	53,659,068.00
tblWater	OutdoorWaterUseRate	47,792,069.29	30,882,523.00
tblWoodstoves	NumberCatalytic	14.90	0.00
tblWoodstoves	NumberNoncatalytic	14.90	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	129.6405	0.2945	25.8238	1.3900e-003		0.1407	0.1407		0.1407	0.1407	0.0000	46.9496	46.9496	0.0495	0.0000	47.9886
Energy	0.3678	3.3019	2.5050	0.0201		0.2541	0.2541		0.2541	0.2541		4,011.9446	4,011.9446	0.0769	0.0736	4,036.3606
Mobile	33.2666	62.0216	326.6352	1.2517	92.5621	1.3076	93.8697	24.7030	1.2078	25.9108		91,314.6999	91,314.6999	3.0227		91,378.1759
Total	**163.2749**	**65.6180**	**354.9640**	**1.2731**	**92.5621**	**1.7024**	**94.2644**	**24.7030**	**1.6026**	**26.3055**	**0.0000**	**95,373.5940**	**95,373.5940**	**3.1490**	**0.0736**	**95,462.5251**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	129.6405	0.2945	25.8238	1.3900e-003		0.1407	0.1407		0.1407	0.1407	0.0000	46.9496	46.9496	0.0495	0.0000	47.9886
Energy	0.3678	3.3019	2.5050	0.0201		0.2541	0.2541		0.2541	0.2541		4,011.9446	4,011.9446	0.0769	0.0736	4,036.3606
Mobile	33.2666	62.0216	326.6352	1.2517	92.5621	1.3076	93.8697	24.7030	1.2078	25.9108		91,314.6999	91,314.6999	3.0227		91,378.1759
Total	**163.2749**	**65.6180**	**354.9640**	**1.2731**	**92.5621**	**1.7024**	**94.2644**	**24.7030**	**1.6026**	**26.3055**	**0.0000**	**95,373.5940**	**95,373.5940**	**3.1490**	**0.0736**	**95,462.5251**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**

Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	33.2666	62.0216	326.6352	1.2517	92.5621	1.3076	93.8697	24.7030	1.2078	25.9108		91,314.6999	91,314.6999	3.0227		91,378.1759
Unmitigated	33.2666	62.0216	326.6352	1.2517	92.5621	1.3076	93.8697	24.7030	1.2078	25.9108		91,314.6999	91,314.6999	3.0227		91,378.1759

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	0.00	0.00	0.00		
Enclosed Parking Structure	0.00	0.00	0.00		
Junior College (2Yr)	14,496.28	5,924.35	635.42	34,104,662	34,104,662
Parking Lot	0.00	0.00	0.00		
Total	14,496.28	5,924.35	635.42	34,104,662	34,104,662

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Enclosed Parking Structure	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1

Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.501871	0.056875	0.196091	0.152579	0.042282	0.006031	0.016253	0.017122	0.001469	0.002194	0.004230	0.000489	0.002515

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Kilowatt Hours of Renewable Electricity Generated

Percent of Electricity Use Generated with Renewable Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.3678	3.3019	2.5050	0.0201		0.2541	0.2541		0.2541	0.2541		4,011.9446	4,011.9446	0.0769	0.0736	4,036.3606
NaturalGas Unmitigated	0.3678	3.3019	2.5050	0.0201		0.2541	0.2541		0.2541	0.2541		4,011.9446	4,011.9446	0.0769	0.0736	4,036.3606

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					

Apartments Mid Rise	7032.64	0.0758	0.6481	0.2758	4.1400e-003		0.0524	0.0524		0.0524	0.0524		827.3690	827.3690	0.0159	0.0152	832.4043
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Junior College (2Yr)	27068.9	0.2919	2.6538	2.2292	0.0159		0.2017	0.2017		0.2017	0.2017		3,184.5755	3,184.5755	0.0610	0.0584	3,203.9563
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.3678**	**3.3019**	**2.5050**	**0.0201**		**0.2541**	**0.2541**		**0.2541**	**0.2541**		**4,011.9446**	**4,011.9446**	**0.0769**	**0.0736**	**4,036.3606**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	7.03264	0.0758	0.6481	0.2758	4.1400e-003		0.0524	0.0524		0.0524	0.0524		827.3690	827.3690	0.0159	0.0152	832.4043
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Junior College (2Yr)	27.0689	0.2919	2.6538	2.2292	0.0159		0.2017	0.2017		0.2017	0.2017		3,184.5755	3,184.5755	0.0610	0.0584	3,203.9563
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.3678**	**3.3019**	**2.5050**	**0.0201**		**0.2541**	**0.2541**		**0.2541**	**0.2541**		**4,011.9446**	**4,011.9446**	**0.0769**	**0.0736**	**4,036.3606**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Mitigated	129.6405	0.2945	25.8238	1.3900e-003		0.1407	0.1407		0.1407	0.1407	0.0000	46.9496	46.9496	0.0495	0.0000	47.9886
Unmitigated	129.6405	0.2945	25.8238	1.3900e-003		0.1407	0.1407		0.1407	0.1407	0.0000	46.9496	46.9496	0.0495	0.0000	47.9886

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	9.9354					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	118.8509					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.8542	0.2945	25.8238	1.3900e-003		0.1407	0.1407		0.1407	0.1407		46.9496	46.9496	0.0495		47.9886
Total	**129.6405**	**0.2945**	**25.8238**	**1.3900e-003**		**0.1407**	**0.1407**		**0.1407**	**0.1407**	**0.0000**	**46.9496**	**46.9496**	**0.0495**	**0.0000**	**47.9886**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	9.9354					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	118.8509					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Landscaping	0.8542	0.2945	25.8238	1.3900e-003		0.1407	0.1407		0.1407	0.1407		46.9496	46.9496	0.0495		47.9886
Total	**129.6405**	**0.2945**	**25.8238**	**1.3900e-003**		**0.1407**	**0.1407**		**0.1407**	**0.1407**	**0.0000**	**46.9496**	**46.9496**	**0.0495**	**0.0000**	**47.9886**

7.0 Water Detail

7.1 Mitigation Measures Water

Use Reclaimed Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

BAU CALCULATIONS

Annual, Summer, and Winter Emissions

OCC BAU

Orange County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking Structure	708.32	1000sqft	16.26	708,320.00	0
Parking Lot	10,919.00	Space	98.27	4,367,600.00	0
Apartments Mid Rise	298.00	Dwelling Unit	3.49	303,688.00	818
Junior College (2Yr)	1,291.19	1000sqft	29.64	1,291,191.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Land Use - Modified

Vehicle Trips - modifed per Traffic Study

Vechicle Emission Factors - Non-Pavley Emission Factors

Vechicle Emission Factors - Modified per Non-Pavley Emission Factors

Vechicle Emission Factors - Modified per Non-Pavley Emissions Factors

Woodstoves - No fireplaces

Energy Use - Modified per 2005-2006 energy use

Water And Wastewater - modified

Solid Waste - modified per projected waste use

Energy Mitigation - Solar PV

Water Mitigation - Outdoor Irrigation Recycled Water

Table Name	Column Name	Default Value	New Value
tblEnergyUse	LightingElect	5.23	3.23
tblEnergyUse	NT24E	2.72	2.14
tblEnergyUse	NT24NG	5.21	8.18
tblEnergyUse	T24E	6.10	4.80
tblEnergyUse	T24NG	10.65	16.72
tblFireplaces	FireplaceDayYear	25.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	253.30	0.00
tblFireplaces	NumberNoFireplace	29.80	0.00
tblFireplaces	NumberWood	14.90	0.00
tblLandUse	LandUseSquareFeet	298,000.00	303,688.00
tblLandUse	LandUseSquareFeet	1,291,190.00	1,291,191.00
tblLandUse	LotAcreage	7.84	3.49
tblLandUse	Population	852.00	818.00
tblProjectCharacteristics	OperationalYear	2014	2024
tblSolidWaste	SolidWasteGenerationRate	1,678.55	640.00
tblVehicleEF	LDA	223.83	349.76
tblVehicleEF	LDA	48.65	73.88
tblVehicleEF	LDA	233.25	364.55
tblVehicleEF	LDA	48.65	73.88
tblVehicleEF	LDA	220.36	344.30
tblVehicleEF	LDA	48.65	73.88
tblVehicleEF	LDT1	276.78	405.12
tblVehicleEF	LDT1	60.22	85.21
tblVehicleEF	LDT1	287.84	421.45

tblVehicleEF	LDT1	60.22	85.21
tblVehicleEF	LDT1	272.69	399.10
tblVehicleEF	LDT1	60.22	85.21
tblVehicleEF	LDT2	341.17	475.84
tblVehicleEF	LDT2	73.59	100.77
tblVehicleEF	LDT2	355.13	495.37
tblVehicleEF	LDT2	73.59	100.77
tblVehicleEF	LDT2	336.01	468.63
tblVehicleEF	LDT2	73.59	100.77
tblVehicleEF	MDV	459.38	608.09
tblVehicleEF	MDV	98.86	128.09
tblVehicleEF	MDV	477.98	632.81
tblVehicleEF	MDV	98.86	128.09
tblVehicleEF	MDV	452.52	598.97
tblVehicleEF	MDV	98.86	128.09
tblVehicleTrips	ST_TR	7.16	0.00
tblVehicleTrips	ST_TR	11.23	13.19
tblVehicleTrips	SU_TR	6.07	0.00
tblVehicleTrips	SU_TR	1.21	1.42
tblVehicleTrips	WD_TR	6.59	0.00
tblVehicleTrips	WD_TR	27.49	32.29
tblWater	IndoorWaterUseRate	63,331,620.27	106,467,120.00
tblWater	OutdoorWaterUseRate	99,057,149.66	61,275,259.00
tblWoodstoves	NumberCatalytic	14.90	0.00
tblWoodstoves	NumberNoncatalytic	14.90	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	26.8000	0.0369	3.2365	1.7000e-004		0.0176	0.0176		0.0176	0.0176	0.0000	5.3406	5.3406	5.6500e-003	0.0000	5.4593
Energy	0.1872	1.6943	1.3742	0.0102		0.1293	0.1293		0.1293	0.1293	0.0000	8,334.6539	8,334.6539	0.3335	0.0956	8,371.2963
Mobile	12.7825	25.7835	133.7519	0.5163	37.0737	0.5317	37.6054	9.9085	0.4911	10.3996	0.0000	46,148.4108	46,148.4108	1.1161	0.0000	46,171.8486
Waste						0.0000	0.0000		0.0000	0.0000	157.7402	0.0000	157.7402	9.3222	0.0000	353.5060
Water						0.0000	0.0000		0.0000	0.0000	39.9369	702.7922	742.7291	4.1342	0.1035	861.6444
Total	**39.7697**	**27.5147**	**138.3626**	**0.5267**	**37.0737**	**0.6786**	**37.7523**	**9.9085**	**0.6380**	**10.5465**	**197.6771**	**55,191.1975**	**55,388.8746**	**14.9116**	**0.1992**	**55,763.7545**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	26.8000	0.0369	3.2365	1.7000e-004		0.0176	0.0176		0.0176	0.0176	0.0000	5.3406	5.3406	5.6500e-003	0.0000	5.4593
Energy	0.1872	1.6943	1.3742	0.0102		0.1293	0.1293		0.1293	0.1293	0.0000	6,914.3180	6,914.3180	0.2682	0.0821	6,945.4019

Mobile	12.7825	25.7835	133.7519	0.5163	37.0737	0.5317	37.6054	9.9085	0.4911	10.3996	0.0000	46,148.4108	46,148.4108	1.1161	0.0000	46,171.8486
Waste						0.0000	0.0000		0.0000	0.0000	157.7402	0.0000	157.7402	9.3222	0.0000	353.5060
Water						0.0000	0.0000		0.0000	0.0000	39.9369	673.6970	713.6339	4.1321	0.1031	832.3716
Total	**39.7697**	**27.5147**	**138.3626**	**0.5267**	**37.0737**	**0.6786**	**37.7523**	**9.9085**	**0.6380**	**10.5465**	**197.6771**	**53,741.7664**	**53,939.4435**	**14.8442**	**0.1852**	**54,308.5873**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.63**	**2.62**	**0.45**	**7.00**	**2.61**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	12.7825	25.7835	133.7519	0.5163	37.0737	0.5317	37.6054	9.9085	0.4911	10.3996	0.0000	46,148.4108	46,148.4108	1.1161	0.0000	46,171.8486
Unmitigated	12.7825	25.7835	133.7519	0.5163	37.0737	0.5317	37.6054	9.9085	0.4911	10.3996	0.0000	46,148.4108	46,148.4108	1.1161	0.0000	46,171.8486

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	0.00	0.00	0.00		
Enclosed Parking Structure	0.00	0.00	0.00		
Junior College (2Yr)	41,692.53	17,030.80	1833.49	98,086,959	98,086,959

Parking Lot	0.00	0.00	0.00		
Total	41,692.53	17,030.80	1,833.49	98,086,959	98,086,959

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Enclosed Parking Structure	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.501871	0.056875	0.196091	0.152579	0.042282	0.006031	0.016253	0.017122	0.001469	0.002194	0.004230	0.000489	0.002515

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Kilowatt Hours of Renewable Electricity Generated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	5,061.6564	5,061.6564	0.2327	0.0481	5,081.4653
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	6,481.9922	6,481.9922	0.2980	0.0617	6,507.3596
NaturalGas Mitigated	0.1872	1.6943	1.3742	0.0102		0.1293	0.1293		0.1293	0.1293	0.0000	1,852.6617	1,852.6617	0.0355	0.0340	1,863.9367
NaturalGas Unmitigated	0.1872	1.6943	1.3742	0.0102		0.1293	0.1293		0.1293	0.1293	0.0000	1,852.6617	1,852.6617	0.0355	0.0340	1,863.9367

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	2.56691e+006	0.0138	0.1183	0.0503	7.5000e-004		9.5600e-003	9.5600e-003		9.5600e-003	9.5600e-003	0.0000	136.9802	136.9802	2.6300e-003	2.5100e-003	137.8139
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Junior College (2Yr)	3.21507e+007	0.1734	1.5760	1.3239	9.4600e-003		0.1198	0.1198		0.1198	0.1198	0.0000	1,715.6814	1,715.6814	0.0329	0.0315	1,726.1228
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.1872**	**1.6943**	**1.3742**	**0.0102**		**0.1293**	**0.1293**		**0.1293**	**0.1293**	**0.0000**	**1,852.6617**	**1,852.6617**	**0.0355**	**0.0340**	**1,863.9367**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Junior College (2Yr)	3.21507e+007	0.1734	1.5760	1.3239	9.4600e-003		0.1198	0.1198		0.1198	0.1198	0.0000	1,715.6814	1,715.6814	0.0329	0.0315	1,726.1228
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Apartments Mid Rise	2.56691e+006	0.0138	0.1183	0.0503	7.5000e-004		9.5600e-003	9.5600e-003		9.5600e-003	9.5600e-003	0.0000	136.9802	136.9802	2.6300e-003	2.5100e-003	137.8139
Total		**0.1872**	**1.6943**	**1.3742**	**0.0102**		**0.1293**	**0.1293**		**0.1293**	**0.1293**	**0.0000**	**1,852.6617**	**1,852.6617**	**0.0355**	**0.0340**	**1,863.9367**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.03669e+006	296.6676	0.0136	2.8200e-003	297.8286
Enclosed Parking Structure	4.6395e+006	1,327.6701	0.0610	0.0126	1,332.8660
Junior College (2Yr)	1.31314e+007	3,757.7755	0.1727	0.0357	3,772.4816
Parking Lot	3.84349e+006	1,099.8790	0.0506	0.0105	1,104.1834
Total		**6,481.9922**	**0.2980**	**0.0617**	**6,507.3596**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	-204134	-58.4164	-0.0027	-0.0006	-58.6450
Enclosed Parking Structure	3.39867e+006	972.5862	0.0447	9.2500e-003	976.3924
Junior College (2Yr)	1.18906e+007	3,402.6915	0.1564	0.0324	3,416.0080
Parking Lot	2.60266e+006	744.7951	0.0342	7.0800e-003	747.7098
Total		**5,061.6564**	**0.2327**	**0.0481**	**5,081.4653**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	26.8000	0.0369	3.2365	1.7000e-004		0.0176	0.0176		0.0176	0.0176	0.0000	5.3406	5.3406	5.6500e-003	0.0000	5.4593
Unmitigated	26.8000	0.0369	3.2365	1.7000e-004		0.0176	0.0176		0.0176	0.0176	0.0000	5.3406	5.3406	5.6500e-003	0.0000	5.4593

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.5875					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	24.1049					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1076	0.0369	3.2365	1.7000e-004		0.0176	0.0176		0.0176	0.0176	0.0000	5.3406	5.3406	5.6500e-003	0.0000	5.4593
Total	**26.8000**	**0.0369**	**3.2365**	**1.7000e-004**		**0.0176**	**0.0176**		**0.0176**	**0.0176**	**0.0000**	**5.3406**	**5.3406**	**5.6500e-003**	**0.0000**	**5.4593**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.5875					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	24.1049					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1076	0.0369	3.2365	1.7000e-004		0.0176	0.0176		0.0176	0.0176	0.0000	5.3406	5.3406	5.6500e-003	0.0000	5.4593
Total	**26.8000**	**0.0369**	**3.2365**	**1.7000e-004**		**0.0176**	**0.0176**		**0.0176**	**0.0176**	**0.0000**	**5.3406**	**5.3406**	**5.6500e-003**	**0.0000**	**5.4593**

7.0 Water Detail

7.1 Mitigation Measures Water

Use Reclaimed Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	713.6339	4.1321	0.1031	832.3716
Unmitigated	742.7291	4.1342	0.1035	861.6444

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e

Land Use	Mgal	MT/yr			
Apartments Mid Rise	19.4159 / 12.2405	117.4232	0.6378	0.0160	135.7756
Enclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
Junior College (2Yr)	106.467 / 61.2753	625.3060	3.4964	0.0875	725.8688
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**742.7291**	**4.1342**	**0.1035**	**861.6444**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	19.4159 / 10.7167	112.5788	0.6374	0.0159	130.9024
Enclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
Junior College (2Yr)	106.467 / 53.6476	601.0551	3.4947	0.0872	701.4692
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**713.6339**	**4.1321**	**0.1031**	**832.3716**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	157.7402	9.3222	0.0000	353.5060
Unmitigated	157.7402	9.3222	0.0000	353.5060

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	137.08	27.8260	1.6445	0.0000	62.3599
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
Junior College (2Yr)	640	129.9142	7.6777	0.0000	291.1461
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**157.7402**	**9.3222**	**0.0000**	**353.5060**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	137.08	27.8260	1.6445	0.0000	62.3599

Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
Junior College (2Yr)	640	129.9142	7.6777	0.0000	291.1461
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**157.7402**	**9.3222**	**0.0000**	**353.5060**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

CO HOTSPOT ANALYSIS

EMFAC 2014 Emission Factors County of Orange 2024

Region	CalYr	VehClass	MdlYr	Speed	Fuel	VMT	CO_RUNEX
Orange	2024	HHDT	Aggregated	5	GAS	63.95251	51.58404
Orange	2024	HHDT	Aggregated	5	DSL	6665.182	19.55561
Orange	2024	LDA	Aggregated	5	GAS	147760.8	0.925395
Orange	2024	LDA	Aggregated	5	DSL	1791.616	3.038197
Orange	2024	LDT1	Aggregated	5	GAS	12239.52	1.730504
Orange	2024	LDT1	Aggregated	5	DSL	7.521154	2.896928
Orange	2024	LDT2	Aggregated	5	GAS	59648.25	1.128365
Orange	2024	LDT2	Aggregated	5	DSL	125.9565	2.419218
Orange	2024	LHDT1	Aggregated	5	GAS	1942.387	1.885948
Orange	2024	LHDT1	Aggregated	5	DSL	1553.845	3.175802
Orange	2024	LHDT2	Aggregated	5	GAS	577.6493	0.563189
Orange	2024	LHDT2	Aggregated	5	DSL	736.6009	2.994992
Orange	2024	MCY	Aggregated	5	GAS	1414.638	44.60201
Orange	2024	MDV	Aggregated	5	GAS	30252.32	1.743089
Orange	2024	MDV	Aggregated	5	DSL	702.8624	3.366115
Orange	2024	MH	Aggregated	5	GAS	189.4189	3.931301
Orange	2024	MH	Aggregated	5	DSL	45.37947	2.280226
Orange	2024	MHDT	Aggregated	5	GAS	639.4457	1.95249
Orange	2024	MHDT	Aggregated	5	DSL	5169.361	1.271469
Orange	2024	OBUS	Aggregated	5	GAS	265.1758	0.95399
Orange	2024	OBUS	Aggregated	5	DSL	178.4958	2.018957
Orange	2024	SBUS	Aggregated	5	GAS	170.8921	3.132314
Orange	2024	SBUS	Aggregated	5	DSL	324.5442	1.346628
Orange	2024	UBUS	Aggregated	5	GAS	811.8853	7.683666
Orange	2024	UBUS	Aggregated	5	DSL	958.2244	40.93816
						Composite	**2.004397**

CL4 Assumptions

Harbor Boulevard & Victoria Street

2024 Existing Plus Project

Job Parameters

File Name	HB & VS (PM)
Job	Orange Coast College
Run type	Worst-case wind angle
Aerodynamic roughness coefficient	Suburban
Link/Receptor Geometry	feet
Altitude above sea level (ft)	86
Number of links	16
Number of receptors	4
Averaging interval	1 hour

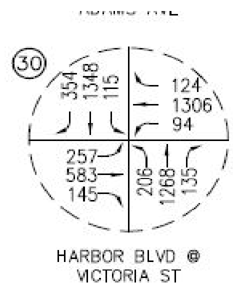
Link geometry

Link name	link type	endpoint 1 coordinate x	endpoint 1 coordinate y	endpoint 2 coordinate x	endpoint 2 coordinate y	link height	mixing zone width
WBRA	at-grade	500	48	24	48	0	33
WBTA	at-grade	500	24	0	24	0	33
WBLA	at-grade	500	0	-24	0	0	33
WBD	at-grade	500	-24	0	-24	0	33
EBLA	at-grade	24	0	-500	0	0	33
EBTA	at-grade	0	-24	-500	-24	0	33
EBRA	at-grade	-24	-50	-500	-50	0	33
EBD	at-grade	0	24	-500	24	0	33
NBLA	at-grade	0	0	0	-500	0	33
NBTA	at-grade	24	0	24	-500	0	33
NBRA	at-grade	48	-24	48	-500	0	33
NBD	at-grade	-24	0	-24	-500	0	33
SBLA	at-grade	0	500	0	0	0	33
SBTA	at-grade	-24	500	-24	0	0	33
SBRA	at-grade	-50	24	-50	500	0	33
SBD	at-grade	24	500	24	0	0	33

Link activity

Link/run	Traffic volume	Emission factor
EBLA	257	2.00

EBTA	583	2.00
EBRA	145	2.00
EBD	1866	2.00
WBLA	94	2.00
WBTA	1306	2.00
WBRA	124	2.00
WBD	833	2.00
NBLA	206	2.00
NBTA	1268	2.00
NBRA	135	2.00
NBD	1587	2.00
SBLA	115	2.00
SBTA	1348	2.00
SBRA	354	2.00
SBD	1649	2.00



Run conditions

Run:	Hour 1
Wind speed (m/s)	1
Wind direction (degrees)	0
Wind direction standard deviation (degrees)	10
Atmospheric stability class (1-7)	7
Mixing height (m)	1000 meters
Ambient temperature (degrees Celsius)	4.4
Ambient pollutant concentration	2.9

Receptor positions

Receptor list - name	x	y	z
Receptor S1	-60	60	5.9
Receptor S2	60	60	5.9
Receptor S3	-60	-60	5.9
Receptor S4	60	-60	5.9

EMFAC Assumptions

Veh type, Veh tech	all, all
Speed	10 mph
Year	2024

IV. Model Results Worst Case Wind Angle

PRED

	RECEPTOR		BRG (DEG)	CONC (PPM)
1	Recpt	**S1**	162	3.3
2	Recpt	**S2**	254	3.3
3	Recpt	**S3**	16	3.3
4	Recpt	**S4**	342	3.3

	RECEPTOR		1-HOUR	8-HOUR Persistence Factor		
				0.8	0.7	0.6
1	Recpt	S1	3.3	2.64	2.31	1.98
2	Recpt	S2	3.3	2.64	2.31	1.98
3	Recpt	S3	3.3	2.64	2.31	1.98
4	Recpt	S4	3.3	2.64	2.31	1.98

Generalized persistence factors (CO Protocol, Table B.15)
0.6: Rural and suburban
0.7: Urban locations
0.8: Urban sites with a recognized tendency for persistent stagnant meteorological conditions and/or persistent traffic congestion

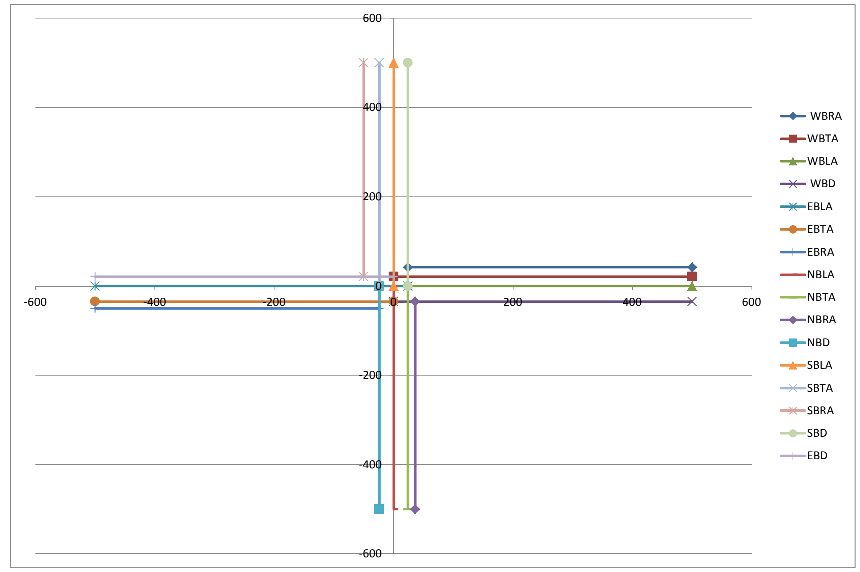
CL4 Assumptions

Harbor Boulevard & Adams Avenue

2024 Existing Plus Project

Job Parameters

File Name	HB & AA (PM)
Job	Orange Coast College
Run type	Worst-case wind angle
Aerodynamic roughness coefficient	Suburban
Link/Receptor Geometry	feet
Altitude above sea level (ft)	64
Number of links	16
Number of receptors	4
Averaging interval	1 hour

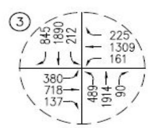


Link geometry

Link name	link type	endpoint 1 coordinate x	endpoint 1 coordinate y	endpoint 2 coordinate x	endpoint 2 coordinate y	link height	mixing zone width
WBRA	at-grade	500	42	24	42	0	33
WBTA	at-grade	500	21	0	21	0	33
WBLA	at-grade	500	0	-24	0	0	33
WBD	at-grade	500	-35	0	-35	0	33
EBLA	at-grade	24	0	-500	0	0	33
EBTA	at-grade	0	-35	-500	-35	0	33
EBRA	at-grade	-24	-50	-500	-50	0	33
EBD	at-grade	0	21	-500	21	0	33
NBLA	at-grade	0	0	0	-500	0	33
NBTA	at-grade	24	0	24	-500	0	33
NBRA	at-grade	36	-35	36	-500	0	33
NBD	at-grade	-24	0	-24	-500	0	33
SBLA	at-grade	0	500	0	0	0	33
SBTA	at-grade	-24	500	-24	0	0	33
SBRA	at-grade	-50	21	-50	500	0	33
SBD	at-grade	24	500	24	0	0	33

Link activity

Link/run	Traffic volume	Emission factor
EBLA	380	2.00
EBTA	718	2.00
EBRA	137	2.00
EBD	2643	2.00
WBLA	161	2.00
WBTA	1309	2.00
WBRA	225	2.00
WBD	1020	2.00
NBLA	489	2.00
NBTA	1914	2.00
NBRA	90	2.00
NBD	2188	2.00
SBLA	212	2.00
SBTA	1890	2.00
SBRA	845	2.00
SBD	2519	2.00



HARBOR BLVD @
ADAMS AVE

Run conditions

Run:	Hour 1
Wind speed (m/s)	1
Wind direction (degrees)	0
Wind direction standard deviation (degrees)	10
Atmospheric stability class (1-7)	7
Mixing height (m)	1000 meters
Ambient temperature (degrees Celsius)	4.4
Ambient pollutant concentration	2.9

Receptor positions

Receptor list - name	x	y	z

Receptor S1	-75	65	5.9
Receptor S2	65	65	5.9
Receptor S3	-75	-65	5.9
Receptor S4	65	-65	5.9

EMFAC Assumptions

Veh type, Veh tech	all, all
Speed	10 mph
Year	2024

IV. Model Results Worst Case Wind Angle

	RECEPTOR	BRG (DEG)	PRED CONC (PPM)
1 Recpt	**S1**	135	3.4
2 Recpt	**S2**	253	3.4
3 Recpt	**S3**	16	3.3
4 Recpt	**S4**	315	3.4

	RECEPTOR	1-HOUR	8-HOUR Persistence Factor		
			0.8	0.7	0.6
1 Recpt	S1	3.4	2.72	2.38	2.04
2 Recpt	S2	3.4	2.72	2.38	2.04
3 Recpt	S3	3.3	2.64	2.31	1.98
4 Recpt	S4	3.4	2.72	2.38	2.04

Generalized persistence factors (CO Protocol, Table B.15)
0.6: Rural and suburban
0.7: Urban locations
0.8: Urban sites with a recognized tendency for persistent stagnant meteorological conditions and/or persistent traffic congestion

CL4 Assumptions

Newport Boulevard & Del Mar Avenue

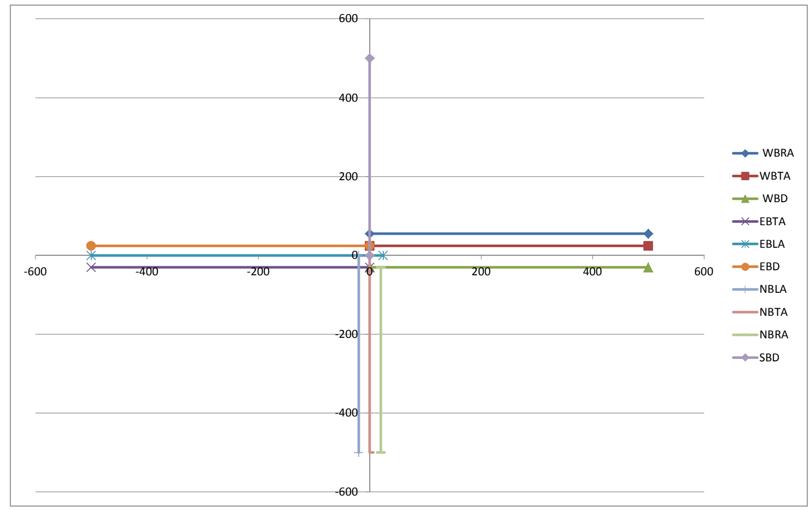
2024 Existing Plus Project

Job Parameters

File Name	NB & DMA (AM)
Job	Orange Coast College
Run type	Worst-case wind angle
Aerodynamic roughness coefficient	Suburban
Link/Receptor Geometry	feet
Altitude above sea level (ft)	71
Number of links	10
Number of receptors	4
Averaging interval	1 hour

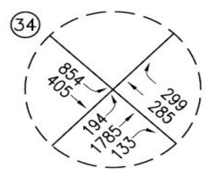
Link geometry

Link name	link type	endpoint 1 coordinate x	endpoint 1 coordinate y	endpoint 2 coordinate x	endpoint 2 coordinate y	link height	mixing zone width
WBRA	at-grade	500	55	0	55	0	33
WBTA	at-grade	500	24	0	24	0	33
WBD	at-grade	500	-30	0	-30	0	33
EBTA	bridge	0	-30	-500	-30	0	33
EBLA	bridge	24	0	-500	0	0	33
EBD	bridge	0	24	-500	24	0	33
NBLA	at-grade	-20	0	-20	-500	0	33
NBTA	at-grade	0	0	0	-500	0	33
NBRA	at-grade	20	-30	20	-500	0	33
SBD	at-grade	0	500	0	0	0	33



Link activity

Link/run	Traffic volume	Emission factor
EBLA	854	2.00
EBTA	405	2.00
EBD	479	2.00
WBTA	285	2.00
WBRA	299	2.00
WBD	538	2.00
NBLA	194	2.00
NBTA	1785	2.00
NBRA	133	2.00
SBD	2938	2.00



NEWPORT BLVD/
SR-55 NB RAMPS @
FAIR DR/DEL MAR AVE

Run conditions

Run:	Hour 1
Wind speed (m/s)	1
Wind direction (degrees)	0
Wind direction standard deviation (degrees)	10
Atmospheric stability class (1-7)	7
Mixing height (m)	1000 meters
Ambient temperature (degrees Celsius)	4.4
Ambient pollutant concentration	2.9

Receptor positions

Receptor list - name	x	y	z
Receptor S1	-60	60	5.9
Receptor S2	65	60	5.9
Receptor S3	-60	-55	5.9
Receptor S4	60	-60	5.9

EMFAC Assumptions

Veh type, Veh tech	all, all
Speed	10 mph
Year	2024

IV. Model Results Worst Case Wind Angle

	RECEPTOR	BRG (DEG)	PRED CONC (PPM)
1 Recpt	**S1**	163	3.1
2 Recpt	**S2**	254	3.2
3 Recpt	**S3**	23	3.2
4 Recpt	**S4**	287	3.1

	RECEPTOR	1-HOUR	8-HOUR Persistence Factor		
			0.8	0.7	0.6
1 Recpt	S1	3.1	2.48	2.17	1.86
2 Recpt	S2	3.2	2.56	2.24	1.92
3 Recpt	S3	3.2	2.56	2.24	1.92
4 Recpt	S4	3.1	2.48	2.17	1.86

Generalized persistence factors (CO Protocol, Table B.15)
0.6: Rural and suburban
0.7: Urban locations
0.8: Urban sites with a recognized tendency for persistent stagnant meteorological conditions and/or persistent traffic congestion

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: HB & VS
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= 1.0 M/S	Z0= 100. CM	ALT= 26.2 (M)
BRG= WORST CASE	VD= 0.0 CM/S	
CLAS= 7 (G)	VS= 0.0 CM/S	
MIXH= 1000. M	AMB= 2.9 PPM	
SIGTH= 10. DEGREES	TEMP= 4.4 DEGREE (C)	

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (FT) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)
A. WBRA	500	48	24	48	AG	124	2.0	0.0	33.0
B. WBTA	500	24	0	24	AG	1306	2.0	0.0	33.0
C. WBLA	500	0	-24	0	AG	94	2.0	0.0	33.0
D. WBD	500	-24	0	-24	AG	833	2.0	0.0	33.0
E. EBLA	24	0	-500	0	AG	257	2.0	0.0	33.0
F. EBTA	0	-24	-500	-24	AG	583	2.0	0.0	33.0
G. EBRA	-24	-50	-500	-50	AG	145	2.0	0.0	33.0
H. EBD	0	24	-500	24	AG	1866	2.0	0.0	33.0
I. NBLA	0	0	0	-500	AG	206	2.0	0.0	33.0
J. NBTA	24	0	24	-500	AG	1268	2.0	0.0	33.0
K. NBRA	48	-24	48	-500	AG	135	2.0	0.0	33.0
L. NBD	-24	0	-24	-500	AG	1587	2.0	0.0	33.0
M. SBLA	0	500	0	0	AG	115	2.0	0.0	33.0
N. SBTA	-24	500	-24	0	AG	1348	2.0	0.0	33.0
O. SBRA	-50	24	-50	500	AG	354	2.0	0.0	33.0
P. SBD	24	500	24	0	AG	1649	2.0	0.0	33.0

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. S1	-60	60	5.9
2. S2	60	60	5.9
3. S3	-60	-60	5.9
4. S4	60	-60	5.9

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: HB & VS
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. S1	162.	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
2. S2	254.	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
3. S3	16.	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
4. S4	342.	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P
1. S1	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0
2. S2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
3. S3	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1
4. S4	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: HB & AA
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= 1.0 M/S	Z0= 100. CM	ALT= 19.5 (M)
BRG= WORST CASE	VD= 0.0 CM/S	
CLAS= 7 (G)	VS= 0.0 CM/S	
MIXH= 1000. M	AMB= 2.9 PPM	
SIGTH= 10. DEGREES	TEMP= 4.4 DEGREE (C)	

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (FT) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)
A. WBRA	500	42	24	42	AG	225	2.0	0.0	33.0
B. WBTA	500	21	0	21	AG	1309	2.0	0.0	33.0
C. WBLA	500	0	-24	0	AG	161	2.0	0.0	33.0
D. WBD	500	-35	0	-35	AG	1020	2.0	0.0	33.0
E. EBLA	24	0	-500	0	AG	380	2.0	0.0	33.0
F. EBTA	0	-35	-500	-35	AG	718	2.0	0.0	33.0
G. EBRA	-24	-50	-500	-50	AG	137	2.0	0.0	33.0
H. EBD	0	21	-500	21	AG	2643	2.0	0.0	33.0
I. NBLA	0	0	0	-500	AG	489	2.0	0.0	33.0
J. NBTA	24	0	24	-500	AG	1914	2.0	0.0	33.0
K. NBRA	36	-35	36	-500	AG	90	2.0	0.0	33.0
L. NBD	-24	0	-24	-500	AG	2188	2.0	0.0	33.0
M. SBLA	0	500	0	0	AG	212	2.0	0.0	33.0
N. SBTA	-24	500	-24	0	AG	1890	2.0	0.0	33.0
O. SBRA	-50	21	-50	500	AG	845	2.0	0.0	33.0
P. SBD	24	500	24	0	AG	2276	2.0	0.0	33.0

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. S1	-75	65	5.9
2. S2	65	65	5.9
3. S3	-75	-65	5.9
4. S4	65	-65	5.9

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 2

JOB: HB & AA
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. S1	135.	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
2. S2	253.	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
3. S3	16.	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
4. S4	315.	3.4	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: NB & DMA
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= 1.0 M/S	Z0= 100. CM	ALT= 21.6 (M)
BRG= WORST CASE	VD= 0.0 CM/S	
CLAS= 7 (G)	VS= 0.0 CM/S	
MIXH= 1000. M	AMB= 2.9 PPM	
SIGTH= 10. DEGREES	TEMP= 4.4 DEGREE (C)	

II. LINK VARIABLES

LINK DESCRIPTION	X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)
A. WBRA	500	55	0	55	AG	299	2.0	0.0	33.0
B. WBTA	500	24	0	24	AG	285	2.0	0.0	33.0
C. WBD	500	-30	0	-30	AG	538	2.0	0.0	33.0
D. EBTA	0	-30	-500	-30	BG	405	2.0	0.0	33.0
E. EBLA	24	0	-500	0	BG	854	2.0	0.0	33.0
F. EBD	0	24	-500	24	BG	479	2.0	0.0	33.0
G. NBLA	-20	0	-20	-500	AG	194	2.0	0.0	33.0
H. NBTA	0	0	0	-500	AG	1785	2.0	0.0	33.0
I. NBRA	20	-30	20	-500	AG	133	2.0	0.0	33.0
J. SBD	0	500	0	0	AG	2938	2.0	0.0	33.0

(LINK COORDINATES (FT): X1, Y1, X2, Y2)

III. RECEPTOR LOCATIONS

RECEPTOR	X	Y	Z
1. Receptor	-60	60	5.9
2. Receptor	65	60	5.9
3. Receptor	-60	-55	5.9
4. Receptor	60	-60	5.9

(COORDINATES (FT))

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: NB & DMA
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. Receptor	163.	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
2. Receptor	254.	3.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
3. Receptor	23.	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4. Receptor	287.	3.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1

RECEPTOR	CONC/LINK (PPM) I	J
1. Receptor	0.0	0.0
2. Receptor	0.0	0.1
3. Receptor	0.0	0.2
4. Receptor	0.0	0.0

APPENDIX C

Biological Resources Letter Report

DUDEK

MAIN OFFICE
605 THIRD STREET
ENCINITAS, CALIFORNIA 92024
T 760.942.5147 T 800.450.1818 F 760.632.0164

Updated July 23, 2015 7910

Mr. Jerry Marchbank
Senior Director, Facilities, Planning and Construction
Coast Community College District
1370 Adams Avenue
Costa Mesa, California 92626

Subject: ***Biological Resources Letter Report for Impacts Associated with the Orange Coast College Project located in Costa Mesa, Orange County, California***

Dear Mr. Marchbank:

This letter report provides an analysis of potential biological resource impacts associated with the proposed modifications to the Orange Coast College located in Costa Mesa, central Orange County, California. The Coast Community College District (District) is proposing to update its Facilities Master Plan for all of its Orange County campuses, including the Orange Coast College (OCC). As part of this update, the District is planning a comprehensive improvement of building program to meet enrollment needs; and plans to make upgrades and repairs of existing buildings, as well as to construct new facilities to improve the safety and education experience of those attending the colleges in accordance with Measure M.

This letter report provides an introduction, the project location, the project description, the survey methods, existing biological resources, special-status biological resources, and results/conclusion based on an evaluation of biological resources present within the study area conducted on August 6, 2013. This letter report was updated on July 23, 2015 to account for changes to the project associated with the full recirculation of the original June 2014 Draft Program Environmental Impact Report (PEIR) released by Coast Community College District.. Changes to the proposed project since the original Draft EIR include the following:

- Preservation and reuse of the Neutra-designed Business Education row building and Haley Business Center in the campus core;
- Removal of the OC Fair & Event Center joint use parking structure and location of a new parking structure on campus in the Adams Avenue parking lot;
- A new dance building in the campus core;
- A modified location for the Adaptive PE, Gym, and Pool
- A change in location for the Chemistry and Multidisciplinary buildings
- Clarification of the number of student housing beds (818 beds instead of 1,900 beds);

- Revision of the traffic impact analysis to incorporate project modifications and to respond to City of Costa Mesa comments
- Revision to the OCC Village to remove a hotel use and clarify that this component would be subject to further CEQA review when a specific development plan is known
- Further development of project alternatives to include more preservation alternatives, including a Significant Reuse, Majority Reuse, Maximum Reuse, and Full Preservation Alternative.

1.0 INTRODUCTION

The proposed modifications to the Orange Coast College (OCC) Project (Project) includes upgrades and repairs to existing buildings; construction of new facilities; improvements to various parking, vehicular, and pedestrian circulations; and improvements proposed to increase entrepreneurial activities to attract visitors to the campus through development of new facilities and improvements to existing facilities. The Project activities are planned to occur within the approximately 160-acre OCC site, within the City of Costa Mesa, California. The site is less than one mile south from Interstate 405 (I-405); and approximately one mile southwest and northwest from State Routes 73 and 55 (respectively).

A biological survey of the project site was conducted by a Dudek biologist in late summer 2013 to inventory the existing resources present on site and the report was revised in July 2015 based on project modifications. The purpose of this biological letter report is to describe the biological character for the project site in terms of vegetation, flora, potentially jurisdictional waters and wetlands, wildlife, and wildlife habitats; provide an analysis of impacts to special-status biological resources based on the proposed project scenarios; and analyze the biological significance of the site with respect to regional biological resource planning. The biological survey discussed in this letter report concentrated on identifying biological resources that may be subject to regulation under the Federal Endangered Species Act (FESA) of 1973 (16 U.S.C. 1531 et seq.), the Migratory Bird Treaty Act (16 U.S.C. 703 et seq.), and the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d) as administered by the U.S. Fish and Wildlife Service (USFWS); Section 404 of the Clean Water Act as administered by the U.S. Army Corps of Engineers (ACOE); Section 401 of the Clean Water Act and the Porter Cologne Act as administered by Regional Water Quality Control Board (RWQCB); various Sections of the California Fish and Game Code, including, but not limited to Sections 1600-1603, 3511, 3503, 3503.5, 3505, 3513, 3800, 3801.6, and 2050 et seq., as administered by the California Department of Fish and Wildlife (CDFW); the

California Environmental Quality Act (CEQA) (14 CCR 15000 et seq.); as well as other potential special-status biological resources.

2.0 PROJECT LOCATION

The Project is located in the City of Costa Mesa in Central Orange County, California. Surrounding cities include Santa Ana to the north, Irvine to the east, Newport Beach to the south, and Fountain Valley and Huntington Beach to the west (Figure 1). More specifically, OCC is bound by Adams Avenue to the north, Fairview Road to the east, Merrimac Way to the south, and Harbor Boulevard to the west (Figure 2). High-density residential developments are north of the campus, across Adams Avenue; and low-density residential developments are located south of Merrimac Way. Costa Mesa High School and the Orange County Fairgrounds are located to the east, across Fairview Road; and commercial and residential developments make up the west side of the campus along Harbor Boulevard (Figure 2). The approximate centroid of the project is 33°40'10.39” north latitude, 117°54'40.43” west longitude on the U.S. Geological Service (USGS) 7.5 minute series topographic Newport Beach map. The campus is within minutes of Interstate 405 (I-405) and State Routes 55 and 73.

3.0 PROJECT DESCRIPTION

Based on recommendations provided by the Vision 2020 Facilities Master Plan and an analysis of the evolving student body, the Project consists of renovations to existing buildings, including the Skill Center and Watson Hall. The Project also consists of construction of new facilities including a Language Arts and Social Sciences Building; Chemistry Building; Dance Building; Multidisciplinary Building; Student Union/Bookstore/Culinary Arts/Student Success Center; Adaptive Physical Education, Gymnasium, Pool Facilities, and Division office; student housing (818 beds); and the addition of a parking structure in the Adams Avenue lot. The Project would involve the implementation of various parking, vehicular, and pedestrian circulation improvements (Figure 3). Additionally, the District is proposing to increase entrepreneurial activities and attract visitors to the campus through the development of new facilities and the improvement of programs in place, including the expansion and reconfiguration of the existing recycling center to accommodate increasing public utilization and alleviate traffic congestion; construction of the OCC Village, a mixed-use development including retail, conference, education, and office space on the corner of Merrimac Way and Fairview Road; and construction of a new Planetarium. The Project is scheduled to occur in four separate phases and would involve the demolition of existing structures.. The proposed project will occur within the existing OCC campus boundary.

Topography and Land Uses

Topography on site is generally flat with elevations ranging from 50 feet above mean sea level (AMSL) along the football field adjacent to the north central end of the OCC campus to 70 feet AMSL along the southern portion of the study area just north of Merrimac Way.

The study area is not within any adopted habitat conservation plan, natural community conservation plan or other approved local or regional habitat conservation plan areas. The Project is subject to local, state, and federal laws pertaining to biological resources, including the federal Migratory Bird Treaty Act and State California Fish and Game Codes.

Soils

According to the U.S. Department of Agriculture and Natural Resources Conservation Services (2013), three soil types from two soil series are mapped within the project study area: Cropley clay 2–9% slopes, Myford sandy loam, thick surface, 0–2% slopes, and Myford sandy loam, 2–9% slopes. The majority of the project contains Cropley clay 2–9% slope soils. Myford sandy loam, thick surface, 0–2% slopes makes up the northernmost portion of the project. Only a small occurrence of Myford sandy loam, 2–9% slopes exists along the northwestern portion of the study area (Figure 4).

The Cropley Clay Series is formed in fine textured alluvium from mixed sedimentary rock sources (shale, sandstone, and mudstone) and contains very deep, well drained soils (OSD 2013). These soils are on alluvial fans, floodplains, and in small basins and valley fill, with smooth slopes ranging from 0–9%. These soils contain medium to very high runoff and slow permeability. Cropley clay 2–9% slopes soil profile consists of an A horizon comprised of heavy clay loam, silty clay or clay texture. The A horizon structure ranges from granular to subangular blocky in the upper few inches; and the reaction is neutral to moderately alkaline. The C horizon has a clay, silty clay loam, or clay loam texture with typically an angular blocky structure. When dry the soil cracks (USDA 1978). This soil is typically found where there are irrigated crops and pastures, urban development, or within uncultivated or undeveloped areas associated with annual grasses and forbs with some scattered live oak (OSD 2013).

The Myford Series are deep, moderately well drained soils formed on marine terraces. This soil series is found in Orange County and are nearly level to moderately steep (OSD 2013). Typical soil profiles are comprised of A horizons that range from light brownish gray to pale brown or grayish brown and sandy loam or loam texture. The A horizon structure typically ranges from weak subangular blocky to weak platy (USDA 1978). The texture of the B2t horizon is sandy clay or heavy clay loam ranging from brown or light brown to yellowish brown (USDA 1978).

Myford sandy loam, thick surface, 0–2% slope soils generally occur on broad level terraces. If this soil is bare, runoff is slow, with minimal erosion. Myford sandy loam, 2–9% slopes occurs on broad terraces with gentle to moderate sloping. If the soil is bare, runoff is medium and the erosion hazard is moderate (USDA 1978). Vegetation associated with this soils series is annual grasses and forbs and scattering low growing brush, though Myford soils are used for citrus, pasture, range, barley, and urban development (OSD 2013).

4.0 METHODS

Data regarding biological and jurisdictional resources present within the study area were obtained through a review of pertinent literature and field reconnaissance; both are described in detail below.

Literature Review

The following data sources were reviewed to assist with the biological and jurisdiction efforts:

- Natural Resource Conservation Service (NRCS) Websoil Survey (U.S. Department of Agriculture) (USDA 2013)
- California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) (CDFW 2013)
- U.S. Fish and Wildlife Database (USFWS 2013)
- California Native Plant Society Inventory of Rare and Endangered Plants (CNPS 2013)

Field Reconnaissance

The survey was performed by Dudek biologist, Johanna Page, on August 6, 2013 (Table 1). The biological survey included documenting vegetation communities and land covers present within the project study area, an evaluation of potential jurisdictional wetlands or waters, and an evaluation of the potential for special-status species to occur in the study area. The project study area includes the existing 160-acre college campus (south of Adams Avenue and north of Merrimac Way). The project study area is defined as an approximate 160-acre area, and a surrounding 150-foot buffer around the project area.

Table 1
Survey Conditions

Date	Time	Personnel	Survey Conditions
8/6/2013	0830-1045	Johanna Page	70-10% cloud cover; 1-3 miles per hour wind; 68˚-77˚Fahrenheit

Resource Mapping

The survey was conducted on foot to visually cover 100% of the project study area and an aerial photograph map with an overlay of the project boundary was utilized to record the vegetation communities and special-status biological resources directly in the field. Observable biological resources including perennial plants and conspicuous wildlife (i.e., birds) commonly accepted as regionally sensitive by CNPSCDFW, or USFWS)were recorded on the field map, when identified. Additionally, an assessment and determination of potential for locally recognized special-status species to occur on site was conducted.

The *Habitat Classification System Natural Resources Geographic Information System* (Gray and Bramlet 1992) was used to describe vegetation community and land cover within the study area. General information regarding vegetation communities and plant species was obtained from Gray and Bramlet (1992), Sawyer et al. (2009), Jones and Stokes (1993), and Hickman (1993).

Flora and Fauna

All plant species encountered during the field survey were identified and recorded directly into a field notebook. Those species that could not be identified immediately were brought into the laboratory for further investigation. A compiled list of plant species observed in the study area is presented in Appendix A.

Wildlife species detected during the field survey by sight, calls, tracks, scat, or other signs were recorded directly onto a field notebook. Binoculars (8.5x42 magnifications) were used to aid in the identification of wildlife. In addition to species actually detected during the surveys, expected wildlife use of the site was determined by known habitat preferences of local species and knowledge of their relative distributions in the area. A list of wildlife species observed in the study area is presented in Appendix A.

Latin and common names of animals follow Crother (2008) for reptiles and amphibians, American Ornithologists' Union (AOU 2012) for birds, Wilson and Reeder (2005) for mammals, and NABA (2001) for butterflies.

Latin and common names for plant species with a California Rare Plant Rank (CRPR) (formerly CNPS list) follow the California Native Plant Society On-Line Inventory of Rare, Threatened, and Endangered Plants of California (CNPS 2013). For plant species without a CRPR, Latin names follow the Jepson Interchange List of Currently Accepted Names of Native and Naturalized Plants of California (Jepson Flora Project 2013).

Special-Status Biological Resources

Special-status biological resources are those defined as follows: (1) species that have been given special recognition by federal, state, or local conservation agencies and organizations due to limited, declining, or threatened population sizes; (2) species and habitat types recognized by local and regional resource agencies as sensitive; (3) habitat areas or vegetation communities that are unique, are of relatively limited distribution, or are of particular value to wildlife; (4) wildlife corridors and habitat linkages; and (5) biological resources which may or may not be considered sensitive, but are regulated under local, state, and/or federal laws.

Searches through the California Native Plant Society (CNPS 2013) online inventory database and California Natural Diversity Database (CNDDB) online inventory were conducted to assist in the determination of special-status plant and animal species potentially present on site (CDFW 2013). Specifically, both a one-quad search and a nine-quad search were conducted. Special-status species with documented occurrence within the project area based on a nine-quad search were individually evaluated in relation to the project site to assist in determining the level of potential to occur on site.

5.0 RESULTS

The quantification of biological resources described herein pertain to the project boundary (i.e., the existing 160-acre college campus).

Land Cover Types

Five land cover types were identified within the project boundary, including: developed land, disturbed habitat, eucalyptus woodland, ornamental plantings, and ruderal habitat. The land cover types observed on site are described in detail below, their acreages are presented in Table 2, and their spatial distributions are shown in Figure 5.

Table 2
Vegetation Communities and Land Cover Types On site

Vegetation Community/Land Cover Type	Acreage
Developed	113.99
Disturbed	5.72
Eucalyptus Woodland	0.70
Ornamental Plantings	35.71
Ruderal	1.78
Total	**157.90**

***Eucalyptus Woodland* (8.0)** is not recognized as a native plant community by Gray and Bramlet (1992); however, eucalyptus woodland is a distinct "naturalized" vegetation type that is fairly widespread in southern California and is considered a woodland habitat. It typically consists of monotypic stands of introduced Australian eucalyptus trees (*Eucalyptus* spp.). The understory is either depauperate or absent owing to shade and the possible allelopathic (toxic) properties of the eucalyptus leaf litter. Although eucalyptus woodlands are of limited value to most native plants and animals, they frequently provide nesting and perching sites for several raptor species.

Australian eucalyptus trees are found in monotypic stands along the southeastern portion of the proposed project site (along Merrimac Way), north of the recycling center at the northern portion of the project area (Adams Road), and along the southeast corner of the Adams parking lot toward the center of the OCC campus. Where Australian eucalyptus trees are associated with other tree species they have been categorized within the ornamental planting land cover type (see ***Ornamental Plantings*** below). There are approximately 0.70 acres of eucalyptus woodland areas located in the three distinct locations throughout the project area.

***Ornamental Plantings* (15.5)** consists of introduced planting of exotic species as landscaping, including greenbelts, parks, and horticultural plantings throughout the County (Jones and Stokes 1993). Ornamental plantings within the project area are diverse and dominated by pines (*Pinus* spp.), eucalyptus spp., Peruvian peppertree (*Schinus molle*), California fan palm (*Washingtonia filifera*), maidenhair tree (*ginkgo biloba*), carrotwood (*Cupaniopsis* anacardioides), Italian cypress (*Cupressus sempervirens*), blue jacaranda (*Jacaranda mimosifollia*), southern magnolia (*Magnolia grandiflora*), weeping bottlebrush (*Callistemon citrinus*), rosemary (*Rosmarinus officinalis*), bird-of-paradise (*Strelitzia reginae*), mint (*Menthe* spp.), and regularly maintained lawns and sports fields (e.g., soccer field, baseball field, and football field). Ornamental plantings make up approximately 35.71 acres of the project area and are located throughout the OCC campus area.

***Ruderal Habitat* (4.6)** is not recognized as a native plant community by Gray and Bramlet (1992); and is dominated by weedy introduced species typically associated with disturbed ground. Ruderal habitat is similar to annual grassland in that non-native species predominate over natives and native habitat recovery is unlikely. Ruderal habitat differs from annual grassland in that non-native forbs become more dominant in ruderal habitat, as opposed to grasses. Dominant species associated with ruderal habitat include bromes (*Bromus* spp.), oats (*Avena* spp.), *Centaurea* spp., barley (*Hordeum* spp.), cheeseweed mallow (*Malva parviflora*), *Salsola,* mustard (*Brassica* spp.), California croton (*Croton californicus*), filaree (*Erodium* spp.), goldenaster (*Heterotheca* spp.), and Australian saltbush (*Atriplex semibaccata*). Ruderal habitat was observed near the center of the project site, where the new Language Arts/Social Sciences Building is proposed to be constructed. Ruderal habitat on site totals 1.78 acres and was dominated by filaree, cheeseweed mallow, common Mediterranean grass (*Schismus barbatus*), Canadian horseweed (*Erigeron canadensis*), and Coulter's horseweed (*Laennecia coulteri*). Most of the vegetation had already set seed and was therefore, difficult to determine to species.

***Disturbed Habitat* (16.1)** refers to areas that have been permanently altered by previous human activity, eliminating future biological value of the land for most species. The native or naturalized vegetation is no longer present and the land lacks habitat value for sensitive wildlife, including potential raptor foraging. Typically, vegetation, if present, is nearly exclusively composed of non-native plant species such as ornamentals or ruderal exotic species (i.e., weeds). Disturbed land found within the study area consists primarily of graded storage areas and laydown yards. The project area is comprised of approximately 5.72 acres of disturbed land, including: a staging/laydown yard at the northwestern corner of the campus, south of Adams Avenue; an area used for storing ornamental plants towards the north central portion of campus, south of Adams Avenue; and a graded area within the area proposed for the new Language Arts/Social Sciences Buildings.

***Developed* (15.0)** land refers to areas that have been constructed upon or disturbed so severely that native vegetation is no longer supported. Developed land includes areas with permanent or semi-permanent structures, buildings, pavements, roads, and highways (Gray and Bramlet 1992). Typically, this land cover type is unvegetated or supports a variety or ornamental plants. Developed areas within the study area include buildings, facilities, pedestrian walkways, and parking lots. Development is the dominant land cover type within the project area, totaling 113.99 acres.

Jurisdictional Waters

Hydrology and vegetation were examined throughout the project study area during the site visit to identify potential wetland sites and/or non-wetland waters (i.e., drainages, channels, etc.), though an official Jurisdictional Delineation was not performed. No jurisdictional wetlands or non-wetland waters occur within the study area.

Flora and Fauna

A total of 19 species of vascular plants, five native and 14 non-native, were recorded during the reconnaissance survey (Appendix A). The diversity of native plant species is relatively low due to the ornamental plantings within the existing development and urban setting of the study area.

A total of nine wildlife species were recorded in the project area during the survey (Appendix A). Most wildlife species observed are common, disturbance-adapted species typically found in urban and suburban settings, such as house finch (*Carpodacus mexicanus*), American crow (*Corvus brachyrhynchos*), and mourning dove (*Zenaida macroura*). Additionally, there is suitable habitat for small wildlife species (e.g., invertebrates, reptiles, and small mammals) within the study area. Overall, the diversity of wildlife species in the study area is low due to the existing development and urban setting of the study area.

Special-Status Flora and Fauna

No federally or state listed species or other special-status species were observed within the survey area. A search of CNPS and CNDDB records was utilized to develop matrices of special-status plant and wildlife species that may have potential to occur on site due to the presence of suitable habitat (taking into consideration vegetation communities, soils, elevation, and geographic range, life form/blooming period, etc.). These two matrices of special-status plant and wildlife species (i.e., federally, state, or locally listed species), their favorable habitat conditions, and their potential to occur on site based on the findings of the field investigations are presented in Appendices B and C, respectively.

None of the plant species presented in Appendix B were detected during the field survey. Additionally, no special-status plant species were determined to have a moderate or high potential to occur within the project area due to the disturbed condition of the site and the surrounding urban environment.

None of the wildlife species presented in Appendix C were detected during the field survey; however, there are three special-status species that are determined to have a moderate potential to occur on site.

One special status invertebrate species has a moderate potential to occur on site. The eucalyptus woodland land cover observed throughout the proposed project site could provide wintering habitat for the monarch butterfly (*Danaus plexippus*) (SA). There is moderate potential for one special status bird species to nest on site, Cooper's hawk (state-listed watch list species, MSCP covered) (status defined in Appendix C). This species has become adapted to and more frequently observed within urban areas. The eucalyptus woodland and ornamental trees on site provide suitable nesting habitat for this species. Additionally, one special status mammal species has moderate potential to occur on site (status defined in Appendix C), yuma myotis (*Myotis yumanensis*) (SA). Yuma myotis are known to occur within urban areas. The buildings, eucalyptus woodland, and ornamental trees on site are suitable to support day roosts for this species.

6.0 RELATIONSHIP TO NCCP/HCP

The project is not located within any adopted habitat conservation plan, natural community conservation plan, or local of regional habitat conservation plan areas. Additionally, the project is not located within any Non-Reserve Supplemental Habitat Special Linkages and/or Existing Use Areas identified within the Natural Community Conservation Plan and Habitat Conservation Plan for the County of Orange Central and Coastal Subregions (Central-Coastal NCCP/HCP) (County EMA 1996). The nearest Reserve Area is the Upper Newport Bay Regional Park located approximately 2 miles southeast of the project area. Since the project is not located within any approved plan areas, the Project would not impact the goals and objectives of any adopted plans. Additionally, the site is proposed to occur within an existing college campus.

7.0 RESULTS/CONCLUSION

The Project is proposing to incorporate upgrades and repairs to existing buildings; construct new facilities; implement various parking, vehicular, and pedestrian circulating improvements; develop new facilities and improve existing programs within the existing 160-acre OCC campus. OCC is an active college offering day and night courses; and therefore, has a high volume of foot-traffic and human presence throughout the day. Since the proposed project would occur within the college campus modifications would not change the existing conditions and use within the project area. Additionally, this campus is bordered by high- and low- density residential and commercial developments offering minimal suitable habitat to support special-status species. The project area is primarily developed or disturbed. Dominant vegetation on site is comprised of ornamental plantings. Although the ruderal and eucalyptus woodland areas have the potential to support special-status species adapted to urban and disturbed environments, these land cover types are limited within the project area, and combined make up less than 3 acres of the total project site. Native plant communities were not mapped on site.

The Project is not located within or adjacent to any designated conservation plan, natural community conservation plan, or local or regional habitat conservation plan areas; and would therefore not impact the goals and objectives of any adopted plans. Although an official Jurisdictional Delineation was not performed, jurisdictional wetlands or non-wetland waters were not identified within the project area. Additionally, riparian habitats were not identified within the project area. Therefore, implementation of the proposed project activities would not result in impacts to state and federally jurisdictional waters (and wetlands) or riparian habitat.

The Project is subject to local, state and federal laws and regulations pertaining to biological resources, including the federal MBTA and California Fish and Game Codes. There are three special-status wildlife species with moderate potential to occur within the project area. No special-status plants are likely to occur within the project area. Potential project impacts to these species are discussed in detail below.

Plants

Special-status plants are not known to occur within the study area; nor do any special-status plant species have a potential to occur within the proposed project area. The project is planned to occur within an existing college campus, surrounded by residential and commercial development. The ruderal habitat mapped within the project area is the only land cover type with any potential, though minimal, to support special-status species. Ruderal habitat on site is found in a single area within the project area, totaling 1.78 acres. Additionally, this land cover appears to be compacted and routinely disturbed. Therefore, implementation of the proposed project is not anticipated to impact special-status plant species.

Avian

Although no special-status avian species are known to occur within the study area, there is potential for one sensitive avian species to occur within the proposed project area; Cooper's hawk (California Watch List species) (nesting only). Cooper's hawk populations have increasingly been observed breeding within urban and suburban areas (Curtis and Rosenfield 2006). In urban areas, Cooper's hawks are known to nest within tall ornamental trees (e.g., eucalyptus spp.) within developed areas (including commercial and industrial areas) (Chiang et al. 2012). Data documented by Chiang (2004) suggest that Cooper's hawks in Southern California appear to be year-round residents and remain close to their nest stands during winter. While the project area contains tall ornamental trees (i.e., eucalyptus and pine species) that provide suitable nesting substrate to support this species, no raptor nests were identified during the field visit. Additionally, Cooper's hawk was not observed during the site visit nor are there any documented occurrences within 5 miles of the project site (CDFW 2013). Therefore, likelihood of this species to nest within the project area is minimal. Impacts to this species are anticipated to be less than significant. Nonetheless, it is recommended that the proposed project activities be planned to occur outside of the general nesting season (February 1 to August 31). If construction activities must occur within the general nesting season, a preconstruction nesting bird survey is recommended, as per the guidelines below.

The eucalyptus woodland, ornamental planting, and ruderal habitat within the project area have the potential to support nesting birds protected under the federal Migratory Bird Treaty Act (MBTA) and/or California Department of Fish and Game Code (including Cooper's hawk discussed above). If construction activities are scheduled to take place adjacent to potential bird nesting habitat during the general bird breeding season (i.e., February 1 through August 31), it is recommended that a nesting bird survey be conducted by a qualified biologist to determine the presence of nests or nesting birds within 300 feet (500 feet for raptors) (given the level of disturbance associated with the project area) of the construction activities. The nesting bird survey shall be completed no more than 72 hours prior to any construction activities.

The survey will focus on special-status species known to use the area as well as other nesting birds that are protected under the MBTA and California Fish and Game Codes. If an active nest (defined by the presence of eggs or young) is identified, grading or site disturbance within an appropriate buffer (e.g., 500 feet for raptors and 250 feet for other birds) of the nest shall be monitored by a qualified biologist regularly until project activities are no longer occurring within the required avoidance buffer of the nest or until fledglings become independent of the nest. The monitoring biologist may adjust the buffer radius if he or she determines it is necessary. The monitoring biologist shall halt construction activities determined to be disturbing nesting activities. The monitor shall make practicable recommendations to reduce the noise or disturbance in the vicinity of the nest. This may include recommendations such as (1) turning off vehicle engines and other equipment whenever possible to reduce noise, (2) working in other areas until the young have fledged, or (3) placing noise barriers to maintain the noise at the nest to 60 dBA L_{eq} hourly or less or to the preconstruction ambient noise level if that exceeds 60 dBA L_{eq} hourly. The on-site biologist will review and verify compliance with these nesting boundaries and will verify that the nesting effort has finished. Construction activities restricted by this measure can resume when no other active nests are found within the restricted area.

"Nest" is defined as: a structure or site under construction or preparation, constructed or prepared, or being used by a bird for the purpose of incubating eggs or rearing young. Perching sites and screening vegetation are not part of the nest. "Active nest" is defined as: once birds begin constructing, preparing or using a nest for egg-laying. A nest is no longer an "active nest" if abandoned by the adult birds or once nestlings or fledglings are no longer dependent on the nest.

Invertebrates

Monarch butterfly (not state- or federally listed) has a moderate potential to overwinter within the project site; however, impacts are anticipated to be negligible. The eucalyptus woodland and some of the ornamental planting land cover (e.g., *pinus* spp.) provide suitable overwintering habitat for monarchs. Monarch overwintering sites are well known throughout California and overwintering sites have not been documented within the project area. Therefore, impacts to this species are anticipated to be less than significant.

Mammals

Yuma myotis (not state- or federally listed) is the only special status mammal species with moderate potential to occur on site. The field visit occurred during the day, which is conducive for detecting most of the wildlife expected to occur within the project area, but may not be appropriate for directly detecting wildlife species (such as bats) that are active at night and dormant during the daytime.

Yuma myotis is known to occur within urban areas and is a common species of Orange County (Sea and Sage Audubon Society 2013); however, this species has not been documented to occur within 5 miles of the proposed project area (CDFW 2013). The closest known occurrence of this species is approximately 18 miles northeast of the project area within Santa Ana Canyon (CDFW 2013). Although the building site could provide potential day roosts for this species, the proposed project site does not contain open waters required by Yuma myotis for foraging and as a drinking source (Zeiner et al. 1988). The closest suitable water source is approximately 0.5 mile east of the project site at Te Winkle Park north of Arlington Drive and 0.75 miles west of the project at the Costa Mesa Golf Course; and this species has not been documented in these areas. Additionally, OCC offers a wide array of classes scheduled throughout the day, with classes beginning as early as 7 am and offered until as late as 10:30 pm, so there is a high level of human activity within the project area during most hours of the day. Given the absence of historic occurrences of this species within the project area, lack of suitable foraging habitat, and the high level of human activity within the project area, this species is not anticipated to occur within the project area. Since the proposed project would occur within the existing campus boundary, overall population effects and impacts to this species range are also not anticipated. Impacts to this species are anticipated to be less than significant.

If you have any questions regarding this report, please contact me via telephone at 661.705.8613 or via email at jpage@dudek.com.

Sincerely,

Johanna C. Page

Johanna C. Page
Biologist

Att.: Figures 1–5
Appendix A, List of Vascular Plant and Wildlife Species Observed Within the Project Boundary

Appendix B, Matrix of Special-Status Plant Species and Potential to Occur
Appendix C, Matrix of Special-Status Wildlife Species and Potential to Occur

cc: Mr. Jerry Marchbank, Coast Community College District, Facilities Division
Rachel Struglia, Dudek
Caitlin Munson, Dudek

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14 CCR 15000–15387 and Appendix A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

16 U.S.C. 668–668d. Bald and Golden Eagle Protection Act.

16 U.S.C. 703–712. Migratory Bird Treaty Act, as amended.

16 U.S.C. 1531–1544. Endangered Species Act, as amended.33 U.S.C. 401–430. Rivers and Harbors Act of 1899.

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SOURCE: ESRI 2013

FIGURE 1

Regional Location

Orange Coast College Vision 2020 Facilities Master Plan Biological Resources Letter Report

7910

Path: Z:\Projects\j791001\MAPDOC\MAPS\OrangeCoastCollege\Recirculated Bio Letter Report\Figure1_Regional_Recirc.mxd

SOURCE: Bing Imagery, 2015; Coast Community College Vision Plan, 2012; County of Orange.

FIGURE 2

Local Vicinity

7910

Orange Coast College Vision 2020 Facilities Master Plan Biological Resources Letter Report

7910

SOURCE: Bing Imagery, 2015, Coast Community College Vision Plan 2012, County of Orange.

FIGURE 3

Proposed Campus Land Use

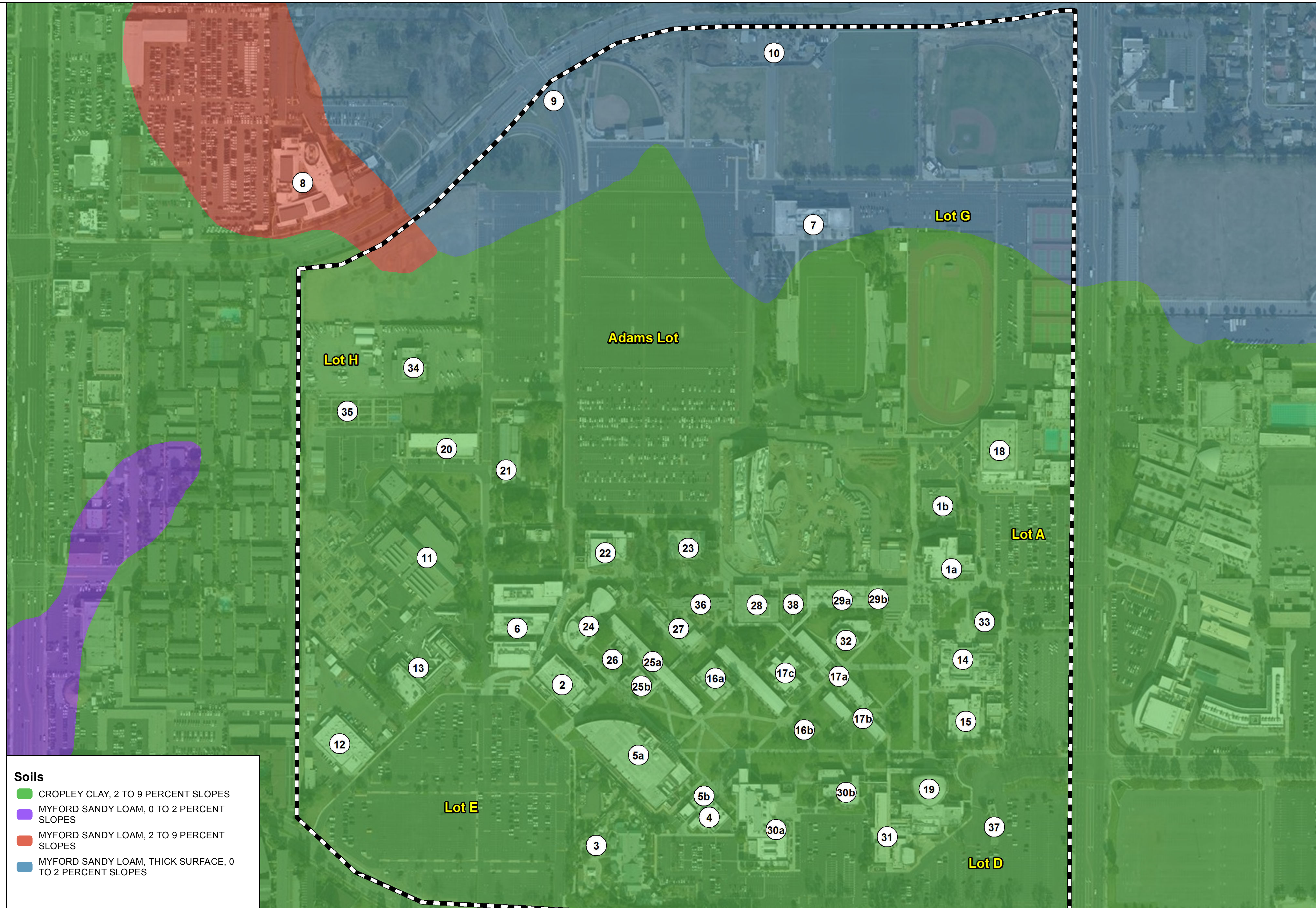
Orange Coast College Vision 2020 Facilities Master Plan Biological Resources Letter Report

Project Boundary

Campus Land Use

1a, Norman E Watson Hall (Counseling)
1b, Student Health Center
2, Lewis Center for Applied Science
3, Harry and Grace Steele Early Childhood Lab School and Children's Center
4, Frank M Doyle Arts Pavilion
5a, Library
5b, Starbucks Coffee
6, Consumer, Allied Health and Bio Sci
7, Fitness Complex and Outdoor Field Labs
8, District Headquarters
9, Main Campus Entrance
10, Recycling Center
11, Technology Center
12, Fran Albers Maintenance and Operations Center
13, Skill Center
14, Student Center
15, Administration
16a, Haley Business Learning Center
16b, Faculty House
17a, Classrooms and Laboratories
17b, Student Success Center
17c, Special Services
18, Locker Rooms
19, Robert B Moore Theatre
20, Information Technology
21, Horticulture
22, Chemistry
23, Virgil D Sessions Center for Literature and Languages
24, Science Hall and Math Lecture Halls
25a, Math Wing
25b, George Hoag Family Foundation
26, Planetarium
27, Journalism
28, Computing Center
29a, Social and Behavioral Sciences
29b, Bookstore
30a, Arts Center
30b, Fine Arts
31, Music Building
32, Giles T Brown Forum
33, Bursar's Office
34, District Transportation
35, Horticulture Garden Lab
36, Writer's Row
37, Campus Public Safety
38, 150 Annex

0 155 310 Feet



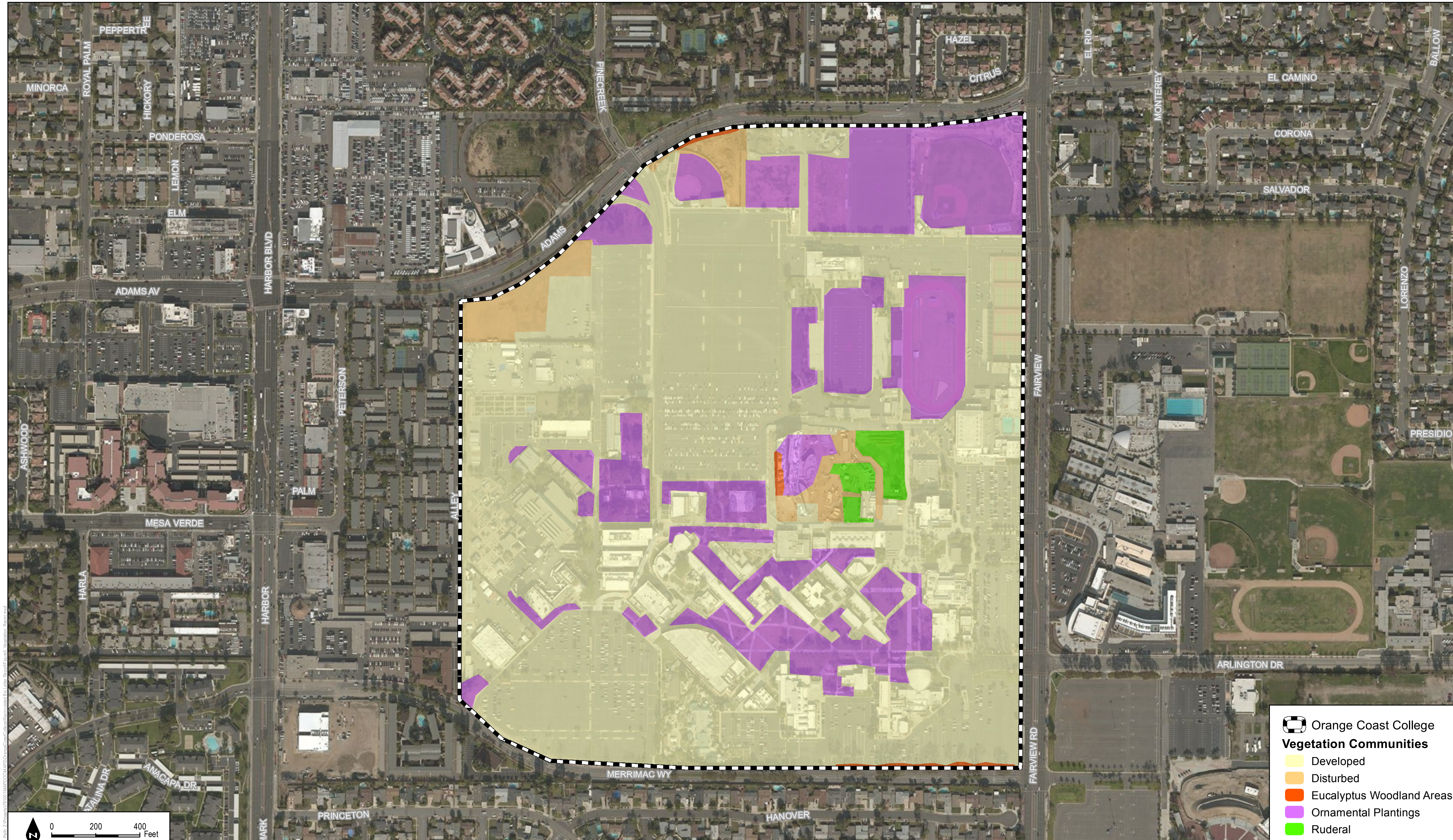
Soils

- CROPLEY CLAY, 2 TO 9 PERCENT SLOPES
- MYFORD SANDY LOAM, 0 TO 2 PERCENT SLOPES
- MYFORD SANDY LOAM, 2 TO 9 PERCENT SLOPES
- MYFORD SANDY LOAM, THICK SURFACE, 0 TO 2 PERCENT SLOPES

7910

SOURCE: Bing Imagery, 2015; Coast Community College Vision Plan, 2012; Count of Orange, 2015; USDA.

FIGURE 4
Soils Map



SOURCE: Bing Imagery, 2015; Coast Community College Vision Plan, 2012; County of Orange.

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FIGURE 5
Vegetation Map

Orange Coast College Vision 2020 Facilities Master Plan Biological Resources Letter Report

APPENDIX A

List of Vascular Plant and Wildlife Species Observed Within the Project Boundary

APPENDIX A
List of Vascular Plant and Wildlife Species Observed within the Project Boundary

VASCULAR PLANT SPECIES

GYMNOSPERMS

GINKGOACEAE – GINKGO FAMILY

* *Ginkgo biloba* – maidenhair tree

PINACEAE – PINE FAMILY

Pinus sp. – pine

ANGIOSPERMS (DICOTS)

ANACARDIACEAE **– SUMAC FAMILY**

* *Schinus molle* – Peruvian peppertree

ASTERACEAE **– SUNFLOWER FAMILY**

Erigeron canadensis – Canadian horseweed
Laennecia coulteri – Coulter's horseweed

BIGNONIACEAE **– BIGNONIA FAMILY**

* *Jacaranda mimosifolia* – blue jacaranda

CUPRESSACEAE **– CYPRESS FAMILY**

* *Cupressus sempervirens* – Italian cypress

GERANIACEAE – GERANIUM FAMILY

* *Erodium* spp. – filaree

LAMIACEAE **– MINT FAMILY**

Mentha spp. – mint
* *Rosmarinus officinalis* – rosemary

MAGNOLIACEAE **– MAGNOLIA FAMILY**

* *Magnolia grandiflora* – southern magnolia

MALVACEAE **– MALLOW FAMILY**

* *Malva parviflora* – cheeseweed mallow

MYRTACEAE **– MYRTLE FAMILY**

* *Eucalyptus* sp. – eucalyptus
* *Callistemon viminalis* – weeping bottlebrush.

***SAPINDACEAE* – SOAPBERRY FAMILY**

* *Cupaniopsis anacardioides* – carrotwood

***STRELITZIACEAE* – STRELITZIA FAMILY**

* *Strelitzia reginae* – bird-of-paradise

***ZYGOPHYLLACEAE* – CALTROP FAMILY**

* *Tribulus terrestris* – puncturevine

ANGIOSPERMS (MONOCOTS)

ARECACEAE – PALM FAMILY

Washingtonia filifera – California fan palm

***POACEAE* – GRASS FAMILY**

* *Schismus barbatus* – common Mediterranean grass

WILDLIFE SPECIES – VERTEBRATES

BIRDS

***COLUMBIDAE* – PIGEONS AND DOVES**

Zenaida macroura – mourning dove

***CORVIDAE* – JAYS AND CROWS**

Corvus brachyrhynchos – American crow

FRINGILLIDAE – FINCHES

Carpodacus mexicanus – house finch

HIRUNDINIDAE – SWALLOWS

Tachycineta thalassina – violet-green swallow

***ICTERIDAE* – BLACKBIRDS AND ORIOLES**

Icterus curcullatus – hooded oriole

***MIMIDAE* – THRASHERS**

Mimus polyglottos – northern mockingbird

***TROCHILIDAE* – HUMMINGBIRDS**

Calypte anna – Anna’s hummingbird

***TYRANNIDAE* – TYRANT FLYCATCHERS**

Sayornis nigricans – black phoebe

MAMMALS

***LEPORIDAE* – HARES AND RABBITS**

Sylvilagus audubonii – desert cottontail

*	Signifies introduced (non-native) species

APPENDIX B

Matrix of Vascular Plant Species and Potential to Occur

APPENDIX B
Matrix of Special-Status Plant Species and Potential to Occur

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Abronia villosa var. *aurita*	chaparral sand-verbena	None/ None/ 1B.1	Chaparral, Coastal scrub, Desert dunes/sandy/ annual herb/ Jan-Sep/ 246-5249	Not expected to occur. The site is outside of the species' known elevation range.
Aphanisma blitoides	aphanisma	None/ None/ 1B.2	Coastal bluff scrub, Coastal dunes, Coastal scrub/sandy/ annual herb/ Mar-Jun/ 3-1001	Not expected to occur. No suitable habitat present within the proposed project site. Closest CNDDB occurrence is from 1934 approximately 3 miles south of the project site within dry bluffs at Newport Beach (CDFW 2013).
Astragalus pycnostachyus var. *lanosissimus*	Ventura marsh milk-vetch	FE/ SE/ 1B.1	Coastal dunes, Coastal scrub, Marshes and swamps (edges, coastal salt or brackish)/ perennial herb/ Jun-Oct/ 3-115	Not expected to occur. No suitable habitat on site. No CNDDB occurrences within 5 miles of the proposed project site (CDFW 2013).
Atriplex coulteri	Coulter's saltbush	None/ None/ 1B.2	Coastal bluff scrub, Coastal dunes, Coastal scrub, Valley and foothill grassland/alkaline or clay/ perennial herb/ Mar-Oct/ 10-1509	Not expected to occur. This perennial plant would have been observed during the survey if present. Limited suitable grassland habitat present within the proposed project area.
Atriplex pacifica	South Coast saltscale	None/ None/ 1B.2	Coastal bluff scrub, Coastal dunes, Coastal scrub, Playas/ annual herb/ Mar-Oct/ 0-459	Not expected to occur. The project site is within the known geographic and elevational range for this species; however, this species is known to occur within coastal bluff scrub and coastal scrub (Jepson Flora 2013; CDFW 2013). Although species occurrences are near the project site, this habitat does not occur on the project site.
Atriplex parishii	Parish's brittlescale	None/ None/ 1B.1	Chenopod scrub, Playas, Vernal pools/alkaline/ annual herb/ Jun-Oct/ 82-6234	Low potential to occur. The project site is within the known geographic and elevational range for this species; however, this species is known to occur within playas, chenopod scrub, and in vernal pools (Jepson Flora 2013; CNPS 2013). Suitable habitat does not occur on the project site.
Atriplex serenana var. *davidsonii*	Davidson's saltscale	None/ None/ 1B.2	Coastal bluff scrub, Coastal scrub/alkaline/ annual herb/ Apr-Oct/ 33-656	Low potential to occur. The project site is within the known geographic and elevational range for this species; however, this species is known to occur within or adjacent to coastal bluff scrub and coastal scrub. The closest known occurrence is approximately 1.75 miles within the Upper Newport Bay Regional Park (Jepson Flora 2013; CDFW 2013). Although species occurrences are near the project site, this habitat does not occur on the project site.

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Calochortus weedii var. *intermedius*	intermediate mariposa lily	None/ None/ 1B.2	Chaparral, Coastal scrub, Valley and foothill grassland/rocky, calcareous/ perennial bulbiferous herb/ May-Jul/ 344-2805	Not expected to occur. The site is outside of the species' known elevation range and the limited grassland habitat within the proposed project area is disturbed. The soils on site are not suitable (e.g., rocky or calcareous).
Camissoniopsis lewisii	Lewis' evening-primrose	None/ None/ 3	Coastal bluff scrub, Cismontane woodland, Coastal dunes, Coastal scrub, Valley and foothill grassland/sandy or clay/ annual herb/ Mar-May(Jun),/ 0-984	Low potential to occur. The project site is within the known geographic and elevational range for this species. The closest known occurrence dates back to 1932 and is approximately 4.75 miles south of the project site within Peninsula Park (Jepson Flora 2013). Although species occurrences are near the project site, grassland habitat is extremely limited and disturbed within the project site.
Centromadia parryi ssp. *australis*	southern tarplant	None/ None/ 1B.1	Marshes and swamps (margins), Valley and foothill grassland (vernally mesic), Vernal pools/ annual herb/ May-Nov/ 0-1394	Low potential to occur. Project site is within known geographic and elevational range for species, and the project site is located within 5 miles of known occurrences of the species (Jepson Flora 2013; CNDDB 2013). This species occurs within and immediately adjacent to salt marshes, floodplains, wetlands, and waterways (Jepson Flora 2013; CNDDB 2013). Although there are species occurrences observed near the project site, no mesic habitat exists on site; therefore, potential to occur is low.
Chaenactis glabriuscula var. *orcuttiana*	Orcutt's pincushion	None/ None/ 1B.1	Coastal bluff scrub (sandy), Coastal dunes/ annual herb/ Jan-Aug/ 0-328	Not expected to occur. Project site within known geographical and elevational range for this species; however, this species is known to occur within or adjacent to coastal bluff scrub and coastal. This habitat does not occur on the project site. Additionally, the closest known occurrence is approximately 12 miles southeast of the project site in Laguna Beach along the coastline (Jepson Flora 2013; CNDDB 2013).

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Chloropyron maritimum ssp. *maritimum*	salt marsh bird's-beak	FE/ SE/ 1B.2	Coastal dunes, Marshes and swamps (coastal salt)/ annual herb hemiparasitic/ May-Oct/ 0-98	Not expected to occur. This species is associated with coastal dunes and marshes. This habitat is not present within the project site. Closest occurrence is approximately 3 miles southeast of the project site within coastal salt marsh at the Upper Newport Bay Ecological Reserve (CDFW 2013). Although the project site is located within known geographical and elevational range, the habitat on site is not mesic.
Chorizanthe parryi var. *fernandina*	San Fernando Valley spineflower	FC/ SE/ 1B.1	Coastal scrub(sandy), Valley and foothill grassland/ annual herb/ Apr-Jul/ 492-4003	Not expected to occur. The site is outside of the species' known elevation range and the limited grassland vegetation present is disturbed.
Comarostaphylis diversifolia ssp. *diversifolia*	summer holly	None/ None/ 1B.2	Chaparral, Cismontane woodland/ perennial evergreen shrub/ Apr-Jun/ 98-2592	Low potential to occur. This perennial plant would have been observed during the survey if present. Closest known occurrence is approximately 17 miles southeast of the proposed project site within Moulton Meadows Park (Jepson Flora 2013). Low potential to occur onsite unless planted as an ornamental.
Dudleya multicaulis	many-stemmed dudleya	None/ None/ 1B.2	Chaparral, Coastal scrub, Valley and foothill grassland/often clay/ perennial herb/ Apr-Jul/ 49-2592	Not expected to occur. The limited grassland vegetation on site is ruderal. This perennial plant would have been observed during the survey if present.
Dudleya stolonifera	Laguna Beach dudleya	FT/ ST/ 1B.1	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland/rocky/ perennial stoloniferous herb/ May-Jul/ 33-853	Not expected to occur. The limited grassland vegetation on site is ruderal. This perennial plant would have been observed during the survey if present.
Eriastrum densifolium ssp. *sanctorum*	Santa Ana River woollystar	FE/ SE/ 1B.1	Chaparral, Coastal scrub(alluvial fan)/sandy or gravelly/ perennial herb/ Apr-Sep/ 299-2001	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.
Eryngium aristulatum var. *parishii*	San Diego button-celery	FE/ SE/ 1B.1	Coastal scrub, Valley and foothill grassland, Vernal pools/mesic/ annual/perennial herb/ Apr-Jun/ 66-2034	Not expected to occur. The project site is outside of the geographic range for this species. This perennial plant would have been observed during the survey if present. Mesic habitat does not occur within the proposed project area.
Euphorbia misera	cliff spurge	None/ None/ 2.2	Coastal bluff scrub, Coastal scrub, Mojavean desert scrub/rocky/ perennial shrub/ Dec-Aug/ 33-	Not expected to occur. This perennial plant would have been observed during the survey if present.

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
			1640	
Helianthus nuttallii ssp. *parishii*	Los Angeles sunflower	None/ None/ 1A	Marshes and swamps (coastal salt and freshwater)/ perennial rhizomatous herb/ Aug-Oct/ 33-5495	Low potential to occur. Project site within known elevational range of species, and the project site is located within 5 miles of known occurrences of this species. Jepson Flora (2013) shows this species as occurring within coastal plains and basins within Newport Lagoon and the Los Angeles Basin. Although species is near project site, suitable habitat (e.g., marshes and swamps) does not occur within the project site, thus low potential for occurrence.
Hordeum intercedens	vernal barley	None/ None/ 3.2	Coastal dunes, Coastal scrub, Valley and foothill grassland (saline flats and depressions), Vernal pools/ annual herb/ Mar-Jun/ 16-3281	Low potential to occur. Project site within known elevational range of species. The closest known occurrence is near Corona del Mar, approximately 6 miles southeast of the proposed project (Jepson Flora 2013). Jepson (2013) shows this species as occurring within vernal pools, dry, saline streambeds and alkaline flats Although species is near the project site, suitable habitat (e.g., coastal scrub and vernal pools) does not occur within the project site, thus low potential for occurrence.
Horkelia cuneata var. *puberula*	mesa horkelia	None/ None/ 1B.1	Chaparral(maritime), Cismontane woodland, Coastal scrub/sandy or gravelly/ perennial herb/ Feb-Jul(Sep),/ 230-2657	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.
Isocoma menziesii var. *decumbens*	decumbent goldenbush	None/ None/ 1B.2	Chaparral, Coastal scrub (sandy, often in disturbed areas)/ perennial shrub/ Apr-Nov/ 33-443	Low potential to occur. This perennial plant would have been observed during the survey if present. There is a single occurrence documented for this species within coastal bluffs of the Pacific Ocean drainage area, dating back to 1946 (Jepson Flora 2013). Suitable habitat is not present within the project area.

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Lasthenia glabrata ssp. *coulteri*	Coulter's goldfields	None/ None/ 1B.1	Marshes and swamps (coastal salt), Playas, Vernal pools/ annual herb/ Feb-Jun/ 3-4003	Low potential to occur. This species is associated with alkali flats typical of marshes and swamps, playas, and vernal pools. Suitable soils and habitat are not present within the project site. A species occurrence dating back to 1965 overlaps with the proposed project site, and is now thought to be extirpated due to development in the area (CDFW 2013). Although the project site is located within the species' known geographical and elevational range, there is no suitable habitat on site; therefore, potential for occurrence is low.
Lepidium virginicum var. *robinsonii*	Robinson's pepper-grass	None/ None/ 1B.2	Chaparral, Coastal scrub/ annual herb/ Jan-Jul/ 3-2904	Low potential to occur. Project site within known elevational range of species. The closest known occurrence is within an open space preserve near UC Irvine, approximately 4.3 miles southeast of the proposed project (Jepson Flora 2013; CDFW 2013). Jepson (2013) shows this species as occurring within coastal sage scrub. Although this species has been recorded near the project site, suitable habitat (e.g., coastal scrub) does not occur within the project site, thus low potential for occurrence.
Nama stenocarpum	mud nama	None/ None/ 2.2	Marshes and swamps (lake margins, riverbanks)/ annual/perennial herb/ Jan-Jul/ 16-1640	Low potential to occur. This species is associated with marshes and swamps. There is a species occurrence within dry vernal pool habitat found in 1936 at Fairview Park, a quarter mile southwest of the proposed project site (CDFW 2013). Although the project site is located within the species' known geographical and elevational range, the habitat on site is not appropriate; therefore, potential for occurrence is low.
Nasturtium gambelii	Gambel's water cress	FE/ ST/ 1B.1	Marshes and swamps(freshwater or brackish)/ perennial rhizomatous herb/ Apr-Oct/ 16-1083	Not expected to occur. This perennial plant would have been observed during the survey if present. No suitable marsh or swamp vegetation present.

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Navarretia prostrata	prostrate vernal pool navarretia	None/ None/ 1B.1	Coastal scrub, Meadows and seeps, Valley and foothill grassland (alkaline), Vernal pools/Mesic/ annual herb/ Apr-Jul/ 49-3970	Low potential to occur. This species is associated with vernal pools and moist environments. There is a species occurrence associated with the bottom of a vernal pool at Fairview Park, approximately 2 miles southwest of the proposed project site (CDFW 2013). Although the project site is located within the species' known geographical and elevational range, suitable mesic habitat (e.g., coastal scrub or meadows and seeps) does not occur within the project site, thus low potential for occurrence.
Nemacaulis denudata var. *denudata*	coast woolly-heads	None/ None/ 1B.2	Coastal dunes/ annual herb/ Apr-Sep/ 0-328	Not expected to occur. No suitable coastal dune habitat present within the project area. All species occurrences are documented along the coastline.
Orcuttia californica	California Orcutt grass	FE/ SE/ 1B.1	Vernal pools/ annual herb/ Apr-Aug/ 49-2165	Not expected to occur. This species is associated with vernal pools and is outside of the known geographical range of the species (approximately 30 miles northwest of project site) (Jepson 2013).
Pentachaeta aurea ssp. *allenii*	Allen's pentachaeta	None/ None/ 1B.1	Coastal scrub (openings), Valley and foothill grassland/ annual herb/ Mar-Jun/ 246-1706	Not expected to occur. The site is outside of the species' known elevation range.
Phacelia ramosissima var. *austrolitoralis*	south coast branching phacelia	None/ None/ 3.2	Chaparral, Coastal dunes, Coastal scrub, Marshes and swamps(coastal salt)/sandy, sometimes rocky/ perennial herb/ Mar-Aug/ 16-984	Low potential to occur. Project site within known elevational range of species. Species associated with alluvial soils; therefore, suitable soils present on site; however there is no suitable vegetation (e.g., chaparral, coastal dunes, coastal scrub, or coastal salt marsh). The closest known occurrence is near Newport Bay, approximately 2 miles southeast of the proposed project (Jepson Flora 2013). This perennial plant would have been observed during the survey if present.
Quercus dumosa	Nuttall's scrub oak	None/ None/ 1B.1	Closed-cone coniferous forest, Chaparral, Coastal scrub/sandy, clay loam/ perennial evergreen shrub/ Feb-Apr(Aug),/ 49-1312	Not expected to occur. No suitable habitat (e.g., coniferous forest, chaparral, or coastal scrub) present on the proposed project site. This perennial evergreen shrub would have been observed during the survey if present.

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Sagittaria sanfordii	Sanford's arrowhead	None/ None/ 1B.2	Marshes and swamps(assorted shallow freshwater)/ perennial rhizomatous herb emergent/ May-Oct/ 0-2133	Not expected to occur. This species is associated with shallow freshwater marshes and swamps, which do not occur on site, and is outside of the known geographical range of the species (approximately 30 miles northeast of project site) (Jepson 2013).
Senecio aphanactis	chaparral ragwort	None/ None/ 2.2	Chaparral, cismontane woodland, coastal scrub/sometimes alkaline/ annual herb/ Jan-Apr/ 49-2625	Low potential to occur. The project site is within the known elevational range of species. Species associated with alkaline soils which are present on site; however, there is no suitable vegetation present within the proposed project area. The closest known occurrence is within the UC Irvine Ecological Reserve, approximately 4.6 miles southeast of the proposed project (Jepson Flora 2013).
Sidalcea neomexicana	salt spring checkerbloom	None/ None/ 2.2	Alkali playas, brackish marshes, chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub/alkaline, mesic/ perennial herb/ Mar-Jun/ 49-5020	Low potential to occur. This species is generally associated with mesic, alkaline areas in playas, marshes, chaparral, coastal scrub, lower montane coniferous forest, and Mojavean desert scrub, which do not occur on site. Although the project site is located within the species' known geographical and elevational range, there is no suitable habitat on site; therefore, potential for occurrence is low.
Suaeda californica	California seablite	FE/ None/ 1B.1	Marshes and swamps (coastal salt)/ perennial evergreen shrub/ Jul-Oct/ 0-49	Not expected to occur. This species is associated with marshes and swamps. Suitable habitat not present within the proposed project site. This perennial evergreen shrub would have been observed during the survey if present.
Suaeda esteroa	estuary seablite	None/ None/ 1B.2	Marshes and swamps(coastal salt)/ perennial herb/ May-Oct(Jan),/ 0-16	Not expected to occur. This species is associated with marshes and swamps. Suitable habitat not present within the proposed project site. This perennial herb would have been observed during the survey if present.

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Symphyotrichum defoliatum	San Bernardino aster	None/ None/ 1B.2	Cismontane woodland, coastal scrub, Lower montane coniferous forest, Meadows and seeps, Marshes and swamps, Valley and foothill grassland(vernally mesic) /near ditches, streams, springs/ perennial rhizomatous herb/ Jul-Nov/ 7-6693	Low potential to occur. This species is associated with ditches, streams, and springs. Suitable habitat not present within the proposed project site. The closest known extant occurrence was documented in 1933 within Upper Newport Bay Regional Park (CDFW 2013). Although the project site is within the species' known elevational range, no suitable water sources exist within the project area.
Verbesina dissita	big-leaved crownbeard	FT/ ST/ 1B.1	Chaparral(maritime), Coastal scrub/ perennial herb/ Apr-Jul/ 148-673	Not expected to occur. Elevation range on site is between 50 to 70 feet above mean seal level (AMSL) and is well outside of the species' known elevation range. Additionally, no suitable chaparral or coastal scrub on the proposed project site.

APPENDIX C

Matrix of Wildlife Species and Potential to Occur

APPENDIX C
Matrix of Special-Status Wildlife Species and Potential to Occur

Scientific Name	Common Name	Status Federal/State	Primary Habitat Associations	Potential to Occur
		Amphibians		
Spea [=*Scaphiopus*] *hammondi*	Western spadefoot	None/ CSC	Most common in grasslands, coastal sage scrub near rain pools or vernal pools; riparian habitat	Absent. No suitable water sources within the project area. No CNDDB occurrences within 5 miles of the proposed project site (CDFW 2013).
		Reptiles		
Actinemys [=*Emys*] *marmorata pallida*	Southwestern pond turtle	None/ CSC	Slow-moving permanent or intermittent streams, ponds, small lakes, reservoirs with emergent basking sites; adjacent uplands used during winter	Low. Project area lacks suitable water source and aquatic habitat required by this species. CNDDB occurrence within 5 miles of proposed project site (CDFW 2013).
Aspidoscelis hyperythra [=*Cnemidophorus hyperythrus*]	Orange-throated whiptail	None/ CSC	Coastal sage scrub, chaparral, grassland, juniper and oak woodland	Absent. Lack of suitable habitat within the proposed project area and adjacent areas. No CNDDB occurrences within 5 miles of the proposed project site (CDFW 2013).
Charina [Lichanura] trivirgata rosseofusca	Coastal rosy boa	None/ None	Rocky chaparral, coastal sage scrub, oak woodlands, desert and semi-desert scrub; common in riparian areas	Absent. Lack of suitable habitat within the proposed project area and adjacent areas. No CNDDB occurrences within 5 miles of the proposed project site (CDFW 2013).
Chelonia mydas	Green turtle	FT/None	Warm marine waters near shorelines such as lagoons and bays with beds of eelgrass and seaweed;nests on sandy beaches	Absent. Lack of suitable habitat within the proposed project area. No CNDDB occurrences within 5 miles of the proposed project site (CDFW 2013).
Crotalus ruber ruber	Northern red-diamond rattlesnake	None/ CSC	Variety of shrub habitats where there is heavy brush, large rocks, or boulders	Low. Limited suitable habitat present within the project site. No CNDDB occurrences within 5 miles of the proposed project site (CDFW 2013).
Phrynosoma coronatum (*blainvillei* population)	Coast (San Diego) horned lizard	None/ CSC	Coastal sage scrub, annual grassland, chaparral, oak and riparian woodland, coniferous forest	Absent. No suitable habitat present within the project site. No CNDDB occurrences within 5 miles of the proposed project site (CDFW 2013).

Scientific Name	Common Name	Status Federal/State	Primary Habitat Associations	Potential to Occur
Birds				
Accipiter cooperii (nesting)	Cooper's hawk	None/ CSC	Riparian and oak woodlands, montane canyons	Moderate (nesting). Suitable habitat is limited to ornamental trees comprised of pine and eucalyptus on site. This species is known to occur in urban areas. No CNDDB occurrence within 5 miles of the proposed project area (CDFW 2013).
Agelaius tricolor	Tricolored blackbird	BCC, USBC/ CSC	Nests near fresh water, emergent wetland with cattails or tules; forages in grasslands, woodland, agriculture pastures, rice fields, feedlots, dairies , and occasionally riparian scrub and marsh borders	Low. Proposed project site lacks suitable aquatic sources and emergent wetland vegetation required for nesting. Suitable foraging potential within the proposed project area is extremely limited. No CNDDB occurrences within 5 miles of the proposed project site (CDFW 2013).
Aimophila ruficeps canescens (nesting and foraging)	Southern California rufous-crowned sparrow	None/ CSC	Grass-covered hillsides, coastal sage scrub, chaparral with boulders and outcrops	Low (nesting and foraging). Lack of suitable nesting and foraging habitat within the proposed project site. No CNDDB occurrences within 5 miles of the proposed project site (CDFW2013).
Ammodramus savannarum	Grasshopper sparrow	None/CSC	Dense, dry or well-drained annual and native grasslands with mix of grasses and forbs; fallow agricultural fields	Low. Lack of suitable nesting and foraging habitat within the proposed project site. Closest CNDDB occurrence approximately 3.5 miles southeast of proposed project site within habitat containing coastal sage scrub (CDFW 2013).
Ardea herodias (rookery)	Great blue heron	None/ None	Variety of habitats, but primarily wetlands; lakes, rivers, marshes, mudflats, estuaries, saltmarsh, riparian habitats	Absent. No suitable water sources within the project area. No CNDDB occurrences within 5 miles of the proposed project site (CDFW 2013).

Scientific Name	Common Name	Status Federal/State	Primary Habitat Associations	Potential to Occur
Athene cunicularia (burrow sites)	Burrowing owl	BCC/ CSC	Grassland, lowland scrub, agriculture, coastal dunes and other artificial open areas	Low. No burrows or suitable habitat present to support this species. Species was not observed during the site visit. Closest CNDDB occurrence approximately 1.6 miles southwest of the proposed project site within non-native grasses and mustard 10 feet of the trailhead to Fariview Park (CDFW 2013). Very few burrowing owls are known to occur in Orange County; mostly wintering birds. Project area is developed, with minimal habitat of poor quality. Based on this and the lack of suitable foraging habitat in the project area, this species is unlikely to occur within the project area.
Buteo regalis (wintering)	Ferruginous hawk	BCC/ CSC	Open, dry country, grasslands, open fields, agriculture	Low. Lack of open habitats suitable for wintering within the proposed project site. No CNDDB occurrences within 5 miles of the proposed project site (CDFW 2013).
Campylorhynchus brunneicapillus sandiegensis	Coastal (San Diego) cactus wren	BCC/ CSC	Southern cactus scrub, maritime succulent scrub, cactus thickets in coastal sage scrub	Absent. Lack of suitable habitat within the proposed project site or adjacent areas No CNDDB occurrences within 5 miles of the proposed project site (CDFW 2013).
Charadrius alexandrinus nivosus	Western snowy plover (coastal population)	FT, BCC, USBC/ CSC	Nests primarily on coastal beaches, in flat open areas, with sandy or saline substrates; less commonly in salt pans, dredged spoil disposal sites, dry salt ponds and levees	Absent. Lack of suitable aquatic habitat (e.g., coastal beaches or saline substrates) required for nesting within the proposed project area. CNDDB occurrences just within 5 miles of the proposed project site along Huntington State Beach (CDFW 2013).
Coccyzus americanus occidentalis (nesting)	Western yellow-billed cuckoo	FC, BCC/ SE	Dense, wide riparian woodlands and forest with well-developed understories	Absent. Lack of suitable aquatic habitat required for nesting within the proposed project area. No CNDDB occurrences within 5 miles of the proposed project site (CDFW 2013).

Scientific Name	Common Name	Status Federal/State	Primary Habitat Associations	Potential to Occur
Elanus leucurus (nesting)	White-tailed kite	None/ FP	Open grasslands, savanna-like habitats, agriculture, wetlands, oak woodlands, riparian	Low. Lack of sutiable open grassland habitat for foraging and riparin habitat suitable for nesting within the proposed project site and adjacent areas. Closest CNDDB occurrence approximately 2.5 miles southeast of the proposed project site in the vicinity of Upper Newport Bay Regional Park (CDFW 2013).
Eremophila alpestris actia	California horned lark	None/ CSC	Open habitats, grassland, rangeland, shortgrass prairie, montane meadows, coastal plains, fallow grain fields	Absent. Suitable open habitats required for nesting and foraging not present within the proposed project site or within adjacent areas. No CNDDB occurrences within 5 miles of the proposed project site (CDFW 2013).
Icteria virens (nesting)	Yellow-breasted chat	None/ CSC	Dense, relatively wide riparian woodlands and thickets of willows, vine tangles and dense brush.	Absent. Suitable aquatic habitat (e.g., riparian woodlands) required for nesting and foraging not present within the proposed project site or adjacent areas. Closest CNDDB occurrence approximately 3.8 miles southeast of the proposed project site within riparian scrub dominated by willow trees (CDFW 2013).
Laterallus jamaicensis coturniculus	California black rail	ST, BCC, USBC/ FP	Saline, brackish, and fresh emergent wetlands	Absent. Suitable aquatic habitat required for nesting and foraging not present within the proposed project site or adjacent areas. CNDDB occurrences within 5 miles of the proposed project site, with the closest occurrence within southern coastal salt marsh habitat at Upper Newport Bay Regional Park approximately 1.8 miles southeast of the project site (CDFW 2013).
Pandion haliaetus (nesting)	Osprey	None/ CSC	Large waters (lakes, reservoirs, rivers) supporting fish; usually near forest habitats, but widely observed along the coast	Absent. Suitable aquatic habitat required for nesting and foraging not present within the proposed project site or adjacent areas. No CNDDB occurrences within 5 miles of the proposed project site (CDFW 2013).

Scientific Name	Common Name	Status Federal/State	Primary Habitat Associations	Potential to Occur
Passerculus sandwichensis beldingi	Belding's savannah sparrow	None/ SE	Saltmarsh, pickleweed	Absent. Suitable aquatic wetland habitat required for nesting and foraging not present within the proposed project site or adjacent areas. CNDDB occurrence just within 5 miles of the proposed project site within a Newport slough area near the mouth of the Santa Ana River (CDFW 2013).
Polioptila californica californica	Coastal California gnatcatcher	FT, USBC/ CSC	Coastal sage scrub, coastal sage scrub-chaparral mix, coastal sage scrub-grassland ecotone, riparian in late summer	Low. Suitable habitat (e.g., coastal sage scrub) required for nesting and foraging not present within the proposed project site or adjacent areas. Closest CNDDB occurrence is approximately 1.75 miles southeast of the project site, just north of Upper Newport Bay Regional Park. (CDFW 2013).
Rallus longirostris levipes	Light-footed clapper rail	FE, USBC/ SE, P	Coastal saltmarsh	Absent. Suitable coastal saltmarsh habitat not present within the proposed project site or adjacent areas. CNDDB occurrences within 5 miles of the proposed project site, with the closest occurrence within southern coastal salt marsh habitat at Upper Newport Bay Regional Park approximately 1.8 miles southeast of the project site (CDFW 2013).
Riparia riparia (nesting)	Bank swallow	None/ ST	Typically occur along rivers, lakes, oceans, stream, and reservoirs with vertical banks or cliffs; nest in lowland country with soft banks or bluffs; mostly forage over water in riparian areas, various aquatic habitats, and wet croplads, occassionaly forage in neighboring brush	Low. Lack of suitable aquatic habitats required for nesting and foraging within the proposed project area. CNDDB occurrences within 5 miles of the proposed project site (CDFW 2013).
Rynchops niger (wintering)	Black skimmer	WL/CSC	Alkali playa; sand shore; beaches; estuarine sand bars	Absent. Suitable habitat not present within the proposed project area. No CNDDB occurrences within 5 miles of the proposed project site (CDFW 2013).

Scientific Name	Common Name	Status Federal/State	Primary Habitat Associations	Potential to Occur
Sterna antillarum browni (nesting colony)	California least tern	FE, USBC/ SE,F P	Nests along the coast from San Francisco Bay south to northern Baja California	Low. Suitable habitat not present within the proposed project area. Closest CNDDB occurrence approximately 2.65 miles southeast of the proposed project site within Upper Newport Bay Ecological Reserve (CDFW 2013).
Vireo bellii pusillus (nesting)	Least Bell's vireo	FE, BCC, USBC/ SE	Nests in southern willow scrub with dense cover within 1-2 meters of the ground; habitat includes willows, cottonwoods, baccharis, wild blackberry or mesquite on desert areas	Low. Suitable aquatic habitat not present within the proposed project area or adjacent areas. CNDDB occurrences just within 5 miles of the proposed project site near the Bonita Canyon Reservoir Dam in Newport Beach (CDFW 2013).
Mammals				
Choeronycteris mexicana	Mexican long-tongued bat	None/ CSC	Desert and montane riparian, desert succulent scrub, desert scrub, and pinyon-juniper woodland; roosts in caves, mines, and buildings	Low. Lack of suitable foraging habitat present within the proposed project site. CNDDB occurrences within 5 miles of the proposed project site (CDFW 2013).
Eumops perotis californicus	Western mastiff bat	None/ CSC	Open, semi-arid to arid habitats including, conifer and deciduous woodland, coastal scrub, annual and perennial grasslands, palm oases, chaparral, desert scrub, and urban; prefer low elevations in the coastal basins of southern California; generally roost in small colonies in cracks and small holes within rugged, rocky areas, also roost within man-made structures	Low. No suitable foraging habitat within the proposed project site. CNDDB occurrences within 5 miles of the proposed project site, with the closest CNDDB occurrence approximately 2.75 miles east of the proposed project site within the San Joaquin Reserve (CDFW 2013).
Lasionycteris noctivagans	Silver-haired bat	None/ SA	Coastal & montane forest, roosts in hollow trees, beneath exfoliating bark, abandoned woodpecker holes, and rarely under rocks.	Low. Roost in cavities of living or dead trees. Suitable habitat not present within the proposed project site. CNDDB occurrences within 5 miles of the proposed project (CDFW 2013).

Scientific Name	Common Name	Status Federal/State	Primary Habitat Associations	Potential to Occur
Lasiurus cinereus	Hoary bat	None/ SA	Broad-leaved upland forest, cismontane woodland, lower montane coniferous forest, and north coast coniferous forest; usually roost at edge of coniferous and deciduous tree clearings; less commonly roost in cavities, caves, or man-made structures	Low. Suitable roosting habitat (e.g., trees) present within the proposed project site, but this species is seldomly found in urban settings. CNDDB occurrences within 5 miles of the proposed project site (CDFW 2013). Closest CNDDB occurrence is 3.8 miles south of the project site adjacent to Newport Harbor (CDFW 2013).
Lasiurus xanthinus	Western yellow bat	None/ SA	Desert and montane riparian, desert succulent scrub, desert scrub, and pinyon-juniper woodland; roosts in trees,particularly palms within urban areas ; forages over water and among trees	Low. Suitable roosting habitat (e.g., palm trees) present within the proposed project site. No CNDDB occurrences within 5 miles of the proposed project site (CDFW 2013).
Microtus californicus stephensi	South coast marsh vole	None/CSC	Tidal marshes in Los Angeles, Orange, and Ventura Counties.	Absent. Suitable habitat (e.g., tidal marshes) not present within the proposed project area or adjacent areas. No CNDDB occurrences within 5 miles of the proposed project site (CDFW 2013).
Myotis yumanensis	Yuma myotis	None/ SA	Closely tied to open water which is used for foraging; open forests and woodlands are optimal habitat; roosts in natural and artificial structures (caves, mines, trees, bridges, and buildings)	Moderate. Suitable roosting habitat (e.g., buildings and trees) and known to occur within urban areas. Open waters required for foraging not present within the proposed project site. No CNDDB occurrences within 5 miles of the proposed project site (CDFW 2013).
Nyctinomops macrotis	Big free-tailed bat	None/ CSC	Rugged, rocky canyons; roosts in crevices of high cliffs, outcroppings, buildings, caves, and occasionally in tree cavities	Low. Suitable roosting habitat (e.g., buildings) present within proposed project site, but prefer rugged, rocky terrain not present within the project site. No CNDDB occurrences within 5 miles of the proposed project site (CDFW 2013).
Perognathus longimembris pacificus	Pacific pocket mouse	FE/ CSC	Grassland, coastal sage scrub with sandy soils; along immediate coast	Absent. Suitable habitat and soils not present withn the proposed project site. Only three known occurrences of this species. Species is common within the immediate vicinity of the Pacific Ocean, within one mile of the coast. The proposed project site is approximately 4.75 miles from the coastline. No CNDDB occurrences within 5 miles of the proposed project site (CDFW 2013).

Scientific Name	Common Name	Status Federal/State	Primary Habitat Associations	Potential to Occur
Sorex ornatus salicornicus	Southern California saltmarsh shrew	None/ CSC	Coastal marshes and Valley foothill and montane riparian optimal (prefers moist soil); also woodland, chaparral, grassland, and emergent wetland. Nests in wood, shrubs, and burrows.	Low. Suitable habitat (e.g., shrubs or burrows) not present within the proposed project site. Closest CNDDB occurrence is approximately 1.3 miles south of the proposed project site within the vicinity of the Newport Lagoon (CDFW 2013).
Taxidea taxus	American badger	None/ CSC	Dry, open treeless areas, grasslands, coastal sage scrub	Low. Limited and fragmented suitable habitat within the proposed project site. Closest CNDDB occurrence approximately 3.5 miles southwest of the proposed project site within the vicinity of disturbed non-native grassland habitat in Newport Beach (CDFW 2013). Individual was identified dead in the road.
Invertebrates				
Branchinecta sandiegonensis	San Diego fairy shrimp	FE/ None	Small, shallow vernal pools, occasionally ditches and road ruts	Low. The proposed project site is mostly developed. Soils are well drained with minimal potential for ponding or pooling water on site. Closest CNDDB occurrence approximately 1.8 miles west of the proposed project site within vernal pool habitat (CDFW 2013).
Cicindela gabbii	Gabb's tiger beetle	None/ SA	Estuaries and mudflats; generally on dark-colored mud; occasional on dry saline flats of estuaries.	Absent. Suitable habitat (e.g., estuaries) not present within the proposed project area or adjacent areas. Closest CNDDB occurrence approximately 4 miles south of the proposed project site along Newport Beach (CDFW 2013).
Cicindela hirticollis gravida	Sandy beach tiger beetle	None/ SA	Sandy areas adjacent to non-brackish water along California coast; found in dry sand in upper zone	Absent. Suitable habitat (e.g., non-brackish waters and sands) not present within the proposed project area or adjacent areas. CNDDB occurrences just within 5 miles of the proposed project site along Newport Beach (CDFW 2013).
Cicindela latesignata latesignata	Western beach tiger beetle	None/ SA	Estuary, mud shore/flats	Absent. Suitable habitat not present within the proposed project area or adjacent areas. Closest CNDDB occurrence approximately 4 miles south of the proposed project site along Newport Beach (CDFW 2013).

Scientific Name	Common Name	Status Federal/State	Primary Habitat Associations	Potential to Occur
Cicindela senilis frosti	Tiger beetle	None/ SA	Salt marshes	Absent. Suitable habitat not present within the proposed project area or adjacent areas. No CNDDB occurrences within 5 miles of the proposed project site (CDFW 2013).
Coelus globosus	Globose dune beetle	None/ SA	Coastal dunes	Absent. Suitable habitat not present within the proposed project area or adjacent areas. Closest CNDDB occurrence approximately 4 miles south of the proposed project site along Newport Beach (CDFW 2013).
Danaus plexippus (wintering sites)	Monarch butterfly	None/ SA	Overwinters in eucalyptus groves	Moderate. *Eucalyptus* spp. observed throughout the proposed project site could provide wintering habitat; however, this species was not observed during the site visit. No CNDDB occurrences within 5 miles of the proposed project site (CDFW 2013).
Panoquina errans	Wandering (= saltmarsh) skipper	None/ SA	Salt marsh from Los Angeles to Baja, Mexico	Low. Suitable habitat not present within the proposed project site. CNDDB occurrences just within 5 miles of the proposed project site within wetland and salt marsh habitats along Huntington Beach (CDFW 2013).
Trigonoscuta dorothea dorothea	Dorothy's El Segundo Dune weevil	None/ SA	Coastal dunes	Absent. Suitable habitat not present within the proposed project site. No CNDDB occurrences within 5 miles of the proposed project site (CDFW 2013).
Tryonia imitator	Mimic tryonia, California brackishwater snail	None/ SA	Coastal lagoons, estuaries and salt marshes	Absent. Suitable aquatic habitat not present within the proposed project site. Closest CNDDB occurrence approximately 1.75 miles southeast of the proposed project site within an outlet of San Diego Creek (CDFW 2013).

Scientific Name	Common Name	Status Federal/State	Primary Habitat Associations	Potential to Occur
		Fish		
Catostomus santaanae	Santa Ana sucker	FT/ CSC	Small, shallow, cool, clear streams less than 7 meters in width and a few centimeters to more than a meter in depth; substrates are generally coarse gravel, rubble and boulder	Absent. No suitable water sources within the proposed project site.
Eucyclogobius newberryi	Tidewater goby	FE/ CSC	Low-salinity waters in coastal wetlands	Absent. No suitable water sources within the proposed project site.

Federal Designations:

- BCC Fish and Wildlife Service: Birds of Conservation Concern
- FC Candidate for federal listing as threatened or endangered
- (FD) Federally-delisted; monitored for five years
- FE Federally-listed Endangered
- FT Federally-listed as Threatened
- MNBMC Fish and Wildlife Service Migratory Nongame Birds of Management Concern
- USBC United States Bird Conservation Watch List

State Designations:

- CSC California Special Concern Species
- FP California Department of Fish and Game Protected and Fully Protected Species
- SA Special Animal List
- SE State-listed as Endangered
- ST State-listed as Threatened
- WL State Watch List Species

APPENDIX D

Cultural Reports

Part 1

DUDEK

MAIN OFFICE
605 THIRD STREET
ENCINITAS, CALIFORNIA 92024
T 760.942.5147 T 800.450.1818 F 760.632.0164

October 23, 2013

Mr. Jerry Marchbank
Coast Community College District
1370 Adams Avenue
Costa Mesa, CA 92626

Subject: Negative Phase I Findings for the CCCD Vision 2020 Plan, Orange Coast College Project, Orange County, CA

Dear Mr. Marchbank:

This letter documents the negative Phase I cultural resources inventory conducted by Dudek for the CCCD Vision 2020 Plan, Orange Coast College Project (Project), located in the City of Costa Mesa, Orange County (Figure 1). The Project proposes select replacement and general renovations of existing college buildings, parking areas, and access roads. A South Central Coastal Information Center (SCCIC) records search indicates that no cultural resources have been recorded in the proposed project area. A Native American Heritage Commission (NAHC) Sacred Lands File (SLF) search and subsequent correspondence with tribal representatives does not suggest the presence of any sacred sites, traditional cultural properties (TCPs), or areas of stated cultural community importance. Cultural pedestrian survey was conducted of the study area in accordance with the standards and guidelines defined by the California Environmental Quality Act (CEQA). No cultural resources were identified.

PROJECT DESCRIPTION AND LOCATION

The Coast Community College District (CCCD) is proposing construction of new facilities and renovations of existing facilities on the Orange Coast College (OCC) campus as a part of the CCCD Vision 2020 Facilities Master Plan (Project). Project components will include the replacement of several buildings with larger facilities, the renovation and expansion of some existing facilities, the reconfiguration or expansion of existing parking lots, and the completion of a Loop Road for automobile traffic in addition to pedestrian circulation enhancements. The project is situated north of Merrimac Way, south of Adams Avenue, and west of Fairview Road (Figure 1). The area of potential effect falls within Sections 2, 3, 4, 9, 10, and 11 of the Newport Beach, USGS Quadrangles (Township 16S; Range 10W).

REGULATORY FRAMEWORK

CEQA requires that all private and public activities not specifically exempted be evaluated for the potential to impact the environment, including effects to historical resources. Historical resources are recognized as part of the environment under CEQA. It defines historical resources as "any object, building, structure, site, area, or place, which is historically significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California" (Division I, Public Resources Code, Section 5021.1(b)).

Lead agencies have a responsibility to evaluate historical resources against the California Register criteria prior to making a finding as to a proposed project's impacts to historical resources. Mitigation of adverse impacts is required if the proposed project will cause substantial adverse change. Substantial adverse change includes demolition, destruction, relocation, or alteration such that the significance of an historical resource would be impaired. While demolition and destruction are fairly obvious significant impacts, it is more difficult to assess when change, alteration, or relocation crosses the threshold of substantial adverse change. The CEQA Guidelines provide that a project that demolishes or alters those physical characteristics of an historical resource that convey its historical significance (i.e., its character-defining features) can be considered to materially impair the resource's significance.

The California Register is used in the consideration of historic resources relative to significance for purposes of CEQA. The California Register includes resources listed in, or formally determined eligible for some California State Landmarks and Points of Historical Interest. Properties of local significance that have been designated under a local preservation ordinance (local landmarks or landmark districts), or that have been identified in a local historical resources inventory may be eligible for listing in the California Register and are presumed to be significant resources for purposes of CEQA unless a preponderance of evidence indicates otherwise.

Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code SS5024.1, Title 14 CCR, Section 4852) consisting of the following:

1. It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States; or
2. It is associated with the lives of persons important to local, California, or national history; or
3. It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master, or possesses high artistic values; or

4. It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

SCIC RECORDS SEARCH

A records search for the proposed project area and a surrounding half-mile was completed by SCCIC staff on August 26, 2013 (Appendix A). This search included their collection of mapped prehistoric, historical and built-environment resources, Department of Parks and Recreation (DPR) Site Records, technical reports, archival resources, and ethnographic references. Additional consulted sources included the National Register of Historic Places (NRHP), California Inventory of Historical Resources/CRHR and listed OHP Archaeological Determinations of Eligibility, California Points of Historical Interest, California Historical Landmarks, and Caltrans Bridge Survey information.

Previously Conducted Studies:

SCCIC records indicate that nine previous cultural resources investigations have been conducted within a half-mile of the proposed project area. Of these, two studies have included eastern portions of the OCC campus (Table 1).

Table 1. Studies that have included project area

Author	Year	Company	Title
Leonard, Nelson N	1975	University of California Riverside	Environmental Impact Evaluation: Route Alternatives Between the Michelson Treatment Plant and Plants on the Santa Ana River, Orange County, CA. Report on file at the South Central Coastal Information Center, CSU Fullerton.
Demcak, Carol R.	1999	Archaeological Resource Management Corp.	Cultural Resources Assessment for Orange County Sanitation Districts. Report on file at the South Central Coastal Information Center, CSU Fullerton.

Previously Identified Cultural Resources:

SCCIC records indicate that no cultural resources have been previously identified within the proposed project area. Five above-ground historic resources (30-162281, 30-176872, 30-706873, 30-176874, and 30-179852) have been previously identified within a half-mile radius of the OCC campus (Appendix A). Five of these resources have been determined ineligible for listing in the NRHP, however, they have not been formally evaluated for CRHR listing. One resource, previously identified as a Point of Historical Interest, has been determined to require reevaluation. The SCCIC records search provided copies of three historic maps (map series). The 1945 USGS 7.5' Santa Ana Quadrangle and a 1896 regional topographic survey map do not suggest that any historical period resources are present within the current project area. A formal historical inventory is currently being conducted for the Project area; these results are pending and will be provided as part of a separate study.

NAHC SACRED LANDS FILE SEARCH

DUDEK requested a NAHC search of their Sacred Lands File on September 4, 2013 for the proposed project area. The NAHC provided results the two days later. This search did not indicate the presence of Native American traditional cultural place(s) within this area, or the surrounding one-mile buffer (Appendix B). The NAHC additionally provided a list of Native American tribes and individuals/organizations that might have knowledge of cultural resources in or near the project area.

TRIBAL REPRESENTATIVE CORRESPONDENCE

Following the NAHC response, letters were sent to the listed tribal representatives with the intent of requesting information, opinions or concerns relating to the proposed project impacts (Appendix B). These letters contained a brief description of the planned project, reference maps, and a summary of the NAHC SLF search results. Andy Salas, Chairman of the Gabrieleno Band of Mission Indians/Kizh Nation, responded on September 20, 2013. Mr. Salas' e-mail response indicated that their tribe has knowledge of a named Native American village (Lopuuknga) location near the proposed project. As such, Mr. Salas requests that a Native American monitor from this tribe be present during all ground disturbances. There has been no additional correspondence with Native American representatives to date.

METHODS

Intensive Pedestrian Survey

The intensive pedestrian survey was conducted by Dudek archaeologist Nicholas Hanten on September 10, 2013 using standard archaeological procedures and techniques. All field practices met the Secretary of Interior's standards and guidelines for cultural resources inventory. In areas that were not constrained by the presence of structures, vehicles, and other obstacles.

No artifacts or archaeological features were identified within the proposed project area. Visibility was variable, allowing for nearly all of the ground to be observed along exposed areas and less than 5 percent visibility in areas obscured by pavement or grasses. Portions of the project area have been previously disturbed by mechanical grading, landscaping, road construction, drainage control, and general development. It is somewhat unclear as to the depth and character of past disturbances within some of these areas, however, it is evident that it has been substantial.

SUMMARY AND MANAGEMENT CONSIDERATIONS

Archaeological Sensitivity and Mitigation Measures

Dudek's Phase I cultural resources inventory of the project area suggests that there is low potential for the inadvertent discovery of cultural resources during ground breaking activities. The area has been highly disturbed by past modifications to the campus. The NAHC Sacred Lands File search did not indicate that cultural resources are in the vicinity of the project. Subsequent tribal correspondence suggests that there is a documented village location near by, however, SCCIC records indicate that no archaeological investigations have been conducted at a resource of this name within a half-mile of the OCC campus. A map provided by Mr. Salas, Chairman of the Gabrieleno Band of Mission Indians/Kizh Nation, suggests that this village is located west of the Santa Ana River, located approximately 1.3 miles west of the project area. In reviewing this map, the scale is relatively small (zoomed-out), this has likely resulted in the village appearing nearer to the project area than it may be. Accounting for modern drainage control that may have shifted the route of this river, it is still likely that the Native American village location more than a mile from the OCC campus.

Due to the highly developed setting of this project, and the lack of evidence for archaeological resources nearer than a half-mile distance, it is recommended that archaeological monitoring is unnecessary during future ground disturbing activities associated with the project. Additional correspondence should be conducted with tribal representatives to determine if Native American monitoring will be required. Should construction or other personnel encounter any historical, archaeological or Native American cultural material within the project area the Lead Agency representative should be notified. In the event that human remains or related cultural material are encountered, Section 15064.5(e) of CEQA requires work to be stopped and the County Coroner notified

Should you have any questions relating to this report and its findings please contact me.

Respectfully Submitted,

Adam Giacinto, MA, R.P.A.
Archaeologist
DUDEK
Office: (760) 479- 4252
Email: agiacinto@dudek.com

cc: Rachel Struglia
Micah Hale, Dudek

Att: Figure 1. Regional Map
Figure 2. Survey Map
Appendix A: Confidential SCIC Records Search Information
Appendix B: Confidential NAHC Search Results and Tribal Correspondence

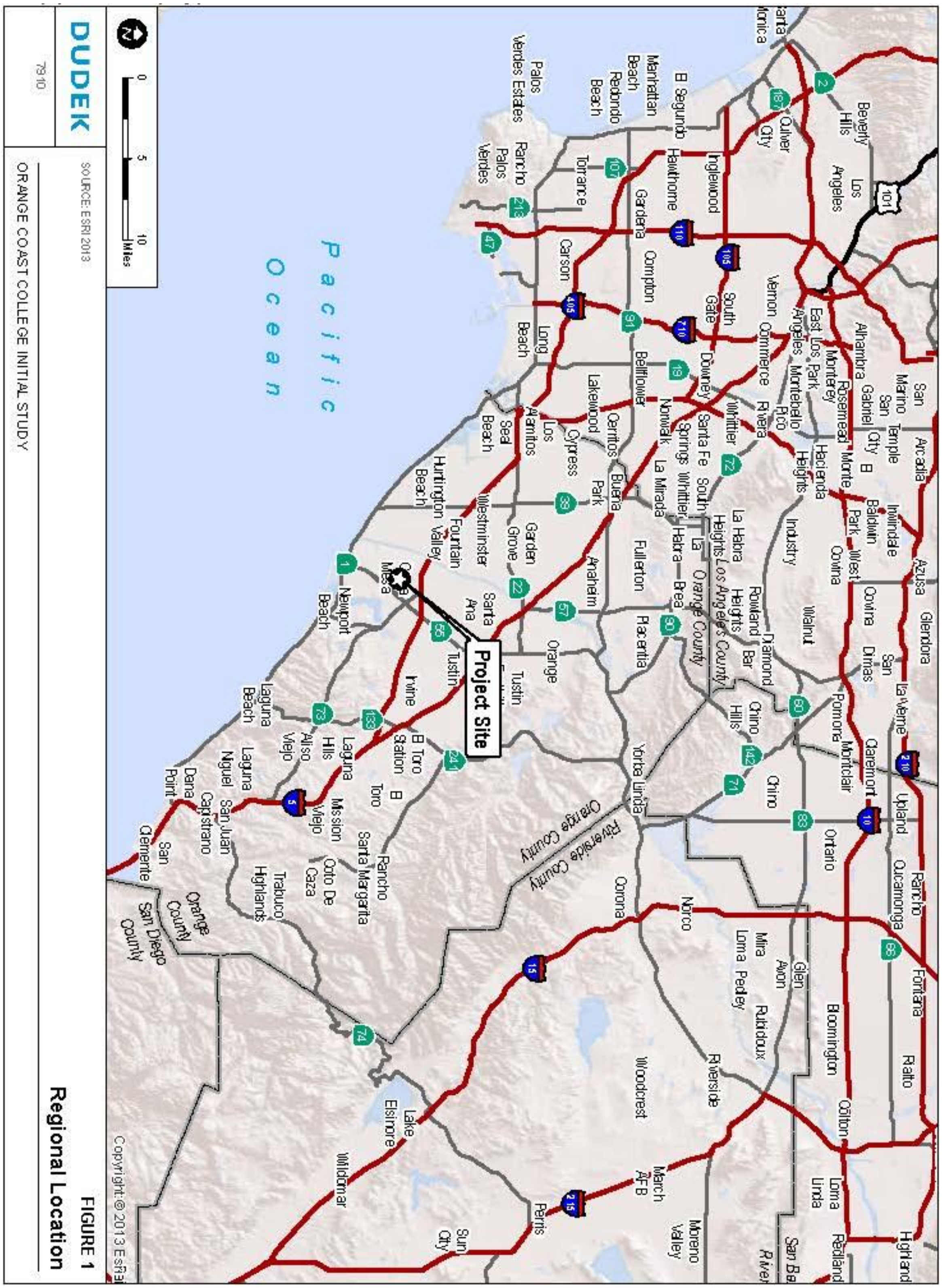
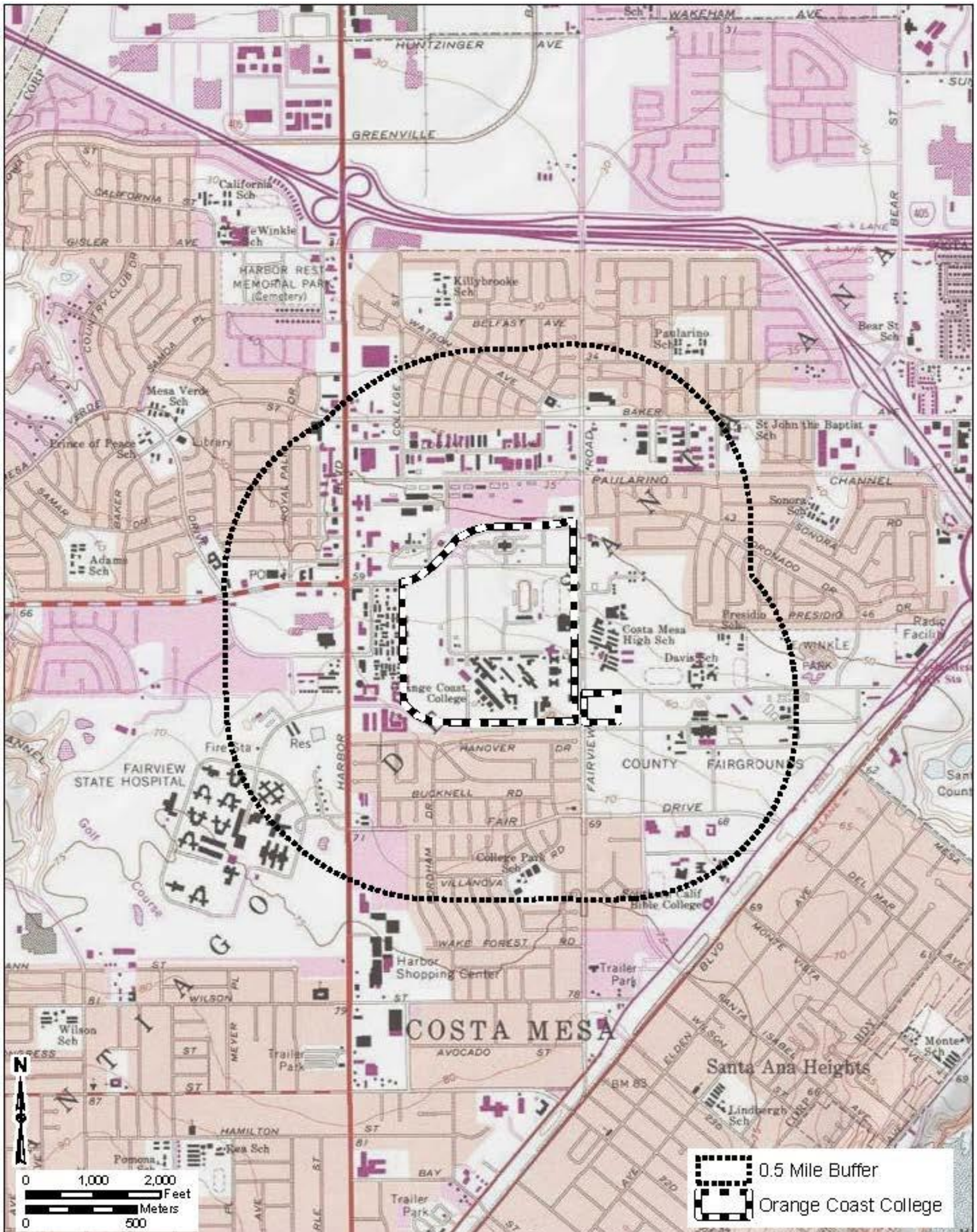


FIGURE 1

Regional Location



SOURCE: USGS Topo 7.5 Minute Series - Newport Beach Quadrangle
Township 16S / Range 10W / Section 02, 03, 04, 09, 10, 11

FIGURE 2
Project Vicinity

ORANGE COAST COLLEGE

Confidential Appendix A:
SCIC Records Search Results

Confidential Appendix B:
NAHC Sacred Lands File Search and Tribal Correspondence

HISTORIC RESOURCES TECHNICAL REPORT

VISION 2020 FACILITIES MASTER PLAN PROGRAM EIR

Historic Resources Survey, Evaluation, and Analysis of Potential Project Impacts

August 2015

ORANGE COAST COLLEGE
2701 Fairview Road, Costa Mesa, California

Prepared for:

Orange Coast College District
Facilities, Planning and Construction
1370 Adams Avenue, Costa Mesa, CA 92626

Prepared by:

Jan Ostashay Principal
Ostashay & Associates Consulting
PO BOX 542, Long Beach, CA 90801

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CONTENTS

LIST OF FIGURES

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1. INTRODUCTION

A. STATEMENT OF PURPOSE

This technical report documents and evaluates potential historic resources that may be affected by the implementation of the Orange Coast College Vision 2020 Facilities Master Plan (the proposed project). Orange Coast College (OCC) is one of three campuses operated by the Coast Community College District (District) within the county of Orange. This report is prepared to facilitate environmental compliance of the proposed project under the provisions of the California Environmental Quality Act (CEQA). The survey assessment includes a discussion of survey methods utilized, the jurisdictional framework for historical resources, a description of the subject property's environmental setting, a brief contextual history of the survey study area, an evaluation assessment of the property for historical significance, an analysis of potential project impacts on identified resources, and recommended mitigation measures for any potential adverse impacts to those resources identified as historically significant.

B. PROJECT LOCATION

The proposed project is located on the existing OCC campus in the City of Costa Mesa, California, within the central portion of Orange County (Figure 1-1, Regional Map). Primary freeway access to the campus is via Interstate 405 and State Routes 55 and 73, which are within minutes of the campus. OCC is bounded by Adams Avenue to the north, Fairview Road to the east, Merrimac Way to the south, and Harbor Boulevard to the west (Figure 1-2, Local Vicinity).

C. PROJECT BACKGROUND AND HISTORY

The District is updating its Facilities Master Plan for all three of its Orange County campuses: Orange Coast College, Golden West College, and Coastline Community College. The Vision 2020 Facilities Master Plan provides an analysis of the evolving student body and makes planning recommendations based on their educational needs. The District is undertaking a comprehensive improvement and building program to meet increasing enrollment and to make the upgrades and repairs of existing buildings as well as to construct new facilities to improve the safety and educational experience of those attending the colleges in accordance with Measure M. Measure M was passed in November 2012 and issued $698 million in bonds to fund the expansion of courses and academic buildings in engineering, math, science, and technology, as well as to upgrade technologies, construct and repair facilities, and improve resources for active military personnel and veterans at all three District campuses.

OCC is proposing to implement the proposed project to more effectively meet the space needs of the projected on-campus enrollment through the year 2020 and beyond while constructing and renovating facilities in order to meet the District's instructional needs. The construction of on-campus housing facilities, parking lot improvements, and construction of a parking structure would accommodate the projected increase in out-of-District students. Improved circulation in and around campus would increase accessibility to existing and new development, improve pedestrian and bicycle safety, and enhance the overall connectivity of campus uses. By pursuing joint venture and entrepreneurial opportunities, the District could generate revenue and support the academic needs and mission of the campus.

The overall goal of the proposed project is to provide the optimal physical settings to support the District's academic mission. The Vision 2020 Facilities Master Plan proposes the development of modern teaching and learning facilities that would attract students to OCC while providing the physical resources necessary to support the educational process.

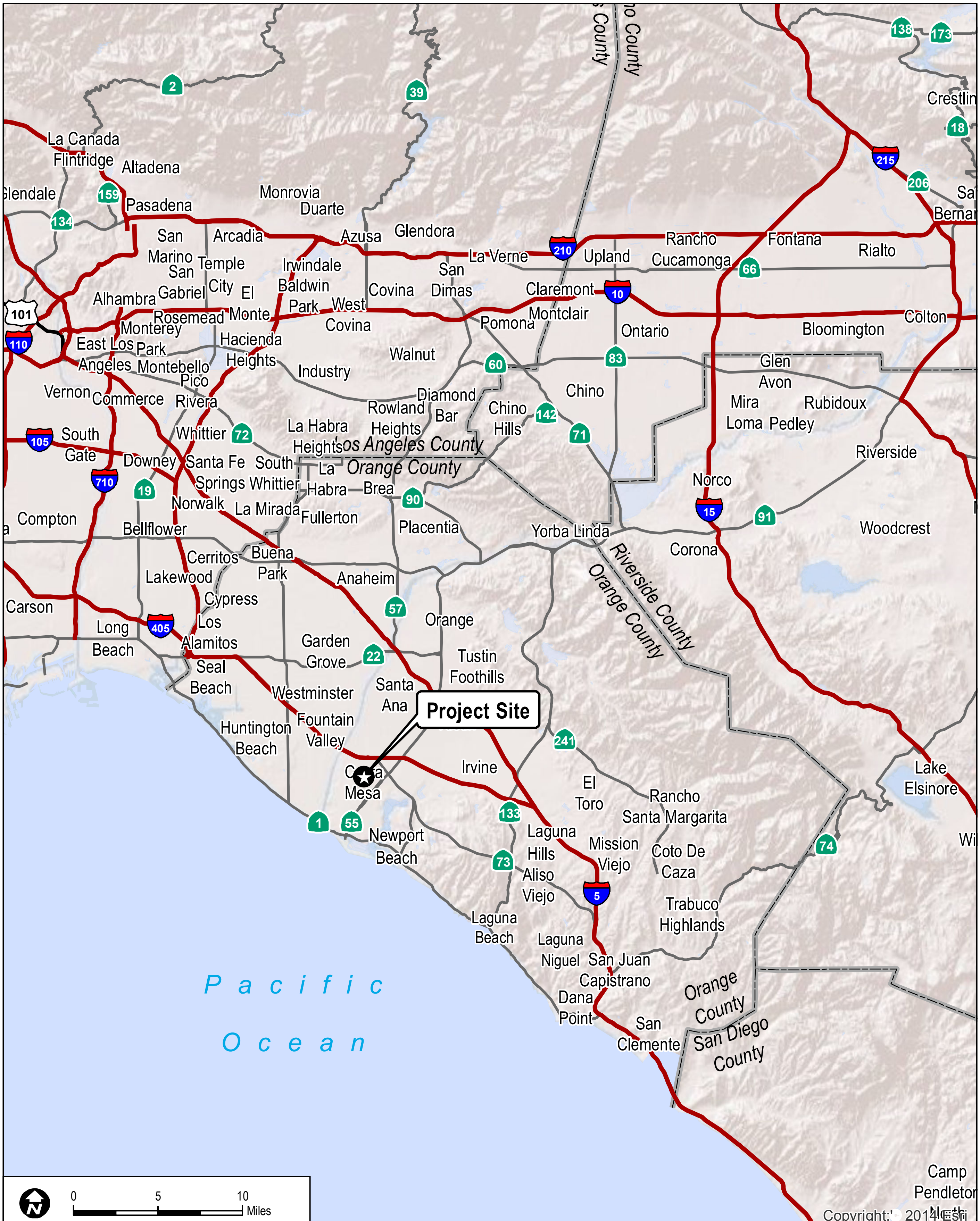
D. HISTORIC RESOURCES ASSESSMENT METHODOLOGY

In order to identify and assess historic resources, a multi-step methodology was utilized. A record search to identify previously documented historic resources was conducted. This search included a review of the National Register and its annual updates, determinations of eligibility for National Register listings, and the California Historical Resources Inventory database maintained by the State Office of Historic Preservation (OHP).

Site inspections of the project site were made to assess existing conditions, define the historic resources survey study area, document potential significant properties, and identify character-defining features of those properties evaluated as historically significant. A survey of the study area, including photography and the collection of archival background data, was then made. Additional background and site-specific research was conducted in order to evaluate potential historic resources within their proper historic context.

Criteria of the National Register, California Register, and the City of Costa Mesa were employed to assess the significance of the property. In addition, the survey methodology of the OHP was utilized. More specifically, in conducting the identification and evaluation of historic resources located within the study area, the following tasks were performed:

- Searched archival records of the National Register, California Historical Resources Inventory (HRI), and the City of Costa Mesa.
- Conducted field inspections of the study area and photographed the site and its features.



SOURCE: ESRI 2013

FIGURE 1-1

Regional Location

7910

Orange Coast College Vision 2020 Facilities Master Plan Historic Resources Technical Report

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SOURCE: Bing Imagery, 2015; Coast Community College Vision Plan, 2012; County of Orange.

FIGURE 1-2

Local Vicinity

7910

Orange Coast College Vision 2020 Facilities Master Plan Historic Resources Technical Report

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Collected and reviewed relevant historic images and archives including, but not limited to those at Orange Coast College, the Regional History Center at the University of Southern California, the Los Angeles Public Library, the County of Orange archives, and the University of California, Los Angeles.

- Conducted site-specific research on historic resources including a review of relevant architectural plans, building permits, tax assessor records, Sanborn Fire Insurance Maps, and other archival documents.
- Reviewed and analyzed previous documentation, ordinances, statutes, regulations, bulletins, and technical materials relating to federal, state, and local historic preservation, designation assessment processes, and related programs.

This historic resources survey assessment was conducted and prepared by Jan Ostashay, Principal, Ostashay & Associates Consulting, who satisfies the U.S. Secretary of the Interior's Professional Qualification Standards in history and architectural history.

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2. REGULATORY FRAMEWORK

Historic resources fall within the jurisdiction of several levels of government. Federal laws provide the framework for the identification, and in certain instances, protection of historic resources. Additionally, states and local jurisdictions play active roles in the identification, documentation, and protection of such resources within their communities.

Numerous laws and regulations require federal, state, and local agencies to consider the effects of a proposed project on historic resources. These laws and regulations stipulate a process for compliance, define the responsibilities of the various agencies proposing or overseeing the action, and prescribe the relationship among other involved agencies (e.g., State Historic Preservation Office and the Advisory Council on Historic Preservation). The National Historic Preservation Act (NHPA) of 1966, as amended; the California Environmental Quality Act (CEQA); the California Register of Historical Resources; Public Resources Code (PRC) 5024; and the City of Costa Mesa (Municipal Code, Title 13, Chapter IX, Article 14, Section 13-200.6-200.59) are the primary federal, state, and local laws governing and affecting preservation of historic resources of national, state, and local significance. A description of these laws and regulations is provided in the following paragraphs.

A. FEDERAL LEVEL

1. NATIONAL REGISTER OF HISTORIC PLACES

First authorized by the Historic Sites Act of 1935, the National Register of Historic Places (National Register) was established by the NHPA, as "an authoritative guide to be used by Federal, State, and local governments, private groups and citizens to identify the Nation's cultural resources and to indicate what properties should be considered for protection from destruction or impairment."[1] The National Register recognizes properties that are significant at the national, state and local levels. Further discussion of National Register criteria and guidelines is provided in Section 3, Environmental Setting, of this document.

B. STATE LEVEL

The California Office of Historic Preservation, as an office of the California Department of Parks and Recreation, implements the policies of the NHPA on a state-wide level. The OHP also carries out the duties as set forth in the Public Resources Code (PRC) and maintains the California

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[1] *Code of Federal Regulations (CFR), 36 Section 60.2.*

Historic Resources Inventory. The State Historic Preservation Officer (SHPO) is an appointed official who implements historic preservation programs within the state's jurisdictions. Also implemented at the state level, CEQA requires projects to identify any substantial adverse impacts which may affect the significance of identified historical resources. Further discussion of OHP survey methodology and specific criteria to determine the significance of a resource are also provided in Section 3, Environmental Setting, of this document.

1. California Register of Historical Resources

Created by Assembly Bill 2881, which was signed into law on September 27, 1992, the California Register is "an authoritative listing and guide to be used by state and local agencies, private groups, and citizens in identifying the existing historical resources of the state and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change."[2] The criteria for eligibility for the California Register are based upon National Register criteria.[3] Certain resources are determined by the statute to be automatically included in the California Register, including California properties formally determined eligible for, or listed in, the National Register of Historic Places.[4]

The California Register consists of resources that are listed automatically and those that must be nominated through an application and public hearing process. The California Register automatically includes the following:

- California properties listed on the National Register of Historic Places and those formally Determined Eligible for the National Register of Historic Places;
- California Registered Historical Landmarks from No. 770 onward;
- Those California Points of Historical Interest that have been evaluated by the OHP and have been recommended to the State Historical Commission for inclusion on the California Register.[5]

Other resources which may be nominated to the California Register include:

- Individual historical resources;
- Historical resources contributing to historic districts;

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2 *California Public Resources Code Section 5024.1(a).*

3 *California Public Resources Code Section 5024.1(b).*

4 *California Public Resources Code Section 5024.1(d).*

5 *California Public Resources Code Section 5024.1(d).*

- Historical resources identified as significant in historical resources surveys with significance ratings of Category 1 through 5;
- Historical resources designated or listed as local landmarks, or designated under any local ordinance, such as a historic preservation overlay zone.[6]

2. CALIFORNIA ENVIRONMENTAL QUALITY ACT

Under CEQA, a "project that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment."[7] This statutory standard involves a two-part inquiry. The first involves a determination of whether the project involves a historical resource. If so, then the second part involves determining whether the project may involve a "substantial adverse change in the significance" of the historical resource. To address these issues, guidelines that implement the 1992 statutory amendments relating to historical resources were adopted in final form on October 26, 1998 with the addition of State CEQA Guideline Section 15064.5. The State CEQA Guidelines provide that for the purposes of CEQA compliance, the term "historical resources" shall include the following:[8]

- "A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources.
- A resource included in a local register of historical resources, as defined in section 5020.1(k) of the Public Resources Code or identified as significant in a historical resource survey meeting the requirements in section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
- Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be a historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources, including the following:

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6 *California Public Resources Code Section 5024.1(e).*
7 *California Public Resources Code Section 21084.1 – Added in 1992 by AB 2881.*
8 *State CEQA Guidelines, 14 CCR Section 15064.5(a).*

a. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

b. Is associated with the lives of persons important in our past;

c. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

d. Has yielded, or may be likely to yield, information important in prehistory or history.

- The fact that a resource is not listed in, or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to section 5020.1(k) of the Public Resources Code), or identified in a historical resources survey (meeting the criteria in section 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be a historical resource as defined in Public Resources Code sections 5020.1(j) or 5024.1."

C. LOCAL LEVEL

1. City of Costa Mesa

The City of Costa Mesa enacted its historic preservation ordinance (Article 14, Chapter IX of Title 13 in the City's Municipal Code) in October 1999. The City's preservation ordinance is the primary body of local laws relating to historic preservation. The ordinance allows the City to establish a Local Register of Historic Places, which is a list of all designated cultural resources, landmarks, and historic districts within the community. According to the ordinance, Local Register designation may include any building, structure, site, object, district, improvement, or natural feature that is over fifty (50) years old or, in special circumstances under fifty years of age, if it meets the significance criteria of the National Register or exemplifies or reflects the broad cultural, political, social, economic, or architectural history of the City; is identified with important personages or historical events; embodies distinctive architectural characteristics; or represents the work of a notable builder, designer, or architect. The preservation ordinance also recognizes and considers the significance of cultural and archaeological resources.

3. Environmental Setting

A. HISTORIC CONTEXT

1. City of Costa Mesa[9]

Early History

The first Europeans to see what would become Orange County were members of the 1542 expedition of Juan Rodriguez Cabrillo. Cabrillo sailed along the coast but did not explore inland. Europeans did not return to the Orange County area until the summer of A.D. 1769, when Don Gaspar de Portola aided by Father Junipero Serra led an overland expedition north from Mexico in search of Monterey Bay. The first permanent Euro-American settlement in Orange County was established when a spot along the El Camino Real, where it crossed San Juan Creek, was selected as the site for a Franciscan religious mission in the spring of 1775. The new San Juan Capistrano Mission did not become fully operational until November 1776 and was eventually relocated to slightly higher ground 3.5 miles southwest to its present site in 1778.

Large tracts of land fell under Mission San Juan Capistrano's authority under Spanish law. The area was once grazing grounds for cattle belonging to Mission San Juan Capistrano. Just after the turn of the 19th century, as a means to encourage effective occupation, the Spanish Crown issued large land grants. On July 1, 1810 Governor Jose Joaquin Arrillaga awarded the Rancho Santiago de Santa Ana to Jose Arrillaga Yorba and his nephew Juan Pablo Peralta. This land grant contained approximately 62,500 acres. Costa Mesa is situated on a portion of this old Spanish land grant.

Early Development of Costa Mesa

The history of Costa Mesa is the story of three communities of the past that included an old boomtown called Fairview; the Boston farming colony of Paularino (Polloreno); and the village of Harper that all once thrived within Costa Mesa's city limits.

By the 1880s, settlers had begun buying portions of the rancho land from Yorba's heirs and in the same decade established the town of Fairview. The town was centered around the present day intersection of Adams Avenue and Harbor Boulevard. Over the next few years

[9] *Adapted from "A Hundred Years of Yesterdays: A Centennial History of the People of Orange County and their Communities" by Karen Turnbull, 1988.*

development of Fairview grew at a rapid pace with a post office, school house, church, and corner drug store constructed. A narrow gauge train line, the Santa Ana, Fairview & Pacific Railroad, was brought in from the county seat, Santa Ana to provide visitors access to the nearby hot sulfur springs. Despite attempts to promote the continuing development of Fairview, by the spring of 1889 the little town began to collapse. After a storm washed out the railroad in mid-March many of the residents began to leave and the once successful business establishments were closed. Much of the area eventually reverted to farming and agriculture.

Another little town was founded on Costa Mesa land in the late 1800s by Eduardo Polloreno (Paularino), who came into possession of the land when the Rancho Santiago de Santa Ana was partitioned. The first settlers came from Boston, Massachusetts to Polloreno in the spring of 1886. This settlement contained roughly 800 acres and was bounded by today's Fairview Road on the west, Newport Boulevard on the east, the San Diego Freeway on the north, and by a line about 1.5 miles south of Baker Street. Much of the land was split up for small farms and the growing of various crops. Unfortunately, without a business center the community could not thrive and develop. The static growth of Polloreno eventually led to its demise. Only the Paularino street signs are left as a reminder of this small agricultural settlement.

Just early into the 20th century the little town of Harper, named after rancher Gregory Harper, Jr., was founded to the south after the discovery of oil promoted further settlement and development. Near the close of 1908, a large two-story structure with a general store and post office was constructed on the northeast corner of 18th Street and Newport Boulevard. Most of the population was centered between Newport Boulevard on the west, Orange Avenue on the east, 17th Street on the south, and 19th Street on the north. The Harper Methodist Episcopal Church, considered a permanent church facility, was constructed in 1915 at the southwest corner of Center Street and Newport Boulevard. Further tract development, an available water supply, the expansion of road construction and auto facilities, and the broadening of farm goods all added to the permanence of this town. The farming community of Harper was renamed in 1920 to Costa Mesa, the Spanish equivalent of "coastal tableland." This is a reference to the city's geographic location as being on a plateau by the coast.

Between 1920 and 1940, the population of Costa Mesa grew from 200 to 4,692. With the increase in population the development of commercial activity and construction also increased. Many stores, markets, garages, banks and other industries were constructed along the busy thoroughfare of Newport Boulevard. The Costa Mesa Grammar School was constructed on a five-acre plot at the northwest corner of 19th Street and Newport Boulevard in 1923. The previous year the town's Chamber of Commerce formed.

With the onset of the Great Depression a number of public schools managed to be constructed. The Monte Vista School at the corner of Center and Placentia avenues was erected in 1930 and the Lindbergh Grammar School in 1931. Unfortunately, the economics of the time caught up and the Costa Mesa branch of the Bank of Balboa was closed in 1932 and the rail line of the Southern Pacific Railroad, which ran from Santa Ana to Newport Beach along Newport Boulevard, was abandoned. The Long Beach earthquake of 1933 also damaged many buildings, businesses, and school facilities. Most of these improvements were re-built and continued operation.

World War II brought thousands of people to the area for training at the Santa Ana Army Air Base (SAAAB). When the war ended many of these men and women returned to their families and the base was eventually decommissioned; a portion of which was converted for use as a junior college that became Orange Coast College. On June 29, 1953, Costa Mesa was formally incorporated with a population of 16,840 covering an area of 3.5 square miles. Within three decades the city's population had nearly quintupled.

Residential tract building in Costa Mesa began in earnest following World War II with builders constructing contemporary ranch homes in styles popular of the time. Large-scale residential developments included the huge "Newport Vista" home project better known as "The Freedom Homes" tract that began in 1953; the Sunshine Homes development in 1955; the Halecrest Tract in 1955; the College Park Homes just south of OCC in 1956; the Cinderella Homes (Costa Mesa Estates) in 1956; among others.

New public facilities including the Police Department structure, fire station, public library, post office, and City Hall were built in the 1960s. From 1966 to 1970 other types of commercial, financial, and industrial facilities were constructed within the City. Acres of bean fields along Bristol Street and adjacent to the 405 San Diego Freeway became South Coast Plaza, one of the largest shopping centers in southern California. Construction of the financial center of South Coast Town Center, located on the east side of Bristol Street across from the South Coast Plaza, was also constructed in 1967.

Over the past forty years new construction and redevelopment of many areas within the city have occurred and continues to date. The community's history is evident in its built environment and architecture.

2. Santa Ana Army Air Base

Despite its growth over the many years, prior to World War II Costa Mesa continued to reflect a small town atmosphere. Though with the onset of the war the growth of the community was about to be accelerated. As world tensions mounted, additional military installations were planned throughout the nation. Formal ground breaking ceremonies for the United States Air Corps Replacement Training Center took place on October 23, 1941. The first aviation cadets arrived in February of 1942. A few months later the base was renamed the Santa Ana Army Air Base (SAAAB). It consisted of three schools: the Air Force Classification Center; the Air Force Pre-Flight School for pilots; and the Air Force Pre-Flight School for bombardiers and navigators. The base eventually reached the size of 1,283 acres and included the territory west from Newport Boulevard to Harbor Boulevard, south from Warehouse Road to the present Southern California College. The main gate was located on Newport Boulevard. What is now the Orange County Fairgrounds, Orange Coast College, and the City's Civic Center were all areas that comprised portions of the SAAAB. On base were a main post office and five branches, a post exchange with five branches, three movie theaters, a service club, a library, four chapels, and a 1,500-bed hospital.

From 1942 through 1945, the war and the training activities at the SAAAB dominated Costa Mesa life. After the war, SAAAB housed German prisoners of war. They were placed in barracks near the northeast corner of the facility. With an oversupply of military training facilities created during World War II the War Department had to reduce its base structure. Many of the bases throughout the country were either realigned or decommissioned. On March 31, 1946, the base officially became inactive. A skeleton crew of some 300 civilian and military personnel was retained to protect property until its final disposal. The War Assets Administration took over control of the SAAAB from the Army on June 24, 1947. They in turn began advertising the site for sale to various Federal agencies, state and municipal governments, educational institutions, and finally private purchasers.

3. Orange Coast College

In late September of 1947, the Orange Coast College District bid on land and buildings at the inactive SAAAB for its new junior college campus. During the latter part of January, 1948, title to roughly 243 acres of land on the northern section of the old base was turned over to Orange Coast College from the War Assets Administration. The deal included seventy-one buildings that contained 285,000 square feet. Four of the barracks were remodeled as living quarters for student veterans and their families. Two were remodeled and used for dormitories and two for apartments. In addition, the base theater was converted into a school auditorium, the service club into a gymnasium, a mess hall into a cafeteria, a chapel was renamed "Veteran's Memorial Chapel," and the other former barracks buildings became classrooms. The college held an open house on September 10, 1948, with classes started three days later.

At the authorization by the Orange Coast Junior College District Board of Trustees (Board), the initial master plan for the campus was created by Los Angeles architect and planner Robert E. Alexander who also designed the first few buildings on site. He was assisted by local Corona del Mar architect Richard Pleger who worked as associate architect on the project. With the partnership of Richard Neutra and Alexander contracted in 1952, the two architects worked on the planning and architecture of the new OCC campus and furthered the seven year master plan to realization. The agreed upon scope for the Neutra and Alexander work was that each would make basic conceptual idea/design contributions with Neutra taking chief responsibility for the architectural design and Alexander assuming control of planning, organization, public relations, and logistics. Neutra provided design ideas for a business education building (complex), a science building (complex), an athletic facility, and a speech arts and music center with a large theatre. All the while, the architects were assisted by associate architect Richard Pleger who was hired on to help coordinate the projects locally; act as liaison between the architects, the Board, and contractors; and provide general assistance. The OCC campus developed incrementally over a period of several years. The master plan, simple with minimal new improvements in the beginning, grew and expanded as the student population increased and the demand for more classroom space for varied curriculum was needed. Neutra and Alexander's work at the campus occurred throughout much of the 1950s. The partnership of Neutra and Alexander; however, eventually dissolved in the late 1950s and their work with the District ceased after completion of the seven year master plan.

At the same time the campus was being initially developed with new construction through much of the 1950s, Neutra and Alexander collaborated with noted landscape architect Garrett Eckbo to assist them in creating a landscape that complemented the Modernist architectural features of the campus and which would help to further unify the campus physically and visually. Eckbo introduced tall trees, including pine, palm, and eucalyptus, within the campus and along its perimeter of the campus site to act as wind screens from the persistent southwest breezes that fanned the campus. He also included softscape elements around each of the classroom buildings, within the various open patios areas, and between each of the well-designed brick "privacy" walls that lined some of the walkways. He designed an interesting cross hatch of paved walkways to physically and aesthetically connect the buildings together. Collectively, the architecture and landscaping created a rather modernistic educational facility reflective of its time and period, and which allowed for the merging of the indoor and outdoor environs. The consideration of orientation, material choice, scale and design, the immediate indoor and outdoor environs utilized in the planning and design of the OCC campus are planning techniques that have since come to be known as environmental design, a trend advocated and promoted by Neutra for years.

The second phase of campus development occurred when Richard Pleger teamed with local master architect William E. Blurock as well as with architect Rumont W. Hougan (and later with Philmer Ellerbroek) to form Pleger, Blurock, Hougan and Ellerbroeck. Under their guard the architects completed the Homes Economics complex in 1958, designed the new Modern style gymnasium and associated men's and women's locker rooms in 1961-1962, designed the stylistically Modern Forum building in 1960, and the complementary Science Hall in 1964, among other smaller projects on the school grounds.

The campus continued to expand and develop with the construction of a new library, the Norman E. Watson Library, in the late 1960s. In the 1970s the third major building phase took place when William Blurock was called upon again to design new classrooms, offices, and other educational facilities on the campus. More recent development on campus has occurred including the construction of a new art center by Steven Ehrich in 2002 and the ABC Building by LPA, Inc. in 2011.

4. Robert E. Alexander, Architect and Urban Planner

Robert Evan Alexander was a distinguished architect and urban planner whose work primarily included large-scale commercial buildings, military housing, college campuses, churches, and other public projects. Born in 1907, Alexander graduated from Cornell University with a degree in architecture in 1930, and in the following years studied at the Academie Beaux Kinds in Paris as well as in Italy and Spain. He came to California in 1932 and for the next ten years held various positions with different architectural firms until he went to work for Lockheed Aircraft in Burbank in 1942. Between 1946 and 1949 Alexander practiced as an independent architect. His innovative ideas for affordable housing produced the nationally prominent Baldwin Hills Village in southwest Los Angeles. Only a few years after operating his own design studio he went into partnership with noted architect Richard J. Neutra to form the firm Neutra and Alexander. The partnership eventually dissolved in the late 1950s due to personal differences, but not before they collaborated on a number of large-scale public projects, including the campus design of Orange Coast College in Costa Mesa. With Neutra he also designed the visitor centers, museum and cyclorama at the Gettysburg National Historic Park; the Petrified Forest visitor center in Arizona; the Los Angeles County Hall of Records; and the American Embassy in Karachi, Pakistan. Other projects included buildings at UCLA, USC, and Cal Tech. In 1959, the accomplished architect founded his own architectural practice, Robert E. Alexander & Associates, following the resolution of the Neutra and Alexander partnership. Locales of his yet other projects ranged from Juarez, Mexico to Anchorage, Alaska. He died in 1992 from cancer in Berkeley at the age of 84.

5. Richard J. Neutra, Architect

Richard Joseph Neutra was a prominent and widely influential Modern architect who practiced globally for over fifty years. Neutra was born in Vienna, Austria in 1892. He studied architectural engineering at the Institute of Technology and graduated in 1918. He attended the University of Zurich in Switzerland for his post-graduate studies until 1919. After World War I, Neutra worked in Germany briefly with architect Erich Mendelsohn before immigrating to the United States in 1923. After a brief stay in New York, he arrived in the Chicago area where he worked briefly with both Frank Lloyd Wright and Holabird & Roche. In 1925, Neutra settled in California, where he worked for the remainder of his career. He immediately joined the firm of fellow Vienna native, Rudolph Schindler. In 1949, Neutra and fellow architect Robert E. Alexander established a partnership dedicated to project planning and of public and commercial architecture. Together they were responsible for planning and designing many high-profile projects throughout California. The partnership ended in 1960 due to personal differences. Neutra then established a new firm – Neutra and Associates – with his son Dion Neutra, who continued the practice after his father's death in 1970.

Richard Neutra's architectural style was distinctly Modern, but with an emphasis on organic lines, natural materials, and integration of the outdoors. Neutra coined his philosophy of architecture "Biorealism" because of his insistence that Modern architecture be humanistic and recognized the client's needs for comfort and aesthetic pleasure. His later work evolved to project a warmer and more relaxed character compared to his earlier projects that were the embodiment of the International Style. His focus on the concept of transparency, distortion of visual indoor and outdoor spatial relationships, and the refinement of his trademark "spider leg" out riggings were well incorporated into many of his later works.

Richard Neutra's signature works include Modern residences in California, such as the Lovell House built in Los Angeles from 1927 to 1929; housing projects designed for the Federal Housing Authority from 1945; and several Case Study Houses designed and built from 1945 to 1948 in partnership with *Arts and Architectural* magazine in an effort that included other notable Modern architects such as Charles and Ray Eames and Eero Saarinen. In addition to homes, Neutra, some in partnership with Alexander, designed many distinguished public buildings, including the Channel Heights housing project in San Pedro, 1932; the Los Angeles Hall of Records, 1961-1962; the U.S. Embassy in Karachi, Pakistan, 1961; and many educational facilities such as Emerson Jr. High School in West Los Angeles, 1938; Palos Verdes High School in California, 1961; the Fine Arts Building at Cal State Northridge, 1961; the Kester-Avenue Elementary School in Los Angeles, 1951; the Richard J. Neutra Elementary School in Lemoore, 1961; and the Orange Coast College campus from the 1950s to the early 1960s.

Neutra influenced numerous young architects through his role as an educator at Harvard, Princeton, Yale, Massachusetts Institute of Technology, the Illinois Institute of Technology, and other colleges and universities. Additionally, through the course of his career Neutra published many books including *Architecture of Social Concern*, 1948; *Mystery and*

Realities of the Site, 1951; *Survival Through Design*, 1954; *Richard Neutra-Mensch Und Wohnen,* 1956; *Life & Human Habitat*, 1956; and *Realisimo Biologico*, 1958.

Richard J. Neutra is considered one of the world's most influential modern architects. His innovative and open plan designs express the freedom from conventions that many find in southern California. In 1949 he was featured on the cover of *Time* magazine and hailed for having humanized modern architecture. In 1955, the Richard Neutra archive was established at the University of California, Los Angeles. In 1977 he was posthumously awarded the AIA's highest honor, the Gold Medal.

Those buildings at the Orange Coast College campus that were designed by Neutra are indicative of his "Biorealism" architectural philosophy and stylistic conventions for modern educational facilities at the time. This collection of buildings is the oldest physical manifestation of his small portfolio work within the Orange County region. Neutra's other works in the area include the Garden Grove Community Church, 1961; the Mariners Medical Arts Building in Newport Beach, 1963; and the Huntington Beach Central Library, 1975.

6. Garrett Eckbo, Landscape Architect

Garrett Eckbo is recognized as one of the central figures in American modern landscape architecture whose career spanned five decades. Eckbo worked to change the typical formal Beaux-Arts system of landscape design as his work demonstrated innovative design ideas in a social and economic setting. He was known for thinking of the "broad landscape and society first, before focusing on the garden," a notion that was reflected in the types of work he was commissioned for during his career. His designs were centered on the garden, which he believed was the prototype for all landscape design. His work was influenced by modernist European architecture, modern art, and vernacular landscape traditions.

Born in Cooperstown, New York in 1910, he relocated with his family to Alameda, east of San Francisco, after his mother and father divorced in 1912. A graduate of the University of California at Berkeley, Eckbo went to do graduate work at the Harvard School of Design. Even before he graduated, Eckbo published the first of a long line of studies and books on landscape architecture, entitled "Small Gardens." The study focused on how creative gardens could be designed for increasingly small lots. After graduating, he went on to form numerous architecture and planning partnerships, designing gardens and working on plans for camps and recreational facilities for the New Deal's Farm Security Administration. From 1942 to 1945, he participated in the World War II effort by contributing landscape designs for defense housing in the San Francisco region. In the post-war years he founded a firm with Robert Royston and Edward Williams that focused primarily on suburban parks and planned communities. He headed south to Los Angeles in 1946 to establish an extension of the firm with Francis Dean. In the years that followed, the firm's projects included a multitude of garden designs and collaborations with Modernist architects, such as architects Robert Alexander and Richard Neutra, on several large-scale planning and development ventures. As Alexander worked on the basic site for the new modern Orange Coast College he brought Eckbo in to help integrate a landscape plan that was both functional and aesthetically pleasing.

During the 1960s, Eckbo was commissioned with the strategic open space plan for the entire state of California. Eckbo was an accomplished designer of campus landscapes. Among his best-known commissions are studies and designs for several University of California campuses, Loyola University in Los Angeles, Ambassador College, the University of New Mexico, and Orange Coast College. Several lesser-known campuses include all of the schools in the Whittier Public School District and many of school campuses in the Long Beach Public School District.

In 1964, Eckbo went on to form EDAW with Dean, Austin, and Williams. During the 1960s Eckbo, working with EDAW, designed the landscape for the Ambassador College in Pasadena. EDAW become one of the foremost private planning and landscape architecture firms in the world. They were later purchased by AECOM in 2009, but remain involved with large-scale urban projects.

7. Pleger, Blurock, Hougan, and Ellerbroeck, Architects

Richard H. Pleger (1908-2010) had worked with Robert Alexander early-on and later with both Neutra and Alexander at the OCC campus. By the mid-1950s the Board had authorized his work to design the entrances to the campus off Harbor Boulevard and later along Fairview Road. Although originally from Kansas, he studied at the University of Southern California from 1926 to 1929 earning an architectural degree. Professionally, little is known about Pleger as the 1956 *American Architects Directory* lists only his name and business address. Both the 1962 and 1970 *American Architects Directory* lists his previous firm as Pleger, Blurock, Hougan, and Ellerbroeck and at that time he was practicing architecture under his name part-time (as he was listed as semi-retired in Corona del Mar).

William H. Blurock, FAIA (1922-2012) was a Newport Beach architect whose work from the 1950s through the 1970s was considered visionary in the burgeoning field of modern educational design. Over his long career, Blurock guided the planning and design of buildings on 32 California college campuses, and scores of other educational facilities throughout the state, including Orange Coast College and the University of California, Irvine. A Los Angeles native, Blurock was a 1947 graduate of the University of Southern California, School of Architecture. In 1993, he was honored as the Distinguished Alumnus of the architecture school and was elected an AIA Fellow in 1968 for outstanding contributions to the design and science of construction. By 1970, Blurock's architectural practice was listed as William Blurock & Parnters, a successor to William H. Blurock & Associates. He served on the local AIA Orange County chapter as president and as an AIA national director in the late 1970s. He was appointed by Governor Ronald Reagan to the California State Board of Architectural Examiners for which he served 13 years.

Architect Rumont W. Hougan (1912-2005) was an architect who had worked as a draftsman for noted architect Myron Hunt and H.L. Chambers in the late 1930s and later for master architect Gordon B. Kaufman. Born in Rock Valley, Iowa he studied architecture at the University of Nebraska from 1931 to 1933. He joined Richard Pleger's office in Corona del Mar in 1947, partnered in 1952, and later became part of the Pleger, Blurock, Hougan and Ellerbroek design team. The *American Architects Directory* (1956, 1962, 1970) lists Hougan as a practicing architect in Corona del Mar without any projects credited to his name. He had his own architectural practice from 1960 to 1970 and joined the firm of Rolly Pulaski, a Newport Beach architect, in 1970. He was also a member of the local AIA Orange County chapter and a member of their historic preservation committee.

Philmer J. Ellerbroek (1905-1969) from Sioux City, Iowa also studied at the University of Southern California graduating in 1928. He was a member of the AIA Orange County chapter having served as president in 1954 and was later elected as an AIA Fellow in 1967. He established his own practice in 1946 and later became a partner in Pleger, Blurock, Hougan and Ellerbroek in the late 1950s. He served on the Newport Beach Planning Commission from 1940 to 1950. In reviewing the *American Architects Directory* (1956, 1962) besides his work with the firm herein at the OCC campus, other representative examples of his work include the design of a department store in Corona (1952), a number of elementary schools in Newport Beach (1955), and an office building in Newport Beach (1955). He went on to join William H. Blurock in the 1960s to establish Blurock Ellerbroeck & Associates and later established his own private practice.

B. EXISTING CONDITIONS

The OCC campus occupies an approximately 160-acre site in the City of Costa Mesa in central Orange County. The project site is surrounded by the cities of Santa Ana to the north, Fountain Valley and Huntington Beach to the west, Newport Beach to the south, and Irvine to the east. OCC, like most of Costa Mesa, is located on flat terrain. The Santa Ana River passes 1.5 miles west of the campus and drains into the Pacific Ocean located 4 miles southwest of the campus. The campus is within the vicinity of John Wayne International Airport located 2 miles east from OCC.

The campus is situated in an urbanized setting. North of the campus, across Adams Avenue, are high-density residential developments (multi-family residences), and low-density residential developments (single-family dwellings) are south of Merrimac Way. Costa Mesa High School and the Orange County Fair and Event Center (OC Fairgrounds) are located to the east across Fairview Road, and commercial and residential development is located to the west of the campus along Harbor Boulevard. The District headquarters is situated along the north side of Adams Avenue just west of the Adams Avenue campus entry into the OCC campus. OCC is accessible from the surrounding areas by three primary access points: Pirate Way, Monitor Way, and S Street.

The OCC campus is one of three colleges of the District. Occupying land that was once part of the Santa Ana Army Air Base developed during World War II, OCC still remains under government ownership and is designated as Public/Institutional Land. Currently, the OCC campus contains more than 80 buildings and multiple recreational fields that occupy 647,603 assignable square feet (ASF) of space. In addition, there is 4,348 square feet of inactive space.

The northwest corner of the site currently contains undeveloped land, some of which is used for parking. Classrooms and academic buildings are predominately in the center to the south end of the campus. Athletic buildings and fields make up the majority of the northeast corner of the campus grounds. Parking lots are located all throughout the campus, but are mainly found along the perimeter. The OC Fairgrounds parking lot across Fairview Road to the east serves as additional off-site parking for students. An additional feature to this campus is a recycling center on the north side of the campus, which provides additional revenue to OCC.

C. CRITERIA FOR EVALUATION OF HISTORIC RESOURCES

In assessing the historic significance of properties located within the study area, various criteria for designation under federal, state, and local landmark programs were considered and applied. The California Office of Historic Preservation survey methodology and instructions were used to evaluate the relative significance of properties.

1. National Register of Historic Places Criteria

To be eligible for listing in the National Register, a resource must be significant in American history, architecture, archaeology, engineering, or culture. Districts, sites, buildings, structures, and objects of potential significance must also possess integrity of location, design, setting, materials, workmanship, feeling, and association. For National Register consideration four criteria have been established to determine the historical significance of a resource: [10]

Criteria

A property of potential significance must meet one or more of the following four established criteria:

A. It is associated with events that have made a significant contribution to the broad patterns of our history;

B. It is associated with the lives of persons significant in our past;

C. It embodies the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction;

D. It yields, or may be likely to yield, information important in prehistory or history.

A property eligible for the National Register must meet one or more of the above criteria. In addition, unless the property possesses exceptional significance, it must be at least fifty years old to be eligible for National Register listing.

Integrity

In addition to meeting the criteria of significance, a property must have integrity. "Integrity is the ability of a property to convey its significance."[11] According to *National Register Bulletin 15*, the National Register recognizes seven aspects or qualities that, in various combinations, define integrity. To retain historic integrity a property will always possess several, and usually most, of these seven aspects. Thus, the retention of the specific aspects of integrity is paramount for a property to convey its significance.[12] The seven factors that define integrity are location, design, setting, materials, workmanship, feeling and association. The following is excerpted from *National Register Bulletin 15,* which provides guidance on the interpretation and application of these factors:

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[10] *Guidelines for Completing National Register Forms, National Register Bulletin 16, U.S. Department of Interior, National Park Service, September 30, 1986 ("National Register Bulletin 16"). This bulletin contains technical information on comprehensive planning, survey of cultural resources and registration in the National Register of Historic Places.*

[11] *National Register Bulletin 15, p. 44.*

[12] *Ibid.*

- Location is the place where the historic property was constructed or the place where the historic event occurred.[13]
- Design is the combination of elements that create the form, plan, space, structure, and style of a property.[14]
- Setting is the physical environment of a historic property.[15]
- Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.[16]
- Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.[17]
- Feeling is a property's expression of the aesthetic or historic sense of a particular period of time.[18]
- Association is the direct link between an important historic event or person and a historic property.[19]

[13] *"The relationship between the property and its location is often important to understanding why the property was created or why something happened. The actual location of a historic property, complemented by its setting is particularly important in recapturing the sense of historic events and persons. Except in rare cases, the relationship between a property and its historic associations is destroyed if the property is moved." Ibid.*

[14] *"A property's design reflects historic functions and technologies as well as aesthetics. It includes such considerations as the structural system; massing; arrangement of spaces; pattern of fenestration; textures and colors of surface materials; type, amount, and style of ornamental detailing; and arrangement and type of plantings in a designed landscape." Ibid.*

[15] *Ibid, p.45.*

[16] *"The choice and combination of materials reveals the preferences of those who created the property and indicated the availability of particular types of materials and technologies. Indigenous materials are often the focus of regional building traditions and thereby help define an area's sense of time and place." Ibid.*

[17] *"Workmanship can apply to the property as a whole or to its individual components. It can be expressed in vernacular methods of construction and plain finishes or in highly sophisticated configurations and ornamental detailing. It can be based on common traditions or innovative period techniques." Ibid.*

[18] *"It results from the presence of physical features that, taken together, convey the property's historic character." Ibid.*

[19] *"A property retains association if it is the place where the event or activity occurred and is sufficiently intact to convey that relationship to an observer. Like feeling, association requires the presence of physical features that convey a property's historic character. . . Because feeling and association depend on individual perceptions, their retention alone is never sufficient to support eligibility of a property for the National Register." Ibid.*

In assessing a property's integrity, the National Register criteria recognize that properties change over time, therefore, it is not necessary for a property to retain all its historic physical features or characteristics. The property must retain, however, the essential physical features that enable it to convey its historic identity.[20]

For properties which are considered significant under National Register Criteria A and B, *National Register Bulletin 15* states that a property that is significant for its historic association is eligible if it retains the essential physical features that made up its character or appearance during the period of its association with the important event, historical pattern, or person(s).[21]

In assessing the integrity of properties which are considered significant under National Register Criterion C, *National Register Bulletin 15* provides that a property important for illustrating a particular architectural style or construction technique must retain most of the physical features that constitute that style or technique.[22]

CONTEXT

To be eligible for listing in the National Register, a property must also be significant within a historic context. *National Register Bulletin 15* states that the significance of a historic property can be judged only when it is evaluated within its historic context.[23] Historic contexts are "those patterns, themes, or trends in history by which a specific…property or site is understood and its meaning…is made clear." A property must represent an important aspect of the area's history or prehistory and possess the requisite integrity for the National Register.

CULTURAL LANDSCAPES

The National Park Service recognizes landscape features as a type of resource that can contribute to the significance of a historic district. To further understand and assess the contribution of significant landscape features the concept of a *cultural landscape* is useful as a framework for evaluation.

National Register Bulletin 30: How to Evaluate and Document Rural Historic Landscapes (NPS 1989) and *Preservation Brief 36: Protecting, Treatment and Management of Historic*

[20] *Ibid, 15, p. 46.*

[21] *Ibid.*

[22] *"A property that has lost some historic materials or details can be eligible if it retains the majority of the features that illustrate its style in terms of the massing, spatial relationships, proportion, pattern of windows and doors, texture of materials, and ornamentation. The property is not eligible, however, if it retains some basic features conveying massing but has lost the majority of the features that once characterized its style." Ibid.*

[23] *Ibid. p.7.*

Landscapes (NPS 1994) provide the guidance for considering and evaluating cultural landscapes within the National Register criteria, and the terminology described in these technical references is generally used at the federal, state, and local levels to document, describe, and analyze cultural landscapes.

Important cultural landscapes may be composed of a number of character-defining features which individually or collectively contribute to the landscape's physical appearance as they have evolved over time and within the property's period of significance. These landscapes may include a grouping of features such as topography, vegetation, water elements (pools, fountains, ponds, streams, etc.), circulation elements (roads, paths, steps, walls, etc.), buildings and furnishings (fences, benches, light fixtures, gates, sculptural objects).

NPS also states that each situation may vary, and some features may often be more important than others. According to the NPS guidelines, "it is the arrangement and the interrelationship of these character-defining features as they existed during the period of significance that is most critical…" As such, spatial organization and land patterns are of primary concern when defining and evaluating a cultural landscape.

2. California Register of Historical Resources Criteria

To be eligible for the California Register, a historic resource must be significant at the local, state, or national level under one or more of the following four criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

2. Is associated with the lives of persons important in our past;

3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; and/or

4. Has yielded, or may be likely to yield, information important in prehistory or history.

Additionally, a historic resource eligible for listing in the California Register must meet one or more of the criteria of significance described above and retain enough of its historic character or appearance (integrity) to be recognizable as a historic resource and to convey the reasons for its significance. Historical resources that have been rehabilitated or restored may be considered and evaluated for California Register listing.[24]

Integrity, as considered for the California Register, is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association. The resource must also be judged with reference to the particular criteria under which it is proposed for eligibility. It is possible that a historic resource may not retain sufficient integrity to meet the criteria for listing in the National Register, but it may still be eligible for listing in the California Register.[25]

3. California Office of Historic Preservation Survey Methodology

The evaluation instructions and classification system prescribed by the OHP in its *Instructions for Recording Historical Resources* provide a three digit evaluation code for use in classifying potential historic resources. The first digit indicates one of the following general evaluation categories.

1. Listed in the National Register or the California Register;
2. Determined eligible for listing in the National Register or the California Register;
3. Appears eligible for the National Register or the California Register through survey evaluation;
4. Appears eligible for the National Register or the California Register through other evaluation;
5. Recognized as Historically Significant by Local Government;
6. Not eligible for any Listing or Designation; and
7. Not evaluated for the National Register or California Register or needs re-evaluation.

The second digit is a letter code to indicate whether the resource is separately eligible (S), eligible as part of a district (D), or both (B). The third digit is a number, which is used to further specify significance and refine the relationship of the property to the National Register and California Register. Under this system categories 1 through 4 pertain to various levels of National Register or California Register eligibility. Category 5 pertains to properties that are

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[24] *California Code of Regulations, California Register of Historical Resources (Title 14, Chapter 11.5), Section 4852(c).*

[25] *Ibid.*

ineligible for National Register or California Register listing, but are recognized as historically significant by local government. In addition, properties not eligible for listing or designation in the National Register, California Register, or at the local level, but perhaps are of local interest in the planning process are given an evaluation status code of 6.

4. City of Costa Mesa Criteria

The Costa Mesa Historic Preservation Ordinance establishes criteria for designating local historic resources and/or historic districts and listing them on the City's Local Register. These properties must be over fifty years of age, unless they possess exceptional significance, and meet the significance criteria for listing in the National Register or one of the following designation criteria:

- Exemplifies or reflects special elements of the city's cultural, social, economic, political, aesthetic, engineering, architectural, or natural history; or
- Is identified with persons or events significant in local, state, or national history; or
- Embodies distinctive characteristics of a style, type, period, or method of construction; or
- Is a valuable example of the use of indigenous materials or craftsmanship; or
- Represents the work of a notable builder, designer, or architect; or
- Contributes to the significance of an historic area, being a geographically definable area possessing a concentration of historic or scenic properties or thematically related grouping of properties which contribute to each other and are unified aesthetically by plan or physical development; or
- Has a unique location or singular physical characteristics or is a view or vista representing an established and familiar visual feature or a neighborhood, community or of the city; or
- Embodies elements of architectural design, detail, materials, or craftsmanship that represent a significant structural or architectural achievement or innovation; or
- Is similar to other distinctive properties, sites, areas, or objects based on historic, cultural, or architectural motif; or

- Is a type of building or is associated with a business or use which was once common but is now rare; or

- Yields or may yield, information important in prehistory or history, and retains the integrity of those characteristics necessary to convey its significance.

5. Evaluation of Resources Less Than Fifty Years Old

A property is usually considered for its historic significance after it reaches the age of fifty (50) years. This threshold is not concrete, but was chosen as a reasonable span of time to develop historical perspective and evaluate significance adequately. Both the California Register and the City of Costa Mesa historic preservation ordinance reflect the lead of the National Register when assessing properties less than fifty years old for historical significance and utilize the fifty-year threshold.

The National Register guidelines indicate that any building less than fifty years of age must be considered under Criteria Consideration G, which states that "a property achieving significance within the last fifty years is eligible if it is of exceptional importance.[26] Properties that are less than fifty years old must meet Criteria Consideration G, as must "a property that continues to achieve significance into a period less than fifty years before the nomination."[27]

D. SURVEY STUDY AREA DEFINED

The study area was identified based on the anticipated direct and indirect effects of the proposed project on potential historic resources. The study area was defined as the project site itself, which is the OCC campus (2701 Fairview Road). A map of the survey study area and existing conditions of the campus is illustrated in Figure 3-1, Survey Study Area/Existing Conditions.

E. EVALUATION OF HISTORIC RESOURCES WITHIN STUDY AREA

A review of relevant historical records, including the California Historic Resources Inventory (HRI) and files at the City of Costa Mesa indicates that the OCC campus was previously documented and evaluated for historical significance as part of the City's city-wide historic resources survey conducted in 1999. At that time, the central core campus comprised of a grouping of linear configured, small-scale buildings that date from the 1950s that were built during the first phase of planning the school, many of which were planned and designed by Richard Neutra and Robert Alexander along with the associated landscaping elements of the

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[26] *How to Apply the National Register Criteria for Evaluation, National Register Bulletin, p.41.*
[27] *Ibid.*

core campus that were designed by landscape architect Garrett Eckbo, were found to be historically significant and eligible for local landmark designation as a potential historic district.[28] This significance for this prior evaluation was based on significance of architectural style and association with master architects Richard Neutra and Robert E. Alexander.

For the purposes of this current assessment, the subject property has been re-assessed for historical significance in order to identify any potential historic resources on the campus, as defined by the CEQA Guidelines.[29]

1. Orange Coast Community College, 2701 Fairview Road

Campus Construction

The Orange Coast College campus was built on the site of the former Santa Ana Army Air Base and was founded in 1947. At the end of 1948, the Orange Coast Junior College District Board of Trustees appointed noted architect and planner Robert E. Alexander of Los Angeles and local architect Richard Pleger to prepare a multi-year master plan for the new campus. The former service buildings though being used as classrooms and dormitories after the school opened in 1948 were found not to conform to state requirements for a community college educational facility and needed to be replaced. The contract with the Board was directly with Alexander while Pleger was assigned as associate architect to assist in obtaining information locally for Alexander and to act as the on-site project manager in providing general assistance. The school master plan was to cover a seven year period with voters approving a special tax levy in May 1949.

With Robert E. Alexander enlisted to draft the new campus plan, and beginning with the Trades and Industry Building (Technology) in 1949 (now demolished), the campus building boom began to take root in the center of the college site. Alexander's initial plan retained some of the existing military structures and remodeled them for use as a gymnasium, administration offices, student center, and home economics, but also included new classroom structures for agricultural, arts and crafts, business education, and science studies. In addition, the modest master plan called for a library, theatre for the speech arts, baseball field, football field, tennis courts, and parking lots.

The new college improvements were set at a distinct 45 degree angle from the north-south orientation of the old base configuration and that of the city grid. Their placement was

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[28] *Note that the city-wide survey only evaluated properties for local significance under the City's designation criteria.*

[29] *State CEQA Guidelines, 14 CCR Section 15064.5(a).*

designed to take advantage of the prevailing southwest breezes that helped to cool the interior spaces of the buildings. Much of the landscape was like-wise set at an angle to complement the orientation of the classrooms. Alexander's plan for the OCC campus and the contemporary architectural style of the initial buildings constructed on the site brought the campus into the age of modern campus planning.

The core group of buildings set within the center of campus played an integral role in the early development of the college. Their design conveyed their part in the development of a modern community college, an educational system that came to fruition following World War II, and which reflected the Modern era and growth of the City and County. The goals of Alexander's plan included the determination of the desirable physical size of the campus based on economics and location, the development of a vision for the relationship between existing and future buildings, and the determination of a proper area of college influence within the context of the surrounding community.

The first permanent structure to be built on the OCC campus was the Technology Building. Ground was broken at the end of 1949 and the building was completed eleven months later with the dedication taking place on November 15, 1950. Designed by Robert Alexander with the assistance of Richard Pleger, the Tech Building was a one-story structure that consisted of three saw tooth roof shop wings extending off a long linear flat roof classroom wing. Constructed at a cost of approximately $393,983, the structure stood for over 44 years until it was demolished in the 1990s after the Technology Center opened on OCC's western perimeter. The Doyle Arts Pavilion and new Library occupy the site where the original Technology Building once stood.

Design of the library, the second building on the new campus, was authorized by the Board in November 1949. Alexander along with the school's faculty, students, and associate architect Pleger crafted plans for the library in the following months. In January of 1950, the Board, on Alexander's recommendation, authorized the hiring of landscape architect Garrett Eckbo to design a landscape plan for the entire campus and for the areas adjoining the new buildings. It was also at this time that Alexander proposed to the Board the incorporation of a visually prominent clock tower as an addition to the library, which they also approved.

South Coast Construction Company was the contractor who built the second library on campus in the fall of 1950. Oversight of the project on behalf of the design architect Robert E. Alexander was Richard Pleger. The very first library was located in a converted SAAAB barracks building and operated from 1948 to 1951. The bid for the new 11,000 square foot reference repository was roughly $117,346. The one-story Modern style facility opened in the fall of 1951 and served as the Library until 1968. When the Library was relocated to Watson Hall (originally called the Norman E. Watson Library) the existing structure became the Counseling and

Admissions Building. Located in the quad, the former library is identified by the distinctive tall framed clock tower. Additions were made to this building in the form of what are now classrooms and laboratories (Buildings 8 and 9) by Neutra and Alexander a few years after its completion.

Eckbo initially developed a landscape plan that complemented the master plan of the campus. To act as windbreaks, Eckbo established tree patterns using eucalyptus, palm, and pine trees set throughout and around the campus. He also proposed landscaping around the Technology Building and Library.

The next new building proposed for the campus was the Fine Arts and Crafts Building in 1951. The structure designed by Alexander with Pleger was to contain roughly 14,000 square feet of space with room for an art studio, painting studio, art gallery, photo lab, and ceramics lab. Construction began in October 1951 with the building completed in January 1952. It was demolished 48 years later to make room for the new Arts Center that opened in 2002.

The building program for the early 1940s and late 1950s not only included the construction of the new Technology Building, Arts Center Building, and Library, but also the remodeling of the existing gymnasium, administration building, home economics classroom and some ancillary structures for use by staff and students. Because of design and construction faults with the Technology Building and Library, in early 1952 the Board considered replacement of Alexander with another architect. However, Alexander had just formed a business partnership with renowned architect Richard J. Neutra and asked the Board to reconsider his contract under the circumstances. Alexander stressed to the board that Neutra would take the design lead on all future building plans associated with the master plan. Richard Pleger would also remain on Alexander's contract as associate architect. The Board, requesting that Neutra take the lead role in the development of project plans, authorized an extended contract with Alexander and Neutra.

The first building stemming from this new design partnership of Neutra and Alexander was the Business Education Building. This classroom facility is a complex comprised of three long, linear horizontal buildings (Buildings 12, 13, and 14) that were completed in 1953 under the guidance of associate architect Richard Pleger. These Modern style one-story buildings are sheathed in red brick and stucco and feature flat roofs; covered open walkways; ribbons of fixed and louvered fenestration; short brick "privacy" walls set at angle along the walkways for privacy, air circulation, and sun control; wooden louvered overhangs; and an outdoor seating area. These buildings originally contained classrooms and laboratories for secretarial, accounting, and office training services programs. In mid-1952, the Board authorized Eckbo to draft landscape plans for the building complex.

In September 1952, Neutra and Alexander were authorized to prepare plans for a new swimming pool stadium and Speech Arts Building. Two pools (a large, deeper pool for competition, water polo, and a smaller pool for practice and beginners), deck, diving board, and bleachers were designed for the area north of the existing, remodeled gymnasium just west of Fairview Road in the northeast corner of the campus. The pool facility was completed a year later only to have problems with the surfacing of the pool walls. This problem was ultimately resolved, however, and operation of the pool by staff and students began later that year.

Neutra and Alexander with associate architect Richard Pleger also worked on the design of the Student Center, which opened in April 1953. This structure replaced the former Army PX building that had served as the Student Center for five years. The PX building had been located where the Business Education Building is located today. The Student Center from 1953 is still used today; however, it has been extensively remodeled and expanded several times. The building underwent a massive overhaul in 1992-1993.

On March 30, 1955, the $650,000 Speech Arts Building (now the Robert B. Moore Theatre) officially opened to the public. The auditorium that the college used prior to the new Speech Arts Building was a converted SAAAB movie theater that was located at the corner of Fairview Road and Monitor Way. That structure was removed in 1960. Planned by Alexander and designed by Richard Neutra the Speech Arts Building, constructed in 1954, includes the grand “aula” or auditorium, which occupies a prominent location at the hub of the campus, as well as ancillary stage production areas, choral and instrument practice classrooms, and dressing areas. In plan the minimalist auditorium is a semi-rounded and clipped ellipse, its footprint was shaped specifically to allow “theatre-in-the-round” productions and “audience-in-the-round” techniques. The theatre also accommodates a detached ticket booth office that is connected to the auditorium by covered walkways. The acoustic design and sound insulation of the theatre were supervised by noted acoustic engineer, Dr. Vern D. Knudsen, a professor at UCLA, who acted as sound consultant on the design of the theatre.

As the master plan came to fruition over the years, the landscape plan for the campus evolved in development to fully complement and integrate the new buildings. The central quad pattern of paving, grass, water, shrubs, and trees were planted adjacent to the buildings and within the brick screen walls of each classroom wing for privacy, intimacy, and warmth. Their spatial relationships purposely interconnected with the built environment.

Part of the building program for the OCC campus in the mid-1950s was the construction of a new, larger more modern football stadium with a field house and bleacher seating. According to the Board minutes, the preliminary plans drafted by Neutra and Alexander did not include space for the yell and song leaders or slight lines of the spectators. Final plans were approved in June 1954 by the Board that included as a cost-saving measure the omission of interior build-out space for concession booths and visiting team room in the field house, omission of 1,000 stadium seats, and the exclusion of an outside concession booth and toilets at the west end of the stadium. Landscaping of the stadium grounds was designed by Garrett Eckbo. The football stadium was initially opened on campus for the 1955 football season, and was dubbed Pirate Stadium. The football stadium and associated facilities like the field house, embankment bleachers, and announcer box reflect elements of the Modern idiom in their design, scale, and materials. It was built to accommodate 7,600 fans. Dirt was excavated from the site of the field and piled high on the sidelines to form the underpinnings for the grandstands. The first graduation ceremonies took place on the field in June 1956. The stadium was renamed the Harry R. LeBard Stadium in 1967. The facility was remodeled and substantially upgraded (seats, lighting, ADA access, etc.) in 2004. Despite the upgrade to the stadium its basic design, form, configuration, and components are still visually and physically evident from when it was initially constructed in 1955. The exterior of the field house has undergone only minor alterations since it was erected.

By late 1954, there was continued questioning by the Board regarding Neutra and Alexander's capability and prolific absence at Board meetings and on campus during construction of improvements. The design and construction of the Science Building was one of the last larger projects remaining in the initial multi-year master plan. Though consideration of a new architect was discussed at their October 11, 1954 board meeting no action was taken to hire a designer to oversee the project. A month later, the Board requested direct personal service from both Neutra and Alexander in exchange for renewing their contract for the design of the Science Building. They also requested Richard Pleger be hired-on by Neutra and Alexander as associate architect.

The Science Building was completed in 1956 and dedicated on April 2, 1957. Similar in configuration and design to the Business Education Building complex, the Science Building is a linear grouping of two buildings with an offset structure that houses a small planetarium. These Modern style buildings are clad in red brick and stucco and feature flat roofs; covered open walkways; ribbons of fixed and louvered fenestration; short brick "privacy" wind break walls set at angle along the walkways for intimacy, air circulation, and sun control; and wooden louvered overhangs. The circular shape planetarium building is a distinctive separate feature as it is sheathed in similar vertical board siding as the theatre auditorium (Robert B. Moore Theatre), has a round floor plan and is capped by a dome shaped standing seam patina copper roof. This structure originally included a small shallow pool at its western base that followed the shape of the curved exterior wall; however, this feature has since been removed and paved. As a complementary art piece to the study of science an armillary sphere designed by noted Laguna Beach artist Peterpaul Ott was installed at the south end of the building complex. This piece cost roughly $5,000 and weighs 1,000 pounds with a concrete foundation sunk six feet underground. Of course, landscaping around the Science Building was planned and designed by Eckbo upon approval by the Board. The landscape plan called for 140 trees, 500 shrubs, and 900 small ground plants keeping the existing trees.

After almost ten years of service, Neutra and Alexander's contract was not renewed by the Board. Rather the Board considered a new set of architects to finish the initial master plan programming and author in a second phase of development and expansion for the campus. It was also at this time that the partnership of Neutra and Alexander began to strain and was ultimately dissolved in 1958. They both went on to manage their own architectural practices.

In November 1956, the Board authorized the architectural firm of Pleger, Blurock and Hougan (later changed to Pleger, Blurock, Hougan, and Ellerbroek) to prepare plans and specifications for the design of a Home Economics Building. The design of the new complex was to be as specified in Alexander's master plan and as designed by Neutra, which called for two parts a general classroom wing and a main wing for home economics facilities. The two-part Home Economics Building was constructed by A.D. Penhall, general contractor, and completed in June 1958. The building originally was designed with a craft and supplementary clothes laboratory, a complete clothing laboratory, a laundry area and a foods laboratory. Also included were a living room classroom, six separate classrooms, and a clothing workroom and food workroom. The grounds about the complex were designed by landscape architect Frederick M. Lang. On campus today, these facilities are now referred to and used as the Journalism Building and Writers Row.

A large lecture hall, referred to as the Forum, was authorized by the Board in 1958 with plans drafted by Pleger, Blurock, Hougan, and Ellerbroek. The semi-circular shape building and curving covered walks included roughly 8,995 square feet of space to accommodate a 400 seat lecture hall with closed circuit television, instructors' offices, work rooms, and restrooms. The Modernistic building was designed after the style, form, materials, and features of the Speech Arts auditorium (Robert B. Moore Theatre). The Forum was completed in 1960 and has been utilized for classroom lectures and evening programs. Landscaping plans for the grounds of the new lecture hall were completed by Frederick M. Lang. The Forum was rechristened the Dr. Giles T. Brown Forum in the spring of 2007.

The two-story OCC gymnasium was completed in December 1961 and christened the Peterson Gymnasium after the founding president Basil H. Peterson in 1962. Designed by Pleger, Blurock, Hougan and Ellerbroek to complement the Modernistic style of the improvements throughout the campus, this complex includes a large indoor gymnasium with formal lobby, classrooms, toilets, storage, weight room, dance room, and wrestling area. It also includes a separate men's locker room wing, a separate women's locker room wing, and covered walk and brick wall that interconnects the locker rooms, pool stadium, and gymnasium together. The minimalist larger gymnasium features a multi-plane flat roof, minimal ornamentation, ribbons of clerestory windows, cantilevered canopies over pedestrian walkways, and a large glazed entry court that fronts south onto the parking lot. The one-story men's and women's locker rooms as well as the pool stadium are situated to the east of the gymnasium and are separated by a covered walkway. The locker rooms are similar in design features and basic form as the gymnasium, though on a smaller scale.

Plans for a science lecture hall addition was initially reviewed and approved by the Board in June 1959. After several iterations of preliminary plans and oversight of construction problems the building was finally completed in 1964. The architects Pleger, Blurock, Hougan, and Ellerbroek designed the large lecture hall after the shape and style of the Moore Theatre (Speech Arts Building auditorium) and the later Forum building. With 374 seats the Science Hall was built on campus at a 70-degree angle as opposed to the Forum's 90-degree angle. This arrangement of the two lecture halls added further uniqueness to the campus and complemented the Modernistic trends of the Forum and the Robert B. Moore Theatre. The adjacent Science Lecture Hall classrooms opened in the fall of 1971.

Expansion and improvement of the campus through much of the 1960s was slow with little new construction occurring. A third master plan phase was developed in the 1970s when many new buildings were designed in the Post-Modern style and erected on the perimeter of the central campus quad. Additional building programs followed in the 1990s and 2000s.

SIGNIFICANCE EVALUATION

The OCC campus today comprises a wide variety of buildings and landscape elements representing evolving ideas in community college planning and architecture. As indicated above, the first major phase of development occurred with the initial planning of the campus and drafting of the master plan by Robert E. Alexander. Representative of prevailing campus planning trends at the time the stylistic design of the early buildings set the precedence for future building.

The basic design of the campus and classrooms were consistent with the building traditions of the time as well. Unlike the design of most earlier classroom buildings, postwar campuses exploited steel framing, plate glass, and low-rise horizontal massing. The standardized plans of multi-story, pre-war school structures were rejected by modernist architects of the day. The desire for flexibility, a key term of postwar building, enhanced the popularity of new materials and configurations of plan design for both lower and higher educational facilities. Flexibility was both a desirable quality for the structural aspects of a building, embodied in open corridors, non-load-bearing partitions, and zoned ventilation and heating systems, but also included provisions for re-arranging interior features and spaces.

As mentioned, the Orange Coast College campus was planned in incremental stages over a period of years. The central core of the campus physically and visually reflects the unity and cohesiveness that Alexander planned for and Neutra envisioned by design. This early master planning of the campus was further integrated and complemented by the landscape program designed and executed by landscape architect Garrett Eckbo. The interrelationship between the buildings and landscape is still physically and visually evident by the arrangement and configuration of the buildings to the walkways, plantings, signage, and other associated accessory features.

Collectively, the buildings' combination of relaxed informality and restrained compositional style along with the distinctive landscape features defines the core campus as a Neutra and Alexander inspired design. The detached, one-story linear classroom wings of brick, stucco, wood, and glass, and a more explicit interaction with the outdoor plantings and hardscape features help to achieve this more informal effect. The long sleek band of ribbon windows, stucco sheathing with brick treatment, spider leg outriggings, louvered wall screens and louvered shade canopies, and immaculate detailing help to connect the buildings and their design with Richard Neutra's earlier work elsewhere.

The later work of the 1950s by Pleger, Blurock, Hougan and Ellerbroek, also complements Alexander's initial improvements on the campus as well as Neutra and Alexander's collective designs for the college. Those subsequent design efforts that were directed by the Board also included the work of noted Orange County architect William Blurock.

Because the central core of the campus possesses a significant concentration, linkage, and continuity of buildings, structures, landscape features, and objects that are united historically, architecturally, and aesthetically by plan and physical development this area is identified as a potential historic district. The district derives its importance from being a unified entity that visually conveys a sense of the overall historic environment and shares an interrelationship by arrangement, function, and plan. This collection of improvements, including its buildings, structures, landscape, and accessory objects is also historically significant as they embody the distinctive characteristics of a particular property type, period of construction, and architectural expression. This district is also the collective work involving master planner and architect, Robert E. Alexander; master architect, Richard J. Neutra; master landscape architect Garrett Eckbo, and local master architect William E. Blurock. The period of significance for the historic district is 1948 to 1964. This span of time captures the initial master planning and design of the community college by Robert E. Alexander; the design and planning work of Neutra and Alexander; as well as the early phase two master plan work of William E. Blerock under the partnership of Pleger, Blurock, Hougan and Ellerbroek.

Contributors to the district represent the significant property types that comprise a historic community college educational institution. [30] These include the classroom facilities; laboratory facilities; student/faculty support facilities; lecture auditoriums and theater; physical education facilities; and lecture halls. Landscape features of the district include paved walkways and their material, location, configuration, and design; mature plantings set around classroom buildings and within screen walls, patio areas, and open sitting areas; flagpole, clock tower, distinct planter boxes, signage, and other similar objects within the core campus grounds; and many of the mature plantings and tall trees set within the campus grounds.

The historic district has been evaluated as eligible for listing in the California Register under Criterion 1 for its early master planning concepts of a community college located within Orange County and under Criterion 3, for its distinctive architectural and design qualities as interpreted in an educational facility and for its direct association with master planner and architect Robert E. Alexander; master architect Richard Neutra; landscape architect Garrett Eckbo; and Orange County architect William E. Blurock. The property also satisfies the local City of Costa Mesa criteria for architecture and educational development. As such, the subject property as defined above is considered a historic resource pursuant to the CEQA Guidelines[31]

The Robert B. Moore Theatre building is also individually historically significant for its unique and distinctive architectural styling and direct association with master designers: architect Richard Neutra; landscape architect Garrett Eckbo; and acoustical engineer Dr. Vern Knudsen. Therefore, this property is also considered a historic resource pursuant to the CEQA Guidelines on its own merit.

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[30] *A contributing property is defined as any building, structure, or object located within a historic district that adds to the historical integrity or architectural qualities that make the district significant. Contributors to historic districts are considered historic resources under CEQA.*

[31] *State CEQA Guidelines, 14 CCR Section 15064.5(a).*

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Project Boundary

Campus Land Use

1a, Norman E. Watson Hall (Student Services/Administration)
1b, Student Health Center
2, Lewis Center for Applied Science
3, Harry and Grace Steele Early Childhood Lab School and Children's Center
4, Frank M Doyle Arts Pavilion
5a, Library
5b, Starbucks Coffee
6, Consumer, Allied Health and Bio Sci
7, Fitness Complex and Outdoor Field Labs
8, District Headquarters
9, Main Campus Entry (Students)
10, Recycling Center
11, Technology Center
12, Fran Albers Maintenance and Operations Center
13, Skill Center
14, Student Center
15, Administration
16a, Haley Business Learning Center
16b, Faculty House
17a, Classrooms and Laboratories
17b, Student Success Center
17c, Special Services
18, Locker Rooms
19, Robert B Moore Theatre
20, Information Technology
21, Horticulture
22, Chemistry
23, Virgil D Sessions Center for Literature and Languages
24, Science Hall and Math Lecture Halls
25a, Math Wing
25b, Reprographics
26, Planetarium
27, Journalism
28, Computing Center
29a, Social and Behavioral Sciences
29b, Bookstore
30a, Arts Center
30b, Fine Arts
31, Music Building
32, Giles T Brown Forum
33, Bursar's Office
34, District Transportation
35, Horticulture Garden Lab
36, Writer's Row
37, Campus Public Safety
38, 150 Annex

N
0 155 310 Feet

SOURCE: Bing Imagery, 2015; Coast Community College Vision Plan, 2012; Count of Orange.

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FIGURE 3-1

Existing Conditions in the Survey Study Area

Orange Coast College Vision 2020 Facilities Master Plan Historic Resources Technical Report

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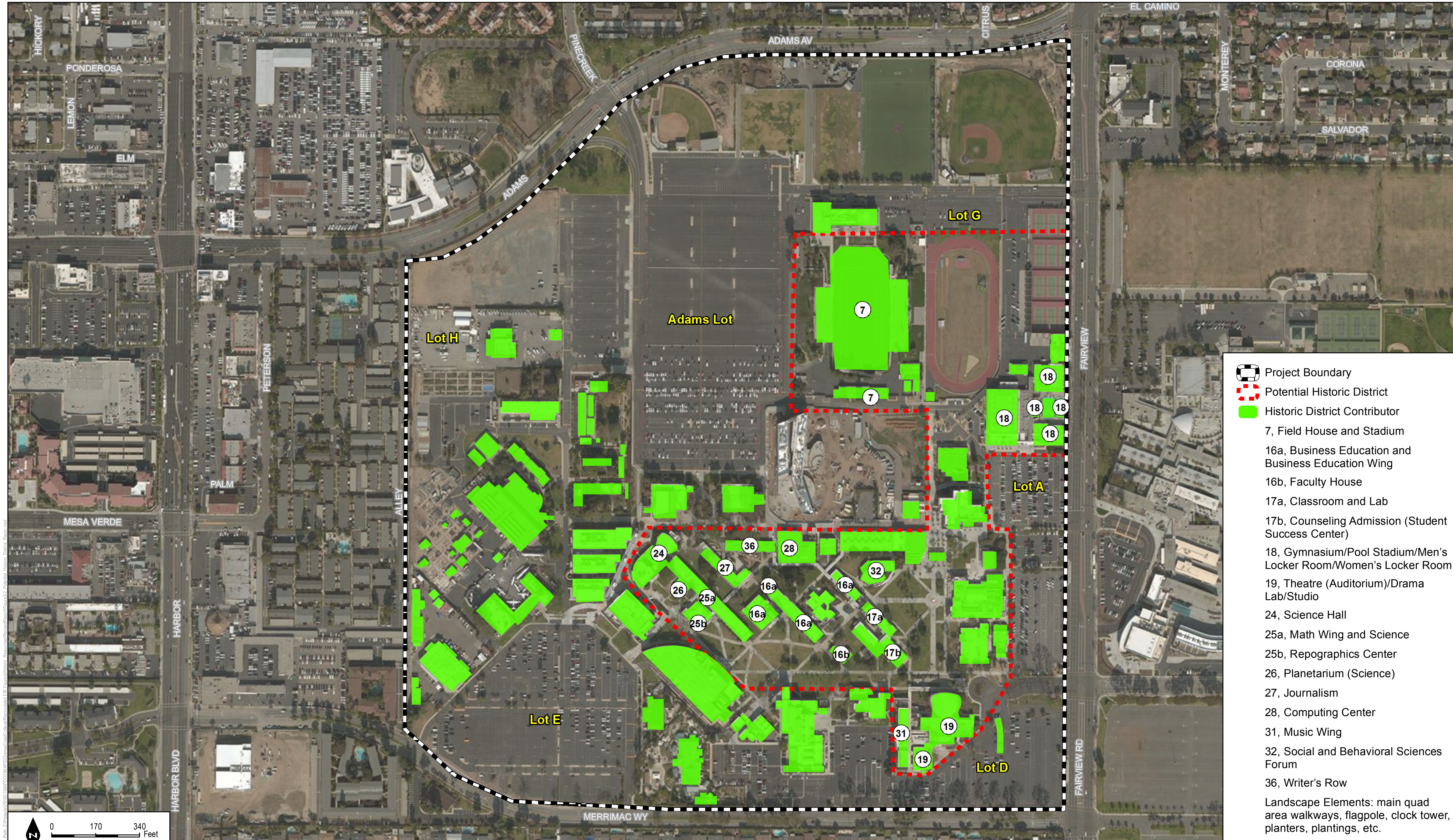
Orange Coast College Historic District Contributors

ID NO	Building	Date	Architect
7	Stadium (105) and Field House (110)	1955	Neutra & Alexander with Pleger
16a	Business Education Wing (12)	1953	Neutra & Alexander with Pleger
16a	Business Education Wing (13)	1953	Neutra & Alexander with Pleger
16a	Business Education (14)	1953	Neutra & Alexander with Pleger
17a	Classroom & Lab (8) (with library extension)	1950/1955	Alexander with Pleger/Neutra
17a	Classroom & Lab (9)	1950	Alexander with Pleger
17b	Counseling Admission (Student Success Ctr) (7)	1950	Alexander with Pleger
18	Pool Stadium (93)	1952	Neutra & Alexander
18	Gymnasium (91)	1961	Pleger, Blurock, Hougan and Ellerbroek
18	Women's Locker Room Wing (92)	1962	Pleger, Blurock, Hougan and Ellerbroek
18	Men's Locker Room Wing (96)	1962	Pleger, Blurock, Hougan and Ellerbroek
19	Theatre (Auditorium)/Drama Lab/Studio (2)	1954	Neutra & Alexander
24	Science Hall (40)	1964	Pleger, Blurock, Hougan and Ellerbroek
25a	Math Wing (Science) (35)	1956	Neutra & Alexander with Pleger
25a	Math Wing (Science) (36)	1956	Neutra & Alexander with Pleger
25b	Reprographics Center (Science) (37)	1956	Neutra & Alexander with Pleger
25a	Science (38)	1956	Neutra & Alexander with Pleger
26	Planetarium (Science) (39)	1956	Neutra & Alexander with Pleger
27	Journalism (72) (orig Home Economics)	1958	Pleger, Blurock, Hougan and Ellerbroek
28	Computing Center (73)	1963	Pleger, Blurock, Hougan and Ellerbroek
31	Music Wing (4)	1954	Neutra & Alexander with Pleger
32	Social & Behavioral Sciences Forum (81)	1960	Pleger, Blurock, Hougan and Ellerbroek
36	Writer's Row (71) (orig Home Economics)	1958	Pleger, Blurock, Hougan and Ellerbroek
---	Science Building Art Piece: Armillary Sphere	1957	Peterpaul Ott w/Alexander
---	Landscape Elements: main quad area walkways, maritime planters, mature trees, shrubs, and plantings	1950s	Alexander, Eckbo

Orange Coast College Historic District Non-Contributors

ID NO	Building	Date	Historic District Status
1a	Watson Hall (87)	1969	Non-Contributor
1b	Student Health Center (89)	1978	Non-Contributor
15	Administration (1)	1975	Non-Contributor
16b	Faculty House (11)	1957	Non-Contributor
17c	Special Services (10)	1975	Non-Contributor
24	Math Lecture Halls 1 & 2 (41)	1971	Non-Contributor
29a	Social & Behavioral Sciences (80)	1965	Non-Contributor
29b	Bookstore (83)	1965	Non-Contributor
33	Bursar’s Office (149)	1993	Non-Contributor
38	Classroom & Lab (150)	1993	Non-Contributor
14	Student Center (86)	1952	Non-Contributor
---	Handball Courts (97)	1962	Non-Contributor
---	Track & Field (103)	1942	Non-Contributor
---	Tennis Courts	1960s	Non-Contributor



SOURCE: Bing Imagery, 2015; Coast Community College Vision Plan, 2012; County of Orange.

FIGURE 3-2

Potential Historic District

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4. ANALYSIS OF PROJECT IMPACTS

A. THRESHOLDS OF SIGNIFICANCE/CRITERIA FOR ADVERSE IMPACTS

1. CEQA GUIDELINES

The CEQA Guidelines state that a project involves a "substantial adverse change" when one or more of the following occurs:

- Substantial adverse change in the significance of a historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired.[32]

- The significance of a historical resource is materially impaired when a project:[33]

  a. Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources; or

  b. Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in a historical resources survey meeting the requirements of section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or

  c. Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA.

As such, substantial adverse effects may include, but are not limited to, physical destruction or damage to all or part of a historic property caused by vibration and/or sound;

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[32] *State CEQA Guidelines, 14 CCR Section 15064.5(b)(1).*

[33] *State CEQA Guidelines, 14 CCR Section 15064.5(b)(2).*

removal of the property from its historic location; isolation from or change of features within the property's historic setting; visual, atmospheric or audible intrusions; foreseeable effects that may occur later in time or farther removed in distance; and cumulative effects.

To be eligible for listing in the National Register and California Register, and as applied at the local level, a property must not only be shown to be historically significant under the applicable criteria (federal, state and local), but it must also have integrity. Integrity is defined as the ability of a property to convey its significance. Pursuant to CEQA, projects that may compromise the integrity of a property, and therefore, compromise its historical significance may be adverse.

The Secretary of the Interior's Standards for Rehabilitation (SOI Standards) are codified at 36 Code of Federal Regulations (CFR) Section 67.7. The SOI Standards are designed to ensure that rehabilitation does not impair the significance of a historic property. In most circumstances, the SOI Standards are relevant in assessing whether there is a substantial adverse change under CEQA. Section 15064.5b(3) of the CEQA Guidelines states in part that "... a project that follows the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings or the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings* (1995), Weeks and Grimmer, shall be considered as mitigated to a level of less than a significant impact on the historic resource."

2. SECRETARY OF THE INTERIOR'S STANDARDS FOR REHABILITATION

As stated above, projects that may affect historic resources are considered to be mitigated to a level of less than significant, if they conform to the SOI Standards. Projects with no other potential environmental impacts qualify for a Class 31 exemption under CEQA if they meet the SOI Standards.[34]

The definition of "rehabilitation" assumes that at least some repair or alteration of a historic property will be needed in order to provide for an efficient contemporary use or maintain its historic use. However, these repairs and alterations must not damage or destroy materials, features, or finishes that are important in defining a property's historic character and significance.

[34] *14 CCR Section 155331.*

The ten standards for rehabilitation are as follows:

1. A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.

2. The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces and spatial relationships that characterize a property will be avoided.

3. Each property will be recognized as a physical record of its time, place and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.

4. Changes to a property that have acquired historic significance in their own right will be retained and preserved.

5. Distinctive materials, features, finishes and construction techniques or examples of craftsmanship that characterize a property will be preserved.

6. Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive historic feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.

7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.

8. Archaeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.

9. New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterized the property. The new work shall be differentiated from the old and will be compatible with the historic materials, features, size, scale, and proportion, and mass to protect the integrity of the property and its environment.

10. New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

The SOI Standards were developed by the NPS to assist property owners and managers in rehabilitating their historic properties. The SOI Standards contain a specific hierarchy for decision-making in assessing the rehabilitation of any historic building. First, the significant materials and features of a property must be identified. Then a method for their retention and preservation must be found. If the physical condition of character-defining materials warrants additional work, repair is recommended. If deterioration or damage precludes repair, then replacement can be considered.

In addition to the rehabilitation of character-defining features, the SOI Standards also address alterations and additions to historic properties, as well as retrofitting properties for health and safety requirements. Some alterations to a historic property may be needed to assure its continued use; however, these modifications should not obscure or destroy important character-defining features of the property or jeopardize those qualities that justify or convey the property’s historical significance.

B. PROPOSED PROJECT

In order to achieve the goals and objectives of the Vision 2020 Facilities Master Plan, the proposed project would involve the demolition of certain existing buildings; the renovation of existing buildings; and the construction and eventual operation of new buildings and campus facilities as illustrated in Figures 4-1 through 4-6. The proposed project would also involve improvements to the existing pedestrian circulation network in and around the campus and the enhancement of open space areas through landscape and pedestrian plaza improvements. Construction of the proposed project would result in the reconfiguration of existing parking lots and vehicular entryways, and the addition of a parking structure on an existing OC Fairgrounds lot.

Specific program- and project-level components include buildings and facilities and site improvements for the OCC campus (see Figures 4-1 and 4-2). Base on the information contained in the Vision 2020 Facilities Master Plan, some elements would be assessed for CEQA compliance at the program level because specific project details are not known at this time. A few of these elements are dependent upon a future joint-venture partnership between the District and a developer yet to be identified. Project-specific plans would be developed after the joint venture is initiated. Other proposed project elements have detailed information available and would receive project-level assessment.

1. Buildings and Facilities (New Construction)

Project Level

The project-level buildings and facilities proposed for new construction as a component of the project includes:

Administration Building. A new Administration Building would be constructed to house the Campus Administration offices, which include the offices of the OCC president, vice president, foundation, and public information. In addition, the public safety office, bursar's office, and classrooms would occupy the new Administration Building.

Planetarium. This proposed 8,234-square-foot facility would be used by the college and the community and would be sited to allow for public access from the Merrimac parking lot.

Student Union/Bookstore/Culinary Arts/Student Success Center. This project element is planned to be developed slightly north of the corner at Fairview Road and Merrimac Way.

Student Housing Project. This project component would include approximately 200,000 square feet of space and would be supported by a private partner. Construction would occur at the corner of Adams Avenue and the campus entry. Parking Structure. The District plans to construct up to a four-level parking structure for 2,000 vehicles on the existing Adams Avenue lot on campus.

New Multidisciplinary Building. A new Multidisciplinary Building is proposed south of the Adams Lot. The new building would house a variety of programs..

New Language Arts and Social Science Building. A new Language Arts and Social Science Building is proposed in the center of the campus, just south of Le Bard Stadium.

New Adaptive Physical Education, Gymnasium, Pool Facilities, and Division Office. New adaptive PE and fitness facilities, men's and women's locker rooms, and aquatic facilities suitable for athletic competitions, and a Division office are proposed east of the Adams Lot and north of the proposed Interdisciplinary complex.

New Chemistry Building. The District proposes to construct a new Chemistry Building which would total 30,741 ASF. The Chemistry Building would provide state-of-the-art science labs suitable for instruction in STEM careers. The Chemistry Building would be located in the center of campus, south of the Adams Lot.

Interdisciplinary Complex Phase 2 (Language Arts and Social Sciences Building). A new Language Arts and Social Sciences Building is proposed in the center of campus, just south of Le Bard Stadium and north of the central quad. The new building would be 77,587 ASF and would house language arts and social science programs. Construction would occur during Phase II (2017–2019).

Dance Building. The District proposes to construct a Dance Building, which would total 20,000 ASF. The Dance Building would be located west of the proposed Student Union/Bookstore/ Culinary Arts/Student Success Center facility and shall be immediately adjacent to the Robert B. Moore Theater. Construction would occur during Phase 3 (2019–2024).

Recycling Center Expansion and Circulation/Parking Improvements. The District proposes to expand the existing recycling center for the purposes of accommodating recycling demand in the City of Costa Mesa. The expansion would primarily enhance pedestrian and vehicular safety on approach to and within the recycling center. It would also provide greater on-site space for visitors to drop sorted recyclable materials at designated areas; landscaped frontage along Adams Avenue; an area for composting; raised planter beds; outdoor instructional space; a 2,500-square-foot covered storage area for trucks, forklifts, and equipment; and large modular spaces for storage. A 54-foot truck turnaround area would be provided for vehicles transporting recyclable materials off campus. The expansion of the site would also involve increasing the number of parking spaces from approximately 8 to 45 dedicated spaces. Expansions would be able to accommodate triple the amount visitors that the Recycling Center it currently receives.

PROGRAM LEVEL

The following is proposed to be analyzed at the program level because a specific development plan has not yet been proposed and a private development partner has not yet been identified. Once a specific plan of development is proposed, this element would be subject to further CEQA review: Thje Mixed-Use Development Concept. This project component would consist of commercial/retail uses and conferencing/office space.

2. BUILDINGS AND FACILITIES (RENOVATION)

PROJECT LEVEL

The project-level buildings and facilities proposed for renovation as a component of the project includes two existing buildings:

Administration Building (Watson Hall Renovation)

The renovated Watson Hall building would house the campus student services and administration offices, which include the offices of the OCC president, vice president, foundation, public information, and Student Service programs including Enrollment Services, Counseling, Financial Aid, Extended Opportunity Programs and Services (EOPS), Career Education, Transfer Center, CalWorks, and Student Equity.

Skill Center. Renovations would occur at the existing Skill Center building in order to meet instructional needs in advanced aerospace manufacturing technologies in aviation maintenance and welding labs.

3. Buildings and Facilities (Demolition)

Over a dozen buildings and facilities are proposed demolition under the Vision 2020 Facilities Master Plan. The table below summarizes those improvements proposed for demolition.

ID #	Building/Area	DOC	Status
14	Student Center (86)	1952	Non-Contributor
15	Administration Building (1)	1975	Non-Contributor
16a	Haley Business Learning Center (10)	1975	Non-Contributor
16b	Faculty House (11)	1957	Non-Contributor
17a	Classrooms and Laboratories (8)	1950	District Contributor
17a	Classrooms and Laboratories (9)	1950	District Contributor
17b	Student Success Center (7)	1950	District Contributor
17c	Special Services (10)	1975	Non-Contributor
18	Gymnasium/Locker Rooms (91)	1962	District Contributor
18	Gymnasium/Locker Rooms (92)	1962	District Contributor
18	Gymnasium/Locker Rooms (96)	1962	District Contributor
18	Gymnasium/Pool Stadium	1962	District Contributor
7	Field House	1955	District Contributor
25a	Math Wing (35)	1956	District Contributor
25a	Math Wing (36)	1956	District Contributor
25b	George Hoag Family Foundation/Repro Ctr (37)	1956	District Contributor
26	Planetarium (39)	1956	District Contributor

ID #	Building/Area	DOC	Status
27	Journalism (72)	1958	District Contributor
29a	Social and Behavioral Sciences (80)	1965	Non-Contributor
29b	Bookstore (83)	1965	Non-Contributor
33	Bursar's Office (149)	1993	Non-Contributor
34	District Transportation Office	N/A	Outside of District
36	Writer's Row (71)	1958	District Contributor
37	Campus Public Safety (147)	N/A	Outside of District
38	150 Annex (150)	1993	Non-Contributor
N/A	Quad Area Landscape/Hardscape Features	1950s	District Contributor

4. Site Improvements Elements

Site improvements proposed include parking and vehicular entry, pedestrian circulation, and site infrastructure improvements.

Parking/Vehicular Entry Improvements. Parking Lot E, located in the southwestern corner of the campus would be reconfigured to provide a primary entry from Merrimac Way, as well as two secondary entries from Merrimac Way. In addition, entries from Fairview would be enhanced with the addition of formal gateways and marked pedestrian drop-off points.

Pedestrian Circulation. The proposed project builds on the existing pedestrian paved pathways, completing the pedestrian connectivity around the central quad. Pedestrian pathways would be paved and landscaped to signify that they are entryways into the campus.

C. ANALYSIS OF PROJECT IMPACTS

The proposed project anticipates the demolition of all most of the existing core campus improvements, including the majority of contributing properties and landscape features to the potentially eligible OCC Campus Historic District. The existing setting of the core campus area would be re-designed and re-configured in a manner that would destroy all semblance of the historic character of the site and those qualities that convey the district's historical significance, period of significance, and eligibility to the California Register and local City of Costa Mesa landmark list. The demolition, re-configuration, and re-design of contributing resources as proposed by the current project would result in significant adverse impacts under CEQA. These impacts cannot be mitigated to a less-than-significant level. Nonetheless, mitigation measures are still required.

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SOURCE: Bing Imagery, 2015; Coast Community College Vision Plan, 2012; County of Orange.

FIGURE 4-1
Proposed Campus Land Uses

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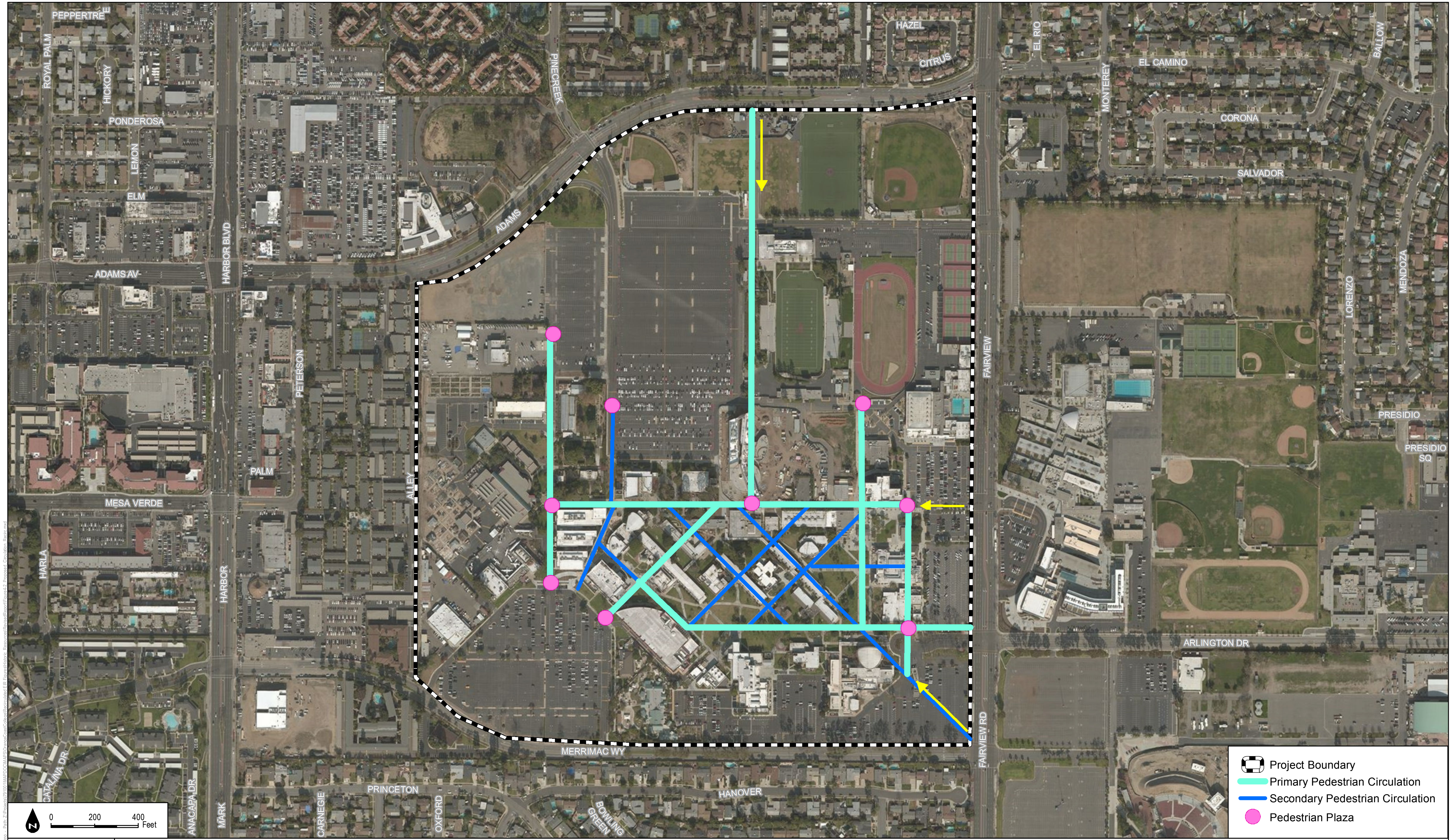

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SOURCE: Bing Imagery, 2015; Coast Community College Vision Plan, 2012; County of Orange.

FIGURE 4-2

Proposed Pedestrian Circulation Improvements

Orange Coast College Vision 2020 Facilities Master Plan Historic Resources Technical Report

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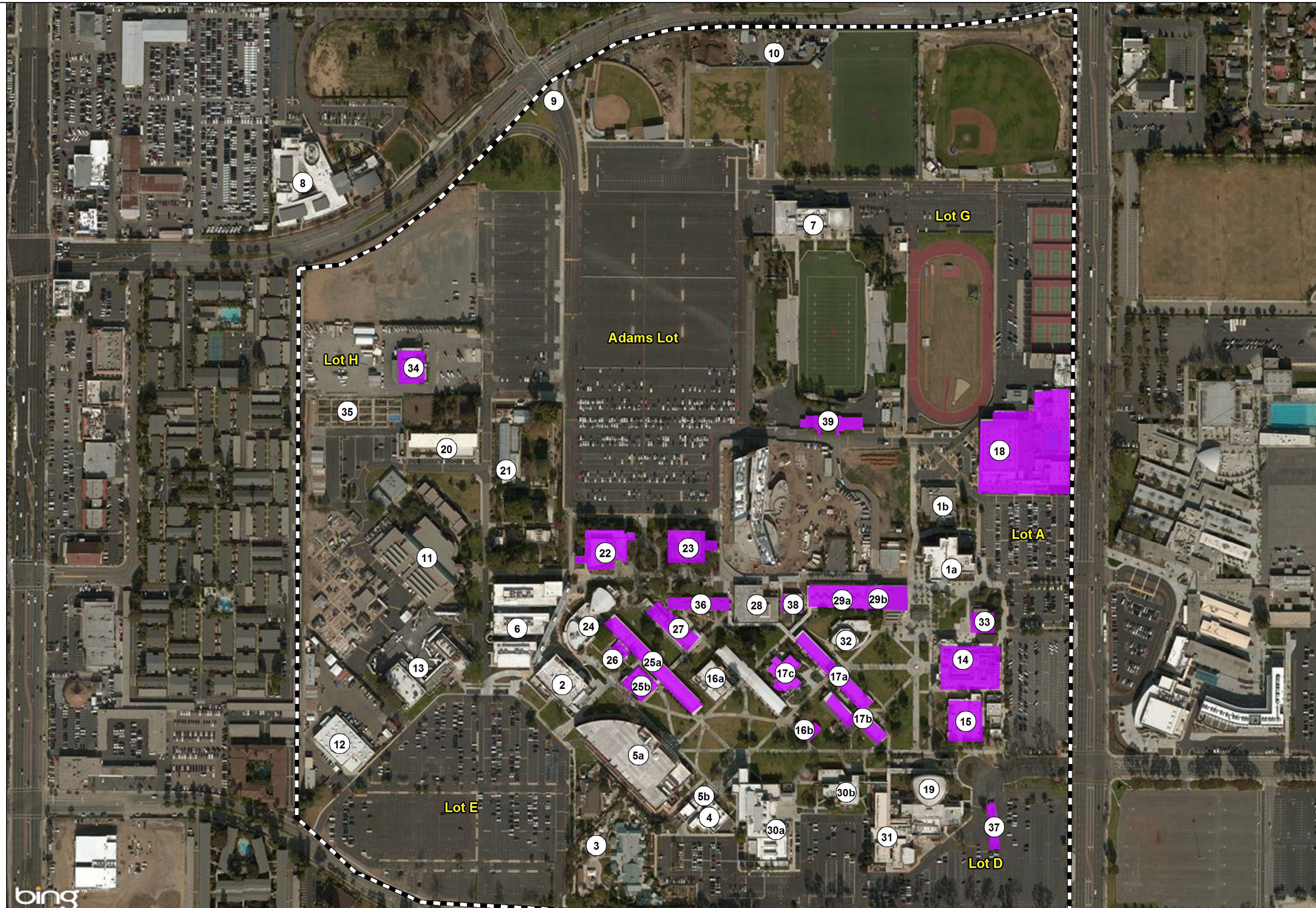
Project Boundary
Proposed Demolition Sites

Campus Land Use

1a, Norman E. Watson Hall (Student Services/Administration)
1b, Student Health Center
2, Lewis Center for Applied Science
3, Harry and Grace Steele Early Childhood Lab School and Children's Center
4, Frank M Doyle Arts Pavilion
5a, Library
5b, Starbucks Coffee
6, Consumer, Allied Health and Bio Sci
7, Fitness Complex and Outdoor Field Labs
8, District Headquarters
9, Main Campus Entry (Students)
10, Recycling Center
11, Technology Center
12, Fran Albers Maintenance and Operations Center
13, Skill Center
14, Student Center
15, Administration
16a, Haley Business Learning Center
17a, Classrooms and Laboratories
16b, Faculty House
17b, Student Success Center
17c, Special Services
18, Locker Rooms, Pool, Stadium, Gym
19, Robert B Moore Theatre
20, Information Technology
21, Horticulture
22, Chemistry
23, Virgil D Sessions Center for Literature and Languages
24, Science Hall and Math Lecture Halls
25a, Math Wing
25b, Reprographics
26, Planetarium
27, Journalism
28, Computing Center
29a, Social and Behavioral Sciences
29b, Bookstore
30a, Arts Center
30b, Fine Arts
31, Music Building
32, Giles T Brown Forum
33, Bursar's Office
34, District Transportation
35, Horticulture Garden Lab
36, Writer's Row
37, Campus Public Safety
38, 150 Annex
39, Field House

0 155 310 Feet



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SOURCE: Bing Imagery, 2015; Coast Community College Vision Plan, 2012; Count of Orange, 2015.

FIGURE 4-3
Proposed Demolition

Orange Coast College Vision 2020 Facilities Master Plan Historic Resources Technical Report

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5. Mitigation Measures

A. CEQA Mitigation Approaches

According to CEQA, mitigation may include:

- Avoiding the impact altogether by not taking a certain action or parts of an action;
- Minimizing impacts by limiting the degree or magnitude of the action and its implementation;
- Rectifying the impact by repairing, rehabilitating, or restoring the impacted environment;
- Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action;
- Compensating for the impact by replacing or providing substitute resources or environments;[35] and
- Utilizing the Secretary of the Interior's Standards of Rehabilitation and Guidelines for Rehabilitating Historic Buildings.[36]

B. Consideration of Mitigation Measures

CEQA requires the Lead Agency to examine and impose mitigation measures or feasible project alternatives that would avoid or minimize any impacts or potential impacts to historic resources.

When identified historic resources are involved, avoidance or preservation in place is the preferable course of action. When total avoidance or preservation in place is not possible, a hierarchy of treatment approaches should be examined and assessed for feasibility. Such treatment approaches may include partial retention, relocation, or reconstruction. Demolition and recordation under CEQA are not considered acceptable treatment approaches as recordation does not address the adverse change resulting from the determination of the

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35 *CEQA Guidelines, Section 15370.*

36 *CEQA Guidelines, Section 15064.5(b)(3).*

physical characteristics that justify the inclusion of the resource in the California Register and/or local landmark register.

C. PROJECT MITIGATION MEASURES

Under the proposed project, the majority of contributors to the identified OCC Historic District would be removed for the development of an open landscaped quad area. The following mitigation measures shall be required to document the important history and architecture of the site and its overall historical association with the early development of the OCC campus. Note that even with the following mitigation measures, the identified adverse impacts caused by the implementation of the proposed project would not be mitigated to a less than significant level.

Recordation

A Historic Structures Report shall be prepared prior to any alteration, relocation, or demolition of any contributing buildings, structures, objects, features, or landscape elements located within the identified OCC Historic District. The work shall be completed by a qualified historic preservation professional who meets the requirements of the U.S. Secretary of the Interior’s Professional Qualifications for history, architectural history, or historic architecture. The report shall be prepared in a manner consistent with the recommended approaches outlined in the National Park Service *Preservation Brief 43: The Preparation and Use of Historic Structures Reports*. The report shall document the significance and physical condition of all contributing buildings, structures, objects, features, and landscape elements with photographs, text narrative, and existing drawings. This documentation shall include at a minimum:

- A written historic and descriptive report completed in narrative format, including an architectural data form for each contributing resource.

- A site plan showing the location of each building. This site plan shall include a photo key.

- A sketch floor plan shall accompany each architectural data form.

- Large format (4” x 5” or larger negative) photographs in accordance with Historic American Buildings Survey (HABS) guidelines and standards. Views shall include contextual views, all exterior elevations, details views of significant exterior architectural features, and interior views of significant historical architectural features or spaces.

- Field photographs (digital) based on HABS guidelines to ensure full documentation of the site. Views should correspond to and augment those in the large format photographs. Such photographs shall be logged, tagged, and collected onto a media storage device for safe archiving.

- Available historic photographs and historic and/or current as-built plans of the site and its contributing resources shall be reproduced digitally or photographically and included in the recordation document.

One original copy of the documentation as specified above shall be assembled and offered to each of the following entities:

- One set shall be sent to the Southern California Information Center at California State University, Fullerton.

- One set shall be offered to and, if accepted, deposited in the archives of the Los Angeles Conservancy.

- One set shall be offered to and, if accepted, deposited in the archives of the University of California, Irvine.

- One set shall be offered to and, if accepted, deposited in the archives of the City of Costa Mesa Public Library.

- One set shall be offered to and, if accepted, deposited in the archives of The Huntington Library, Art Collections, and Botanical Gardens.

- One set shall be offered to and, if accepted, deposited in the archives of the Neutra Institute for Survival Through Design.

- One set shall be offered to and, if accepted, deposited in the archives of the Los Angeles Conversancy.

- One set shall be offered to and, if accepted, deposited in the archives of the Orange County Archives.

- One set shall be offered to and, if accepted, deposited in the archives of the Costa Mesa Historical Society.

Salvage and Reuse of Key Features.

Prior to demolition of any contributing resources, including landscape elements, within the OCC Historic District, an inventory of significant exterior character-defining features, distinctive architectural elements, and materials shall be made by a qualified historic preservation professional who satisfies the U.S. Secretary of the Interior's Professional Qualifications for history, architectural history or historic architecture. Where feasible these features shall be itemized, photographed, salvaged, and incorporated into the new design of the campus pursuant to the 2020 Facilities Master Plan. To the extent salvageable materials exceed on-site reuse needs, they may be sold, donated, or exchanged for use elsewhere in the community. Unsound, decayed, or toxic materials (e.g. asbestos, etc.) need not be included in the salvage process. Some materials shall also be incorporated into an educational interpretive program as discussed as part of the following mitigation measure. Salvage efforts shall be documented by summarizing all measures taken to encourage receipt of salvaged materials by the public.

Interpretive Educational Program

To assist the students, faculty, parents, other interested parties in understanding the early history of OCC, an interpretive multi-media educational program and 3-D public art display shall be incorporated into the development of the reconfigured campus quad area and/or campus library. This interpretive program and public art work shall be developed with the assistance of a qualified architectural historian or historic preservation professional who satisfies the Secretary of the Interior's Professional Qualifications. Content and design of the interpretive program should be specific to OCC, specifically the architecture and historical development of the campus. The program/display may include but not be limited to: commemorative signage; plaques; enlarged and framed historic photographs; representative statues; salvaged materials; models; display of as-built plans and drawings; educational interactive CD software program; other relevant displays and exhibits; tours or events; and published information in the form of brochures, pamphlets, videos, electronic media, campus web site, etc.

6. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Under CEQA, the mitigation measures required herein would reduce, but not eliminate the significant impacts of the proposed project to the identified historic district and its contributing resources. The substantial demolition of the buildings, structures, objects, features, and landscape elements that comprise the OCC Historic District would result in a substantial adverse change to the historic property (the historic district) and the environment. The impact to the OCC Historic District cannot be mitigated to a less than significant level. Nevertheless, the measures outlined for documentation of the District, the salvage and reuse of significant character-defining features, and the development of an interpretative educational program(s) are important to assure that information regarding the historical development of the college campus, its association with master architect Richard Neutra, and its physical manifestation of Modern style educational facilities are documented, retained, archived, and promoted.

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APPENDIX

OTHER RELEVANT MATERIALS

EPHEMERAL MATERIAL AND PHOTOGRAPHS

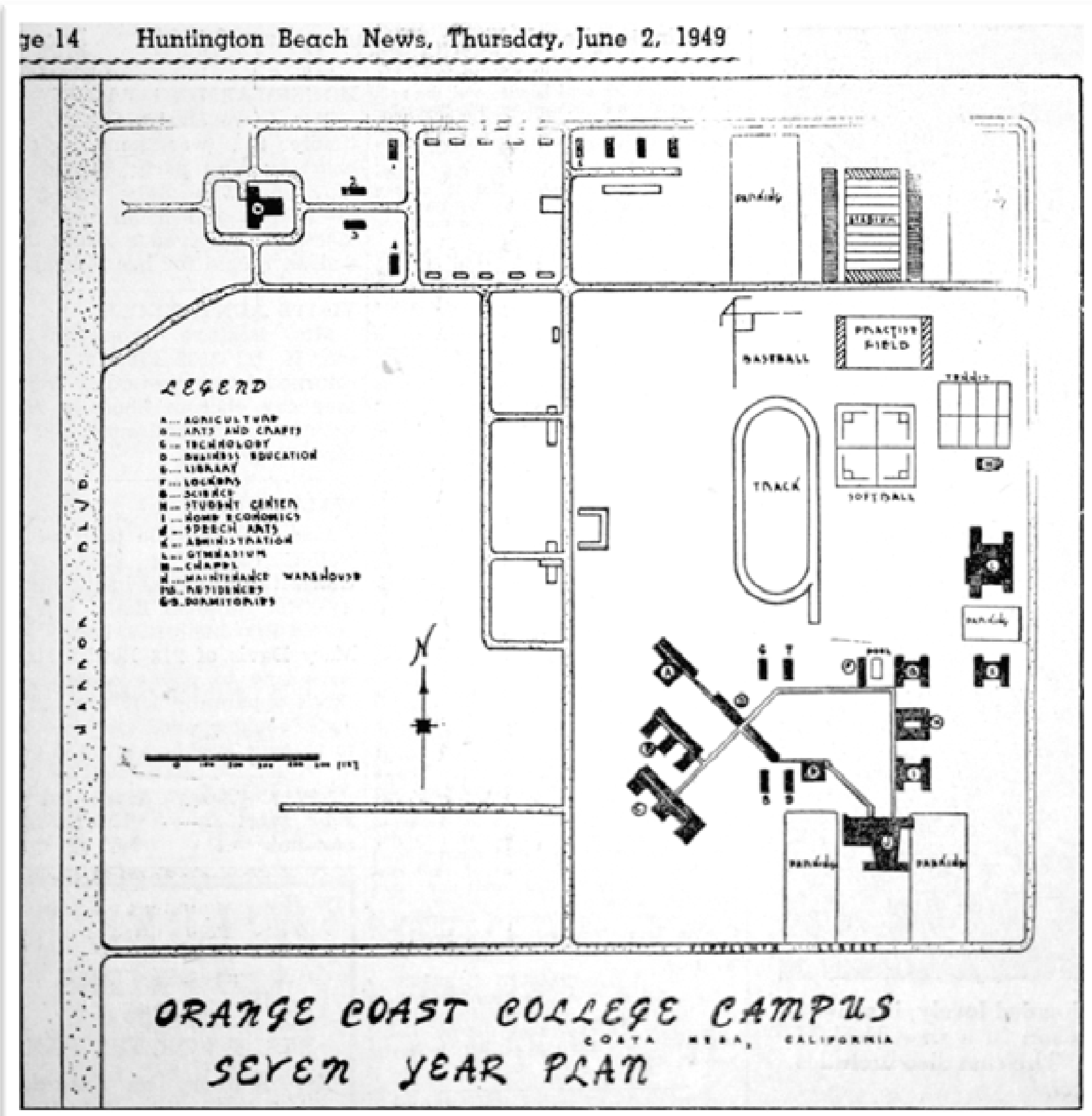
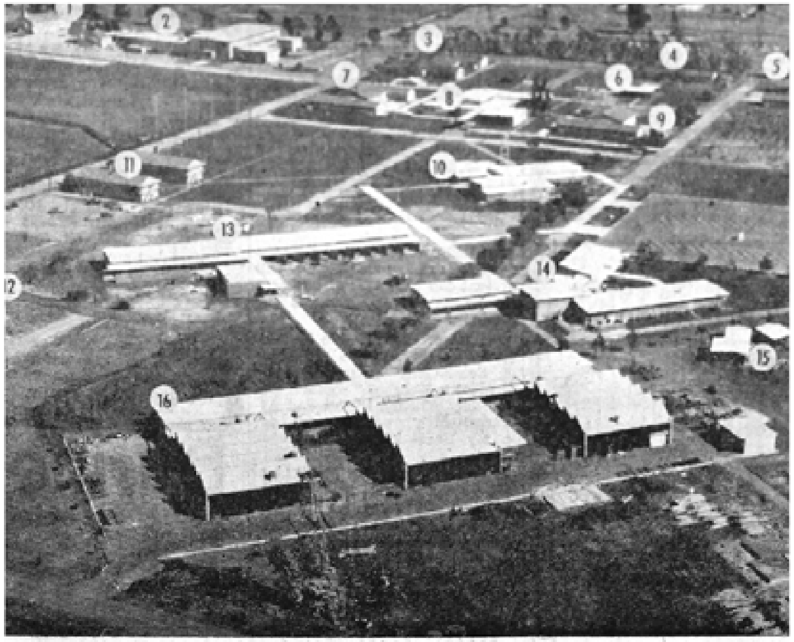


PHOTO - 1: The initial master plan for the campus from 1949.



COLLEGE EXPANSION—From the air, looking towards the northeast, Orange Coast College campus appears as shown above. As the fifth year of the seven year building program gets underway the campus is gradually including all the facilities needed to make it an outstanding college. Building of an auditorium is scheduled to begin around January 1, and an athletic stadium will be started during the spring of 1955. Structures may be identified as follows: (1) memorial chapel, (2) swimming pools* and gymnasium, (3) administration, (4) nursing arts, (5) commerce, (6) home management cottage* **, (7) science, (8) student center*, (9) home economics, (10) library*, (11) men's dormitories, (12) agriculture classroom, (13) business education*, (14) art center*, (15) employee dwellings* **, (16) technology*. (* indicates new buildings, ** indicates built by building construction classes).

PHOTO - 2: Aerial view of the OCC campus during the initial expansion period, c.1953.

PHOTO - 3: Aerial view of the OCC campus, looking southeast, c.1957.

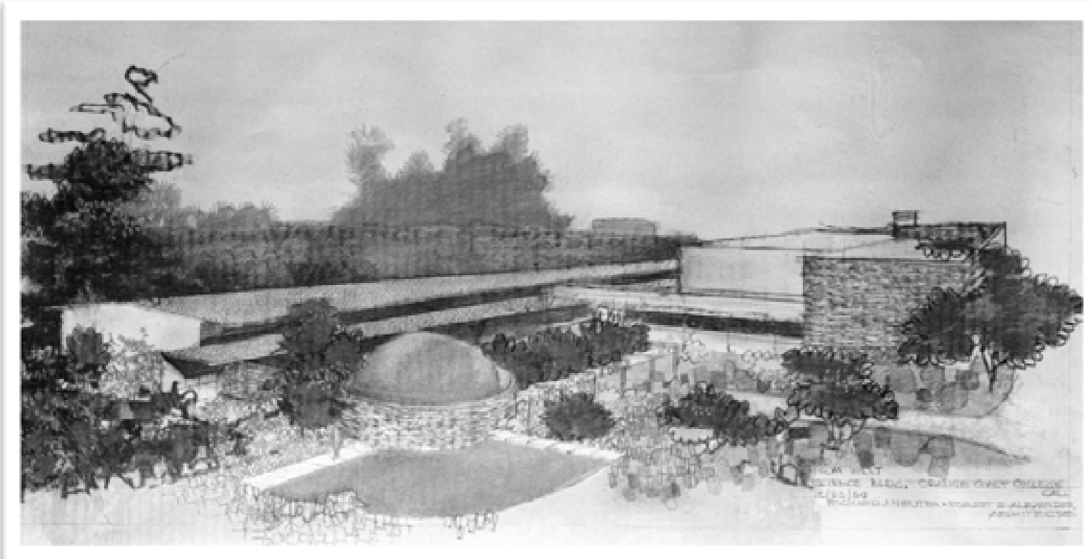


PHOTO - 4: Neutra rendering of the Science Building and Planetarium, north end.

PHOTO - 5: Neutra rendering of the Science Building and Planetarium, south end.

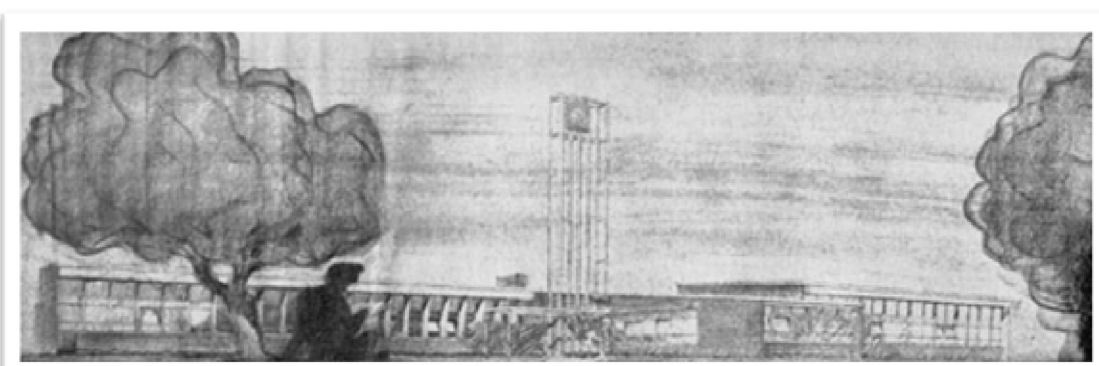


PHOTO - 6: Alexander rendering of the Library addition and clock tower.

PHOTO - 7: Auditorium (Moore Theatre), c.1960s.

PHOTO - 8: Library building and clock tower, looking northwest, c.1960s.

PHOTO - 9: Speech Arts Theatre Building (Robert B. Moore Theatre), looking south, 2014.

PHOTO - 10: Speech Arts Theatre Building, side view, looking east, 2014.

PHOTO - 11: Science Building south end, 2014.

PHOTO - 12: Science Building south end with armillary sphere (right), 1956.

PHOTO - 13: Windbreak walls with landscaping along corridor of Science Building (aka Math Wing), looking northeast, 2014.

PHOTO - 14: Science Building Planetarium, looking south, 2014.

PHOTO - 15: Business Education Building, north wing, 2014.

PHOTO - 16: Business Education Building, central corridor, 2014.

PHOTO - 17: Inner courtyard area of Counseling/Admission Office with clock tower, 2014.

PHOTO - 18: Classroom/labs (originally the library) with clock tower, looking northwest, 2014.

PHOTO - 19: Social Science Forum, entry approach, 2014.

PHOTO - 20: Social Science Forum façade, looking north, 2014.

PHOTO - 21: Flanking classroom wings, landscaping courtyards, looking north, 2014.

PHOTO - 22: Classroom wing with corridor and landscape details, looking northeast, 2014.

PHOTO - 23: Central quad area context with landscape features, looking southwest, 2014.

PHOTO - 24: Central quad area with landscape features, looking south, 2014.

PHOTO - 25: Gymnasium complex, looking north, 2014.

PHOTO - 26: Gymnasium complex, looking northwest, 2014.

PHOTO - 27: Men's Locker Room entry, looking east, 2014.

PHOTO - 28: Women's Locker Room entry, looking northeast, 2014.

PHOTO - 29: Swimming pool stadium, looking south, 2014.

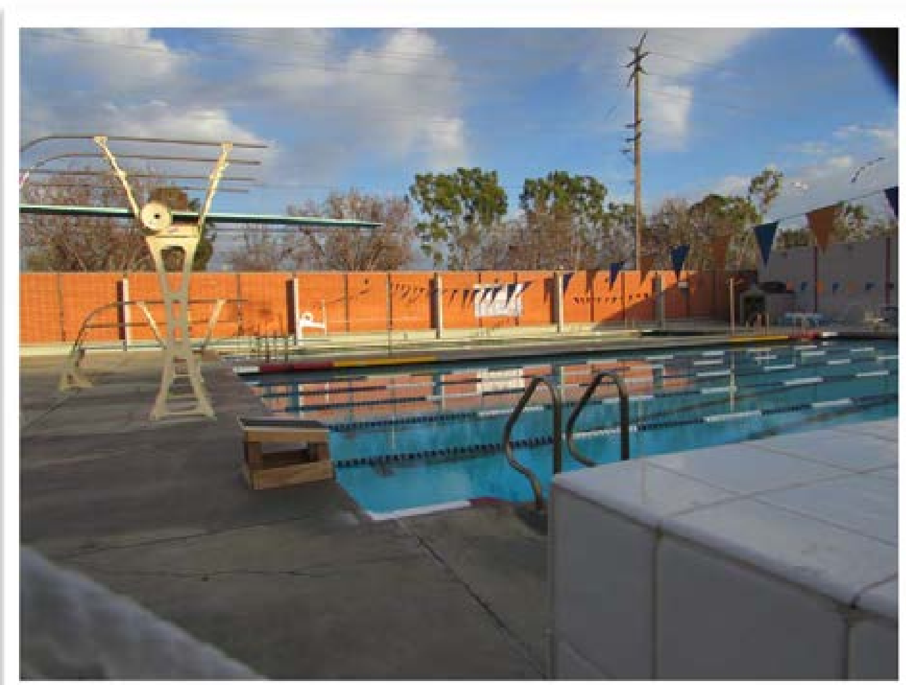


PHOTO - 30: Swimming pool stadium, looking east, 2014.

PHOTO - 31: Field House at Football Stadium, looking northwest, 2014.

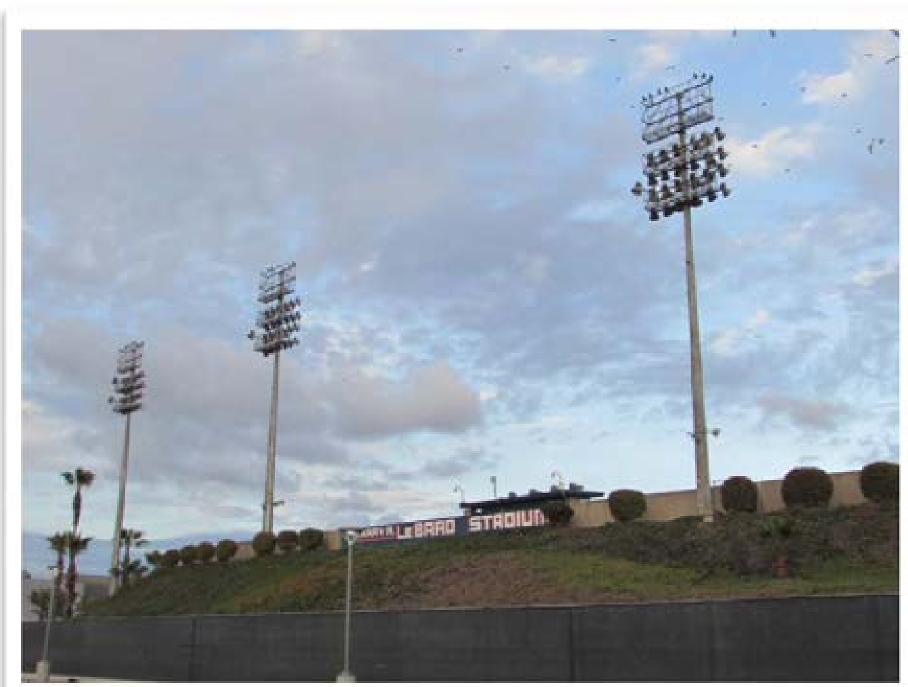


PHOTO - 32: Football Stadium with dirt-filled embankment grandstands, looking northeast, 2014.

PHOTO - 33: Campus landscape features, 2014.

PHOTO - 34: Campus landscape features, 2014.

PHOTO - 35: Campus corridor details, 2014.

PHOTO - 36: Classroom window and planting details, 2014.

PHOTO - 37: Classroom wing fenestration and canopy overhang details, 2014.

PHOTO - 38: Classroom wing fenestration and canopy overhang details, 2014.

PHOTO - 39: Maritime flagpole in quad area, looking north, 2014.

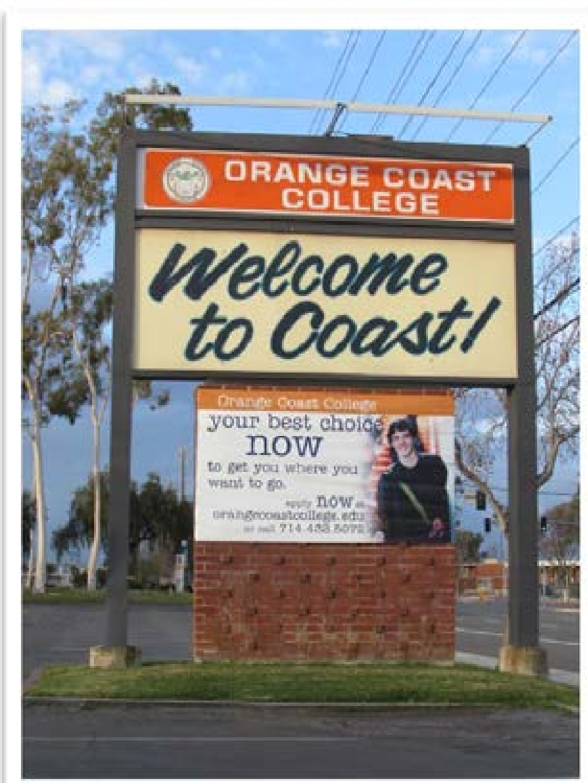


PHOTO - 40: Monument sign along Fairview Road, 2014.

PREVIOUS HISTORIC EVALUATION OF OCC CAMPUS

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code *5D2*

Other Listings
Review Code **Reviewer** **Date**

 Resource Name or #: (Assigned by recorder) *Orange Coast College*

P1. Other Identifier: *OCC-Orange Coast College*

P2. Location: ☐ **Not for Publication** ☒ **Unrestricted** **a. County** *Orange*

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

b. USGS 7.5' Quad **Date** **T** **; R** **;** **1/4 of** **1/4 of Sec** **;**

c. Address: *2701* *Fairview Road* City *Costa Mesa* Zip *92626*

d. UTM: (Give more than one for large and/linear resources) ; mE/ mN

e. Other Locational Data (Enter Parcel #, legal description, directions to resource, elevation, etc., as appropriate)

Parcel No.

P3. Description (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

P3b. Resource Attributes: (List attributes and codes) *HP15 - Educational building*

P4. Resources Present ☐ Building ☐ Structure ☐ Object ☐ Site ☒ District ☐ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, accession #)

P6. Date Constructed/Age and Sources:
☐ Prehistoric ☒ Historic ☐ Both

P7. Owner and Address
Public

P8. Recorded by: (Name, affiliation, and address)
Jan Ostashay
PCR,
233 Wilshire Blvd., Suite 130,
Santa Monica, Ca 90401

P9. Date Recorded: *7/6/99*

P10. Survey Type: (Describe)
Intensive Level City-wide Historic Resources Survey

P11. Report Citation: (Cite survey report and other sources, or enter "none")

Attachments
☐ NONE
☐ Location Map
☐ Sketch Map
☒ Continuation Sheet
☐ Building, Structure, and Object Record
☐ Archaeological Record
☒ District Record
☐ Linear Feature Record
☐ Milling Station Record
☐ Rock Art Record
☐ Artifact Record
☐ Photograph Record
☐ Other: (List)

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State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
DISTRICT RECORD

Primary #
HRI #
Trinomial

NRHP Status Code 5D2

Resource Name or #: (Assigned by recorder) *Orange Coast College*

D1. Historic Name: *Orange Coast College* D2. Common Name: *OCC-Orange Coast College*

D3. Detailed Description (Discuss overall coherence of the district, its setting, visual characteristics, and minor features. List all elements of district.):

The Orange Coast College District is located in the City of Costa Mesa, a developed community within the jurisdiction of Orange County. Composed of five buildings arranged on the campus of Orange Coast College, the district lies between Fairview Road on the east, Adams Avenue on the north, Merrimac Way on the South, and a residential area to the west (See Continuation Sheet 3 of 4).

D4. Boundary Description (Describe limits of district and attach map showing boundary and district elements.):

The district is bounded on the north by Adams Avenue and on the west by a residential neighborhood. It is bounded on the south by Merrimac Way and on the east by Fairview Road.

D5. Boundary Justification:

D6. Significance: Theme *Education* **Area** *Costa Mesa*

Period of Significance **Applicable Criteria** Discuss district's importance in terms of its historical context as defined by theme, period of significance, and geographic scope. Also address the integrity of the district as a whole.)

Richard Neutra world renowned international style architect established a partnership with architect Robert Alexander during the 1950s. The agreed upon scope for the Neutra and Alexander work was confined to the "big" areas of planning and of public and commercial architecture, conducted in an office in Glendale. As a team, Neutra and Alexander were probably best on these planning projects of the early 1950s. In formulating the plans, each made basic conceptual contributions, with Neutra taking chief responsibility for architectural design and Alexander assuming control of planning, organization, and logistics. One of the ongoing commissions Alexander brought to the partnership was for the developing Campus of Orange Coast College (See Continuation Sheet 4 of 4).

D7. References (Give full citations including the names and addresses of any informants, where possible.):

County Tax Assessors Records; Sanborn Maps; Building Permits; Costa Mesa Public Library; Los Angeles Public Library; Costa Mesa Historical Society

D8. Evaluator: *Jan Ostashay* **Date:** *7/6/99*

Affiliation and Address: *Jan Ostashay*

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State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary #
HRI #
Trinomial

 Resource Name or #: (Assigned by recorder) Orange Coast College
Recorded by: Jan Ostashay **Date** 1/22/99 ☒ Continuation ☐ Update

D3. Detailed Description

The five resources are:

The Science Building (Building Nos. 35 and 36)

The Speech Arts and Theatre Building (Building No. 2)

The Business Education Building (Building Nos. 12 and 13)

The Football Stadium (Building No. 135)

The Swim Stadium and Gymnasium (Building Nos. 91, 93, and 94)

D6. Significance

In the early fifties Neutra contributed design ideas for a business education building, a science building, an athletic facility, and a speech arts and music center with a large theatre.

The Orange Coast College, a building complex developed over a period of years, comprises: Speech Arts and Music Center, Business Education, Stadium, Swimming pool, Science Group with planetarium.

The Speech Arts and Music Center with its grand "aula" or auditorium occupies a prominent location at the hub of the campus. The requirements for the Center were drawn up in close cooperation with the teaching staff concerned with the study of language, voice, dramatics, and instrumental music. Student representatives also took part in the program deliberations since student participation in the preparation and performance of the theatrical events was of prime importance. These events were to vary from intimate and small-scale productions to those of larger scale and dramatic pageantry. The college was then particularly interested in exploring the "theatre-in-the-round" as well as the "audience-in-the-round" techniques. Provisions for these and for various types of musical production were considered in the design.

The "theatre-in-the-round" takes place right on the stage itself where strong tables of different heights are designed as removable and adjustable seat platforms, allowing several patterns for audience seating. A pair of revolving stages add to the flexibility of uses as do the two side stages which permit the dramatic action to extend around the audience. Huge motor-driven doors open the stage to the outdoor amphitheater.

Because it was planned in incremental stages over a period of years, the campus lacked a central unifying orientation that would have strengthened the aggregate of competent, though unspectacular architecture. However, even with this design flow, Neutra's signature style - International is apparent in these campus buildings. Key elements of this style include: the Science Building; the Speech Arts and Theatre Building; the Business Education Building; the Football Stadium and; the Swim Stadium and Gymnasium.

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State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 5D2

Other Listings
Review Code ____ **Reviewer** ____ **Date** ____

 Resource Name or #: (Assigned by recorder) *Science Building*

P1. Other Identifier: *Orange Coast College*

P2. Location: ☐ **Not for Publication** ☒ **Unrestricted** **a. County** *Orange*

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

b. USGS 7.5' Quad **Date** **T** **; R** **;** **1/4 of** **1/4 of Sec** **;**

c. Address: *2701* *Fairview Road* City *Costa Mesa* Zip *92626*

d. UTM: (Give more than one for large and/linear resources) ; mE/ mN

e. Other Locational Data (Enter Parcel #, legal description, directions to resource, elevation, etc., as appropriate)

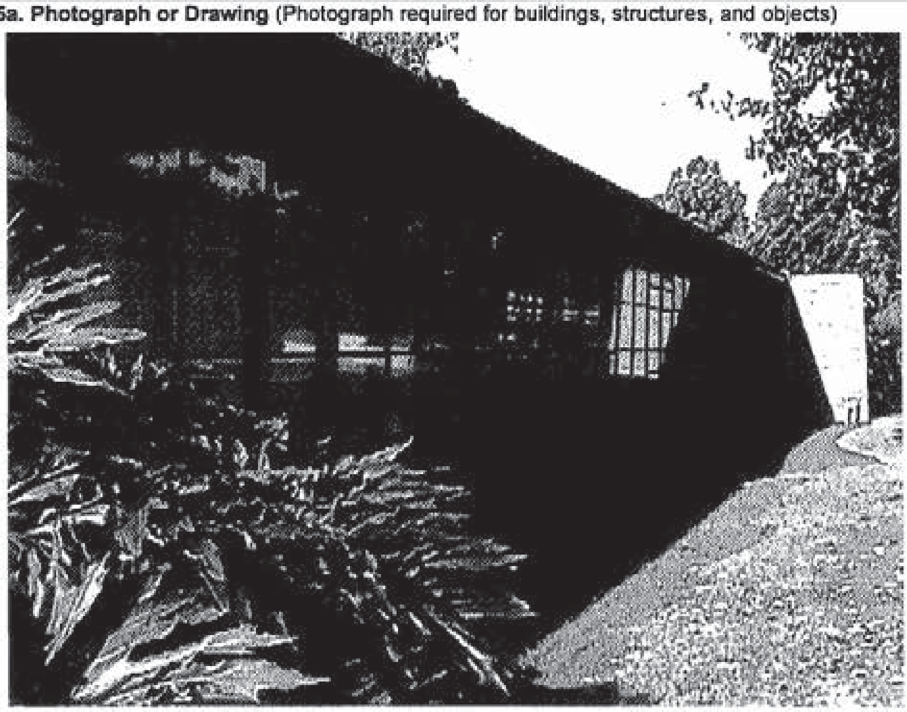
Parcel No.

P3. Description (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

P3b. Resource Attributes: (List attributes and codes) *HP15 - Educational building*

P4. Resources Present ☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☒ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)



P5b. Description of Photo: (View, date, accession #) *(View toward northeast). Photo No: 1-5, 1/21/99*

P6. Date Constructed/Age and Sources: ☐ Prehistoric ☒ Historic ☐ Both

P7. Owner and Address
Public

P8. Recorded by: (Name, affiliation, and address)
Jan Ostashay
PCR,
233 Wilshire Blvd., Suite 130,
Santa Monica, Ca 90401

P9. Date Recorded: *1/22/99*

P10. Survey Type: (Describe)
Intensive Level City-wide Historic Resources Survey

P11. Report Citation: (Cite survey report and other sources, or enter "none")

Attachments ☒ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record ☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record ☐ Other: (List)

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State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 5D2

Other Listings
Review Code Reviewer Date

 Resource Name or #: (Assigned by recorder) *Speech Arts and Theatre Building*

P1. Other Identifier: *Orange Coast College*

P2. Location: ☐ Not for Publication ☒ Unrestricted **a. County** *Orange*

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

b. USGS 7.5' Quad **Date** **T** **; R** **;** **1/4 of** **1/4 of Sec** **;**

c. Address: *2701* *Fairview Road* City *Costa Mesa* Zip *92626*

d. UTM: (Give more than one for large and/linear resources) ; mE/ mN

e. Other Locational Data (Enter Parcel #, legal description, directions to resource, elevation, etc., as appropriate)

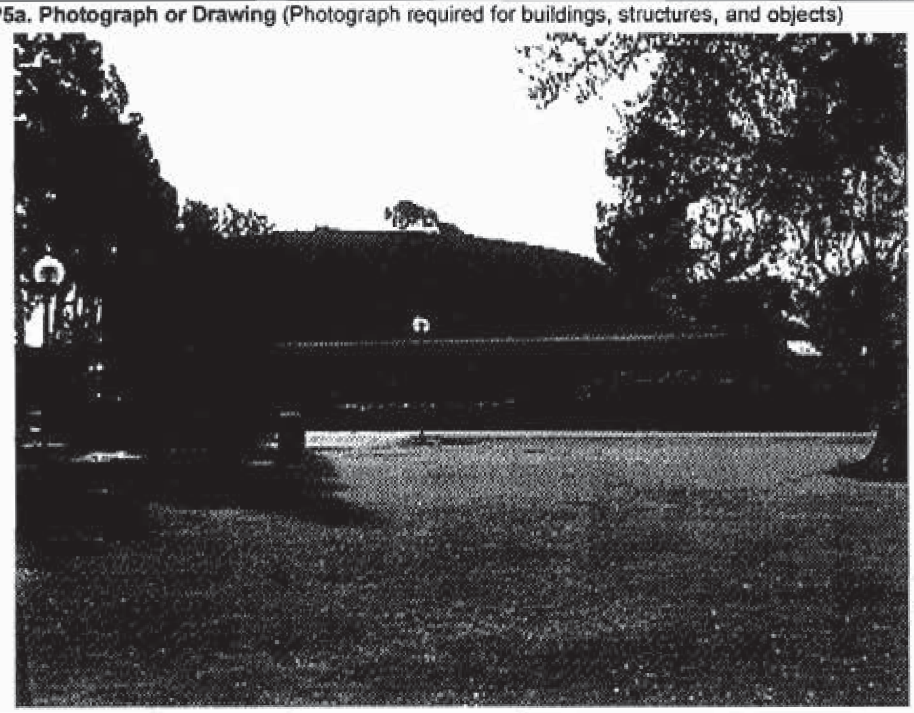
Parcel No.

P3. Description (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

P3b. Resource Attributes: (List attributes and codes) *HP15 - Educational building* *HP10 - Theater*

P4. Resources Present ☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☒ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)



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(View toward south). Photo No: 1-7, 1/21/99

P6. Date Constructed/Age and Sources:
☐ Prehistoric ☒ Historic ☐ Both

P7. Owner and Address
Public

P8. Recorded by: (Name, affiliation, and address)
Jan Ostashay
PCR,
233 Wilshire Blvd., Suite 130,
Santa Monica, Ca 90401

P9. Date Recorded: *1/22/99*

P10. Survey Type: (Describe)
Intensive Level City-wide Historic Resources Survey

P11. Report Citation: (Cite survey report and other sources, or enter "none")

Attachments ☒ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record ☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record ☐ Other: (List)

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code *5D2*

Other Listings
Review Code **Reviewer** **Date**

 Resource Name or #: (Assigned by recorder) *Business and Education Building*

P1. Other Identifier: *Orange Coast College*

P2. Location: ☐ **Not for Publication** ☒ **Unrestricted** **a. County** *Orange*
and (P2b and P2c or P2d. Attach a Location Map as necessary.)
b. USGS 7.5' Quad **Date** **T** **; R** **;** **1/4 of** **1/4 of Sec** **;**
c. Address: *2701* *Fairview Road* City *Costa Mesa* Zip *92626*
d. UTM: (Give more than one for large and/linear resources) ; mE/ mN
e. Other Locational Data (Enter Parcel #, legal description, directions to resource, elevation, etc., as appropriate)

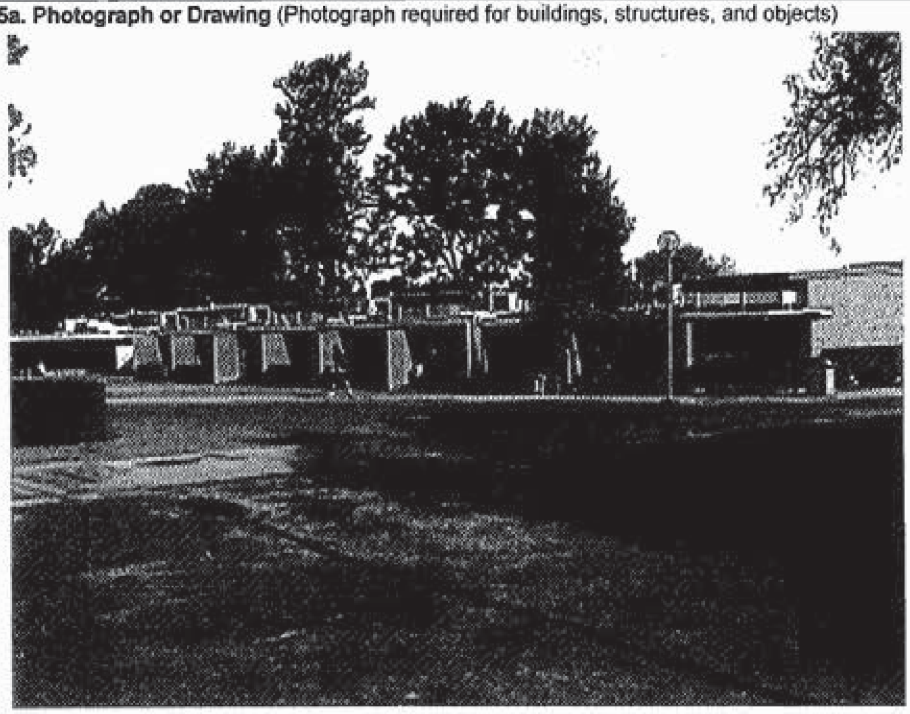
Parcel No.

P3. Description (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

P3b. Resource Attributes: (List attributes and codes) *HP15 - Educational building*

P4. Resources Present ☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☒ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)



P5b. Description of Photo: (View, date, accession #)
(View toward northeast). Photo No: 1-8, 1/21/99

P6. Date Constructed/Age and Sources:
☐ Prehistoric ☒ Historic ☐ Both

P7. Owner and Address
Public

P8. Recorded by: (Name, affiliation, and address)
Jan Ostashay
PCR,
233 Wilshire Blvd., Suite 130,
Santa Monica, Ca 90401

P9. Date Recorded: *1/22/99*

P10. Survey Type: (Describe)
Intensive Level City-wide Historic Resources Survey

P11. Report Citation: (Cite survey report and other sources, or enter "none")

Attachments ☒ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record ☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record ☐ Other: (List)

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State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 5D2

Other Listings
Review Code **Reviewer** **Date**

Page 8 of 9 **Resource Name or #:** (Assigned by recorder) *Football Stadium*

P1. Other Identifier: *Orange Coast College*

P2. Location: ☐ **Not for Publication** ☒ **Unrestricted** **a. County** *Orange*

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

b. USGS 7.5' Quad **Date** **T** **; R** **;** **1/4 of** **1/4 of Sec** **;**

c. Address: *2701* *Fairview Road* City *Costa Mesa* Zip *92626*

d. UTM: (Give more than one for large and/linear resources) ; mE/ mN

e. Other Locational Data (Enter Parcel #, legal description, directions to resource, elevation, etc., as appropriate)

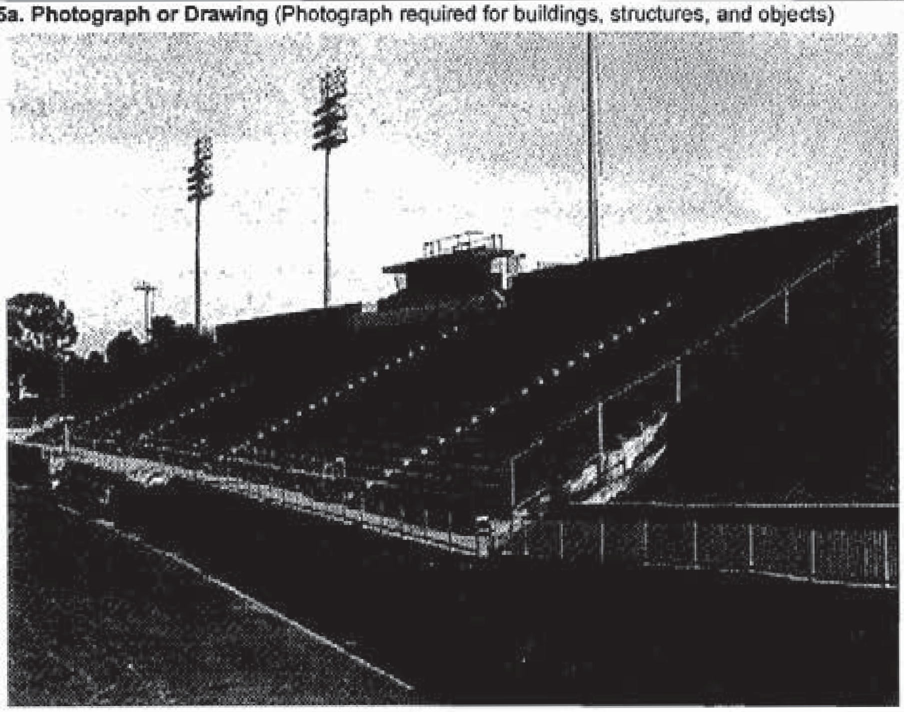
Parcel No.

P3. Description (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

P3b. Resource Attributes: (List attributes and codes) *HP15 - Educational building* *HP42 - Stadium/sports arena*

P4. Resources Present ☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☒ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)



P5b. Description of Photo: (View, date, accession #) *(View toward northeast). Photo No: 1-9, 1/21/99*

P6. Date Constructed/Age and Sources: ☐ Prehistoric ☒ Historic ☐ Both

P7. Owner and Address
Public

P8. Recorded by: (Name, affiliation, and address)
Jan Ostashay
PCR,
233 Wilshire Blvd., Suite 130,
Santa Monica, Ca 90401

P9. Date Recorded: *1/22/99*

P10. Survey Type: (Describe)
Intensive Level City-wide Historic Resources Survey

P11. Report Citation: (Cite survey report and other sources, or enter "none")

Attachments ☒ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record ☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record ☐ Other: (List)

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State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 5D2

Other Listings
Review Code Reviewer Date

Resource Name or #: (Assigned by recorder) *Swim Stadium and Gynamsium*

P1. Other Identifier: *Orange Coast College*

P2. Location: ☐ Not for Publication ☒ Unrestricted a. County *Orange*

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

b. USGS 7.5' Quad Date T ; R ; 1/4 of 1/4 of Sec ;

c. Address: *2701 Fairview Road* City *Costa Mesa* Zip *92626*

d. UTM: (Give more than one for large and/linear resources) ; mE/ mN

e. Other Locational Data (Enter Parcel #, legal description, directions to resource, elevation, etc., as appropriate)

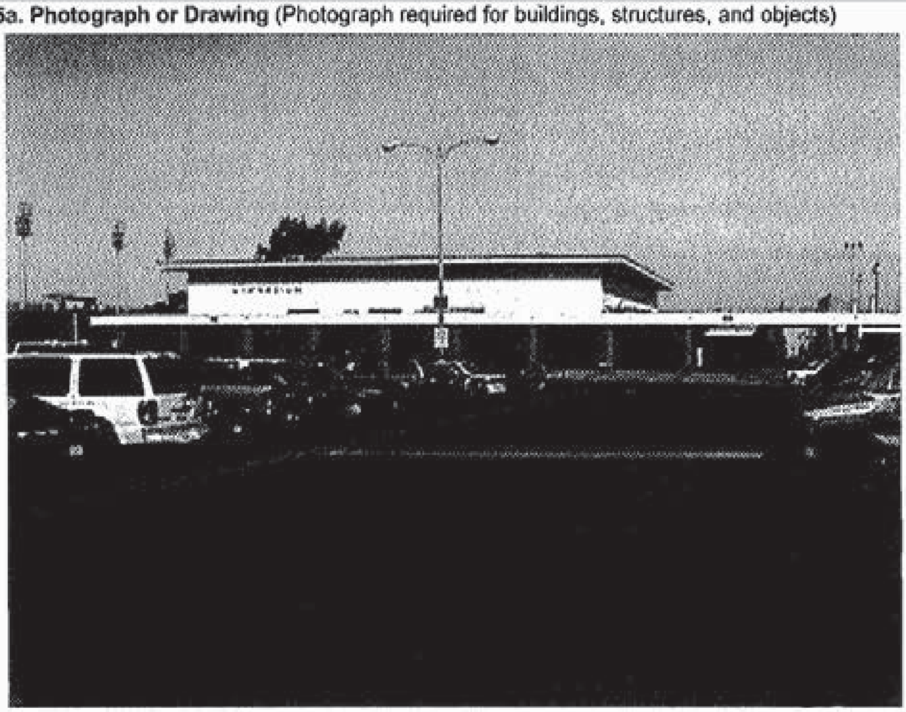
Parcel No.

P3. Description (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

P3b. Resource Attributes: (List attributes and codes) *HP15 - Educational building*

P4. Resources Present ☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☒ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)



P5b. Description of Photo: (View, date, accession #)
(View toward north). Photo No: 1-6, 1/21/99

P6. Date Constructed/Age and Sources:
☐ Prehistoric ☒ Historic ☐ Both

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Paleo Solutions
Paleontological and Archaeological Compliance and Consulting Services

PALEONTOLOGICAL RESOURCE SURVEY
ORANGE COAST COLLEGE
CITY OF COSTA MESA
ORANGE COUNTY, CALIFORNIA

Prepared For:

Rachel Struglia, Ph.D., AICP
Principal
Dudek
31878 Camino Capistrano, Suite 200
San Juan Capistrano, CA 92675

Prepared By:

Sarah A. Siren, M.S., Project Manager / Co-Principal Investigator (Paleontology) and
Geraldine L. Aron, M.S., Co- Principal Investigator
Paleo Solutions, Inc.
911 S. Primrose Ave., Suite J,
Monrovia, CA 91016
geraldine@paleosolutions.com
(562) 818-7713

December 2, 2013

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Figures

Tables

1.0 INTRODUCTION

This paleontological assessment was prepared at the request of Dudek in order to evaluate the paleontological resource potential of the Orange Coast College campus (the Project) located in the City of Costa Mesa, County of Orange, California (Figure 1).

The study was performed in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code, §21000 et seq.), State CEQA Guidelines (California Code of Regulations, Title 14, §15000 et seq.), County of Orange Guidelines, and the City of Costa Mesa General Plan (Eisentraut and Cooper, 2002; Costa Mesa, 2000). Ms. Sarah Siren, M.S., Project Manager/Principal Investigator (Paleontology), conducted the pedestrian survey, the institutional records search, and co-authored this report with Ms. Geraldine Aron, M.S. Report review was provided by Paul C. Murphey, Ph.D., and GIS mapping was provided by Mr. Mark Deering. The goal of this report is to identify the paleontological sensitivity of the Project area and develop recommendations for the mitigation of adverse effects on paleontological resources that may result from the proposed construction.

2.0 PROJECT LOCATION AND DESCRIPTION

The Orange Coast College campus is an approximately 164-acre site located at 2701 Fairview Road, north of Merrimac Way, west of Fairview Road, south of Adams Avenue, and east of Harbor Boulevard, in the City of Costa Mesa, California. The campus can be accessed from Interstate (I-) 405 to the north, State Highway 55 to the southeast, and State Highway 73 to the northeast (Figure 1). Residential communities generally surround the campus to the north, west, and south. The Costa Mesa Farm Sports Complex, High School, and Arlington Pacific Amphitheater are located opposite the campus on the east side of Fairview Road (Figure 1). The Project area, as seen on a portion of the USGS Newport Beach, California 7.5-minute Topographic Quadrangle map (1965 edition, photorevised 1981), is located in an unsurveyed portion of Township 6 South, Range 10 West (San Bernardino Meridian).

The proposed development will involve improvements to the Orange Coast College campus, including construction of taller buildings and recreational facilities. Requisite improvements to existing infrastructure such as road expansion and inclusion of preservation areas will also accommodate the campus redevelopment.

3.0 METHODS

The paleontological study of the Project area included a review of regional geologic mapping and relevant reports, a literature search, an institutional records search, a review of previous paleontological investigations in the area, and an on-site field survey.

3.1 Records Search

A paleontological records search was conducted by Samuel McLeod, Ph.D., of the Vertebrate Paleontology Section of the Natural History Museum of Los Angeles County (LACM). The results of the records search dated October 17, 2013, are attached (Appendix A).

3.2 Literature Search

The literature reviewed included published scientific papers that were found at the library of the Biodiversity Research Center of the Californias, San Diego Natural History Museum; the Journal of Vertebrate Paleontology; and digitized publications obtained on internet sources such as GeoRef, GeoPub, GeoTracker, Science Direct, and Web of Science.

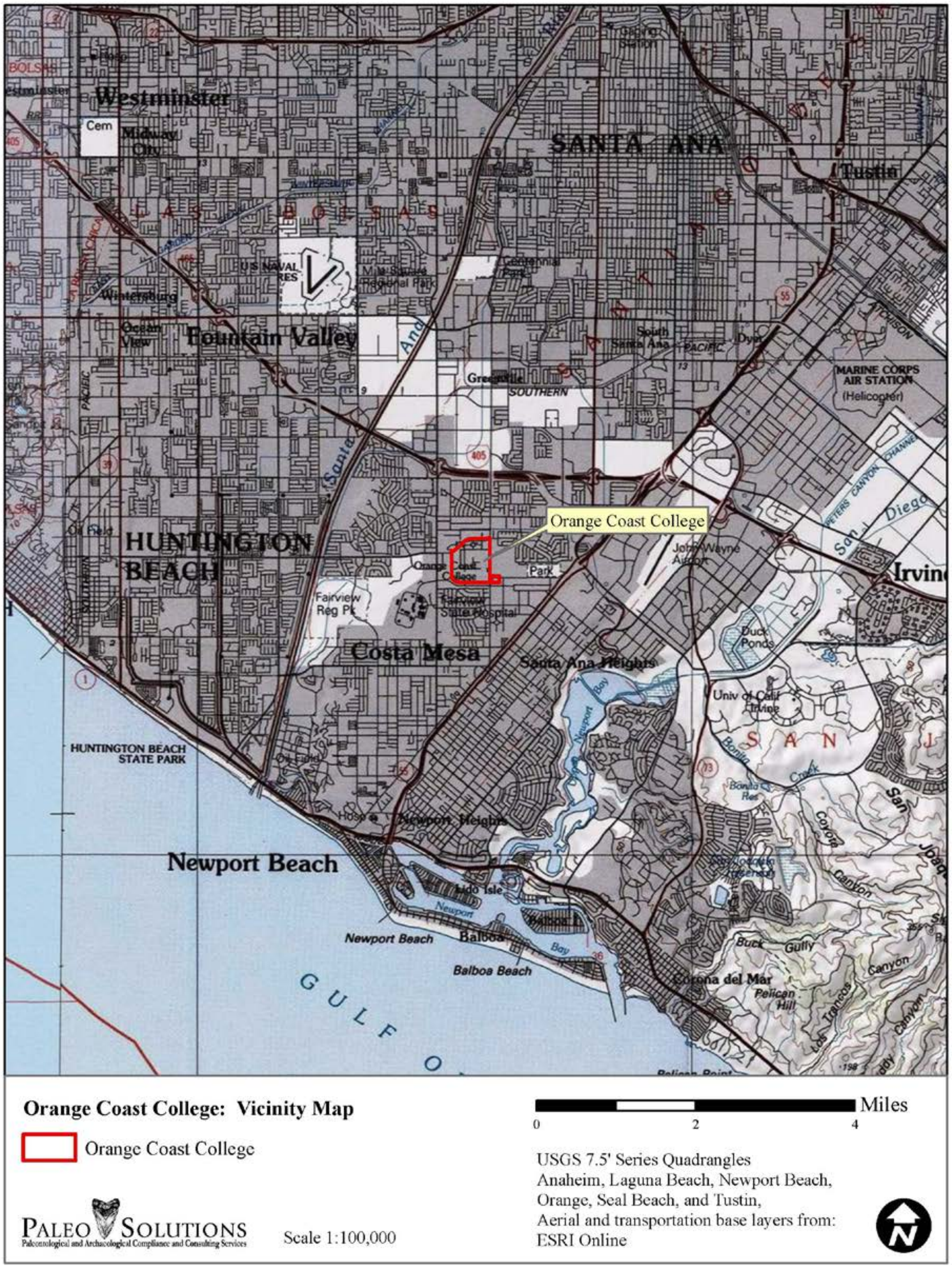

Figure 1. Index map of the western coast of Orange County, with the Orange Coast College campus, outlined in red, in the City of Costa Mesa, California.

3.3 Geologic Map Review

Paleo Solutions, Inc. (Paleo Solutions) reviewed both published geologic mapping (Morton and Miller, 2006) and unpublished reports (Chambers Group, Inc., 2007) for the area as part of this assessment.

3.4 Field Survey

A pedestrian survey of the property was conducted on October 29, 2013, by Sarah Siren, M.S. The survey included both an examination of outcrops for surface fossils and an assessment of the potential for occurrences of subsurface fossils.

4.0 REGULATORY REQUIREMENTS

This section of the report presents the regulatory requirements that will apply to the Project.

4.1 Federal Regulations and Laws

There are no federal regulations related to paleontological resources that apply to the Project.

4.2 State and Local Regulations and Laws

The procedures, types of activities, persons, and public agencies required to comply with the CEQA are defined in the *Guidelines for Implementation of CEQA* (State CEQA Guidelines), as amended on March 18, 2010 (Title 14, Section 15000 et seq. of the California Code of Regulations [i.e., 14 CCR Section 15000 et seq.] and further amended January 4, 2013. One of the questions listed in the CEQA Environmental Checklist is: "Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?" (State CEQA Guidelines Section 15064.5 and Appendix G, Section V, Part C).

The *County of Orange General Plan* by Eisentraut and Cooper (2002)—based on the Society for Vertebrate Paleontology (SVP) recommendations—is used in part because it provides a convenient and locally useful way to address the paleontological sensitivity of formations. The formations that occur within Orange County have been assigned a sensitivity ranging from very high to none (Eisentraut and Cooper, 2002). The City of Costa Mesa General Plan, specifically the Historic and Cultural Resources Element (2000), provides an outline for the protection and preservation of resources.

According to the Historic and Cultural Resources Element of the City of Costa Mesa General Plan (2000):

> "The goals, objectives and policies that address Historic and Cultural Resources Element are as follows:
>
> GOAL HCR-1: HISTORIC RESOURCE CONSERVATION
> It is the goal of the City of Costa Mesa to provide its citizens with a high quality environment through the protection and conservation of historic and cultural resources.
>
> Objective HCR-1A. Encourage the preservation and protection of the City's natural and man-made historic resources.
>
> HCR-1A.1 Require, as part of the environmental review procedure, an evaluation of the significance of paleontological, archaeological, and historical resources and the impact of proposed development on those resources."

5.0 RESOURCE ASSESSMENT CRITERIA

According to the County of Orange Curation Guidelines (Eisentraut and Cooper, 2002), impacts to paleontological resources range from zero to very high depending upon the resource sensitivity of the impacted geologic formations. The specific criteria applied for each sensitivity category are summarized below.

Very High Sensitivity

Very high sensitivity is applied to sedimentary deposits that yield scientifically very significant fossils, that give us insight into a particular time period, and those fossils which are very important for research. Formations that are included in this category are: the Capistrano Formation, the Monterey Formation, the Topanga Formation, the Sespe Formation, and southern Orange County exposures of the Santiago Formation (Eisentraut and Cooper, 2002). None of the units underlying the Project area are considered to have a very high paleontological sensitivity.

High Sensitivity

High sensitivity is assigned to geologic formations known to contain paleontological localities with rare, well-preserved, critical fossil materials for stratigraphic or paleoenvironmental interpretation, and fossils providing important information about the paleobiology and evolutionary history (phylogeny) of animal and plant groups. Generally speaking, highly sensitive formations produce vertebrate fossil remains or are considered to have the potential to produce such remains. Geologic units that have been assigned a high paleontological resource sensitivity that crop out elsewhere in Costa Mesa include the Pleistocene Old Paralic Deposits (also referred to as terrace deposits). These high sensitivity sedimentary deposits include the Pleistocene age marine and non-marine terrace deposits (older alluvium) that are presumed to underlie younger, alluvial fan deposits mapped within the Project area.

Moderate Sensitivity

Moderate sensitivity is assigned to geologic formations known to contain paleontological localities with poorly preserved, common elsewhere, or stratigraphically unimportant fossil material. The moderate sensitivity category is also applied to geologic formations that are judged to have a strong, but unproven potential for producing important fossil remains. Geologic deposits that have been assigned a moderate paleontological resource sensitivity that are documented elsewhere in Orange County include the San Pedro Sand (McLeod, 2013; Eisentraut and Cooper, 2002).

Low Sensitivity

Low sensitivity is assigned to geologic formations that, based on their relatively youthful age and/or high-energy depositional history, are judged unlikely to produce important fossil remains. Typically, low sensitivity formations produce poorly-preserved invertebrate fossil remains in low abundance. Due to the young age and coarse-grained nature of younger alluvium, these surficial sedimentary deposits are generally considered to have little potential to yield scientifically significant fossils. However, on occasion deeper excavations into sedimentary deposits mapped as younger alluvium penetrate into alluvial deposits of Pleistocene age and do yield fossils. None of the units underlying the Project area are considered to have a low paleontological sensitivity.

None Sensitivity

Sedimentary deposits designated as having no sensitivity is assigned to geologic formations that are entirely igneous in origin (i.e., plutonic and/or volcanic), and therefore have no potential for producing fossil remains. Volcanic ash deposits can represent an exception to this general rule and preserve fossils as both body fossils or natural casts. Artificial fill materials are also assigned a paleontological resource sensitivity of none.

6.0 GEOLOGY AND PALEONTOLOGY

6.1 Geologic Summary

The Project area is the campus of Orange Coast College, in the City of Costa Mesa, California (Figure 1). This portion of Orange County lies within the Coastal Los Angeles Basin of southern California (Fram and Belitz, 2012) (Figure 1). As stated in the Draft Program EIR by Chambers Group, Inc. (2007):

> *"Costa Mesa lies adjacent to the to the Downey and Tustin portion of the Coastal Plain, where sedimentary and volcanic rocks in the subsurface attain great thickness. These deposits are composed mainly of volcanic, marine and nonmarine sedimentary rocks overlying a basement of granitic and metamorphic rock. The plain is immediately underlain by a thick sequence of alluvial sediments, which overlie the older sedimentary and volcanic rocks."*

Surficial deposits within the campus are entirely mapped as old paralic deposits (Qopf; less than 500,000 years old) (Morton and Miller, 2006). The campus itself is relatively flat-lying in this developed portion of Costa Mesa. Recent deposits (Holocene; 10,000 years or younger) occur below and adjacent to the I-405 freeway due north of the Orange Coast College campus (Morton and Miller, 2006; shown on maps as the designation Qya) (Figure 3).

Pleistocene-age fossils have been found at shallow depths in surficial sedimentary deposits throughout southern California (Jefferson, 1991). It is likely that Pleistocene age deposits underlie the campus at depth, and these deposits are known to produce Ice Age fossils elsewhere in Costa Mesa. Older paralic deposits of the same age have been documented during nearby development projects in Costa Mesa, and are presumed to underlie the younger alluvial fan deposits mapped within the Project area, but at an unknown depth (Morton and Miller, 2006). Older marine Quaternary terrace deposits are visible in the bluffs above the Santa Ana River due west of the Orange Coast College campus (McLeod, 2013) (Figure 2).

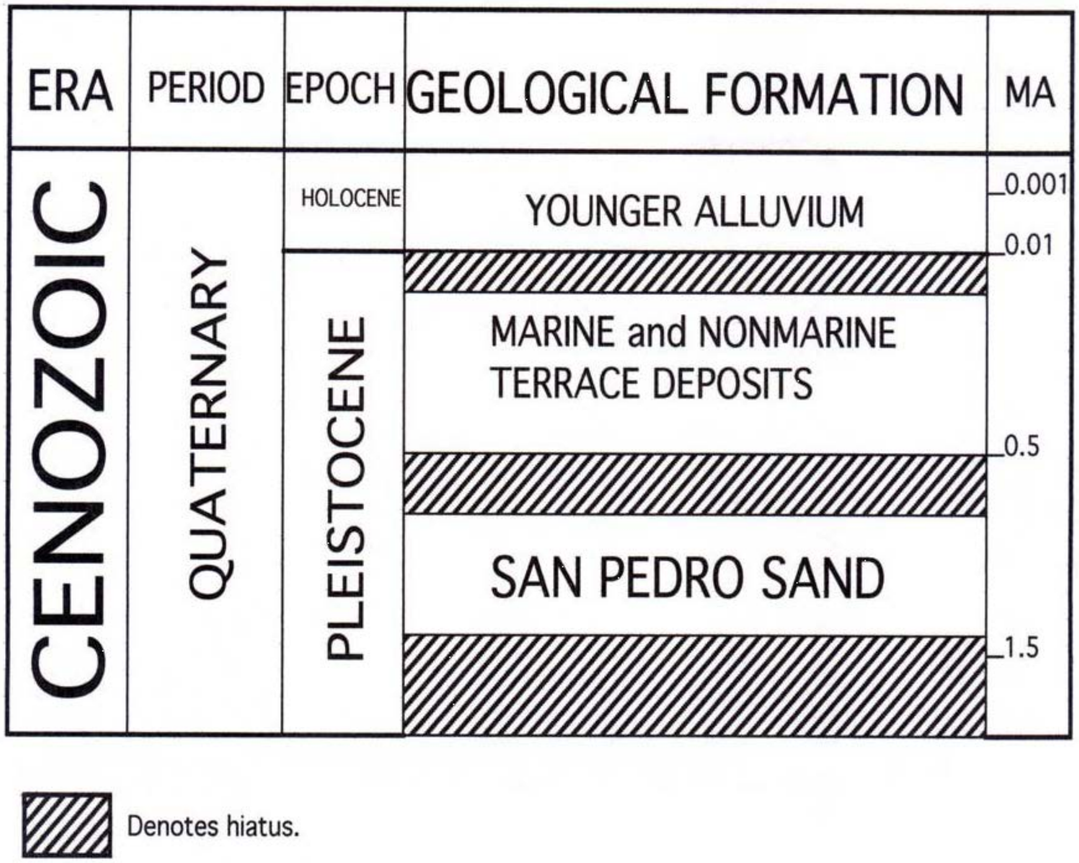

Figure 2. Stratigraphic relationship of younger alluvium, terrace deposits, and the San Pedro Sand, as they occur in Costa Mesa, and as referenced in the records search results by McLeod, 2013 (modified from Eisentraut and Cooper, 2002).

6.2 Old paralic deposits overlain by alluvial fan deposits (Qopf)

6.3.1 Description

These late to middle Pleistocene age (less than 500,000 years old) old paralic deposits are described by Morton and Miller (2006) as being "capped by extensive but thin, discontinuous, younger, locally derived, sandy alluvial fan deposits," and were derived from local streams draining from the surrounding mountains. Old paralic, or marginal marine, deposits of Pleistocene age may also be encountered at unknown depths below younger alluvial fan deposits. The old paralic deposits themselves consist of "poorly sorted, moderately permeable, reddish-brown, interfingered strandline, beach, estuarine and colluvial deposits composed of silt, sand and cobbles" (Morton and Miller, 2006).

6.3.2 Paleontology

Pleistocene geologic units are mapped within the Project area and have been assigned a high sensitivity based on their potential to yield significant, Ice Age mammals elsewhere in Costa Mesa (McLeod, 2013) (Appendix A).

Scientifically significant paleontological resources have been recovered from correlative Pleistocene older alluvial deposits throughout southern California and include fossil plants, invertebrates, and mammals (e.g., ground sloth, rodents, horse, tapir, camel, deer, llama, mastodon, and mammoth) (Jefferson, 1991; Reynolds and Reynolds, 1991; Anderson et al., 2002; Springer et al., 2009; 2010; Scott, 2010). Previously, Pleistocene megafauna remains were typically found in mass accumulations, such as Rancho La Brea, and Cousteau Pit, or singly in stream deposits in the centers of more low-lying basins. Discoveries of Pleistocene megafauna in the terrace deposits are a relatively new phenomenon, largely associated with construction projects along the coast of southern California. Old Pleistocene age deposits, although not visible at the surface during the pedestrian survey, have the potential to yield significant paleontological resources, and have been assigned a high paleontological resource sensitivity (McLeod, 2013) (Appendix A).

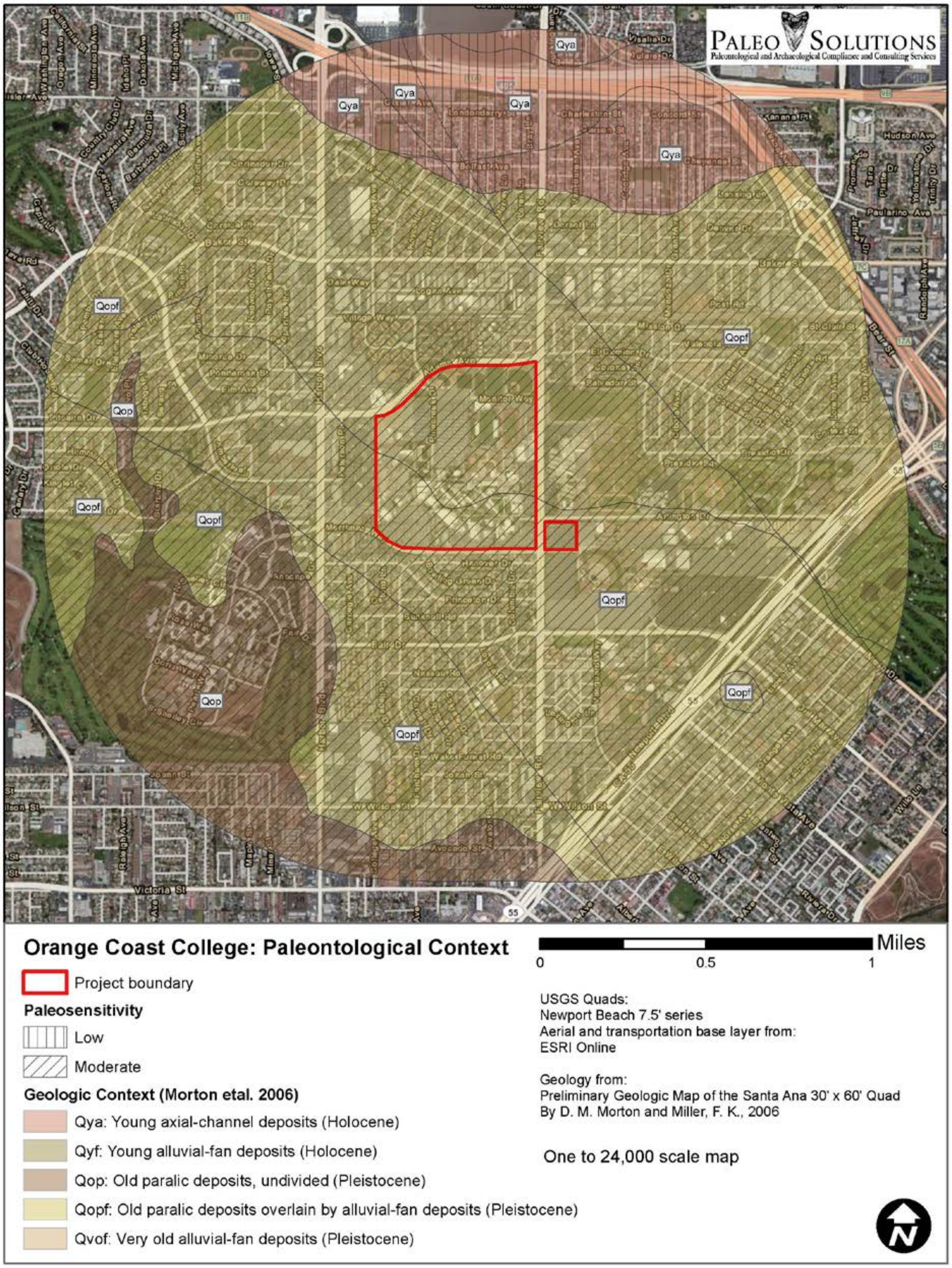

Figure 3. Geologic map overlain on an aerial photograph of the Project area and surrounding region (from Morton and Miller, 2006).

7.0 RESULTS

7.1 Museum Records Search

According to the records search (McLeod, 2013), there are no documented fossil localities within a one-mile radius of the Project boundary. However, the LACM does have a number of previously recorded fossil localities from Pleistocene age sedimentary deposits in the Costa Mesa area (McLeod, 2013; Appendix A), and these same age deposits underlie the Project area at a shallow depth. Such deposits have yielded the fossilized remains of mammoth and extinct camel, among others (McLeod, 2013).

As reported by McLeod (2013), a number of LACM fossil collecting localities are known from older Quaternary deposits in Costa Mesa. These include LACM 1339, located due west of the Orange Coast College campus, east of the Santa Ana River channel along Adams Avenue. This locality produced fossil mammoth and camel bones in sand from approximately 15 feet below the mesa bluffs, and just over a mile and a half west of the campus (McLeod, 2013). Another fossil locality, LACM 4219, located southeast of the campus, produced both fossil sea turtle and camel remains from sands 30 feet below the ground surface near Santa Isabel Avenue. Additional localities are documented further to the south in the Upper Newport Bay region of Orange County (McLeod, 2013; Barnes et al., 2013).

7.2 Resource Assessment

The following table is generated using the County of Orange guidelines (Eisentraut and Cooper, 2002) and the currently available geologic mapping. Based on the results of the literature and museum records searches, the geologic formations in the Project area are individually ranked (Table 1).

Table 1. Rankings of units that are found underneath the Orange Coast College campus

Unit Group	Map Abbreviation	Age	Typical Fossils	SensitivityRanking
Old Paralic Deposits overlain by Alluvial Fan Deposits	Qopf, and similarly aged deposits	Pleistocene	Ice Age Mammals	High

7.3 Field Survey

On October 29, 2013, the areas of impact that had the potential to impact paleontologically sensitive sediments during construction were surveyed. Particular attention was paid to exposed ground surfaces and areas of recent excavation on the Orange Coast College property.

Construction for the development has the potential to impact paleontologically sensitive sediments, as the entire area is underlain by relatively shallow deposits (Morton and Miller, 2006)

(Figure 3). These Pleistocene age deposits occur within the Project area, and may yield significant paleontological resources. Scattered brush and the developed nature of the campus made it difficult in some areas to interpret the surficial geology and paleontological potential (Figures 4 through 9).

Figure 4. View south from the northern portion of the Orange Coast College Campus on Adams Avenue, between Pinecreek Drive and Fairview Road.

Figure 5. View north toward Drama Lab from the parking lot in the southeastern portion of the campus.

Figure 6. View north from edge of parking lot located southwest of S Street and Adams Avenue on the Orange Coast College Campus.

Figure 7. Newly planted trees and exposed, surficial sedimentary deposits on campus southwest of the intersection between S Street and Adams Avenue.

Figure 8. Same location as Figure 5. Map view of water line installation and exposed ground surface.

Figure 9. Same location as Figure 6. Close up of utility building with exposed ground surface at the base.

8.0 POTENTIAL RESEARCH

Construction activities for the Project have the potential to impact deeper sediments that may contain scientifically important fossil remains in areas where buried native sediments are disturbed. Because such a large portion of California is urbanized and covered by development or agriculturally disturbed, opportunities to collect new fossils and paleontological data from Pleistocene age sediments are largely restricted to construction projects that disturb these sediments and reveal the fossils that are preserved in them.

The fossils found in older alluvium in California provide critically important paleoecological and paleoenvironmental data. They provide direct evidence of the composition and phylogenetic diversity of the Pleistocene biota, paleobiologic features of individual taxa, and evolutionary relationships of the fauna and flora through time. In combination, the fossil assemblages at individual localities, together with the sediments in which they are preserved, also provide indirect evidence of the nature of Pleistocene climates and environments, and importantly, the geographic distributions of different paleoenvironment types such as the fluctuating ocean shorelines, locations of inland lakes and swamps, upland habitats, and lowland habitats such as basin floors. It is important to bear in mind that the type and scope of research that can be accomplished for a paleontological construction mitigation project is entirely dependent upon the types and numbers of fossils that are discovered and their sediment logical context. If no fossils are discovered, then no paleontological research will be possible.

Despite the relatively rich Pleistocene fossil record of California, the timing of the transition from the Irvingtonian to the Rancholabrean North American Land Mammal Age (NALMA) is poorly documented and hence not well understood. For example, the first appearance (stratigraphically lowest) of the bison marks the beginning of the Rancholabrean NALMA, but there are few identifiable and stratigraphically well documented specimens of bison known from California, and those that do exist are not associated with reliable age dates. Thus, the timing of the beginning of the Rancholabrean is in question, and may be older or younger than the estimate of 300,000 years BP (before present) that has traditionally been accepted by paleontologists. In addition to the timing of the Irvingtonian-Rancholabrean transition, the composition of the faunal assemblages that comprise these biochronologic intervals and the finer details of faunal composition and change within them are also not well understood and remains problematic. Traditionally, larger mammals have been designated as index fossils and have been the focus of biostratigraphic efforts since the provincial NALMA system was codified by the Wood Committee in 1941. However, more recent work, especially on the Eocene biostratigraphy and biochronology of San Diego and Ventura counties (e.g. Walsh, 1996; Whistler and Lander, 2003), has demonstrated the value of utilizing small mammals because of their phylogenetic diversity, but also the potential to obtain statistically larger samples of specimens via screenwashing of bulk matrix samples.

The Project has the potential to produce additional significant paleontological resources should construction impacts encounter Pleistocene-aged sediments beneath the younger or disturbed surficial sediments in this area. Significant paleontological resources are fossils and fossiliferous deposits, here defined as consisting of identifiable vertebrate fossils, large or small, uncommon invertebrate, plant, and trace fossils, and other data that provide taphonomic, taxonomic, phylogenetic, paleoecologic, stratigraphic, and/or biochronologic information.

The recovery of fossils from Project excavations as the result of paleontological monitoring, together with the implementation of the procedures outlined in this report, would add to existing paleontological data and help better document the Pleistocene history of California. The recovered fossils would provide information that may be useful in more accurately and precisely determining the ages of the sedimentary units in which they were preserved depending upon the biostratigraphic utility of the fossil specimens and potential for radiocarbon dating, and provide a new Pleistocene age fossil locality data point for this portion of southern California. Depending upon the types of fossils that are recovered from Project excavations and the quality of their preservation, the existing Pleistocene fossil record of California may be enhanced by the addition of new specimens of known taxa, the discovery of taxa that have not been previously reported from the general area, and possibly the discovery of previously unknown taxa. In combination, the fossil assemblage from the Project area would have the potential to add new paleoecologic and paleoenvironmental information to our existing knowledge of the Pleistocene in Orange County.

All scientifically significant fossils salvaged from the Project area will be permanently curated in an accredited regional museum where they will be available for future scientific research. The County of Orange requires consultation before the final determination of a paleontological repository is made.

9.0 IMPACTS TO PALEONTOLOGICAL RESOURCES

Surface disturbing actions in areas known to contain scientifically significant fossils (sedimentary geologic formations) may produce adverse impacts to nonrenewable paleontological resources (State CEQA Guidelines, 14 CCR Sections 15064.5[3] and 15023; State CEQA Guidelines Appendix G, Section V, Part C).

Direct impacts to paleontological resources concern the physical destruction of fossils, usually by human-caused ground disturbance. Indirect impacts to paleontological resources typically concern the loss of resources to theft and vandalism resulting from increased public access to paleontologically sensitive areas. Cumulative impacts to paleontological resources concern the incremental loss of these nonrenewable resources to society as a whole.

Project activities not related to earthmoving are not expected to have a paleontological impact, because the surface of the Project area has been surveyed and determined to be barren of fossils.

During the field survey, no fossils were observed in the surface exposures of disturbed alluvium within the Project area boundaries. A paleontological records search for the property was performed by Dr. Samuel McLeod, at the LACM. There are no documented paleontological localities within the boundaries of, nor within one mile radius of the Project area (McLeod, 2013) (Appendix A). Geologic units mapped at the surface beneath the Orange Coast College campus have a high paleontological sensitivity with respect to their potential to yield fossil remains (Appendix B).

The old paralic deposits within the Project area are unlikely to yield fossils, and are considered to have a high potential to contain significant nonrenewable fossil resources (McLeod, 2013; Appendix A). However, these Pleistocene age deposits underlie the surficial alluvial fan deposits within the Orange Coast College campus, and have a high paleontological sensitivity (McLeod, 2013) (Appendix A).

It is anticipated that construction activities that extend less than five feet below the ground surface would only impact artificial fill, topsoil, and/or the surface mapped younger Holocene age deposits mapped within the Project area. Although this is an arbitrary metric, five feet is the typical interval utilized in construction operations (e.g., mass grading, trenching, and drilling), and is a best guess for avoiding monitoring of Holocene sediments. If fossils are unearthed during construction at a shallower depth than five feet, the monitoring program should be adjusted accordingly. As evidenced by nearby LACM fossil collection localities (McLeod, 2013), it is possible that older, Pleistocene age deposits may occur at depths below five feet within the Project area.

10.0 MITIGATION MEASURES

The Project area is comprised of alluvial fan deposits, overlying Pleistocene age old paralic deposits at depth (Morton and Miller, 2006). The paleontological sensitivity of the Pleistocene age old alluvial deposits is high and the discovery of at least some "unique paleontological resources" (CEQA Guidelines) during construction excavation is likely.

A paleontological mitigation program to mitigate adverse impacts to significant paleontologic resources is recommended for the proposed Project (McLeod, 2013) (Appendix A). Excavations into undisturbed Pleistocene age deposits may unearth scientifically significant fossils at an indeterminate depth below the alluvial fan deposits during construction. Such disturbance should be monitored during construction in order to mitigate adverse impacts to scientifically significant paleontological resources (McLeod, 2013) (Appendix A).

If any subsurface fossils are found by construction personnel, activity in the immediate area should be suspended and the fossils should be left in place untouched. A qualified paleontologist should then evaluate the significance of the discovery and make further recommendations. Fossils that are considered unique under CEQA guidelines, Section V(c) of Appendix G (CEQA; PRC §21000, et seq.) should be collected, prepared, analyzed, reported, and curated.

According to the Society of Vertebrate Paleontology (2010):

> *"A Significant Fossiliferous Deposit is a rock unit or formation which contains significant nonrenewable paleontologic resources, here defined as comprising one or more identifiable vertebrate fossils, large or small, and any associated invertebrate and plant fossils, traces and other data that provide taphonomic, taxonomic, phylogenetic, ecologic, and stratigraphic information."*

In the unlikely event that earthmoving activities extend into a significant fossiliferous deposit, paleontological monitoring (e.g. field observation by a qualified paleontological technician) will be warranted. If development does impact these sediments, examination of the sediments by the Project paleontologist would be needed to ascertain paleontological sensitivity.

10.1 Procedures

The following procedures and staffing requirements shall be implemented to ensure compliance with these requirements.

APM-1 Retention of a qualified paleontologist

Procedures: Paleo Solutions has been retained to design and implement this document. An Orange County Qualified Paleontologist must be retained by the Project owner to implement the mitigation measures discussed below.

APM-2 Preconstruction meeting

Procedures: An Orange County Qualified Paleontologist (principal investigator) shall participate in a preconstruction meeting with Project construction personnel in order to ensure an understanding of any mitigation measures required during construction and procedures to follow in the event of a fossil discovery.

APM-3 Paleontological monitoring in areas of high geologic sensitivity

Procedures: Paleontological resource monitoring of construction excavations involves field inspections of freshly graded surfaces, spoils piles, and all visible temporary surfaces in accordance with project safety requirements for occurrences of exposed fossil remains. During construction excavation activities, the monitoring schedule and specific locations that can be inspected are dictated by field conditions including the number and locations of heavy equipment in the cut and amount of excavation activity. The primary responsibility of paleontological monitors should always be to adhere to all Project safety requirements, and to only inspect and evaluate fossil discoveries when conditions are safe to do so.

Paleontological monitoring of earthmoving activities below five feet (an arbitrary depth below which Holocene age sediments are anticipated) will be conducted on an as-needed basis by the paleontological monitors under the supervision of an Orange County Qualified Paleontologist (principal investigator) during all earthmoving activities that may expose sensitive strata. If fossils are unearthed at a shallower depth, the monitoring program should be adjusted accordingly. Earthmoving activities in areas of the Project area where previously undisturbed strata will be buried but not otherwise disturbed will not be monitored. The Principal Investigator or his/her assignee will have the authority to reduce monitoring once he/she determines the probability of unearthing fossils is lower than anticipated. If the excavations in undisturbed sediments will exceed five feet in depth, a qualified paleontological monitor should be present to observe earthmoving activities in these areas. Five feet is the general dividing point in this area after which monitoring should be initiated in sediments of high sensitivity, as determined by mapping, and in compliance with County of Orange guidelines. In areas of disturbed sediments on campus, a paleontological monitor should spot-check construction activities until such a time that it becomes possible to determine the depth of undisturbed native sediments or that no undisturbed sediments have been or will be impacted. Monitoring during any brushing or vegetation removal activities in artificial fill is not recommended.

APM-4 Paleontological discoveries

If a fossil is discovered by a monitor during construction, the monitor must immediately notify the equipment operator and the construction manager to stop work, and then delineate the discovery area with flagging until it can be fully explored and evaluated. The paleontological monitor shall immediately notify the construction manager and the Principal Investigator. Construction activities in the immediate vicinity of the Project area shall be immediately redirected away from the vicinity of the discovery to allow room for the recovery of the resources as necessary. Earthmoving will be allowed to proceed within the discovery site when the principal investigator determines the fossil discovery has been adequately documented and recovered.

APM-5 Post construction

All scientifically significant fossils collected during monitoring and salvage should be cleaned, repaired, sorted, and cataloged as part of the mitigation program. Prepared fossils, along with copies of all pertinent field notes, photos, and maps, should be reposited (as a donation) at the John D. Cooper Archaeological and Paleontological Center at California State University, Fullerton. Donation of the fossils should be accompanied by financial support for initial specimen storage. A final summary report should be completed that outlines the results of the mitigation program. This report should include discussions of the methods used, stratigraphic section(s) exposed, fossils collected, and significance of recovered fossils.

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Appendix A: Natural History Museum of Los Angeles County Paleontological Records Search

Natural History Museum
of Los Angeles County
900 Exposition Boulevard
Los Angeles, CA 90007

tel 213.763.DINO
www.nhm.org

NATURAL HISTORY MUSEUM LOS ANGELES COUNTY

Vertebrate Paleontology Section
Telephone: (213) 763-3325
Fax: (213) 746-7431
e-mail: smcleod@nhm.org

17 October 2013

Paleo Solutions, Inc.
911 South Primrose Avenue, Unit J
Monrovia, CA 91016

Attn: Geraldine Aron, President

re: Paleontological resources for the proposed Orange Coast College Project, in the City of Costa Mesa, Orange County, project area

Dear Geraldine:

I have conducted a thorough search of our paleontology collection records for the locality and specimen data for the proposed Orange Coast College Project, in the City of Costa Mesa, Orange County, project area as outlined on the portion of the Newport Beach USGS topographic quadrangle map that you sent to me via e-mail on 4 September 2013. We have no vertebrate fossil localities that lie directly within the outline boundaries of the proposed project area, but we do have localities nearby from sedimentary deposits similar to those that occur at depth in the proposed project area.

According to the geologic mapping, in the entire proposed project area there are surface exposures of marine younger Quaternary Terrace deposits, although our vertebrate fossil localities in this area almost always contain terrestrial fossil vertebrates. These deposits typically do not contain significant vertebrate fossils, at least in the uppermost layers, but they are usually underlain by older Quaternary deposits that frequently do contain significant vertebrate fossils. Our closest vertebrate fossil locality from these deposits is LACM 1339, directly west of the proposed project area along Adams Avenue near the top of the mesa bluffs east of the Santa Ana River. Fossil mammoth, *Mammuthus*, and camel, Camelidae, bones were recovered from LACM 1339 in sand approximately 15 feet below the top of the mesa that is overlain by shell bearing silts and sands. Our next closest vertebrate fossil locality is LACM 4219, south of the eastern-most portion of the proposed project area in a roadcut for the Newport Freeway near Santa Isabel Avenue, that produced fossil sea turtle, Cheloniidae, and camel, Camelidae, bones in coarse poorly sorted friable sands about 30 feet below the grade of Newport Boulevard. We further have a large number of localities from the marine and terrestrial Late Pleistocene terraces deposits on the east side of Upper Newport Bay. Those localities have produced an extensive composite fauna.

Surface grading or very shallow excavations in the nominally marine younger Quaternary Alluvium exposed in the entire proposed project area probably will not uncover significant vertebrate fossil remains. Deeper excavations that extend down into older Quaternary deposits, however, may well encounter significant fossil vertebrate specimens. Any substantial excavations in the proposed project area, therefore, should be monitored closely to quickly and professionally recover any fossil remains discovered while not impeding development. Any fossils recovered during mitigation should be deposited in an accredited and permanent scientific institution for the benefit of current and future generations.

This records search covers only the vertebrate paleontology records of the Natural History Museum of Los Angeles County. It is not intended to be a thorough paleontological survey of the proposed project area covering other institutional records, a literature survey, or any potential on-site survey.

Sincerely,

Samuel A. McLeod

Samuel A. McLeod, Ph.D.
Vertebrate Paleontology

enclosure: invoice

Appendix B: Statement of Qualifications

PROJECT MANAGER / PRINCIPAL INVESTIGATOR (PALEONTOLOGY)
Sarah A. Siren, M.S.

Education: M.S., Vertebrate Paleontology, South Dakota School of Mines & Technology
B.S., Geology, The George Washington University

Ms. Siren has been a paleontological resources consultant for over a decade. She has served as paleontologist for numerous projects throughout California, with extensive experience in Imperial, Orange, Riverside, Los Angeles, San Bernardino, and San Diego counties. These projects involved multiple agencies, public and private sector clients, a variety of resources, and multidisciplinary staff supervision. She specializes in CEQA and BLM compliance standards. She has taught at Saddleback Community College in Mission Viejo, California as an associate geology professor and has worked as a curatorial assistant with the Natural History Museum of Los Angeles County, and more recently, as field manager with the San Diego Natural History Museum. Ms. Siren received a Bachelor of Science Degree in Geology (1999) from The George Washington University and was awarded a Master's Degree in Paleontology (2002) from the South Dakota School of Mines and Technology. While pursuing her degrees, she conducted studies at both the Smithsonian Institution and Badlands National Park, and supervised as lead research scientist for various field activities, curation projects, and laboratory preparations. Her diverse experience includes recovering, identifying, mapping, and preparing fossils. As a consultant, Ms. Siren is able to effectively manage projects and complete deliverables from assessments to final technical reports in a timely manner. She is a Geologist-in-Training (no.167) with the State of California and is 40 hour HAZWOPER certified.

PRESIDENT
Geraldine L. Aron

Education: M.S., Geological Sciences, California State University, Long Beach
B.S., Geological Sciences, California State University, Long Beach

Ms. Aron has fifteen years of professional experience working in the Paleontological and Cultural Resource Management field and is responsible for maintaining the overall scientific integrity and oversight of all Paleo Solutions, Inc. projects. This includes all aspects of company management, field paleontology and geology including: survey, salvage, measuring and drafting stratigraphic sections, geological mapping, sample collection, and paleontological and archaeological monitoring, budget oversight, managing, training, and coordinating the tasks of field staff, developing cliental relationships, fossil preparation, and the production of technical reports. Ms. Aron has produced hundreds of technical reports, which include paleontological assessments, DEIR’s, EIR/EIS’, Paleontological Mitigation and Monitoring Plans, document reviews, and survey reports for CEQA/NEPA compliance. Geraldine has worked on at least half a dozen-water projects in and around the greater Los Angeles area and more than a dozen transmission line projects. Her field projects, both geological and paleontological, include areas in Utah, central and eastern Nevada, southern, eastern, central, and northern California counties, including Owens Valley and surrounding areas. Her career also included an appointment as a staff paleontologist at the San Diego Natural History Museum, where she gained valuable experience both in the field and in specimen preparation. Geraldine is certified by the California Energy Commission (CEC) to conduct paleontological monitoring and teach environmental awareness programs and is the Principal Investigator on the California, Nevada, and Arizona BLM permits.

APPENDIX D

Cultural Reports

Part 2

ORANGE COAST COLLEGE
HISTORIC STRUCTURES REPORT

COSTA MESA, CA

[14227]

Prepared for

COAST COMMUNITY COLLEGE DISTRICT

PAGE & TURNBULL

imagining change in historic environments through design, research, and technology

MAY, 2015

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INTRODUCTION

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INTRODUCTION

This Historic Structures Report (HSR) for Orange Coast College (OCC or the college) was prepared by Page & Turnbull for the Coast Community College District (CCCD) under Purchase Order PO336635. The campus is located at 2701 Fairview Road in Costa Mesa, California.

A Historic Structures Report (HSR) is generally considered a primary planning document for the stewardship of historic buildings and sites. HSRs are frequently the only place where a site's past history is compiled; its present appearance and physical condition are recorded; and its future treatment is planned. HSRs typically follow a prescribed format[1], which this report follows for Orange Coast College. While the organization of HSRs may be similar, each report has a focus to address critical issues. The HSR for OCC is rather unusual for two reasons. First is its scale, as it encompasses a historic district rather than an individual building or structure. The historic district has been determined eligible for listing in the National Register of Historic Places (National Register) and the California Register of Historical Resources (California Register). Second, most of the contributing elements of the historic district are proposed to be demolished as part of the CCCD's Vision 2020 Facilities Master Plan for Orange Coast College. This HSR focuses on providing preservation alternatives to prevent demolition of the contributing elements of the eligible historic district.

This HSR concentrates on four of OCC's original building complexes (12 buildings total), as well as a stadium, field house and pool complex. The buildings were constructed between 1950 and 1957 as part of the campus's initial seven-year development under the original master plan, which was developed in 1948-9 by master architect and planner Robert E. Alexander in association with master landscape architect Garrett Eckbo. Master architect Richard Neutra merged practices with Alexander in 1949 and OCC buildings from 1953 to 1957 were designed by Neutra and Alexander.

Individual sections of the HSR discuss the overall OCC Historic District as identified by Page & Turnbull followed by each district contributor organized in complexes. The complexes within the core of the Historic District are presented first and arranged in chronological order by date of completion. The order is:

- Buildings 7[2], 8, 9 | Student Success Center and Classroom & Labs complex (1951/1955)
- Buildings 12, 13, 14 | Business Education complex (1953)
- Building 2, 3, 4 | Theater and Music complex (1955)
- Buildings 35, 36, 37, 38, 39 | Math and Planetarium complex (1956-1957)
- Building 93 | Swimming Pool complex (1954)
- Building 105 & 110 | Stadium and Field House (1955)

[1] Refer to US Department of the Interior, National Park Service publication: *Preservation Brief 43: The Preparation and Use of Historic Structure Reports.*

[2] Note: The building numbers used throughout the HSR are those currently used by OCC on their campus maps and plans. The draft EIR uses a different building numbering system.

OBJECTIVES OF THE HISTORIC STRUCTURES REPORT

The objectives of the Orange Coast College Historic Structures Report are to:

- Confirm the findings of a previously prepared Historic Resource Tech Report (HRTR) regarding the historic status eligibility of a historic district at OCC and the definition of its contributing elements.
- Identify character-defining features of the eligible historic district, including landscape and site features and individually eligible buildings.
- Assess the current physical condition of contributing buildings and features
- Define one or more "Preservation Alternatives" for the contributing buildings to the eligible historic district. The maximum alternative would retain all of the buildings and rehabilitate them in conformance with the *Secretary of the Interior's Standards for the Rehabilitation of Historic Properties (the Standards)*. The minimum alternative would retain just enough contributing buildings and character-defining features to retain an eligible historic district following selective demolition and adaptive use. Developing the alternatives includes:
  - Identifying possible future uses for contributing buildings
  - Determining code requirements for potential uses
  - Establishing construction work and associated costs required to adaptively re-use the contributing buildings
  - Providing treatment recommendations
- The preservation alternatives will be used to support finalization of the environmental review process.

STUDY SUMMARY

Critical Findings

Historic Significance Evaluation

Page & Turnbull found a discontiguous historic district that is eligible for listing in the National Register of Historic Places and the California Register of Historical Resources. The eligible OCC Historic District (the Historic District) is significant under Criterion A/1 in the context of education in California for its direct association with the postwar expansion of higher education through the local development of junior colleges. It also meets Criterion C/3 as an excellent example of a Mid-Century Modern junior college campus and is also significant as a work by master architects Neutra and Alexander in collaboration with landscape architect Garrett Eckbo.

The Historic District includes the following building complexes:

- Student Success Center and Classroom & Labs complex (Buildings 7, 8, 9)
- Business Education complex (Buildings 12, 13, 14)
- Theater and Music complex (Buildings 2, 4)
- Math and Planetarium complex (Buildings 35, 36, 37, 38, 39)
- Swimming Pool complex (Building 93), discontiguous
- Stadium and Field House (Buildings 105 & 110), discontiguous

District Contributors

District Non-contributors

Identified Historic District Boundaries

This map illustrates the Orange Coast College Historic District, including both contributors and non-contributors, identified by Page & Turnbull.

** Student Center (Building 86) was designed by Neutra and Alexander in 1952, but was substantially altered ca.1992.*

Orange Coast College Historic District Contributors

OCC Map No.	Resource Name	Original Name	Resource Type	Date	Architect(s)
2	Robert B. Moore Theatre	Auditorium, Speech Arts Building	Building	1955	Netura and Alexander
4	Music Wing	Speech Arts Building	Building	1954	Neutra and Alexander
7	Student Success Center (SSC)	Library	Building	1951	Robert Alexander
8	Classroom and Labs (C&L)	Library / Library Addition	Building	1951/55	Neutra and Alexander
9	Classroom and Labs (C&L)	Library Addition	Building	1955	Neutra and Alexander
12	Business Education	Business Education	Building	1953	Neutra and Alexander
13	Business Education	Business Education	Building	1953	Neutra and Alexander
35	Math Wing	Science Building	Building	1956/57	Neutra and Alexander
36	Math Wing	Science Building	Building	1956/57	Neutra and Alexander
37	Reprographics Center	Science Building - Laboratory	Building	1956/57	Neutra and Alexander
39	Planetarium	Planetarium	Building	1956/57	Neutra and Alexander
93	Swimming Pool and Bleachers	Pool Stadium	Building	1954	Neutra and Alexander
105 & 110	Stadium and Field House	Stadium and Field House	Building	1955	Neutra and Alexander
N/A	Armillary Sphere Sculpture	Armillary Sphere Sculpture	Object	1957	Peterpaul Ott
N/A	Landscape (circulation pattern, open spaces / patios / courtyards, palm tree cluster, planters, etc.)		Landscape	1950s	Garrett Eckbo and Robert Alexander

Orange Coast College Historic District Non-Contributors

OCC Map No.	Resource Name	Original Name	Resource Type	Date	Architect(s)
3	Music	New Music Building	Building	1976	William Blurock and Partners
10	Special Services	Faculty Offices and Tutorial Center	Building	1975	William Blurock and Partners
11	Faculty House	Faculty House	Building	1957	Rodney Lauter
14	Haley Business Learning Center	Business Education Building	Building	1953 / 1976	Neutra and Alexander with substantial addition by William Blurock & Partners
38	Science	Science Office	Building	1959	Pleger, Blurock, Hougan, Ellerbroek

Buildings Outside the Orange Coast College Historic District

OCC Map No.	Resource Name
1	Administration
5	Fine Arts Lecture Halls
40	Science Hall
41	Math Lecture Halls 1 & 2
42	Lewis Center for Applied Sciences
43	Consumer Science & Design
44	Allied Health Sciences
45	Biological Sciences
47	Welding Technology
48	Aviation Technology
64	Horticulture
69	Chemistry
70	Literature & Languages
71	Writer's Row

OCC Map No.	Resource Name
72	Journalism
73	Computing Center
80	Social & Behavioral Sciences
81	Forum Lecture Hall
83	Bookstore
86*	Student Center
87	Watson Hall
89	Student Health Center
91	Gymnasium
92	Women's Locker Room
96	Men's Locker Room
97	Handball Courts
114	Technology Center
144	Warehouse

OCC Map No.	Resource Name
146	Early Childhood Lab School
149	Bursar's Office
150	Classroom & Lab
152	Children's Center
155	Maintenance & Operations
156	Information Technology
157	Weight Room
158	Arts Center
171	Technology Center
180	Frank M. Doyle Arts Pavilion
182	Library
183	Exercise Science/Fitness Complex

A contributing object, the armillary sphere sculpture, and contributing landscape features are part of the Historic District. The prominent clock tower is also a character-defining feature of the Historic District, but is attached to the Student Success Center (Bldg. 7) and considered part of that building.

The eligible Historic District has a period of significance from 1950, with the construction of OCC's first permanent building, through 1957 when the final Neutra and Alexander-designed building was completed. The end date also corresponds to the end of the seven-year limited local tax that funded the initial campus development.

The Robert B. Moore Theater, a contributor to the Historic District, was identified as individually eligible for the California Register of Historical Resources in the HRTR. Page & Turnbull agrees with this assessment, given the significance conveyed by the building under Criterion 3 for its high architectural design and association with master architects: Richard Neutra and Robert E. Alexander.

The eligible Historic District identified by Page & Turnbull has a shorter period of significance, smaller boundaries, and fewer contributors than the historic district identified in the HRTR. See Evaluation of Significance section for more details.

Immediate Life-Safety Issues

The structural engineer evaluated all contributing buildings located within the Historic District boundary and identified two locations of deteriorated wood structural members that present a risk of localized failure if not stabilized. The areas are:

- Building 9 – South elevation covered walkway support beam below a mechanical unit exhibits major deterioration.
- Building 13 – Cantilevered wood outriggers at the north side of the breezeway exhibit major damage and deterioration.

This information was transmitted to the Coast Community College District on January 22, 2015. More detail regarding these items is included in the Structural Evaluation (Appendix 3) of this report.

Building Condition

Given their age, the buildings included in our assessment are generally in fair-to-good condition. Major issues include:

- **Structural Mitigation**: Most of the buildings require enhanced structural connections between the roof and walls to provide additional seismic resilience.
- **Inappropriate Heating, Ventilating, and Air Conditioning (HVAC) Installations**: At the three central complexes, mechanical equipment and ductwork was installed on top of the covered walkway canopies. Not only are these installations of extreme detriment to the buildings' aesthetics, but the installations typically do not have adequate structural support nor provide for adequate drainage.

- **Hazardous Materials Abatement**: Review of previous hazardous materials testing and records for the District revealed that only limited testing for asbestos has been performed on the buildings eligible for historic designation. Per our scope of services, our team performed a visual assessment to identify areas potentially containing hazardous materials, such as lead, mercury, and PCBs. These observations will need to be confirmed via laboratory analysis. All cost estimates prepared for this report include allowances for abatement.
- **Concrete Repair at Stadium**: A high degree of concrete deterioration was observed at the stadium bleachers. The spalling of concrete bleacher risers appears to be due to the corrosion (rusting) of steel reinforcing within the concrete risers.
- **Face Spalling / Efflorescence at Brick Units**: Brick units used on several of the buildings eligible for historic designation exhibit an unusually high degree of deterioration. Specifically, spalling of the face of individual brick units and efflorescence (salt build-up) at areas under the spalled surfaces. Laboratory testing will be required to determine the exact cause of the problem, but initial observations indicate problems with the original brick manufacture and/or rising damp due to irrigation in adjacent plantings. While not currently a structural issue, the deterioration is aesthetically displeasing and presents long-term maintenance challenges. Note that the bricks are an unusual size.

Preservation Alternatives

Several preservation alternatives are provided within the Part 2 Treatments and Appendix 2 of this HSR. The alternatives represent a range, from a *Standards* compliant option that adaptively reuses all buildings slated for demolition within the eligible Historic District in the Vision 2020 Facilities Master Plan (Preservation Alternative 1A), to an alternative that allows for some demolition, but still maintains the Historic District (Preservation Alternatives 2A and 2B). Alternative uses for the adaptively reused buildings were generated through meetings with OCC and CCCD administration and staff, discussion with other OCC planning and programing consultants, and review of the Vision 2020 Facilities Master Plan and draft EIR. While a range of reuse options are presented in the Preservation Alternatives, not all possible configurations and programmatic scenarios are included. The historic buildings provide sufficient flexibility where additional options to re-program the buildings are possible. Estimated costs included in the Preservation Alternatives reflect Page & Turnbull's scope of work only and do not include related work as defined by the CCCD.

New Planetarium Location

One of the major factors shaping the alternatives is a proposed new planetarium for the College. The new Planetarium is proposed for the site of the existing Math Wing and Planetarium complex including the original Planetarium (Buildings 35, 36, 37 and 39). The CCCD has reported that this Project has cleared building permit review by the California Division of the State Architect (DSA) and is "shovel ready" with construction scheduled to start late-summer / early-fall 2015. Preservation Alternatives 1A through 1C relocate the proposed new Planetarium approximately 200-feet to the northeast of the existing Math Wing and Planetarium complex. A portion of the Math Wing and Planetarium complex is adapted to provide additional support and amenities to the new Planetarium. Alternatives 2A and 2B, retain the plan east Math Wing (Bldg. 35) and allow for the new Planetarium to be built in its preferred location. As described in the HSR, it is our professional opinion that retention of Building 35 is critical to retaining the character of the eligible Historic District and relationship of the central core buildings.

Preservation Alternative 1A

Preservation Alternative 1A retains all of the contributors to the eligible Historic District and can be considered the maximum reuse alternative. The new Planetarium is relocated to outside the Historic District's north boundary to avoid demolishing contributing buildings. Buildings north of the Historic District may be demolished to allow for the relocated new Planetarium and to connect the Historic District to new classroom buildings currently under construction. Within the Historic District, non-contributing buildings and additions made after 1957 will be removed to restore the original site planning principles of the Historic District, including an east-west axis that has been disrupted by non-contributors. The historic buildings will be rehabilitated in conformance with the *Secretary of the Interior's Standards for Rehabilitation* (*Standards*). The original classroom buildings will be adaptively reused for Administrative Services, Special Services and the Honors Program, and as an interdisciplinary center shared by the Science, Architecture, and Art Departments as well as student and community facilities. The Theater and Music complex buildings (Bldgs. 2 and 4) will retain their current use. Where required by code, structural systems will be sensitively retrofitted to increase seismic performance. New heating, ventilation and air conditioning (HVAC) systems are proposed and will be installed in a manner that is compatible with the buildings. Interiors will receive new finishes and contemporary power, lighting and audio-visual equipment is included. Minor and sensitive alterations to character-defining features, such as introducing skylights at the covered walkways to allow better visibility around the buildings, are proposed. The estimated cost for Alternative 1A is approximately $30 million.

Figure 1: Birds-eye view looking southwest of Preservation Alternative 1A. The revised location of the new proposed Planetarium and adaptively reused Math Wing and Planetarium complex is to the upper right.[3]

Preservation Alternative 1B

Alterative 1B is the same as Alternative 1A, except the Swimming Pool complex (Bldg. 93) and Field House (Bldg. 110) are removed to allow the College to focus its resources on preserving the core of the Historic District. Although this alternative does not fully comply with the *Standards*, the loss of the discontiguous Swimming Pool complex (Bldg. 93) does not affect the Historic District's ability to convey its significance to the extent that it is no longer eligible for historic listing. The Stadium (Bldg. 105) remains as an eligible component of the Historic District, even without the Field House (Bldg. 110). The estimated cost for Alternative 1B is approximately $25 million.

Preservation Alternative 1C

In response to comments from the College Administration, Alternative 1C retains the Special Services Building (Bldg. 10) as well as non-contributing additions at Building 7. The rest of the alternative is similar to Alternative 1B. With Special Services remaining in Building 10, part of Building 7 is adaptively reused as a theater pre-function space. Alternative 1C will not restore the east-west axis that was a key part of the original circulation pattern in the Historic District, but the District will retain its eligibility for historic listing. The estimated cost for Alternative 1C is approximately $26 million.

[3] All images Page & Turnbull, 2014 – 2015, unless identified otherwise.

Figure 2: Campus "quadrangle" looking east at a rehabilitated Building 14. This outdoor space would be directly adjacent the new proposed Planetarium in its alternative location.

Preservation Alternative 2A

Preservation Alternative 2A is considered a minimum preservation alternative, where the new Planetarium remains at its proposed location and contributing buildings at the Math Wing and Planetarium complex, Buildings 36, 37, and 39, are removed. The east Math Wing (Bldg. 35) remains to continue, in a more limited manner, the spatial relationship among the original classroom complexes. While not preferred, it is in Page & Turnbull's opinion that an eligible historic district remains because sufficient buildings would exist at the core of the Historic District to convey the significant spatial relationships from the original planning and design. However, removal of any additional historic fabric beyond what has been identified in Preservation Alternative 2A would jeopardize the eligibility of the Historic District for historic listing.

Under Alternative 2A, the remainder of the Historic District will be rehabilitated with particular emphasis on preserving and restoring original character-defining features so that the District is able to better convey its significance. Non-contributing buildings and additions made after 1957 within the Historic District will be removed to restore the spatial relationships between classroom building complexes as well as an east-west axis that has been disrupted by non-contributors. The Swimming Pool complex (Bldg. 93) and Field House (Bldg. 110) will be removed, as under Alternative 1B. The remaining historic buildings will be rehabilitated in conformance with the

Standards. Reuses for the classroom buildings are similar to Alternative 1A. Overall, Alternative 2A includes less square footage due to the loss of Buildings 36 and 37. The existing Planetarium (Bldg. 39) will be relocated to a to-be-determined location outside of the Historic District. The Theater and Music complex buildings (Bldgs. 2 and 4) will retain their current use.

Where required by code, structural systems will be sensitively retrofitted to increase seismic performance. New heating, ventilation and air conditioning (HVAC) systems are proposed and will be installed in a manner that is compatible with the buildings. Interiors will receive new finishes and contemporary power, lighting and audio-visual equipment is included. Minor and sensitive alterations to character-defining features, such as introducing skylights at the covered walkways to allow better visibility around the buildings, are proposed. The estimated cost for Alternative 2A is approximately $23 million.

Preservation Alternative 2B

In response to the College Administration who indicated a desire for a new building for their Dance Department, Alternative 2B includes an addition to Building 7 to accommodate Dance Studios. The addition shall be located and designed to be compatible with Building 7 and will not impact the integrity of the Historic District. The rest of Alternative 2B is similar to Alternative 2A. The estimated cost for Alternative 2B is approximately $30 million.

Methodology

Page & Turnbull and its sub-consultants produced this HSR between December 2014 and April 2015. The team's work was broken into five tasks:

Task 1A | Collect and Review Existing Information

In conjunction with Orange Coast College, Page & Turnbull acquired and reviewed the following documents for buildings identified as eligible for historic designation:

- Available original architectural drawings in digital format
- Available architectural drawings of subsequent alternations in digital format
- Limited architectural drawings, specifications and construction administration reports present in the Department of State Architect (DSA) archives (from the San Diego service center)
- Available hazardous materials surveys
- Facilities Utilization, Space Inventory Options Net "FUSION" database reports maintained by the Foundation for California Community Colleges.
- Miscellaneous Autocad drawing files

The documents noted above were distributed to our consultant team.

We also downloaded publically available documents such as the Vision 2020 Facilities Master Plan and draft EIR.

Page & Turnbull acquired existing research from Ostashay & Associates used to prepare the HRTR.

Task 1B | Draft Development History and Review Previous Evaluation

Page & Turnbull peer reviewed the HRTR and identified additional areas of research for drafting the development history and historic context. Supplemental research was conducted at the;

- Orange Coast College Archives at the OCC Library;
- Garrett Eckbo Collection in the Environmental Design Archives at the University of California, Berkeley;
- Robert E. Alexander Collection in the Division of Rare and Manuscript Collection at Cornell University Library; and the
- Julius Shulman Photography Archive at the Getty Research Institute.

Limited additional research was conducted at the Los Angeles Public Library, the University of Southern California Fine Arts Library, and various online resources.

Page & Turnbull also conducted site visits in December 2014 to gather information for building descriptions, identify primary character-defining features, and review historic integrity. Digital photographs were taken during the visits. Page & Turnbull used the information gathered in Task 1A and Task 1B to re-evaluate the OCC Historic District's historic significance, integrity, period of significance, district boundaries, and list of contributors and non-contributors. Page & Turnbull reviewed the results with the CCCD Board of Trustees, CCCD administration and OCC administration in February 2015.

Task 1C | Conditions Assessment

Page & Turnbull's project team, including consultants, conducted visual inspections of the Historic District's contributing buildings the week of January 12, 2015. The purpose of the inspections were to document existing conditions; this included exterior envelopes, structural, mechanical, electrical and plumbing (MEP), and fire and life-safety systems. In addition, a visual survey of potentially hazardous materials was completed. Conditions were recorded through hand-written field notes, sketches, and digital photography. Page & Turnbull reviewed the results with the CCCD Board of Trustees, CCCD administration, and OCC administration in March 2015.

Task 2A | Preservation Objectives & Work

Page & Turnbull discussed potential programmatic elements with the College's senior administrative staff in a series of meetings in February and March 2015. Page & Turnbull also attended a Facilities Committee Meeting in March 2015 and received additional program information from Hill Partnership Inc. and Brailsford & Dunlavey about the College's future space needs and desires to inform our development of preservation alternatives.

Task 2B | Work Recommendations & Alternatives

Page & Turnbull reviewed our preliminary preservation alternatives and treatment recommendations with the CCCD Board of Trustees, CCCD staff, and OCC staff in March 2015.

Project Data

Site:	Orange Coast College
Location:	2701 Fairview Road, Costa Mesa, CA - 92626
Architect:	Richard Neutra and Robert E. Alexander in collaboration with landscape architect Garrett Eckbo
Construction Date:	Constructed circa 1950-1957 Alterations 1958-Present
Current Use:	Community College
Acreage:	164 Acres (current)
No. of Buildings:	78 (current)
Enrollment:	22,053 (Fall 2014)

Project Team

Historical Architect

Page & Turnbull
417 S. Hill Street, Suite 211
Los Angeles, CA 90013
213.221.1200

Principal: John Lesak, AIA
Project Manager: Drew Gorski, AIA
Cultural Resource Planner: Flora Chou

Structural Engineer

Risha Engineering Group, Inc.
410 East Cypress Avenue
Burbank, CA 91501
818.729.9777

President: Janah A. Risha, S.E.
Principal: Robert Lyons, S.E.
Senior Associate: Matt Breaks, S.E.

Structural Engineer Collaboration

Melvyn Green and Associates
3868 Carson Street, Suite 300
Torrance, California 90503
310.792.9252

Consulting Structural Engineer:
Melvyn Green, S.E.

Coast Community College District (CCCD)

1370 Adams Avenue
Costa Mesa, CA
714.438.4600

Vice Chancellor of Administrative Services:
Andrew Dunn
Program Manager: Dennis Reid, P.E., CCM
Senior Director, Facilities, Planning and
Construction: Jerry Marchbank

Orange Coast College (OCC)

2701 Fairview Road,
Costa Mesa, CA 92626
714.432.5072

President: Dennis Harkins, Ph.D.
Vice President of Administration:
Richard Pagel, Ph.D.
Administrative Services: James Farrow

MEP Evaluation

Design West Engineering
275 W. Hospitality Lane, Suite 100
San Bernardino, CA 92408
909.890.3700

Senior Mechanical Engineer:
Steven Johnson, P.E.
Senior Electrical Engineer: Leo Maya, P.E.

Hazardous Building Material Consulting
Omega Environmental Services, Inc.
4570 Campus Drive, Suite 30
Newport Beach, CA 92660
949.252.2145

Principal: Steve Rosas
Project Manager: Navid Salari

Fire, Life Safety and Code Evaluation
Jensen Hughes
2099 South State College Blvd. Suite 360
Anaheim, CA 92806
714.450.1700

Operations Manager:
Jared Birmingham, P.E.
Fire Protection Engineer:
Yogesh Kalantre, P.E.

Peer Review, HABS Documentation
Galvin Preservation Associates Inc.
231 California Street
El Segundo, CA 90245
310.792.2690

Principal Architectural Historian:
Teresa Grimes

Cost Consultant
Searock Stafford CM, Inc.
690 East Green Street, Suite 100
Pasadena, CA 91101
626.773.8122

Principal: Steve Searock

PROJECT BACKGROUND

The need for this Historic Structures Report (HSR) grew out of the Orange Coast College's Facilities Master Plan update and the subsequent environmental review that identified an adverse environmental impact created by the proposed demolition of buildings determined eligible for listing in the California Register.

Vision 2020 Facilities Master Plan

The *Vision 2020 Facilities Master Plan* (Plan) was published by the Coast Community College District (CCCD) in May 2011. The intent of the Plan was to provide a current perspective for future space requirements, buildings and campus improvements for the CCCD's three campuses, including Orange Coast College (OCC or College). Included in the "Foundation for the Future Vision" Section of the Plan were the following "Key Planning Assumptions"[4] for OCC, which were generated from surveys with the faculty, staff, students and administrators:

- Campus zoning will be a priority in the facility plan of the future.
- Future site development will seek to unify the campus.
- Aesthetics are viewed as important in defining/reflecting the College's identity
- The creation and maintenance of open space and planned landscaping is a priority for campus development
- Sustainability is an important element in the future planning/development of the campus
- New buildings on the campus will be timeless with respect to architectural design
- The internal plan of the College will seek to resolve conflicts that exist between service vehicles, bicycles, skate boards, and pedestrians
- The College will seek to engage in public/private relationships that are revenue generating in nature
- Joint venture partnerships that result in synergistic developments will be actively pursued.

The Plan calls for the "the vast majority of older 1950's campus facilities (row buildings) [to be] replaced with larger, more efficient structures."[5] The larger structures are shown to be at the perimeter of the campus core, creating a very large central open space. Proposed demolition includes three of four of the building complexes (10 buildings total) and the Swimming Pool complex that dated to the College's initial construction period financed by a limited local tax (1950 – 1957). During the environmental review process, these buildings were determined to be eligible for listing in the California Register as part of a historic district.

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[4] Coast Community College District – Vision 2020 Facilities Master Plan, prepared by Cambridge West Partnership, LLC and HPI Architects, dated May 2011, page 37

[5] Vision 2020, page 92

Figure 3: Above: Aerial rendering looking northeast from the Vision 2020 Facilities Master Plan which proposes demolition of three of the four remaining original OCC building complexes in order to create a very large central open space. Source: Vision 2020 Facilities Master Plan page 113. Below: Aerial photograph looking northeast from 1957 showing the first phase of campus development. Source: Orange Coast College Library. Red dot indicates location of the Robert J. Moore Theater.

The Plan indicates the scheduled construction of a new Business / Math / Computer Center and a Language Arts / Social Sciences Building. Proposed future construction at OCC included:

- A Recycling Center
- Parking Structure / Campus Security
- Student Union / Bookstore / Culinary Arts / Student Success Center
- Planetarium
- Administration Building
- Joint Venture / Mixed Use Development

Measure M Funding

Much of the Coast Community College District and Orange Coast College improvements identified in the Vision 2020 Facilities Master Plan are to be paid through a local bond measure. Measure M was passed in November 2012 and approved $698 million in bonds to fund the expansion of courses and academic buildings in science, technology, engineering, and math (STEM). Bond funds were also allocated for upgrading technology, to construct and repair facilities, and to improve resources for active military personnel and veterans at all three CCCD campuses.

Draft Orange Coast College Vision 2020 Facilities Master Plan Program Environmental Impact Report

In June 2014, the CCCD released a Draft Orange Coast College Vision 2020 Facilities Master Plan Program Environmental Impact Report (draft EIR). Preparation of the report was required under the California Environmental Quality Act (CEQA) to "provide the public and responsible agencies information about the potential adverse effects on the local and regional environment associated with implementation of the Vision 2020 Facilities Master Plan."[6] The draft EIR identified "significant and unavoidable" environmental impacts related to the demolition of eligible historical resources.

The proposed project assessed in the draft EIR contained both program-level components, where the specific project details have not been developed, and project-level elements which have detailed information available. The proposed project included demolition of certain existing buildings, renovation of existing buildings, and construction and eventual operation of new buildings and campus facilities, which would occur over three Phases.

The assessed project included the following components.

Project-Level Demolition

Phase 1 (2015-2017)

- The Planetarium (Building 39)
- Math Wing (Buildings 35 and 36)
- George Hoag Family Foundation / Reprographic Center (Building 37)
- Adaptive PE

[6] Draft Orange Coast College Vision 2020 Facilities Master Plan Program Environmental Impact Report, prepared by Dudek, dated June 2014, page 1-1.

Phase 2 (2017-2019)

- Administration Building (Building 1)
- District Transportation Office
- Bookstore (Building 83)
- Bursar's Office (Building 149)
- Student Center (Building 86)
- Campus Public Safety (Building 147)

Phase 3 (2019-2024)

- Journalism (Building 72)
- Writer's Row (Building 71)
- Haley Business Learning Center (Building 10)
- Student Success Center (Building 7)
- Social and Behavioral Sciences (Building 80)
- 150 Annex (Building 150)
- Classrooms and Laboratories (Buildings 8 and 9)

Figure 4: An annotated aerial photograph illustrating the proposed demolition of existing buildings according to the draft EIR (Note that the building numbering differs from the campus standard). Source: Draft Orange Coast College Vision 2020 Facilities Master Plan Program Environmental Impact Report, Figure 3-6.

Project-Level Renovation

Phase 1 (2015-2017)

- Recycling Center Expansion and Circulation/Parking Improvements

Phase 3 (2019-2024)

- Skill Center
- Reuse of the existing Literature and Language Building as a College Support Center
- Remodel and expansion of the existing Chemistry Building from approximately 21,000 square feet to approximately 31,000 square feet.

Project-Level New Construction

Phase 1 (2015-2017)

- An approximately 54,050 square-foot Business, Math and Computing Center just south of LeBard Stadium. *Note that this project is currently under construction and nearing completion.*
- A four-level Parking Structure to accommodate 2,000 vehicles for both the Orange County Fairgrounds and events at the OCC campus.
- Adaptive Physical Education, Gymnasium, and Pool Facilities.
- Solar Photovoltaic Panel Carport System covering approximately 330,000 square feet.

Phase 3 (2019-2024)

- An approximately 77,600 square foot Language Arts and Social Sciences Building.

Unscheduled

- An approximately 18,000 square foot Multidisciplinary Building.

Program-Level (New Construction)

Phase 1 (2015-2017)

- An approximately 7,220 square foot Planetarium. *This project has reportedly cleared the building permitting process through the Division of the State Architect (DSA) and is considered "shovel ready"*.

Phase 2 (2017-2019)

- An approximately 24,550 square foot Administration Building.
- An approximately 72,500 square foot Student Union / Bookstore / Culinary Arts / Student Success Center.
- An approximately 299,650 square foot Student Housing Project with approximately 600 dedicated parking spaces.

Unscheduled

- An approximately 75,510 square foot Mixed-Use Development with street level retail and a boutique hotel with up to 145 rooms.

Figure 5: An annotated aerial photograph illustrating the proposed campus land uses according to the draft EIR. Source: Draft Orange Coast College Vision 2020 Facilities Master Plan Program Environmental Impact Report, Figure 3-4.

Historic Resources Technical Report

The appendices of the draft EIR contained a Historic Resources Technical Report (HRTR). The HRTR "documents and evaluates potential historic resources that may be affected by the implementation of the Orange Coast College Vision 2020 Facilities Master Plan."[7] The HRTR assessed OCC according to the CEQA guidelines and found a historic district eligible for listing in the California Register of Historical Resource under the following criteria:

- Criterion 1 for its early master planning concepts of a community college located within Orange County.
- Criterion 3 for its distinctive architectural and design qualities as interpreted in an educational facility, and
- Also Criterion 3 for its direct association with master planner and architect Robert E. Alexander; master architect Richard Neutra; landscape architect Garrett Eckbo; and Orange County architect William E. Blurock.

[7] Ostashay & Associates, "Orange Coast College Historic Resources Technical Report," in Draft Orange Coast College Vision 2020 Facilities Master Plan Program EIR, May 2014, 1.

The HRTR-identified historic district includes 23 contributing buildings (several joined in complexes), the *Armillary Sphere* art piece, and landscape features such as the main quad area, walkways, maritime flagpole, planters, mature trees, shrubs and plantings. It has a period of significance of 1948 to 1964 starting with the school's founding and encompassing the initial master planning and design by Robert E. Alexander with collaborators including landscape architect Garrett Eckbo as well as the design and planning work of Alexander's partnership with Richard Neutra. The period of significance also captures a subsequent phase of campus development with buildings designed by Pleger, Blurock, Hougan and Ellerbroek through 1964.

The HRTR finds the Robert B. Moore Theatre building is individually eligible for the California Register for its unique and distinctive architectural styling and direct association with master designers: architect Richard Neutra; landscape architect Garrett Eckbo; and acoustical engineer Dr. Vern Knudsen.

In preparing the HSR, Page & Turnbull reviewed the findings of the HRTR and concur with the HRTR's finding that a California Register-eligible historic district is present at the OCC campus. However, there is not sufficient information regarding the designers and events that shaped the subsequent phase of campus construction to support the inclusion of the 1958 to 1964 development within the identified historic district. Regardless of the size of the historic district, the proposed demolition creates a "significant and unavoidable" environmental impact.

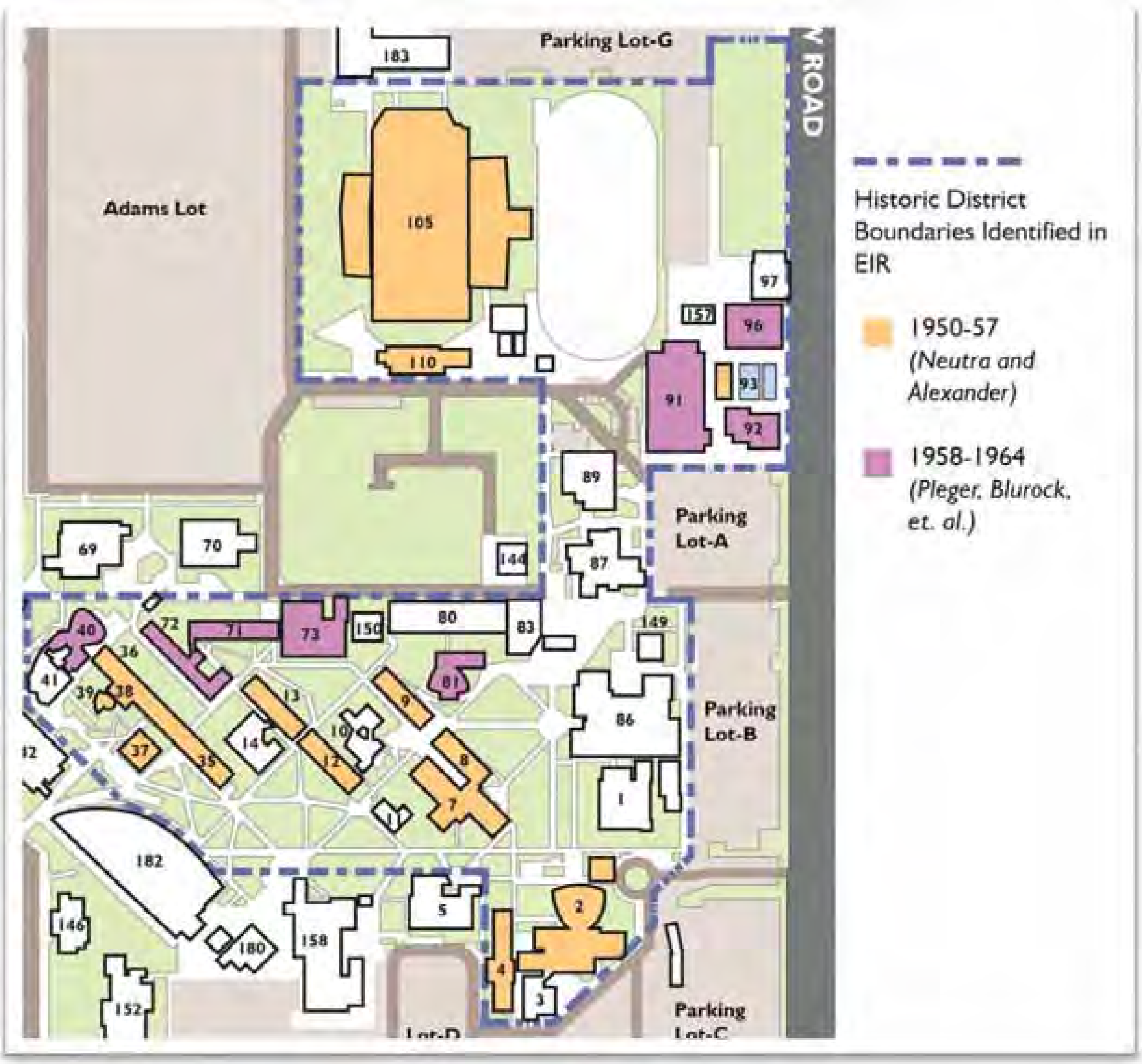

Figure 6: Partial campus plan with the dashed blue line indicating the historic district determined eligible for the California Register within the draft EIR/HRTR. The shaded buildings indicate contributors to the historic district according to the draft EIR/HRTR. As described in the Evaluation of Significance section of this HSR, after more research and analysis, Page & Turnbull believes the historic district contributors should be limited to the buildings shaded orange.

Project Alternatives

CEQA requires that the EIR "describe a range of reasonable alternatives to the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives."[8]

[8] CEQA Guidelines Section 15126(a).

Draft EIR Project Objectives[9]

The project objectives in the draft EIR are:

- Provide the building space, pursuant to the utilization and efficiency requirements established by Title 5 of the California Code of Regulations and the California Community College Chancellor's Office, to meet the Coast Community College District's (CCCD's) instructional needs and academic mission on the Orange Coast College campus.
- Update and modernize existing building spaces to meet the CCCD's instructional needs on the Orange Coast College campus.
- Accommodate growth in the student body over the planning horizon.
- Provide joint venture and entrepreneurial opportunities that generate revenue and support the academic needs and mission of the campus.
- Provide on-campus student housing.
- Foster projects that support innovative solutions to reduce resource consumption and support environmentally responsible practices to change behavior in the campus community and beyond.

The only significant and unavoidable impact in the draft EIR is the impact to historic resources with the proposed demolition of most contributors to the identified historic district. The draft EIR considered five alternatives but only three addressed the historic district: Maximum Reuse, Strategic Reuse, and Minimum Reuse. The alternatives were developed with input from the College's Facilities Planning Committee, which is comprised of professors, staff, and students. Only the Maximum Resource alternative reduced impacts to less than significant levels by retaining a California Register-eligible historic district at the College.

Maximum Reuse

From the Chapter 6 – Alternatives in the draft EIR:

> The Maximum Reuse Alternative suggests the preservation and reuse of a number of structures that contribute to the historic district in the campus core. This plan is represented by Figure 6-1, Maximum Reuse Alternative [Figure 7 here]. The plan shows that a number of contributors to the historic district (colored yellow), including the Science and Math Lecture Halls, Math Wing, Journalism, Haley Business Learning Center, Classrooms and Labs, the Forum, Robert B. Moore Theater, Music Hall and Fitness, and Stadium complex would be saved and repurposed with different uses. The plan also accommodates a new Planetarium and a new Dance Hall building (both in orange) in the central core. The new Planetarium would be moved from its proposed location and shifted south to allow the old Planetarium to be preserved in place. This new proposed location for the Planetarium creates a tight corridor between the Lewis Center for Applied Science and the library.[10]

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[9] Draft EIR, 1-2.
[10] Direct text from draft EIR, 6-8.

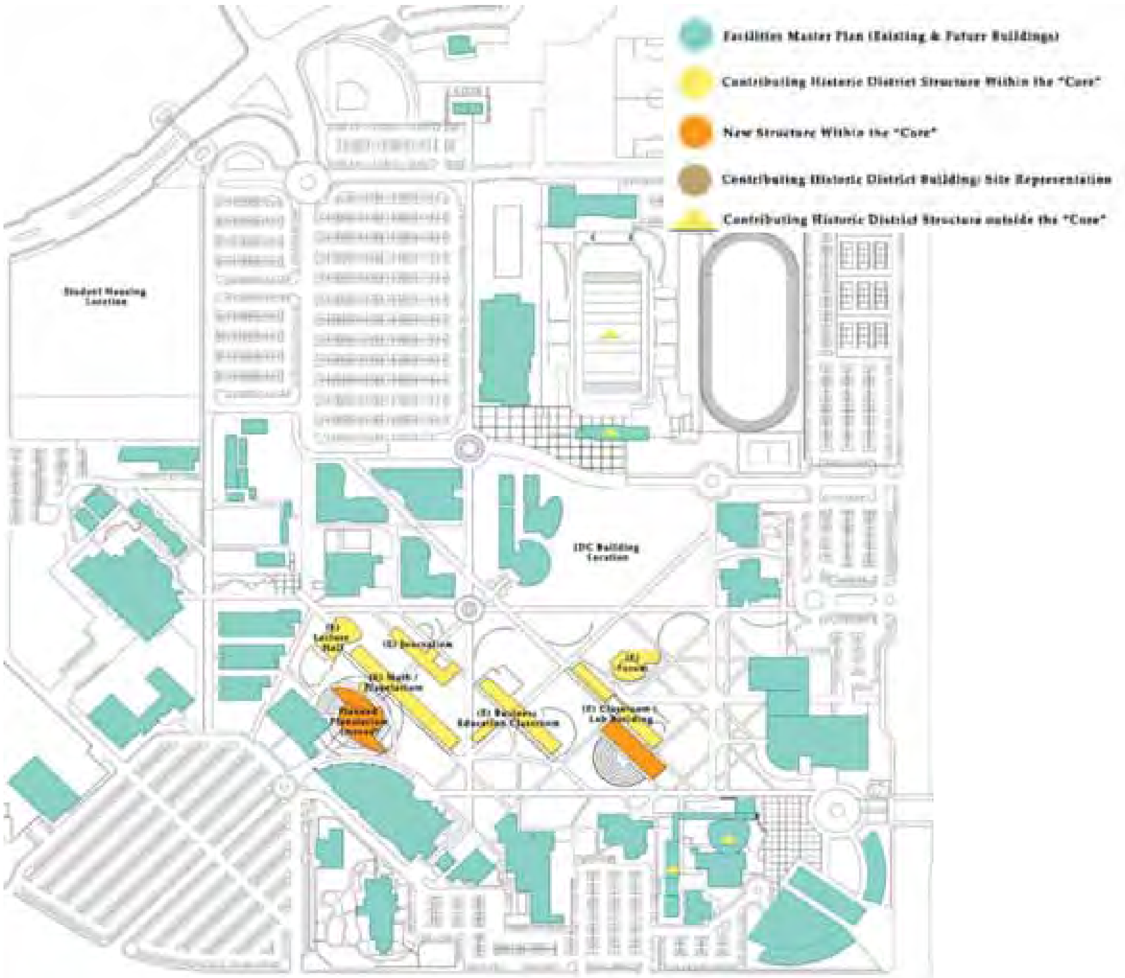

Figure 7: An illustration of the Maximum Reuse Alternative. Source: Draft Orange Coast College Vision 2020 Facilities Master Plan Program Environmental Impact Report, Figure 6-1.

Strategic Reuse

From the Chapter 6 – Alternatives in the Draft EIR:

> The Strategic Reuse Alternative as represented in Figure 6-2 [Figure 8 here], highlights the preservation and reuse of key contributing historic structures in the campus core and keeps the new Planetarium in its originally planned location. As a result, the old Planetarium would not be preserved, but the dome would be moved to serve as an entry element to the campus from the Merrimac Lot. This domed entry element could also serve as a kiosk detailing the history of the Orange Coast College campus. The plan shows that a number of contributors to the historic district (colored yellow), including the Science and Math Lecture Halls, Haley Business Learning Center, Forum, Robert B. Moore Theater, Music Hall, and Fitness and Stadium complex, would be saved.[11]

[11] Direct text from draft EIR, 6-12

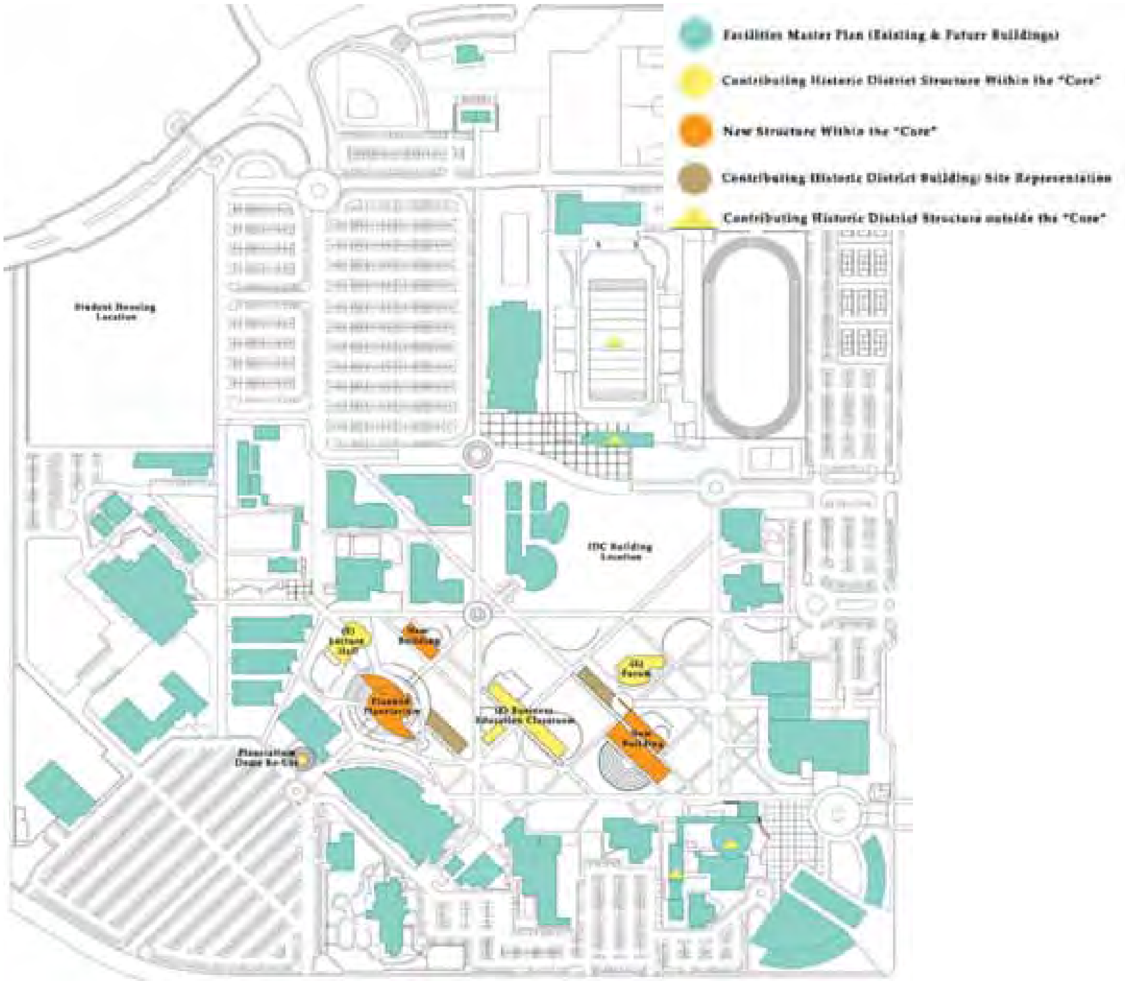

Figure 8: An illustration of the Strategic Reuse Alternative. Source: Draft Orange Coast College Vision 2020 Facilities Master Plan Program Environmental Impact Report, Figure 6-2.

Minimum Reuse

From the Chapter 6--Alternatives in the Draft EIR:

> The Minimal Reuse Alternative, as represented by [Figure 9], highlights the preservation and reuse of two buildings in the campus core: the Science and Math Lecture Halls and the Forum. The footprints of the Haley Business Learning Center and partial footprints of the Math Wing and Classroom and Lab Buildings would provide opportunities for patios, gathering places, and other outdoor spaces. The new Planetarium would stay in its originally planned location, and the old Planetarium's dome would be moved to serve as an entry element to the campus from the Merrimac Lot.[12]

[12] Direct text from draft EIR, 6-16

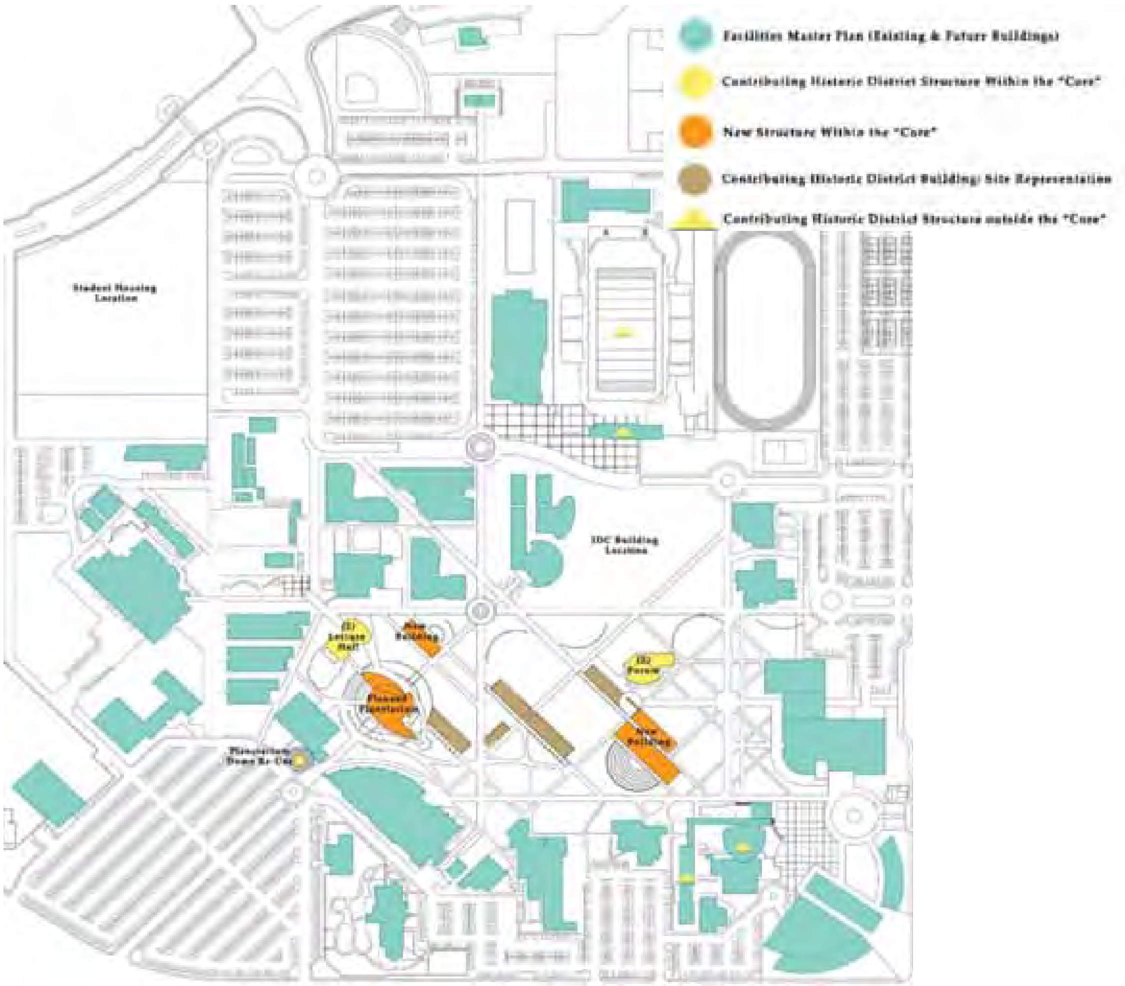

Figure 9: An illustration of the Minimum Reuse Alternative. Source: Draft Orange Coast College Vision 2020 Facilities Master Plan Program Environmental Impact Report, Figure 6-3.

The draft EIR concluded that because the Maximum Reuse Alternative retains and reuses buildings in the central core of the campus that are in the historic district, the historic integrity of the district would remain and impacts to historic resources would be considered less than significant. However, the draft EIR also concluded the following:

> The adoption of the Maximum Reuse Alternative would not meet the project objectives identified by the District [CCCD] for campus growth through 2024 because of the need for new instruction buildings to meet the educational goals for the campus and also the need to open up the inner core to create way-finding opportunities and defensible spaces. The preservation of the historic structures also hinders the ability to identify distinct zones on campus with the placement of new buildings.[13]

[13] Direct text from draft EIR , 6-12.

The Maximum Reuse Alternative fails to fully accomplish the project objectives in the CCCD's vision but has fewer environmental impacts than the Proposed Project and is therefore environmentally superior.

Under the Strategic Reuse Alternative and the Minimum Reuse Alternative, a number of contributing buildings would still be removed. Although the draft EIR concludes both alternatives would meet the project objectives identified by the CCCD for campus growth through 2024, the integrity of the historic district would be compromised and impacts to historic resources remained significant under these alternatives. The Strategic Reuse Alternative demolishes fewer buildings than the proposed project and has fewer environmental impacts but the historic district would not retain its eligibility for the California Register. Also, the Facilities Planning Committee recommended adoption of the Strategic Reuse Alternative to the CCCD's Board of Trustees, despite the fact that this alternative has significant and unavoidable impacts to historic resources.

Mitigation Measures

Because the proposed project has a significant impact on historic resources, mitigation measures were proposed to document the important history and architecture of the site and its overall historic association with the early development of the campus. The measures included:

- Recordation
    - A Historic Structures Report shall be prepared prior to any alternation, relocation, or demolition of any contributing buildings, structures, objects, features, or landscape elements located within the HRTR-identified OCC historic district.
    - Documentation in accordance with Historic American Building Survey (HABS) guidelines and standards, including large format photography and field photographs.
    - Available historic photographs and historic and/or current as-built plans of the site and its contributing resources reproduced digitally or photographically
- Salvage and reuse of key features, where feasible.
- Interpretive Educational Program with multi-media and 3-D public art display incorporated into the reconfigured campus quad area or library.

However, even with the mitigation measures, the impacts to historic resources under the proposed project are not mitigated to less than significant levels.

Public Comments

The Coast Community College District received a number of public comments objecting to the demolition of historic buildings designed by Neutra and Alexander at the College. The comments were received from regional and national historic preservation advocacy organizations as well as from local community members challenging the infeasibility of the project alternatives. To address the public comments as well as meet the mitigation measures, the CCCD engaged Page & Turnbull to prepare this HSR.

PART 1 – DEVELOPMENTAL HISTORY

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1A. HISTORICAL BACKGROUND AND CONTEXT

Early Costa Mesa History[1]

The contemporary city of Costa Mesa is the result of three smaller communities that were established in the late nineteenth century with varying success: Fairview, Paularino, and Harper (Figure 1A-1 and Figure 1A-2).

Fairview was a small agricultural and tourism town that was established from the former Yorba family rancho lands in the 1880s, centered near the current intersection of Adams Avenue and Harbor Boulevard. Fairview developed quickly, particularly after the arrival of the Santa Ana, Fairview & Pacific railway; a spur line from Santa Ana that provided increased access for tourists visiting Fairview and the neighboring hot springs. However, the rate of development was not sustainable and the town began to decline. In 1889, a large storm washed out the railway line and it was never replaced, effectively quashing the town.

Paularino was founded on portions of Rancho Santiago de Santa Ana by Eduardo Polloereno. The first settlers, primarily from Boston, Massachusetts, arrived in 1886 and began to develop the small agricultural community in the area bounded by the current San Diego Freeway (north), Fairview Road (west), Baker Street (south), and Newport Boulevard (east). The town was unable to establish a commercial presence and ultimately failed.

Figure 1A-1: Historic map of Orange County, ca. 1921. Orange box illustrating zoomed in area, as shown at right. Source: Orange County Archives.

Figure 1A-2: Detail section of historic map of Orange County, showing locations of the towns Paularino and Harper (highlighted in orange), ca. 1921. Source: Orange County Archives.

Following the introduction of oil production within the Costa Mesa area in 1906, the town of Harper began to take form. Founded on the lands of rancher Gregory Harper Jr., the town quickly grew near the present-day intersection of Newport Boulevard and 18th Street. This included a

[1] The following section is summarized from Ostashay & Associates, "Orange Coast College Historic Resources Technical Report," in Draft Orange Coast College Vision 2020 Facilities Master Plan Program EIR, May 2014. Any additional sources will be cited accordingly.

general store, schoolhouse, post office, and an Episcopal church. Both the growing oil and agricultural industries in the area helped to establish the permanence of Harper by attracting an increasing number of settlers. The population boom resulted in more road construction, water infrastructure, and tract housing developments. The community of Harper officially changed its name in 1920 to Costa Mesa, roughly translating to “coastal tableland” in Spanish (Figure 1A-3). This refers to the coastal plateau on which the city is located.

Figure 1A-3: Newport Boulevard in Costa Mesa, California, ca. 1927. Source: Orange County Archives.

Over the next two decades, the population of Costa Mesa expanded from 200 to almost 5,000. Although the Great Depression and the 1930s brought economic hardship to the emerging city, development continued as migrants from other parts of the country moved to the area. The increase in population continued after the United States entered World War II. The Santa Ana Army Air Base was established in Costa Mesa and brought thousands of people to the surrounding area. Following the end of the war, large portions of the base that later became part of Costa Mesa were decommissioned to be used for agricultural land, tract housing development, and the campus location of Orange Coast College. In 1953, Costa Mesa was incorporated as a city after facing annexation pressure from the neighboring cities of Santa Ana and Newport Beach. At this time, it had a population of 16,840 and covered an area of 3.5 square miles.[2]

Tract housing development in Costa Mesa continued rapidly throughout the 1950s as people migrated to Southern California and Orange County. Many of these large residential developments, like Freedom Homes (1953), Sunshine Homes (1955), and College Park Homes (1956), featured the popular Ranch style houses, which were becoming synonymous with the postwar suburban Southern California lifestyle. The transition from rural to suburban development continued over the next several decades as the City of Costa Mesa sustained its expansion

[2] “Timeline,” Costa Mesa Historical Society, accessed March 4, 2015, http://www.costamesahistory.org/timeline.htm.

physically, economically, and institutionally. According to the 2010 census, the City of Costa Mesa currently has a population of 109,316.

Development of Junior Colleges (Community Colleges)

In the late nineteenth century, the concept of a junior college that bridged secondary and higher education started to develop among educators in the United States. Several related factors contributed to their development. Progressive educational reform during the period had transformed public education, which established secondary education as the norm and produced more high school graduates in demand for higher education. Existing colleges and universities expanded but could not keep up with the demand. Thus, some educators suggested the formation of two-year colleges could provide the first two years of general education courses so that universities could focus on research. At the same time, growing industrialization and larger businesses increased the need for skilled workers who could receive vocational training beyond that provided by high schools. Many communities also sought to have higher education institutions locally, not only to keep their best and brightest students close to home, but as a sign of their growing importance.[3]

By the early twentieth century, junior colleges had emerged as extensions of high schools that offered vocational and technical programs, or as smaller colleges with general education courses that could be transferred to a four-year university program. California was at the forefront of developing junior colleges. In 1907, the California legislature adopted the Upward Extension Law allowing high schools to offer "postgraduate" classes. Fresno High School first used the law in 1910 as the state's first public junior college.[4] In subsequent years, several junior colleges were established throughout California as extensions of high schools and often sharing campuses. These included Fullerton College (1913) and Santa Ana College (1915) in Orange County, both of which are still in operation as community colleges.

Between 1900 and 1920, 14 public junior colleges were established in California. They joined eight state colleges (teacher training colleges that were precursors to California State Universities) and two University of California campuses (Berkeley and the southern campus in Los Angeles) as California's public higher education institutions.[5] In the 1920s and 1930s, the junior college concept grew as additional legislation allowed for state and county support of junior colleges. California, Illinois, and Texas were the primary states to see growth in junior colleges. Twenty-five new junior colleges were established across California while only two State colleges were established during this period.

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[3] For more on the development of junior colleges, see John Aubrey Douglass, *The California Idea and American Higher Education: 1850 to the 1960 Master Plan*, (Stanford, CA: Stanford University Press, 2000), 114-134 and James L. Ratcliff, "Community Colleges—The History of Community Colleges, The Junior College and the Research University," Education Encyclopedia-StateUniversity.com, accessed March 25, 2015, http://education.stateuniversity.com/pages/1873/Community-Colleges.html.
[4] Douglass, *The California Idea*, 122.
[5] Research stations in Davis, Riverside, and San Diego affiliated with the University of California were established in this period and would become full University of California campuses in the postwar period. Douglass, *The California Idea*, 345-348.

Heightened recognition of the importance of junior colleges came in the postwar years. The passage of the G.I. Bill in 1944 provided veterans with financial assistance for higher education and created unprecedented demand for access to colleges, universities, and training schools in the United States. The 1947 President's Commission on Higher Education (also known as the Truman Commission) called for a network of public junior colleges, or the newly introduced term "community colleges," that would charge little or no tuition, serve as cultural centers, be comprehensive in their offerings but with emphasis on civic responsibilities, and serve the areas in which they were located.[6] Similarly, the first attempt at creating a master plan for California's overburdened public higher education system acknowledge junior colleges as the embodiment of California's commitment to a democratic way of life. They provided vocational training for local high school graduates; general education for civic engagement; adult education; and lower-division courses for those who wished to move on to four-year institutions.[7]

By 1945, California had dozens of junior colleges across the state, but the limited resources during the Depression and World War II created a backlog of demand for new campuses. Between 1945 and 1949 alone, 15 new junior colleges were founded in California. However, with no state support for building programs and continued material scarcity in the immediate postwar years, many of the newly established schools used surplus military buildings and did not constructed their own campuses until well into the 1950s. Orange Coast College was among these junior colleges that started in the immediate postwar years and the only one in Orange County. Other contemporaries are El Camino College in Torrance, Monterey Peninsula College, Shasta College, and Los Angeles City Colleges in Wilmington and Van Nuys.

In 1960, the California Master Plan for Higher Education codified the state's tripartite higher education system (junior colleges, state colleges that became California State Universities, and the University of California campuses).[8] Unlike the limited California State and University of California universities, junior colleges opened enrollment to all and were a key component that democratized access to higher education. By allowing all high school graduates access to higher education, the local junior college also took pressure off enrollment at universities. In recognition of their role, state funding was provided for the first time to help junior colleges with building programs.[9] In 1967, the state legislature authorized the Board of Governors of the California Community Colleges to oversee community colleges throughout the state. This also changed the official designation of two-year programs from "junior colleges" to "community colleges."[10]

Additional federal legislation in the 1960s and 1970s further supported community colleges and community colleges saw dramatic increases in enrollment. Campuses underwent their greatest expansion during these decades.[11] The California Community College system is currently the

[6] The Truman Commission report also popularized the use of "community college" to refer to junior colleges. "Significant Events in the Development of the Public Community College," American Association of Community Colleges, accessed March 25, 2015, http://www.aacc.nche.edu/AboutCC/history/Pages/significantevents.aspx.
[7] Douglass, *The California Idea*, 187.
[8] Ibid., 15.
[9] Ibid., 286.
[10] Sidney W. Brossman and Myron Roberts, *The California Community Colleges* (Palo Alto, CA: Field Educational Publications Inc., 1973), 8.
[11] Ratcliff, "Community Colleges —The History of Community Colleges," and Douglass, *The California Idea,* 317, 350-54.

largest system of higher education in the country, serving over 2.1 million students at 112 different colleges throughout the state.[12]

Junior (Community) Colleges in Orange County

Following the 1907 adoption of the Upward Extension Law that allowed California high schools to offer "postgraduate" classes, the first junior college founded in Orange County was Fullerton Junior College (Figure 1A-4). It was approved by the Fullerton Union High School administration in the spring of 1913 and began offering two-year postgraduate programs the following fall with an enrollment of 28 students.[13]

In 1915, Santa Ana Junior College was founded, providing Orange County its second higher education institution. As with other early junior colleges, both Fullerton Junior College and Santa Ana Junior College were entirely affiliated with high schools. Although the original educational function of these colleges was to provide pre-university transfer courses, by 1915 there was a shift towards vocational programs appropriate for the local economy, such as agriculture and petroleum-related fields.[14] In 1916, Anaheim High School established the third junior college in Orange County; however, the college suspended operations due to lack of state funding and decreased enrollment following the United States entering World War I.[15]

The number of students enrolled at Fullerton and Santa Ana Junior Colleges rose exponentially over the years following World War I. By 1926, Fullerton Junior College had 235 students and offered a variety of programs including oil drilling technology, manual arts and shop, typing, stenography, and bookkeeping.[16] That same year, Santa Ana Junior College had an enrollment of 287 and by 1933 that number had increased to 803.[17]

With increased enrollment and diversification of courses offered, the need to separate from their high school counterparts became apparent, in terms of both facilities and educational autonomy. Between 1934 and 1935, Fullerton Junior College began acquiring land and developing a master plan for its own campus. Construction began on the 14-acre parcel later that year, largely through the funds and efforts of the Works Progress Administration (WPA). This initial period of campus development included the Commerce Building (1936), Administration Building (1937), Industrial Building (1937), and the Student Union (1938), all of which were composed in the Spanish Colonial Revival style.[18]

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[12] "Home," California Community Colleges Chancellor's Office, accessed March 4, 2015, http://www.cccco.edu/.
[13] "History of Fullerton College," Fullerton College Public Information Office, accessed March 4, 2015, http://web.archive.org/web/20070613100427/publicinfo.fullcoll.edu/about/history.htm.
[14] Carl G. Winter, "History of the Junior College Movement in California," *Bureau of Junior College Education Release* No.20 (December 21, 1964): 2-4, accessed March 14, 2015, http://files.eric.ed.gov/fulltext/ED346902.pdf
[15] Winter, "History of the Junior College Movement in California," 2-5.
[16] Ibid., 11.
[17] "History of Santa Ana College," Santa Ana College, accessed March 4, 2015, http://www.sac.edu/AboutSAC/Pages/history.aspx.
[18] "History of Fullerton College."

Although there were efforts to start a third junior college in Orange County prior to World War II, it did not gain traction, and no new colleges started until after the war.[19] In 1946, local leaders in southern Orange County organized to petition the state for a new junior college district to serve four high schools: Capistrano, Laguna Beach, Newport Harbor, and Huntington Beach. In 1946, the State Board approved the petition and the measure to form the Orange Coast Junior College District (OCJCD) was placed on the ballot for January 1947. Voters overwhelming approved it.[20]

Figure 1A-4: The College Building at Fullerton Union High School, ca.1927. Source: Fullerton College Library, http://libraryfchistory.fullcoll.edu/photos.php?image_id=253.

The new Orange Coast Junior College District established its first school, Orange Coast College (OCC) in Costa Mesa in 1948 on part of the former Santa Ana Air Army Base (SAAAB). Construction materials and capital were both in short supply in the immediate postwar years, so OCC initially repurposed many of the site's existing military buildings for the administrative, educational, and recreational needs. As the army buildings did not meet state education standards, new buildings were needed. The OCJCD hired Los Angeles-based architect Robert E. Alexander to develop a campus master plan. With a voter-approved limited local tax, OCC constructed the first postwar higher education college campus in Orange County between 1950 and 1957. The new campus was comprehensive and modern in style, construction methods, and educational programming with a Library, Technology Building (focused on courses for the local petroleum industry), Fine Arts Complex, Business Education, Agricultural Complex (still a major industry in Orange County), Science Building, and Speech Arts Building/Theater, as well as athletic facilities in the form of a football stadium, running track, and swimming pools (see below for more about OCC's development).

[19] Raymond M. Elliott and Sidney H. Davidson, "We Want a Junior College," in *From Tumbleweed to Roses: A History of Orange Coast College*, (Newport Beach, CA: Orange Coast College Faculty and Associated Student Body, 1964), 31
[20] Ibid., 43.

Orange County continued to develop through the 1960s, shifting from a primarily agricultural and petroleum producing community to become one of the quintessential suburban environments in the United States. This significant population growth increased the need for two-year postsecondary educational institutions. Orange Coast Junior College District established a second school, Golden West Community College, in Huntington Beach in 1965. Its 122-acre campus on former farmland, planned out by master architect William Pereira, opened to students in the fall of 1966.[21] With this second school, the OCJCD changed its name to Coast Community College District (CCCD) around 1970 (Figure 1A-5).

The Fullerton Junior College District also expanded during this period. It established Cypress College in Cypress in 1966 and became the North Orange County Community College District (NOCCCD).[22] Cypress College opened in 1966 using temporary buildings but Caudill Rowlett Scott (also known as CRS) of Houston, Texas planned a permanent campus that was constructed from 1967-1972. The campus buildings were designed in a Brutalist architectural vocabulary, as evident in the college's "Campanile," a large concrete tower set in a central plaza.[23]

In far southern Orange County, Saddleback College was founded in 1967 as the primary campus of the Saddleback Junior College District, now named the South Orange County Community College District (SOCCCD). The college first utilized a temporary location, which occupied 11 interim buildings that were rapidly constructed until a more appropriate site could be acquired. The community approved a $9.5 million bond to fund the acquisition and construction of a new 200-acre campus and construction began in 1970. The campus rapidly expanded over the years, eventually becoming one of the largest community colleges in Orange County.[24]

The 1970s, a tumultuous and transformative decade in the United States, saw several changes to the nature of community colleges in Orange County. First and foremost, the demographics of those enrolled became increasingly diverse. In addition, classes and programs would reflect upon these changes in the student body, moving towards an inclusive model rather than a divisive one.[25] In 1976, the community college took a new form in Orange County when Coast Community College District (formerly Orange Coast Junior College District) founded Coastline Community College. The school was planned specifically as a distance learning institution, serving the broader community through correspondence instead of in a traditional "brick and mortar" classroom setting. [26] This model was designed to provide non-traditional students, especially those with time conflicts, the opportunity to increase their education. Coastline College still lacks a traditional campus setting, although supportive and administrative complexes are now

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[21] Gonzalez Goodale Architects, *Golden West College Facilities Master Plan*, prepared for Golden West College (2004): 6-7, accessed March 25, 2015, http://www.goldenwestcollege.edu/pdf/FacilitiesMasterPlan.pdf
[22] "The Community College Idea: The History of the North Orange County Community College District," North Orange County Community College District, accessed March 25, 2015, http://www.nocccd.edu/CCLife/TheCCIdea.htm.
[23] HMC Architects, "History of the College," in *Cypress College 2011 Comprehensive Master Plan* (March 2011): 8-9, accessed March 31, 2015, http://www.cypresscollege.edu/news/NOCCD_CYPRESS_031811-lorez.pdf.
[24]GKK Works, *SOCCCD Education & Facilities Master Plan,* V.1, prepared for South Orange County Community College District (2011): 20, accessed March 25, 2015, http://www.socccd.edu/about/documents/Volume1SOCCCD_000.pdf.
[25] "Budget Woes, Curricular Changes, and the Inclusion of Non-traditional Students: 1970-1979," Fullerton College Library, accessed March 22, 2015, http://libraryfchistory.fullcoll.edu/albums/budget-woes-curricular-changes-and-the-inclusion/.
[26] "Coastline College President Selected," *Los Angeles Times*, April 22, 1976.

located in the cities of Westminster, Garden Grove, Newport Beach, and Fountain Valley within the Coast Community College District.

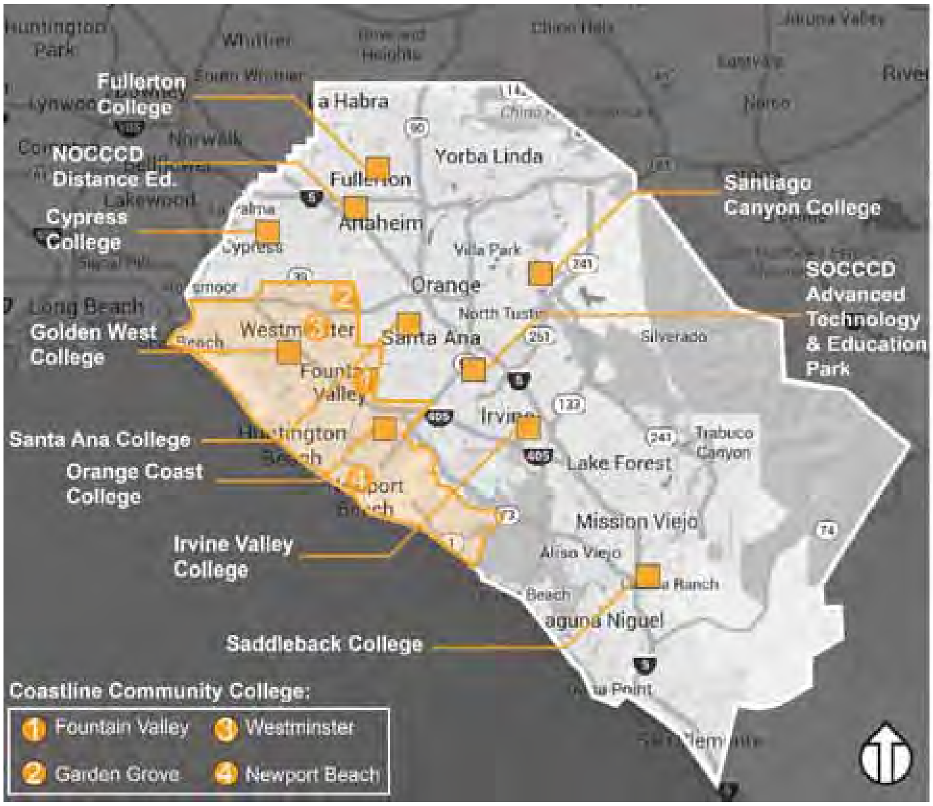

Figure 1A-5: Map of Orange County showing the location of all community colleges. Coast Community College District area is highlighted in orange. Source: Google maps image, edited by Page & Turnbull, 2015.

In 1979, Saddleback College established a satellite campus in the City of Irvine. Irvine was already served by the University of California, Irvine – the largest and most prominent postsecondary institution in Orange County. As extensive growth was forecast for the region, however, the need for a community college to better meet the educational needs in southern Orange County became increasingly apparent.[27] The small 20-acre Saddleback College satellite campus became an independently accredited community college and was renamed Irvine Valley College in 1985. That same year, Santa Ana College established a satellite college in the City of Orange. The 82-acre campus would remain tied to Santa Ana College until 1997, when it became an independent institution known as Santiago Canyon College. It was fully accredited as an institution in 2000.[28]

The community college districts in Orange County continue to expand, many of which have established distance and continuing education programs. Although much of this can be conducted via the internet now, brick and mortar campuses continue to be established. In 2002, the NOCCCD began work on a campus in Anaheim to serve as a new administrative center and

[27] "District Overview," *SOCCCD Education & Facilities Master Plan*, 20-21.
[28] "The Community College Idea."

continuing education campus.[29] The SOCCCD opened a preliminary campus in the City of Tustin in 2007 to serve as an Advanced Technology and Education Park. It is now on a permanent 68-acre location on a site formerly part of the Marine Corps Air Station in Tustin and is planning to expand.[30]

The Typology of the Junior (Community) College Campus

Collegiate Campus Planning and Architecture

Early American higher education campus design reached back beyond the founding of the country and was modeled on previously established English and European universities. At the University of Virginia in 1819, Thomas Jefferson created the defining American campus using a simple layout of a wide, tree lined central space flanked by a series of neo-classical pavilions that each housed an individual subject. The axis of the mall opened at one end to a view of surrounding plantations and it terminated at the other end with the library.[31]

In the nineteenth century, greater experimentation in higher education campus planning occurred in step with the architectural and town planning trends of the time and involved nationally-known designers. These new plans included the more natural settings of the picturesque ideal (such as at Stanford University), the formality of the Beaux-Arts movement (University of California, Berkeley), and the use of the Gothic Revival architectural style for collegiate buildings (Yale University).[32]

With the popularity of the City Beautiful aesthetic and planning movement in the late nineteenth century, the Beaux-Arts style of planning and architecture was the most widely accepted and applied. Strongly influenced by Jefferson's design at the University of Virginia, these campuses often had a longitudinal axis lined by academic buildings and dominated at one end by a strong focal point. Secondary axes and symmetrical layouts are also hallmarks. The buildings were designed in various classical or other revival styles such as Italian Renaissance Revival (University of California, Los Angeles) and Romanesque Revival (University of Southern California). In Southern California, the Mediterranean Revival and Spanish Colonial Revival styles were also frequently used, such as at Whittier College and Occidental College.

The dramatic shift to modern design in the post-World War II years affected college and school planning as well. Though some prewar modern campuses exist (most notably the Illinois Institute of Technology designed by modern pioneer Ludwig Mies Van der Rohe and Frank Lloyd Wright's Florida Southern College), postwar campuses turned to modern design both as the dominant style and as an economical and rapid means of constructing much needed buildings. Additionally, the formality and strict symmetry of the Beaux Arts gave way to a more fluid and informal approach, which responded less to spatial composition and visual coherence with the greater

[29] "The Community College Idea."
[30] "District Overview," *SOCCCD Education & Facilities Master Plan*, 21.
[31] Johnathan Coulson, Paul Roberts and Isabelle Taylor, *University Planning and Architecture: The Search for Perfection* (New York: Routledge, 2011), 10-11.
[32] Coulson, Roberts and Taylor, *University Planning and Architecture*, 13-24.

campus and more to the programmatic, functional, and specific needs of the uses.[33] Typically, the new modern collegiate buildings of the 1940s and 1950s were built on available open space outside their existing campus cores. While modern in style and construction, these immediate postwar buildings were often of similar scale and massing and used the same material or color palette as the older buildings of their campuses. As high-rise construction technology advanced, and with material shortages no longer an issue, taller and larger buildings in other modern styles emerged in the 1960s and 1970s.

Southern California Public Schools

According to a historic context prepared for Los Angeles Unified School District, the earliest school buildings remaining were one- to two-story vernacular schoolhouses from the late-nineteenth century to the first decade of the twentieth century.[34] The 1920s saw a boom in school construction coinciding with the great population and development in Southern California. Most schools of this era typically had a main classroom and administration building, often sited along the street. Constructed out of masonry and often designed in Classical Revival, Mediterranean, or Spanish Colonial Revival architectural styles, the buildings were typically two to three stories, were rectangular or had side wings with a double-loaded corridor for classrooms or offices on both sides, and had large windows and high ceilings to take advantage of natural lighting and ventilation during school hours. An auditorium was common, either as a separate building or in its own wing. Cafeterias were sometimes included. Gymnasiums for the junior and senior high school levels were housed in separate buildings and were often more utilitarian in character. Shop buildings, also for high schools, were often located in industrial-like buildings with large spaces and open truss roofs.

The 1933 Long Beach Earthquake damaged several school buildings and resulted in legislation that required heightened seismic standards for public education buildings. Some school buildings were retrofitted, while new ones, built primarily in Art Deco and Moderne styles, were associated with New Deal programs that funded some of the construction. The 1930s also saw greater variety in school and campus plans reflecting progressive educational reforms and advances in ventilation, illumination, hygiene, sanitation, school furnishings, and landscaping.

In the post-World War II years, modern architecture, and specifically the midcentury variant of the International Style, was adopted for many schools. Pioneered in part by modern architect Richard Neutra in some 1930s Los Angeles area schools, the 1950s and 1960s schools were predominately one-story, open air plan campuses. Built in conjunction with and to serve growing suburban developments, these postwar schools were built where land was plentiful. They were characterized by sprawling, low clusters of “finger” buildings that allowed natural daylighting from two sides. Connected by covered walkways, the one-story design eliminated wasted space usually needed for corridors and stairwells and easily accommodated expansion with the addition of new wings and separate structures. Buildings and classrooms had individual patios or open

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[33] Coulson, Roberts and Taylor, *University Planning and Architecture*, 24-32.
[34] The following section is summarized from Leslie Huemann, Science Applications International Corporation, “Historic Schools of the Los Angeles Unified School District,” for Los Angeles Unified School District, March 2002 and Los Angeles Unified School District’s “Historical Context Statement, 1870 to 1969,” prepared by Sapphos Environmental, Inc. (March, 2014). Any additional sources will be cited accordingly.

courtyards to encourage air circulation and take advantage of the region's mild climate. The one-story design also reduced earthquake and fire risks with outdoor access readily available.

Junior College Campuses in California

As previously discussed, the early junior colleges were established in direct relation to a high school or a university. This provided the institutional and physical settings necessary for the colleges to develop their early programs.[35] Spare rooms and temporary, or underutilized, buildings were often used to accommodate the small classes. As programs and enrollment increased in the 1920s and 1930s, more established facilities were built to accommodate the influx of students and the unique developing programs. Many junior colleges began constructing their own wings or stand-alone buildings adjacent to the parent institution.[36]

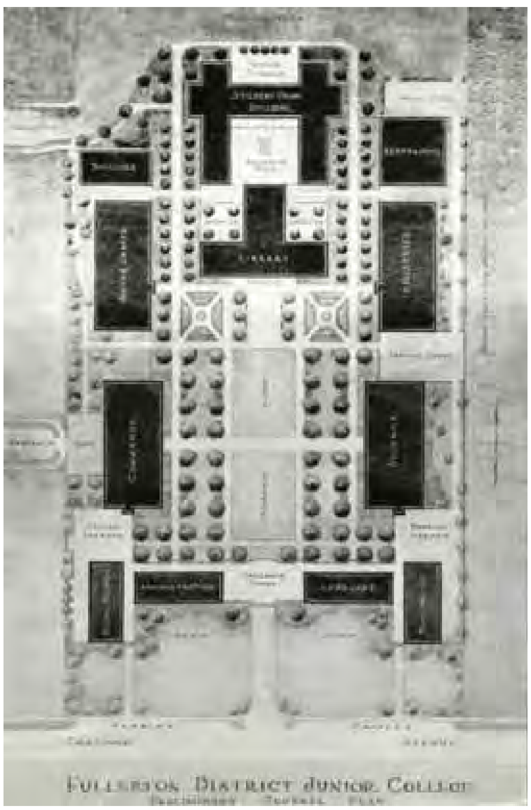

Figure 1A-6: Preliminary General Plan for Fullerton Junior College by Harry K. Vaughn and Ralph Cornell, ca. 1935. Source: Fullerton College Library.

Figure 1A-7: Aerial of Fullerton Junior College Campus under construction, ca. 1940. Source: Fullerton College Library.

In terms of planning, they shared the ambition of colleges and universities in following Beaux-Art planning principles (Figure 1A-6). However, these early campuses had only a few buildings constructed initially- usually a general classroom facility, administration building, and a library

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[35] Arthur M. Cohen and Florence B. Brawer, *The American Community College* 4th ed., (San Francisco: John Wiley & Sons Inc., 2003), 3-5.
[36] This information has been accumulated from written histories of several Junior colleges founded between 1910 and 1935: Fullerton College, Santa Ana College, Fresno City College, Pasadena City College, Glendale City College, and San Francisco City College. Full citations are available in the Bibliography Section.

(Figure 1A-7). Additional buildings were constructed according to a master plan and evolving needs of the college. Some junior college facilities built during this time, in addition to many other educational buildings, were done so through the influx of federal funding and readily available construction labor through New Deal programs, like the Public Works Administration (PWA) and the Works Progress Administration (WPA).[37]

As with four-year colleges and universities, the postwar junior college campus shifted away from strict Beaux Arts stylistic requirements and began to focus more on aspects like circulation, functional and spatial organizations, prospective growth, and efficient facilitation of college programs. Unlike established universities, junior colleges drew students locally rather than state- or nation-wide. The colleges' focus on their immediate communities, in addition to the proliferation of automobiles, created the "commuter campus" model where new elements, like surface parking lots and vehicular circulation patterns, became integral to the campus design while traditional campus amenities, such as dorms, were no longer necessary.[38] With their stronger community connections, junior college facilities, like theaters and art galleries, were used by the community as well.

The broad spectrum of junior college programs- offering academic transfer to four-year universities, vocational and technical programs, liberal arts education, continuing education, developmental education, recreational opportunities, and cultural services- required a variety of building types to facilitate the institutions' educational missions.[39] Common programs in the postwar years that required specialized facilities included:

- Business Education (typing, accounting, office practice, etc.)
- Technology (metal trades, building trades, etc.)
- Arts and Crafts (drafting, ceramics, photography, etc.)
- Home Economics (sewing, cooking, etc.)
- Science
- Language Arts
- Theater and Music

Like university campuses, the junior college had libraries, student unions, athletic facilities, and separate administration buildings to encourage campus life and improve the physical health of its students and the community.

In the immediate postwar years, the demand for more facilities to accommodate the exponential rise in enrollment was a pressing issue. However, these buildings were seldom built all at once and were often constructed over several years. This was due in part to limited access to building materials and resources, which were often diverted to deal with the immense housing shortage.[40]

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[37] This information was accumulated from research conducted at; "The New Deal in Action – Listings of Public Works Projects Sponsored During the New Deal," Franklin Delano Roosevelt Presidential Library and Museum, accessed March 31, 2015, http://www.fdrlibrary.marist.edu/archives/resources/newdealprojects.html.
[38] Jon Buono, "Modern Architecture and The U.S. Campus Heritage Movement," *Planning for Higher Education* v.39, no.3 (2011): 99, accessed March 25, 2015, http://www.scup.org/blog/scuplinks/2011/05/buono.
[39] Cohen, *The American Community College*, 20-23.
[40] "Challenges of the Post-war Era," Penn State University Libraries Digital Collections, accessed March 31, 2015, https://www.libraries.psu.edu/psul/digital/pshistory/bezilla/postwar.html.

Most postwar junior college buildings were one to two stories, sited to take advantage of natural lighting and ventilation, and composed in a Mid-Century Modern architectural style. The rational configurations and functional adaptability of modern architecture provided the developing postwar community college with a practical and flexible space.[41] However, by the 1960s, many community colleges were adopting a variety of modern architecture styles, creating a more cohesive aesthetic and identifiable brand specific to the campus.[42]

Figure 1A-8: Historic photo of Foothill College in Los Altos, California, ca. The 1960 campus features a cohesive regionally inspired modern architecture. Source: Docomomo US, http://docomomo-us.org/files/NoCaFoothill.jpg.

Junior college campuses constructed in the late 1950s and 1960s also deviated from earlier postwar campuses in that many were built at once. One reason was that state funding became available to junior colleges for capital improvements. Additionally, postwar material shortages were no longer an issue. Once a community college was founded, operations began the following fall in temporary facilities. Classes would continue at this temporary site while master plans and campus designs were formulated by a single architect or firm and then constructed. This method of planning and building meant that a college had a fully functional and architecturally cohesive campus in one to three years. For example, Foothill College in Los Altos, California, was founded in 1958, and its core campus was built between 1958 and 1961 in the regional Bay Area Modern style (Figure 1A-8). Existing junior colleges also initiated building programs during the 1960s and moving into the 1970s that significantly expanded their campuses.

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[41] Leland L. Medsker, “Providing Facilities for Optimum Service,” in *New Dimensions in Junior College Planning* (Palo Alto: Stanford University School Planning Lab, 1958), 6.
[42] Buono, “Modern Architecture,” 99.

Educational and technological advancements during the 1970s, 1980s, and 1990s had a resounding impact on the typology of community college campuses in California. Seemingly outmoded programs, such as agriculture, home economics, and typing, were replaced by more contemporary fields, like horticulture, culinary studies, and computer science. These curricular changes, linked with changes in education theory, architectural expression, funding options, and seismic requirements, often led to new buildings being constructed specifically to facilitate new or rapidly evolving programs being adopted by the college.

California's community colleges today are becoming increasingly similar to university campuses, albeit typically on a smaller scale. As enrollment numbers have become comparable to large universities, the sizes of community college buildings have increased to accommodate several thousand more students. Expanded libraries, facilities for advanced technology programs, and student dormitories are also becoming common fixtures on many community college campuses today. This, in part, is a reflection of overcrowding and increased tuition at public universities. Furthermore, some community colleges are expanding to offer four-year baccalaureate programs, particularly in fields where regional educational opportunities are limited.[43]

Modern Architecture in Southern California[44]

Southern California, with its varied history, Mediterranean climate, and accommodating creative character was a hotbed for architectural experimentation throughout the twentieth century. Along with the local Craftsman and Spanish Colonial Revival styles that dominated the region in the early twentieth century, innovators like Frank Lloyd Wright and Irving Gill took advantage of the mild climate and experimented with modern design generally independent of the Bauhaus school and rise of the Modern movement in Europe. The arrival of Austrians Rudolph Schindler and Richard Neutra in the late 1910s and early 1920s helped to introduce the International Style to Southern California.

These early modernists – Irving Gill, Frank Lloyd Wright, and Rudolph Schindler – often took inspiration from traditional architectural forms of the American Southwest, Mexico, and Japan, translating them into a new vocabulary through the use of modern materials and construction techniques. Concrete was the primary material of choice for its fireproof qualities, malleability, strength, and minimal maintenance required. As with modern architecture elsewhere, ornamentation became more abstracted, expressionist, or removed entirely. The natural aesthetic qualities of the building materials, the overall simplicity and honesty of the composition, and the integrated landscape became the ornamental features of a building. Like the regional architects before them, the mild climate inspired incorporation of the outdoors as a year-round extension of the living space. Sliding glass walls, sleeping porches, expansive windows, and the patio were rendered in a modern idiom. Technological and material advancements further allowed the barriers between the indoor and outdoor to erode and, indoor/outdoor living became synonymous with the Southern California lifestyle.

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[43] Jason Song, "Fifteen Community Colleges in California to Offer Four-year Degrees," *Los Angeles Times*, January 20, 2015, accessed March 25, 2015, http://www.latimes.com/local/lanow/la-me-ln-community-colleges-degrees-20150120-story.html.
[44] The following section was summarized from, Tom Hines, *Architecture of the Sun: California Modernism, 1900-1970* (New York: Rizzoli International Publications, 2010). Any additional sources will be cited accordingly.

As with other parts of the country, modern architecture dominated in the years after World War II. The umbrella term "Mid-Century Modern" is often used to describe the postwar iteration of the International Style.[45] With greater exposure of modern design through national publications like *Architectural Record, Architectural Forum,* and *Progressive Architecture* and the prewar works of Neutra and Schindler, architects like Charles Eames, Gregory Ain, Pierre Koenig, A. Quincy Jones, and Craig Ellwood soon adapted the Modern movement's design approach, technological innovation, and social progressiveness to California's outdoor living, optimistic outlook, and booming residential development. They in turn gained national prominence through their involvement with the Case Study House program sponsored by Los Angeles-based *Arts & Architecture* magazine.

Steel, glass, concrete, aluminum, and other modern and industrial materials developed in the war effort were employed in all building types. The construction techniques, expansive glass walls, geometric forms, horizontal orientations, open floor plans, and integrated outdoor spaces became the hallmarks of Mid-Century Modern in Southern California. Simultaneously, landscape architects, like Thomas Church and Garrett Eckbo, were experimenting with these same modern materials and forms to further develop the outdoors as habitable room-like spaces and part of the casual, informal California lifestyle. As the years progressed into the late 1950s and 1960s, the aforementioned architects and others like William Pereira, Welton Becket, Robert E. Alexander, and Albert C. Martin Jr. designed larger and more complex projects throughout the region. Additional variants of modern design, including New Formalism and Brutalism, offered variety to the International Style underpinning of Mid-Century Modern.

[45] Historic Resources Group & Pasadena Heritage, *City of Pasadena Cultural Resources of the Recent Past; Historic Context Report*, October 2007. 67.

Robert E. Alexander, FAIA (1907-1992)[46]

Figure 1A-9: Robert E. Alexander. Source: https://barbaralamprecht.files.wordpress.com/2012/06/robert-alexander.jpg.

Robert Evans Alexander (Figure 1A-9) was an influential figure in the development of midcentury urban design and planning in Southern California. He was a proponent of a rational, methodical, and well-researched approach that extended beyond pure aesthetics. Although his architecture was very much a product of modernist theory, his designs had an ingrained humanist element, reducing the often perceived coldness of strict modernism.

Born in Bayonne, New Jersey in 1907, Robert Evans Alexander graduated from the Cornell University School of Architecture in 1930. After completing further architectural studies in Western Europe, he moved to Southern California and had established himself as a partner in the Pasadena-based firm of Wilson, Merrill, and Alexander by 1936.[47] The firm's profile grew in 1937 when it began collaborating on the Baldwin Hills Village with local architect Reginald Johnson and nationally noted planner Clarence Stein (Figure 1A-10). As an example of progressive community housing, the 64-acre housing development was very influential in its overall site plan, which allowed for easy automobile access and circulation without infringing on pedestrians, the shared open spaces, or the sense of place. The buildings are a mix of simply designed two and single-story apartment buildings arranged around expansive insular communal green spaces. Parking garages, access roads, and other utilitarian spaces were placed at the site's periphery, ultimately serving as a buffer between the outlying urban environment and the central open space. This project exposed Alexander to large scale urban planning.[48] Baldwin Hills Village is listed in the National Register of Historic Places and was designated in 2001 as a National Historic Landmark, the highest designation of national significance, as an innovative and humanistic example of community housing developed during the automobile age.

During World War II, Alexander collaborated on the design of public and wartime housing projects and worked for the Lockhead Aircraft Corporation. Thereafter, he began practicing as an independent architect. One of his projects was the public elementary school near Baldwin Hills Village (Figure 1A-10). He also became increasingly involved in urban planning as a member of the City of Los Angeles Planning Commission; by 1948, Alexander had become president of the commission. It was during this period that he and Richard Neutra, who was impressed with Alexander's work at Baldwin Hills Village, began collaborating on a redevelopment study of the

[46] The following section is summarized from Ostashay & Associates, "Orange Coast College Historic Resources Technical Report." Any additional sources will be cited accordingly.
[47] Sara Allaback, "Richard J. Neutra and Robert E. Alexander, Architects and Planning Consultants," *Mission 66 Visitor Centers: The History of A Building Type* (Washington D.C.: US Department of the Interior, National Park Service, 2000), accessed March 5, 2015, http://www.cr.nps.gov/history/online_books/allaback/vc3a.htm.
[48] Thomas S. Hines, *Richard Neutra and the Search for Modern Architecture* (New York: Oxford University Press, 1982), 224.

Sacramento riverfront.[49] They also developed a proposal for an unrealized public housing development for Chavez Ravine. The two would develop a partnership from 1949 to 1958 that combined their individual talents to work on commercial, institutional and educational projects at a scale larger than each could do on their own, including Orange Coast College, which spanned the period of their partnership (see Neutra and Alexander section below).[50]

Figure 1A-10: Historic photo of Baldwin Hills Village, ca. 1958. Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles. ID no.: gri_2004_r_10_b257_f04_002.

In 1959, Alexander founded his own firm of Robert E. Alexander & Associates in downtown Los Angeles. In the following decades, Alexander continued his role as both architect and urban planner. These projects include Bunker Hill Residential Towers in Los Angeles (1968), and several higher education projects such as the University of California San Diego master plan (1963), University of California, San Diego School of Medicine (1968), and Baxter Hall of Humanities at the California Institute of Technology (1971), in addition to others. In many of these later projects, Alexander's approach used the evolving forms of modernist styles that were developing in the 1960s and 1970s. Alexander moved to Berkeley, California in 1982 and would remain there until his death in 1992.[51]

[49] Hines, *Richard Neutra,* 224-225.
[50] Ibid., 230-232.
[51] Burt A. Folkart, "R.E. Alexander: One of Nation's Top Architects," *Los Angeles Times*, December 2, 1992, accessed March 5, 2015, http://articles.latimes.com/1992-12-02/news/mn-1120_1_r-e-alexander.

Richard Neutra, FAIA (1892-1970)[52]

Figure 1A-11: Richard Neutra on the cover of *Time,* August 15, 1949. Source: http://content.time.com/time/covers/0,16641,19490815,00.html

Richard Neutra was one of the early masters of modern design in America (Figure 1A-11). His interpretations of the modern aesthetic, although featured on an international scale, became synonymous with Southern California through much of the twentieth century.

Neutra was born in Vienna, Austria in 1892. He began his studies at the Vienna Institute of Technology where he studied architectural engineering and was first introduced to the Modern movement through his instructor, and famous early modernist, Adolf Loos. He continued his studies at the University of Zurich, graduating in 1919. Soon thereafter, Neutra moved to Berlin and began working with Erich Mendelsohn on several projects in Germany. Mendelsohn was an influential figure in the development of modern architecture for his pioneering use of expressionist and streamlined architectural forms.

In 1923, Neutra immigrated to the United States. After brief stays in both New York and Chicago, as well as at Frank Lloyd Wright's Taliesin office in Wisconsin, Neutra eventually settled in Los Angeles. He began working with fellow Austrian and good friend, Rudolph Schindler, who had immigrated to Los Angeles prior to World War I and had established an architectural practice. The partnership was short lived, but the connections Neutra made in Los Angeles earned him many of his early commissions, most of which were single-family residences. Neutra's work had many parallels to the International Style that was developing in Europe, albeit with Southern Californian variations. This "biorealist" style that Neutra developed called for organic compositions, emphasis on the natural aesthetic qualities of materials, and integration of the outdoors into interior spaces through the use of large sliding glass walls, optimally placed clerestories, and carefully sited patios. These measures ensured maximum privacy and enjoyment of the Southern California landscape. Among the dozens of prewar residential projects, the Lovell Health House (1927-1929) and his own VDL Research House (1932, rebuilt after fire 1968) are the most well-known.

Savvy with publicizing his projects, Neutra received significant coverage in various national and international architectural journals, often with photographs by master photographer Julius Schulman who began his influential architectural photography career with a Neutra project. In 1949, Neutra was featured on the cover of *Time* magazine following the completion of his most prominent modern residence, the Kaufmann Desert House (1946) in Palm Springs. His influential books included *Architecture of Social Concern* (1948), *Mystery and Realities of the Site* (1951), *Survival Through Design* (1954), and *Life & Human Habitat* (1956).

[52] The following section is summarized from Ostashay & Associates, "Orange Coast College Historic Resources Technical Report." Any additional sources will be cited accordingly.

In 1949, Neutra formed a partnership with fellow architect Robert E. Alexander (described below). The partnership focused on larger-scale project planning, commercial and institutional projects. Neutra continued to design single-family residences separate from the partnership.[53] The partnership ended in 1960 due to personal differences, though they continued to finish the shared projects well into the 1960s. Neutra then established a new firm—Neutra and Associates—with his son Dion Neutra, who continued the practice after his father's death in 1970. Among the most influential Southern California architects, Neutra's legacy has grown in the subsequent years.

Neutra and Alexander (1949-1958)

Architects Richard Neutra and Robert E. Alexander began collaborating on projects in 1949 with proposals for an early redevelopment project in Sacramento, California and a public housing project in Chavez Ravine in Los Angeles. These two projects were ultimately unbuilt, but the two architects continued to pursue projects together. When Alexander asked Neutra to enter a joint venture with him on Orange Coast College, the collaboration morphed into a productive decade-long partnership for both.[54]

Alexander was knowledgeable and skilled in the planning processes of large sites, while Neutra was at the height of his public recognition with the *Time* cover article. Both had skill sets, reputations, and connections that complemented each other and by joining forces, they expanded their capacity, and staff, to realize larger scale commercial and institutional projects requiring both comprehensive planning and a keen eye for architectural detail.[55] Though not an incorporated entity, both Richard Neutra and Robert E. Alexander's names appeared on the title block and the projects are attributed to Neutra and Alexander.

The partnership produced projects that spanned educational, multi-family residential, recreational, institutional, and commercial uses. These projects included Orange Coast College (1951-57), the Redevelopment Plan for Guam (1952), Mountain Home Air Force Base Housing (1955), the National Charity League Observation Nursery School (1955), the Dayton Planetarium and Museum of Natural History (1957), the United States Embassy in Karachi (1959), the Los Angeles County Hall of Records (1962), the Lincoln Memorial Museum/Cyclorama Building at Gettysburg National Park in Pennsylvania (1962); and the Painted Desert and Petrified Forest National Park Visitor's Center and Community in Arizona (1964).[56] The last two projects were commissioned through the National Park Service's distinguished Mission 66 program, which improved access and introduced modern visitor centers within national parks ahead of the agency's 50th anniversary in 1966.

During his partnership with Alexander, Neutra continued his own private firm based out of his Silver Lake home office, working on single-family residential commissions while contributing to the partnership. Alexander managed the collaborative firm's regular operations out of the office on Glendale Boulevard. The firm continued in this fashion until strains, both operational and

[53] Robert Evans Alexander, "Architecture, Planning, and Social Responsibility Oral History," interview by Marlene L. Laskey, Tape number: IX, Side Two, October 4, 1986. Oral History Program, University of California, Los Angeles (1989).
[54] Alexander, "Oral history," Tape number: IX, Side Two, October 4, 1986.
[55] Hines, *Richard Neutra*, 232
[56] Ibid., 313-316

personal, reached a breaking point in 1958.[57] As such, no new projects were taken on collectively after 1958 but projects that were already underway were completed over the following years.

Educational Projects

Although Neutra gained much of his early critical accolade and fame for his residential projects, his prewar work also extended to schools. He was a proponent of progressive educational models emerging out of the same period as the Modern movement. The first school design Neutra developed was an elementary school, appropriately named the "Ring Plan School" in 1928. The plan called for a series of classrooms arranged in a single-story ring with individual courtyards radiating out from the building as outdoor extensions of the classroom spaces. A shared insular courtyard was located in the center of the ring with administrative offices extending out from the configuration. Neutra intended the design to provide a modern, adaptable, and progressive educational setting that would allow for immediate access to the outdoors.[58] His was among several prototypes for open-air schools that developed in the early twentieth century.

Figure 1A-12: Outdoor classroom space with sliding glass walls at Corona Avenue School, ca.1953. Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles. ID no.: gri_2004_r_10_b0079_f012_1545_04.

Figure 1A-13: Classroom with sliding glass doors at Alamitos Intermediate School, ca.1957. Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles. ID no.: gri_2004_r_10_b0082_f014_2454_40.

Neutra continued to build upon his educational plans and philosophies. He treated the classroom as a living space that required flexible and adaptable space, abundant natural lighting and ventilation, and access to the outdoors as a usable space and extension of the classroom. The importance of nature as an essential component to the learning process is central to Neutra's designs. Clerestory windows, sliding glass walls, outdoor classroom spaces, open-air covered walkways, and low-profile rectilinear layouts became common architectural elements in Neutra's pioneering school designs at the Corona Avenue School (1935) (Figure 1A-12) and Emerson Intermediate School (1937) .[59]

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[57] Hines, *Richard Neutra*, 246-248
[58] Esther McCoy, *Richard Neutra* (New York: George Braziller, Inc., 1960), 19-22
[59] McCoy, *Richard Neutra,* 21-22

Neutra and Alexander collaborated on several educational projects, building upon Neutra's programs and educational philosophies of the 1930s. Their commissions included Kester Avenue Elementary (1951) in Los Angeles, Alamitos Intermediate School (1957) (Figure 1A-13) in Orange County, and Palos Verdes High School (1961) in Los Angeles County. He and Alexander also tackled the programmatic challenges for progressive schools with teacher training and child observation components such as the UCLA Kindergarten & Elementary School (1957). Many features from Neutra's prewar schools became the standard vocabulary for the modern postwar California public school.

For institutions of higher education, Neutra and Alexander designed a collection of classroom buildings, athletic facilities, and a large theater for Orange Coast College (1950-1957), as well as individual buildings at California State College, Northridge (1959, demolished c.1994); the University of Nevada, Reno (1961); and the library complexes for Simpson College in Indianola, Iowa (1956-61) and Adelphi University in Garden City, New York (1955-63).[60] At St. John's College in Annapolis, Maryland, Neutra and Alexander designed Mellon Hall, an interconnected music and science complex that included classrooms, labs, a theater, and a small planetarium (1958-1959). The stand-alone modern complex complemented the scale and design of St. John's more traditional existing campus buildings. St. John's College restored, modernized, and expanded Mellon Hall in 2002.[61]

Figure 1A-14: Outdoor classroom space at UCLA Kindergarten and Elementary School, ca. 1958. Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles. ID no.: gri_2004_r_10_b0083_f009_10_2676_21.

Figure 1A-15: Planetarium at Mellon Hall (1959), designed by Neutra and Alexander, at St. John's College in Maryland, ca 2008. Source: Larry Miller, Flicker, https://www.flickr.com/photos/drmillerlg/3056060226/in/photostream/

[60] Hines, *Richard Neutra*, 235-236
[61] Edward Gurnts, "Modern Classic Thrives on Historic Campus," Baltimore Sun, December 22, 2002.

Garrett Eckbo (1910-2000)[62]

Figure 1A-16: Portrait of Garrett Eckbo, ca. 1959. Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles. ID no.: gri_2004_r_10_b261_f10_001.

Garrett Eckbo is one of the most influential American landscape architects to practice during the postwar years (Figure 1A-16). His approach, designs, and publications were heavily shaped by the progressive politics of the New Deal era and the proliferation of Modernist theories into American design practices.

Eckbo was born in Cooperstown, New York in 1910, but moved to Alameda, California with his mother in 1912. Eckbo enrolled at the University of California, Berkeley's Division of Landscape Design and Floriculture in 1932. In 1936, Eckbo received a scholarship to attend Harvard University's Graduate School of Design (GSD). The program's traditional Beaux-Arts curriculum was a source of frustration for Eckbo who viewed it as out of touch with the harsh realities of the Great Depression.[63] Eckbo rejected historicist design elements in favor of new forms and materials, which he felt were better suited for a modern world with modern problems. In addition, he rejected the garden as a purely aesthetic construct and professed that landscapes should be usable as recreation and living spaces for all. Fortunately for Eckbo, the GSD experienced a period of restructuring under the guidance of architect Walter Gropius, founder of the Bauhaus school and prominent figure in the development of modern architecture under the Modern movement. Eckbo's work at Harvard was characterized by a collaborative and multi-disciplinary approach that become a hallmark of his design theories.[64]

Upon graduating in 1938, Eckbo moved back to California to begin working for the federal New Deal's Farm Security Administration, where he designed resettlement communities meant to accommodate migrant workers throughout the American Southwest. During World War II, Eckbo's focus shifted to the planned housing of defense workers in California. In 1946, Eckbo moved to Los Angeles to start a southern branch of his firm Eckbo, Royston and Williams. He initially rented office space from Robert E. Alexander in Baldwin Hills and established a long-term working relationship and friendship with the architect and planner.

In Southern California's postwar residential boom, Eckbo experimented with small-scale residential gardens using modern wartime materials. Like other modern landscape architects of the period, Eckbo saw the landscape as an extended living space integrally tied to residential interiors. He frequently incorporated patios, pools, and other structures into his designs, ultimately

[62] The following section is summarized from Ostashay & Associates, "Orange Coast College Historic Resources Technical Report." Any additional sources will be cited accordingly.
[63] "Pioneer: Garrett Eckbo," The Cultural Landscape Foundation, accessed March 3, 2015, http://tclf.org/pioneer/garrett-eckbo.
[64] Ibid.

designing outdoor rooms within the landscape. The most famous of these residential experiments was the Forecast Garden (1956) at his own residence, which was partially commissioned by the Aluminum Company of America (ALCOA) to demonstrate peacetime applications of aluminum in residential design (Figure 1A-17 and Figure 1A-18).[65]

Figure 1A-17: ALCOA Forecast Garden, ca. 1959. Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles. ID no.: gri_2004_r_10_b261_f11_012.

Figure 1A-18: ALCOA Forecast Garden, ca. 1959. Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles. ID no.: gri_2004_r_10_b261_f12_021.

In addition to the countless small garden schemes he designed for residential projects by noted modernist architects, Eckbo also worked on landscape schemes for a few influential modern suburban residential developments in Los Angeles: Mar Vista Housing Tract with architect Gregory Ain and Crestwood Hills with architect A. Quincy Jones. In addition, Eckbo became increasingly involved in the design of commercial and institutional landscapes. He crafted public spaces that integrated buildings and people, as demonstrated in his pedestrian walk at the outdoor pedestrian Fulton Shopping Mall in Fresno, California (1966). Later Los Angeles area projects featuring Eckbo designs include the campus landscape for Ambassador College (1965) and Union Bank Plaza (1968).[66]

Eckbo left Eckbo, Royston, and Williams in 1958. In 1963, Eckbo returned to Northern California to serve as head of the Landscape Architecture Department at University of California, Berkeley from 1963 to 1969. In 1964, Eckbo would cofound the landscape architecture firm of Eckbo, Dean, Austin, and Williams (EDAW).[67] Eckbo became disenchanted with the automobile-oriented suburban environments that he had helped design, and he moved towards crafting landscapes that were less manufactured and more public and accessible to pedestrians. He shifted from the regimented and industrial esthetics of his postwar designs and began to incorporate increasingly naturalistic landscape elements. His hardscape integrated boulders, plantings become less geometric, and the landscape scheme would be opened up for less structured interaction.[68]

[65] "Pioneer: Garrett Eckbo."
[66] Ibid.
[67] Ibid.
[68] Ibid.

Eckbo died in Berkeley in 2000 after gaining a legacy of thousands of gardens, hundreds of public spaces, internationally recognized firms, and several publications that continue to influence the contemporary practice of landscape architecture.

Peterpaul Ott, Sculptor (1898-1992)

Peterpaul Ott was born in 1898 in Pilsen, then a city in the Austria-Hungary, but now part of the present-day Czech Republic. While growing up, Ott became increasingly interested in art, leading him to enroll in the Royal College of Fine and Applied Arts in 1912 in Dresden, Germany.[69] His studies were interrupted by the outbreak of World War I, but he would continue his education at the Austrian State Academy of Fine Arts following his service during the war.[70]

With the postwar economic crises in Germany, Ott immigrated to New York in 1924 where he found work carving furniture while attending art school at Cooper Union. There, he studied under the famous avant-garde sculptor, Alexander Archipenko, who was a significant influence in Ott's stylistic development.[71] In 1931, Ott moved to Chicago for a teaching position at Northwestern University. From 1936 to 1939, he served as the Works Progress Administration's (WPA) Supervisor of Sculpture in Chicago. During this time, he completed dozens of pieces incorporated into the interiors and exteriors of many of the Chicago WPA projects. Many of these works featured stylized and abstracted Hellenistic, Egyptian, and Babylonian forms, which were to remain a constant throughout his career.[72]

In 1941, Ott moved to Laguna Beach, California. He continued teaching in various Orange County high schools, working on his art, and establishing the arts community in Laguna Beach as one of the first formally trained artists to settle there. His involvement helped to establish Laguna Beach as a hotbed of arts and culture in Orange County. Although he officially retired in 1967, Ott continued to sculpt, teach, and contribute to the arts community of Orange County until his death in 1992 at the age of 97.[73]

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[69] Laura Saari, "Creativity: a Life Force as the Body Ages," *The Orange County Register*, September 5, 1991, accessed March 20, 2015, http://search.proquest.com.ezproxy.lapl.org/docview/272474586/9A47EE067D1E469CPQ/4?accountid=6749.
[70] "Sculptures: Child With Lamb, Peterpaul Ott," Illinois State Museum Collections Online-The WPA Collection, accessed March 20, 2015, http://www.museum.state.il.us/ismdepts/art/WPA/gallery.html?RollID=roll02&FrameID=Ott_ChildLamb.
[71] "Peterpaul Ott," wpamurals.com, accessed March 20, 2015, http://www.wpamurals.com/ppott.htm.
[72] Ibid.
[73] Saari, "Creativity."

1B. CHRONOLOGY OF DEVELOPMENT AND USE

Santa Ana Army Air Base

Although the United States had yet to enter World War II in 1940, the German blitz in that spring spurred the U.S. military to expand its air capabilities rapidly.[1] Pilot training was needed, and in February 1942, the Santa Ana Air Corps Replacement Training Center opened in Costa Mesa, California. One of three replacement training centers in the country, the Santa Ana installation became the largest to offer pre-flight training during World War II, as well as the only one to offer training for pilots, bombardiers, and navigators.[2]

The center was renamed the Santa Ana Army Air Base (SAAAB) not long after. The base eventually reached the size of 1,283 acres and included land bounded roughly by Harbor Boulevard to the west, the diagonal Newport Boulevard to the east, Wilson Street to the south, and Baker Street to the north (Figure 1B-1).

Figure 1B-1: Aerial photograph of SAAAB, ca.1943. North is up. Harbor Blvd. is at the left edge and Newport Blvd. is the diagonal street at the bottom right. Area originally set aside for Orange Coast College in orange. Source: Edrick J. Miller, *The History of the Santa Ana Army Air Base*.

The SAAAB constructed hundreds of buildings for its training use, including barracks and mess halls, a hospital area, post exchange buildings, theater, recreation buildings, and school buildings.[3] The site was laid out in a rectilinear grid, with four blocks of barracks sharing a central mess hall. The construction company used prefabricated materials and assembly-line methods to

[1] Edrick J. Miller, *The SAAAB Story: The History of the Santa Ana Army Air Base,* (Santa Ana, CA: Costa Mesa Historical society and the SAAAB Wing, 1981), 13.
[2] Ibid., 16.
[3] Ibid., 21.

construct the needed number of buildings quickly; seven two-story barracks and six one-story buildings were erected each day at the height of base construction.[4]

After the war ended in 1945, SAAAB first housed German prisoners of war but ultimately became surplus war property. By March 31, 1946 the base had become inactive. The War Assets Administration took control of SAAAB in June 1947 and began advertising the site for sale.[5] The multi-acre site was eventually parceled for various uses, including the Orange County Fairgrounds, Costa Mesa High School, Davis Junior High School, TeWinkle Park, Costa Mesa City Hall, and a new campus for Southern California Bible College (known today as Vanguard University).

Orange Coast College

After the Orange Coast Junior College District (OCJCD) was approved by ballot measure in 1947, this new district focused on starting its first junior college, Orange Coast Junior College. After much negotiation, the OCJCD finally acquired approximately 243 acres of SAAAB between Harbor Boulevard to the west and Fairview Avenue to the east in late 1947 and early 1948. Included were 58 existing Army buildings. The federal War Assets Administration gave the land and buildings to the OCJCD with a 100% educational discount, allowing the college to be established with no bond issue or special tax.[6] In 1948 Dr. Basil H. Peterson, then president of Glendale City College as well as president of the California Junior College Association, became the new OCJCD's first superintendent; he led Orange Coast College until 1964.[7]

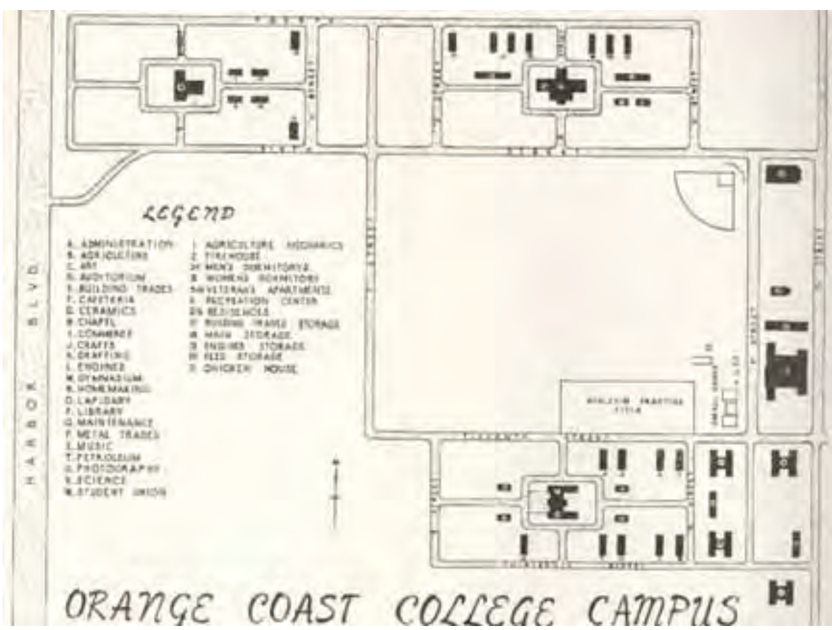

Figure 1B-2: Orange Coast College campus map in 1949 with site plan and buildings inherited from the former SAAAB site. Source: OCC Archives.

[4] Miller, *The SAAAB Story*, 25.
[5] Ostashay & Associates, *Historic Resources Technical Report*, 14.
[6] Board of Trustee meeting minutes, Orange Coast Junior College District, December 13, 1948, available at Coast Community College District Office.
[7] Unknown - *From Tumbleweed to Roses: A History of Orange Coast College*, (Newport Beach, CA: Orange Coast College Faculty and Associated Student Body, 1964), 47 and 52. Based of digital version, author is unclear.

The OCJCD planned to start classes in September 1948 within the existing Army buildings (Figure 1B-2). Most were wood-framed two-story barracks, of which a few were used to house students and veteran students' families, while others were adapted for classrooms, shops, gymnasium, cafeteria, library and auditorium.[8] However, the Army buildings did not meet the State Division of Architects' fire standard, and the college district agreed to a temporary two-year use while upgrading buildings or replacing them with permanent buildings.

Dr. Peterson met Robert E. Alexander at the State Superintendent's Conference in Long Beach, where the architect had an exhibit. According to Assistant Superintendent William Kime, "The man who seemed to have the most progressive ideas [at the exhibits] was Mr. Alexander. In addition to being alert to the problems of junior college education, he seemed willing to tackle the problem of evolving a master plan around, among and between army buildings, which would remain in use."[9] Peterson subsequently hired Alexander to advise the OCJCD on campus development. Alexander recalled, "The understanding was simply a gentleman's agreement that I would be paid on a time basis for the master planning. There was no formal agreement that I would get to design all the buildings in the master plan, but that I should be assured of their good will, and that as long as I provided satisfactory services, I would do their work."[10]

In late 1948, the OCJCD board engaged Alexander and his team to appraise and advise about the campus's existing buildings, analyze the OCJCD's population now and in the future, and propose a development plan.[11] Alexander's team included:

- Richard H. Pleger, Associate Architect
- Parker-Zahnder Associates, Civil Engineer
- Forest K. Sampson, Electrical Engineer
- Irving E. Hattis, Mechanical Engineer
- Eckbo, Royston & Williams, Landscape Architects

Pleger, Parker-Zahnder Associates, and Garrett Eckbo, the Southern California-based partner of Eckbo, Royston & Williams, would stay with Alexander on OCC projects through the initial years.

Kime described Alexander's approach as:

> Mr. Alexander approached the problem in a unique manner. He prepared a map of the campus showing the location of all the buildings. This was pasted to a piece of plywood. In addition, he prepared small blocks in scale to the map of the several buildings that would be needed for a campus of fifteen hundred students in fifteen years. It is significant that Dr. Peterson was criticized in some quarters for the extravagant estimate.

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[8] Board of Trustee meeting minutes, December 13, 1948.
[9] William F. Kime, "From Barracks to Modern Classrooms," in *Tumbleweeds to Roses: A History of Orange Coast College*, (Newport Beach, CA: Orange Coast College Faculty and Associated Student Body, 1964), 63.
[10] Alexander oral history, Tape number: VII, Side One, October 3, 1986.
[11] Board of Trustee meeting minutes, November 8, 1948.

> The buildings included by Dr. Peterson were based upon the courses to be housed as determined by the results of the community survey conducted by Dr. [James] Thornton [college vice president].
>
> A guiding factor was that of keeping the college "housed" while new buildings were under construction. To effect [sic] this, Mr. Alexander set up a seven year plan and a twenty year plan...A schedule of building based upon growth of the college and accumulation of funds was also worked out.[12]

A Faculty Building Committee and a Citizen's Building Committee formed to guide Alexander's efforts. Alexander presented the master plan to the Board of Trustees and the various committees in February 1949 as "Report on a Development Plan and A Construction Program for Orange Coast College," [13] (Figure 1B-3).

Figure 1B-3: Cover for OCC's original master plan, revised in 1951. Source: Robert Evans Alexander papers, #3087. Division of Rare and Manuscript Collections, Cornell University Library.

To develop the master plan, Alexander took a systematic approach for each of the components. He evaluated the existing buildings and developed cost estimates for remodeling versus constructing new buildings. He found that only two buildings--the Administration Building and Gymnasium—were more cost-effective to remodel rather than build from scratch.

[12] Kime, "From Barracks to Modern Classrooms," 63.
[13] Robert E. Alexander, Architect, "Report on a Development Plan and a Construction Program for Orange Coast College, Costa Mesa, California," January 8, 1951, 4. In Robert Evans Alexander papers, #3087, Division of Rare and Manuscript Collection, Cornell University Library. The school would continue the practice of the Faculty Building Committee reviewing and providing input on the initial building plans before the Board of Trustees approved them.

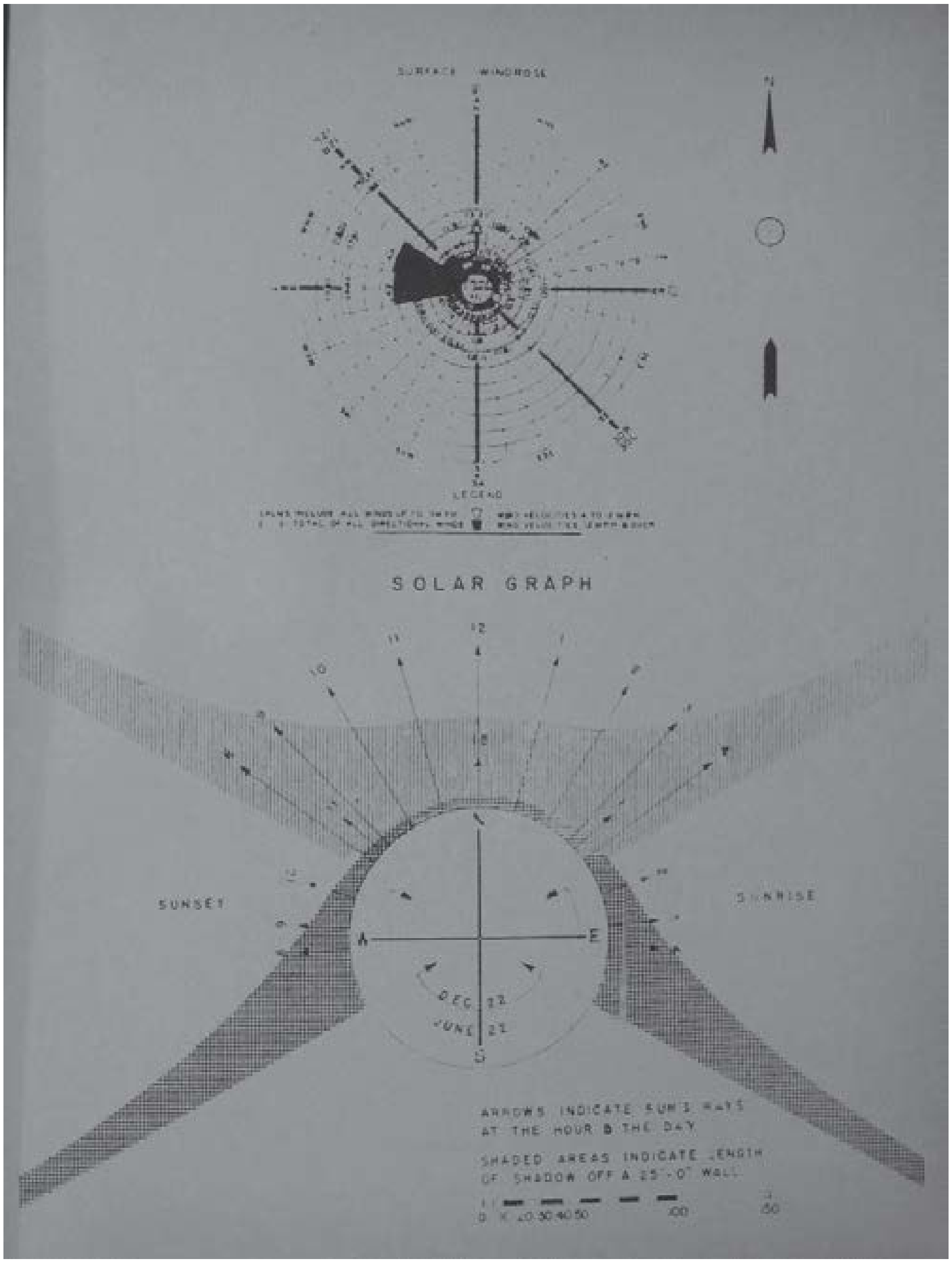

Figure 1B-4: Wind rose and solar graph from “Report on a Development Plan and a Construction Program for Orange Coast College.” Source: Robert Evans Alexander papers, #3087. Division of Rare and Manuscript Collections, Cornell University Library.

For determining how much space the college would need, Alexander took into consideration its mission to provide occupational training, courses for university transfers, continuing education training, and “civic competency” and “personal efficiency.”[14] He also took into consideration the school’s curriculum and its seven divisions: languages and literature; social sciences; natural sciences and mathematics; technology; health and physical education; business education; and fine and applied arts. He analyzed the OCJCD’s enrollment forecast derived from the graduation

[14] Alexander, “Report on a Development Plan,” 6.

rates of local high schools: the administration calculated that the initial enrollment of 500 full-time students would expand to 1,500 within 15 years. In addition, Alexander gathered information on space requirements from the faculty.[15]

Finally, Alexander studied the site and its existing conditions for guidance on how to plan a new campus from the ground up. Given the surrounding transportation and access routes, he concluded that while Adams Boulevard would continue to serve students from the west, Fairview Road would become the major corridor for students coming from the OCJCD's main population centers to the south and east.[16] He looked at the soil and topography, identifying drainage as a potential issue for the flat site. He examined the site's sun and wind exposure and Army records indicating that strong winds primarily came from the west (Figure 1B-4).

Orange Coast College's 1949 Master Plan

With all this in mind, Alexander created a seven-year and twenty-year development plan for the college (Figure 1B-5). The immediate construction program assumed a student enrollment of 1,500 by 1964 and an ultimate enrollment of 2,400 by 1970.[17]

Based on his comparison of remodeling and new construction costs, Alexander recommended that the Administration Building and Gymnasium were the only buildings that were cost effective to remodel. The Chapel, which had been purchased outright from SAAAB, would also be retained and remodeled. According to Alexander's development plan, the central campus would be located in the southeast, closest to the OCJCD's population centers toward Costa Mesa and Newport Beach. The Administration Building, Gymnasium, and Chapel were also in this quadrant, along with two buildings that had already been remodeled.[18] The athletic fields and stadium would be placed in the northeast quadrant. The west part of campus with the best soil would be devoted to the agriculture program, with agricultural barns located at the north where the Army barracks in that area would be used for animal husbandry programs.

The seven-year plan recommended:

- Remodeling Administration, Gymnasium and Chapel buildings
- Construction of New Buildings in the following order:
    - Technology Building
    - Library Building
    - Agriculture Barns
    - Fine Arts Center
    - Agriculture Building
    - Student Center
    - Business Education
    - Speech Arts Building
    - Swimming Pool
    - Stadium
- Campus-wide utilities to be installed during the course of the seven years[19]

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[15] Alexander, "Report on a Development Plan," 11.
[16] Ibid., 29.
[17] Ibid., 9.
[18] Ibid., 35-36.
[19] Ibid., 38-39.

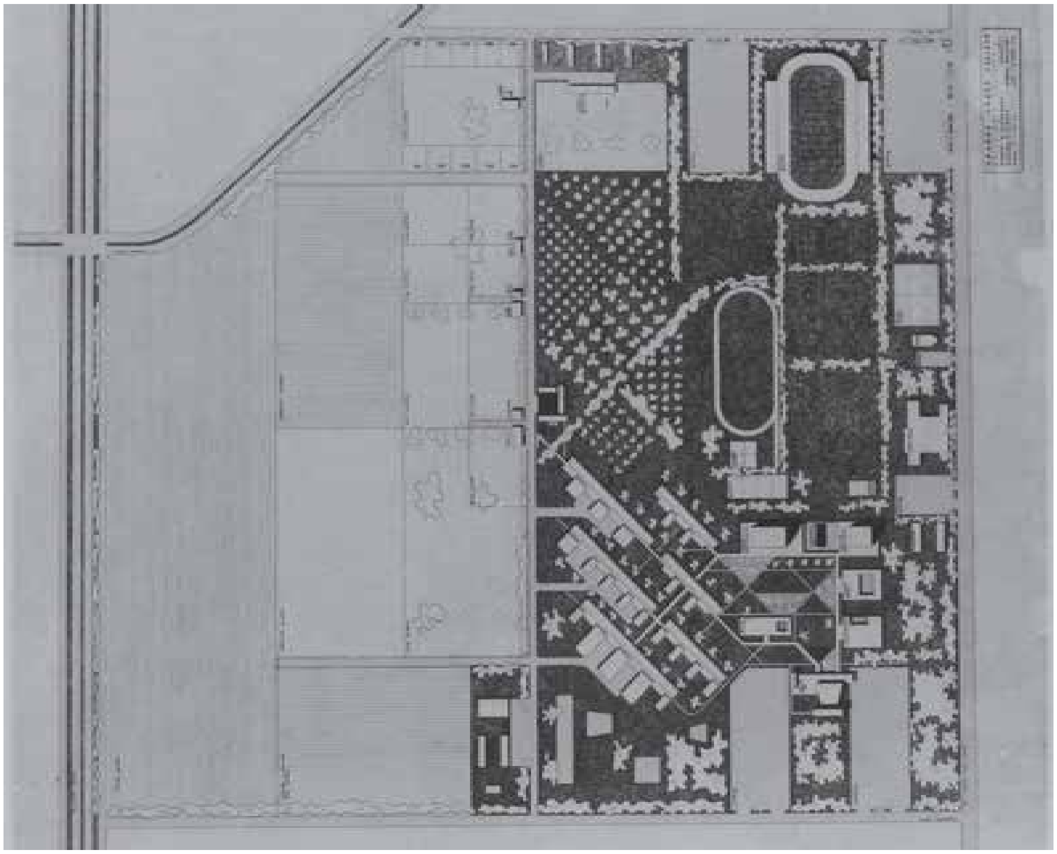


Figure 1B-5: Site plan proposed in the original master plan. While some changes were made, such as the location of the stadium and final building designs, OCC's initial development generally followed the plan. Source: Robert Evans Alexander papers, #3087. Division of Rare and Manuscript Collections, Cornell University Library.

Central Campus Organization

Following his analysis, Alexander concluded that each department needed general, multi-purpose classroom spaces as well as specialized spaces that could not be shared with other departments. However, things such as lockers, restrooms, offices, and conference spaces were common amenities that could be grouped or shared among departments.

Alexander proposed a modular linear building for classrooms 32 feet wide with movable partitions that could divide the space into offices (16 feet), storage and service facilities (24 or 32 feet) and classroom, laboratory, or drafting rooms at 40 feet sections.[20] Specialized spaces such as shops and studios were conceived as wings built at right angles to the classroom strips and separated by connecting corridors that would be covered walkways for circulation. The shops and studio wings would be top-lighted with skylights facing north or northeast and separated by courts 64-feet wide. Central lockers, restrooms, and offices were proposed. The classroom strips could be expanded in length as needed, and the specialized space wings could be extended in depth.[21]

[20] Alexander, "Report on a Development Plan," 22.
[21] Ibid., 22.

Alexander proposed placing the classroom buildings facing northeast in order to capture natural daylight from two directions and to provide shelter from the prevailing west winds.[22] With four-foot roof overhangs, the classrooms would not receive direct sunlight during normal school hours, nor would they receive direct west sun. The buildings that were not dependent on daylighting for instruction, such as the Student Center and the Speech Arts auditorium, would be placed in the north-south orientation.[23]

For the rest of the central campus, Alexander proposed:

- The Speech Arts Building containing the auditorium and the Administration Building should be related to the public and to large parking lots.
- The Administration Building with its student counseling services, should be related to the Student Center, which in turn should be related to the Gymnasium and Swimming Pool.
- All these facilities should be separated from the classroom areas.
- The Library should be related to the classroom areas and in direct line between the classroom areas and the Student Center.
- The Gymnasium should be between the classrooms and the Student Center, and should include a Swimming Pool with gym facilities for men and women.
- A series of covered walks was planned to connect all buildings in case of bad weather.
- Future dormitories should be close to the Student Center and between the Central Campus and the highway while future Maintenance Buildings should be near the Technology Shop areas.[24]

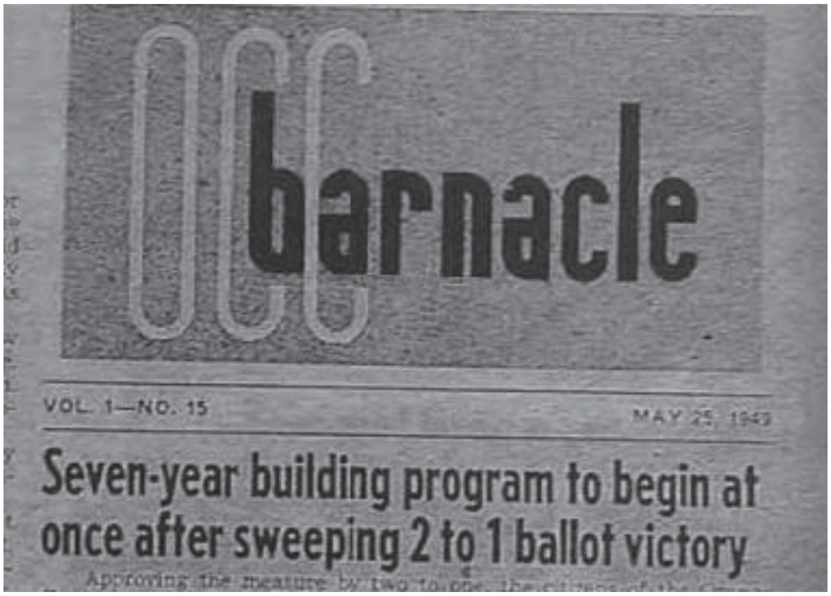
The diagonal orientation of the classroom area of the campus contrasted with the orthogonal orientation of the non-classroom buildings creating "an interesting and convenient pedestrian circulation pattern."[25]

Constructing the Seven-Year Plan

The Orange Coast Junior College District decided to fund the building program with a 29-cent tax override for seven years. Voter approved the $2.5 million, seven-year building program in the May 1949 election (Figure 1B-6). According to Alexander,

> [Basil Peterson] was a careful Mormon who abhorred being in debt and refused to go along with any thought of a bond issue (which was going into debt) and insisted on a tax-rate increase of ten cents a hundred or something like that, so that he could build one building a year… So every year for ten years I had a budget for a certain building and I was to spend as much of that budget as I could in building what I was building, but I was not to spend any more. This was quite a trick, especially when the Korean War came along and all of a sudden we had inflation. But over a period of years, we performed very well as far as our estimates versus the final costs were concerned.[26]

[22] Alexander, "Report on a Development Plan," 31.
[23] Ibid., 34.
[24] Ibid., 38.
[25] Ibid., 34.
[26] Alexander oral history, Tape number: VII, Side One, October 3, 1986.


OCC barnacle

VOL. 1—NO. 15 MAY 25, 1949

Seven-year building program to begin at once after sweeping 2 to 1 ballot victory

Figure 1B-6: May 25, 1949 article in OCC's school newspaper about the passage of tax measure to fund OCC's initial campus development. Source: OCC Archives.

With funding in place, the college immediately set to work constructing Alexander's master plan. Rather than seek other architects to design the individual buildings, the OCJCD continued appointing Alexander as the architect for new buildings. Local Orange County-based architect Richard Pleger was the associate architect with Alexander. The first building completed was the Technology Building (1950) with its saw-tooth skylight ceiling and three shop wings. The second was the Library (1951, Bldg. 7 and part of Bldg. 8) and its distinctive clock tower, though the start of the Korean War and the resultant price increase and material shortage reduced the size and initial plans for the building and associated classrooms (Figure 1B-7).[27] Also planned and completed in 1950 and 1951 was the remodeling of the Gymnasium and Administration Building, construction of new agricultural barns, and installing campus-wide electricity and gas service as well as other ground improvements.[28] Eckbo, Royston and Williams prepared a campus landscape plan, including a Master Tree Plan in 1950.[29]

[27] "College Buildings: Space Analysis," *Progressive Architecture,* v.33 (February 1952): 69.
[28] Board of Trustees meeting minutes, November 14, 1949.
[29] Board of Trustees meeting minutes, January 9, 1950, August 28, 1950, and September 11, 1950.

Figure 1B-7: Rendering of new library building (Bldg. 7) from January 9, 1951 *OCC Barnacle*. Source: OCC Archives.

The Arts and Crafts Building came next, also designed by Alexander and completed in 1952, as was the Feed Storage Unit in the agricultural area. At this point, Alexander's master plan and first three buildings (Technology Building, Library, and Feed Storage Unit) had been published in *Progressive Architecture's* 1952 issue on colleges (See Appendix). Alexander had also begun his collaboration with Richard Neutra by this time, and subsequent buildings were constructed with Neutra taking on the building design and Alexander continuing his planning and project management roles.[30] Except for at the original Library, Garret Eckbo provided the landscape design for the individual buildings in the seven-year plan.

The Student Center (Bldg. 86) and the Business Education Buildings (Bldgs. 12, 13, and 14) were completed in 1953. Business Education was the first in which Neutra and Alexander are credited as the architects (Figure 1B-8). Next came the Swimming Pool, completed in 1954 (Bldg. 93), which was relocated from adjacent to the Student Center (as specified in the master plan) to be near the newly remodeled Gymnasium, in order to share the locker facilities.[31] Similarly, the Stadium and Field House, completed in 1955 (Bldgs. 105 and 110), were moved closer to the center of campus and integrated next to the track rather than placed at the campus' far northeast

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[30] It appears some initial construction and operation problems prompted the Board of Trustees to consider other architects for campus buildings. Alexander presented to the Board in March 1952 after the *Progressive Architecture* article and stated that Neutra would be interested in being considered for OCC building projects. The Board continued to hire Neutra and Alexander for the remaining buildings of the seven year plan with the desire that Neutra play a leading part in the development of plans. See Board of Trustee meeting minutes April 1951 and May 1952.
[31] Robert E. Alexander, "Memo RE: Planning a Campus," *College & University Business,* January 1959.

corner. Though initially planned for later in the building program, the Swimming Pool and Stadium were moved up in the construction schedule.

Figure 1B-8: Coverage for the opening of the Business Education complex in the *Long Beach Press Telegram* on January 13, 1954. Source: OCC Archives.

Also completed in 1955 was the Speech Arts Building (Bldg. 2) with its multipurpose and flexible auditorium that could open at its backstage to a planned outdoor amphitheater. A Music Building (Bldg. 4) was also part of the Speech Arts Building. A classroom addition (Bldg. 8 and 9) was added to the Library in 1955 as well.

In the end, the OCJCD decided that a new Science Building would be constructed rather than a new Agriculture Building; the old Science Building was relocated and remodeled for agricultural use.[32] The Science Building (Bldg. 35, 36, and 37) with its Planetarium (Bldg. 39) was completed in 1956 and 1957, completing the seven-year building plan (Figure 1B-9). The Planetarium was the first college planetarium in Southern California, and OCC received inquiries from several colleges from around the state, including Diablo Valley College, Yuba College, and Santa Rosa Junior College, asking about building a planetarium for their campuses (Figure 1B-10).[33]

[32] Board of Trustee meeting minutes, January 9, 1956.
[33] "OCC planetarium First of Its Kind," *Los Angeles Times*, October 14, 1956 and letters in OCC Archives for the Planetarium.

Figure 1B-9: Aerial of OCC in 1956 with the Science complex (Bldg. 35-39) under construction at left. Source: Floyd T. Waterman in OCC Archives.

As part of the Science Building, Neutra and Alexander approached artist Peterpaul Ott for an art object.[34] Members of the science department made suggestions for the art piece. The armillary sphere sculpture, placed at the east end of the Science Building is set on a concrete base depicting various scientific instruments from ancient times to the present.

Also in 1956, a Faculty Clubhouse (Bldg. 11) was constructed. Designed by Rodney Lauter, a former student at Orange Coast College, the Faculty House was drawn up by the drafting class, and constructed by the building trades class.[35]

By 1957, the seven-year building program came to an end. While additional buildings were needed for an enrollment that had already reached the anticipated 1,500 students, the immediacy of construction lessened. The seven-year tax increase ended, but the passage of the Murdy Bill gave the OCJCD authorization to use funds from out-of-district students toward capital improvements.[36] Neutra, Alexander, and Eckbo ended their role as designers of new buildings at Orange Coast College.

[34] Board of Trustee meeting minutes, June 11, 1956.
[35] "Owens Class Builds Faculty Clubhouse," *OCC Barnacle*, April 13, 1956.
[36] Kimes, "From Barracks to Modern Classrooms", 66.

OCC PLANETARIUM FIRST OF ITS KIND
Los Angeles Times (1923-Current File); Oct 14, 1956;
ProQuest Historical Newspapers: Los Angeles Times
pg. K1

IMPORTANT GAIN—Orange Coast College's new dome-shaped auditorium, which will house the first college planetarium in the Southland, has created interest among art students. Instructor William O. Payne oversees the work of Darlene Longwell, center, and Carol Woodall. Planetarium is part of new center.

PROJECTOR AT WORK—Science Instructor James Pitton shows how the planetarium's $5000 projector will display the moon and many other planets on the dome ceiling. In addition to being used for classes, the planetarium will be utilized for community shows and special programs for high school students.

DECORATION—Sculptor Peter Paul Ott exhibits a model of a 15-foot armillary he will construct for the front of the main science building adjoining planetarium. The science center will be ready next spring.

OCC PLANETARIUM FIRST OF ITS KIND

COSTA MESA — The first college planetarium in Southern California has been constructed at Orange Coast College.

It is part of a new [illegible] science center which will be ready for classes during the spring semester, according to Dr. Basil Peterson, college president.

Instructor James Pitton explained that although a planetarium is important as a teaching device, few colleges have been able to afford the [illegible]

[illegible]

Lectures Planned

[illegible]

STAR GAZING—According to OCC football player Joe Coito there is nothing more interesting than the planetarium, especially when you study the phenomena of the heavens with a coed such as Nancy Cristy.

Figure 1B-10: Coverage of OCC's planetarium in the *Los Angeles Times*, October 14, 1956.

Recognition for OCC Initial Buildings

The buildings designed by Neutra and Alexander received widespread attention when they were constructed. *Progressive Architecture* devoted part of their February 1952 issue to college buildings, specifically junior college buildings, with Alexander's OCC master plan and initial buildings as one of two case studies (See Appendix). The section's foreword stated:

> The junior college is in one sense a "decapitation" of the full 4-year college, and in another, an upward growth from high school…Its functions therefore can be several—continuing cultural education not carried to the full collegiate level, pre-professional or even pre-academic training, or continual schools of perhaps a very specialized nature.
>
> If the college and university building has been neglected in the United States until very recently, the junior college—a phenomenon entirely of the 20th century—has suffered even more. In most cases, it has inherited structures either from a high school plant, or from a senior college. In their book, "Planning Secondary School Buildings" (Reinhold-1949), Engelhardt, Engelhardt, and Leggett state, "…it is quite the exception to find a junior college plant which was conceived, planned, and erected after a thorough-going survey which identified the particular purposes to be served in the local situation."
>
> The two Junior Colleges shown on the following pages, then, are exceptions to the rule. For one of them—the Little Rock Junior College (page 63-67)—was wholly planned from scratch. And, in the case of Orange Coast College (pages 68-79), while a few existing buildings were salvaged, the campus plan that was developed is essentially a brand new one. Determination of building needs, number of classrooms needed, of what type and size, etc. derived from findings drawn up in an extraordinary thorough-going, 106 page-survey—"Report on a Development Plan and a Construction Program"—prepared for the college board by Robert E. Alexander, the architect and his associates.[37]

Progressive Architecture again published a spread of the Neutra and Alexander buildings in 1955 with a special feature on the Speech Arts (theater) complex. The buildings were published in international journals such as *Bauen und Wohnen* and *Architektur und Wohnform, Innen-dekoration* in Germany and in *Kokusai-Kentiku* in Japan after their completion.

OCC was also featured in education journals as a case study for planning a new junior college. These publications included *College & University Business, American School and University,* and the proceedings from a summer institute focused on junior college planning, *New Dimensions in Junior College Planning*. Alexander and OCC's assistant superintendent William Kimes were invited to the 1958 summer institute at Stanford University's School Planning Laboratory along with others who had recent experience in planning for junior colleges.

[37] "College Buildings: Space Analysis," *Progressive Architecture,* February 1952, 61.

The buildings at OCC also received awards recognition, including

- 1951, Southern California Chapter AIA
  - Honorable Mention for the Technology Building
  - Special Citation for the Cattle Feeding Shed and Corrals
- 1954, National AIA Awards Program
  - Merit Award for Business Education Building
- 1954 Southern California Chapter AIA Honor Awards Program
  - Citations for Art Center and Student Center
- 1955 School Executive Competition
  - Honorable Mention for Business Education Building

Subsequent Development

Starting in 1957, Richard Pleger, who was associate architect and the local Orange County architect during the seven-year, Neutra and Alexander period, received subsequent commissions at OCC. His first was the Home Economics Building (now Bldgs. 71 and 72; Writer's Row and Journalism respectively), completed 1958. His firm, Pleger, Blurock, Hougan, and Ellerbroek, were responsible for several buildings through 1964:[38]

- Home Economics, 1958 (Writer's Row (Bldg. 71) and Journalism (Bldg. 72))
- Forum Lecture Hall, 1960 (Bldg. 81)
- Gymnasium, 1961 (Bldg. 91)
- Women's and Men's Locker Rooms, 1962 (Bldgs. 92 and 96)
- Data Processing Center, 1963 (Bldg. 73)
- Science Hall, 1964 (Bldg. 40)

Other projects include expanding the Technology Building, Student Center (Bldg. 86), as well as the Science Building (Bldg. 36) and Library (Bldg. 7) (Figure 1B-11 and Figure 1B-12).

Figure 1B-11: OCC course catalogue map (and legend with original building numbers), 1957-58. Source: OCC Archives.

Figure 1B-12: Course catalogue map of OCC, 1965-66. Source: OCC Archives.

[38] The firm was initially Pleger, Blurock and Hougan, became Pleger, Blurock, Hougan, and Ellerbroek around 1959, which became Blurock, Ellerbroek and Associates around 1962.

The Home Economics Building (Bldg. 71 and 72) partially continued the 45-degree angled classroom building layout set by Alexander, but one of its wings returns to an east-west orientation along a service road. The Forum (Bldg. 81) and Data Processing Center (Bldg. 73) followed as individual buildings, signaling a departure from the earlier planning principle of classroom building complexes connected by walkways.

In 1958, Richard Pleger and Dr. Peterson presented a revised master plan showing the location of a new Administration Building, additional classroom buildings, and a new Gymnasium.[39] However, Pleger, Blurock, Hougan, and Ellerbroek also designed sensitive additions to existing buildings, including to the Library (Bldg. 7) and the Science Building (Bldg. 36) that matched the existing architectural style. Between 1965 and 1967, Robert E. Alexander returned to the campus to design the Bookstore (Bldg. 83) and Liberal Arts classroom building (Bldg. 80 and 150) as well as an addition to the Music Building (Bldg. 4).

Figure 1B-13: Aerial view of OCC looking northwest with 1970s additions around the theater and between classroom complexes. Source: OCC Archive.

The next wave of development came in the 1970s with a number of new buildings and additions to existing buildings. William Blurock was then in partnership with Pleger and continued his association with OCC by designing subsequent buildings under William Blurock and Partners (Figure 1B-13). Between 1969 and 1979, the following buildings and additions were designed by William Blurock and Partners:

- New Library (Bldg. 87, Watson Hall), 1969
- Science Lecture Building (Bldg. 41), 1971

[39] Board of Trustee meeting minutes, February 24, 1958.

- Center for Applied Sciences (Bldg. 42, Lewis Center), 1971
- Environmental Horticulture complex, 1973
- New Administration (Bldg. 1), 1975
- New Music Building (Bldg. 3), 1975
- Fine Arts Lecture Hall (Bldg. 5), 1975
- Tutorial Center (Bldg. 10, Special Services), 1975
- Skills Center (Bldg. 47 and 48), 1975
- Literature and Language Building (Bldg. 70), 1976
- Chemistry Building (Bldg. 69), 1979

Significant additions also by William Blurock and Partners during this period include:

- Data Processing Center addition (Bldg. 73), 1970
- Drama Workshop wing to auditorium (Bldg. 2), 1975
- Expansion of Business Education's Bldg. 14, ca.1977

It appears few new buildings were constructed in the 1980s, though existing buildings received some upgrades, including air conditioning added to some Neutra and Alexander classroom buildings by placing the mechanical equipment on the covered walkway roofs. Additional renovations occurred in the 1990s, including to the renamed Robert B. Moore Theater (original Speech Arts Building auditorium, Bldg. 2) and to the Student Center (Bldg. 86) (Figure 1B-14 and Figure 1B-15) . In 1995, the Technology Building, the campus's first permanent building, was demolished. It was followed by the demolition of the Fine Arts Center around 2002 for the construction of a new Art Center complex by architect Steven Erlich Architects. Also in 2002, Measure C, a $372 million general obligation bond to fund facility improvements, passed in the OCJCD. Several new construction and renovation projects occurred in the subsequent years, including the new Library (Bldg. 182) constructed in 2008 on the cleared site of the demolished Technology Building.

Figure 1B-14: Neutra and Alexander Student Center. Date unknown. Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles. ID no.: gri_2004_r_10_b0079_f014_1590_01.

Figure 1B-15: Current Student Center (Bldg. 86) after 1990s alteration.[40]

[40] All photographs in this section of the Historic Resources Report were taken by Page & Turnbull, 2014-2015, unless sourced otherwise.

OCC Construction Chronology

Note: Colors denote the buildings designed by specific architects.

- Yellow is Robert E. Alexander (1950-52)
- Orange is Neutra and Alexander (1953-1957)
- Pink is Pleger, Blurock, Hougan, and Ellerbroek (1958-1964)
- Blue is William Blurock and Partner (1969-1979)

Year	**Event**
1947:	Orange Coast Junior College District (OCJCD) founded. The OCJCD acquires 243 acres and 58 buildings from the former Santa Ana Army Air Base for its inaugural campus, Orange Coast Junior College.
1947:	Dr. Basil H. Peterson hired as OCJCD Supervisor. Agreement with State Division of Architecture and School House Planning and Fire Marshal for temporary occupancy of army buildings while they are upgraded to State standards or replaced.
1948:	Classes start at Orange Coast Junior College in September 1948 in existing army buildings. Board of Trustees hire Robert E. Alexander to ▫ Appraise existing structures on the Orange Coast College campus ▫ Give professional advice on improvements of said structures and on landscaping ▫ Prepare a statistical analysis of population size of the OCJCD now and in future ▫ Design and draft plot plan of proposed buildings ▫ Publicize artist's sketches of proposed buildings Consultants on Alexander's team include: ▫ Richard H. Pleger as Associate Architect "to obtain information locally at Architect's request and to provide general assistance;" ▫ Parker-Zahnder Associates, Civil Engineers ▫ Forster K. Sampson, Electrical and Illuminating Engineer ▫ Irving E. Hattis, Mechanical Engineer ▫ Eckbo, Royston & Williams, Landscape Architects

1949:	Board of Trustees approve master plan presented by Robert E. Alexander for;
	▫ Remodeling certain buildings
	    ▪ Administration, Gymnasium, Chapel
	▫ Seven-year building program for replacement buildings
	    ▪ Technology Building
	    ▪ Library
	    ▪ Agriculture Barns and Buildings
	    ▪ Fine Arts Center

    - Student Center
    - Business Education Building
    - Speech Arts Building
    - Swimming Pool
    - Stadium
    - Campus-wide utilities and grounds improvement
- Longer term building program to replace all existing buildings

Voters approve ballot measure for a 29-cent tax increase for seven years to build OCC.

1950: Technology Building, first permanent new building, opens. Architect: Robert E. Alexander.

1951: The Library Building (Bldg. 7 and east end of Bldg. 8) completed and dedicated on September 19, 1951. Architect: Robert E. Alexander.

1952: Arts Center Building completed. Architect: Robert E. Alexander.

1953: Student Center (Bldg. 86) completed. Architect: Neutra and Alexander.

Construction completed for Business Education (Bldg. 12, 13, and 14) Architects: Neutra and Alexander

1954: Swimming Pool (Bldg. 93) completed. Architects: Neutra and Alexander

1955: Speech Arts Building (Bldg. 2 and 4) completed. Architects: Neutra and Alexander

Stadium and Field House (Bldg. 105 and 110) completed. Architects: Neutra and Alexander

“Library Addition” classroom buildings (Bldg. 8 and 9) completed. Architect: Neutra and Alexander.

1956-57: Science Building (Bldg. 35, 36, 37, and 39) completed. Architects: Neutra and Alexander. Peterpaul Ott’s armillary sphere sculpture installed at the east end of Building 35.

1957: Faculty House completed. Designed and constructed by OCC faculty and students.

1958: Home Economics Building (Bldg. 71 and 72) completed. Architects: Pleger, Blurock, Hougan, and Ellerbroek.

1960: Forum Lecture Hall (Bldg. 81) completed. Architects: Pleger, Blurock, Hougan, and Ellerbroek.

	Additions to Science Building (Bldg. 36) and Library (Bldg. 7) completed by Pleger, Blurock, Hougan, and Ellerbroek.
1961:	New Gymnasium (Bldg. 91) completed. Architects: Pleger, Blurock, Hougan, and Ellerbroek.
1962:	Women's and Men's Locker Rooms (Bldg. 92 and 96) completed. Architects: Pleger, Blurock, Hougan, and Ellerbroek.
1963:	Data Processing Center (Bldg. 73) completed. Architects: Pleger, Blurock, Hougan, and Ellerbroek.
1964:	Science Hall (Bldg. 40) completed. Architects: Pleger, Blurock, Hougan, and Ellerbroek.
1965:	Bookstore (Bldg. 83), Liberal Arts Building (Bldg. 80 and 150), and addition to Music Building (Bldg. 4) completed. Architect: Robert E. Alexander F.A.I.A. and Associates.
1969:	New Library (Bldg. 87, Watson Hall) constructed. Architect: William Blurock and Partners.
1970:	Science Lecture Building (Bldg. 41), Center for Applied Sciences (Bldg. 42, Lewis Center), and addition to Data Processing Center (Bldg. 73) completed. Architect: William Blurock and Partners. Orange Coast Junior College District changes its name to Coast Community College District (CCCD) in recognition of its second school, Golden West Community College, which was established in 1965.
1972:	Environmental Horticulture complex completed. Architect: William Blurock and Partners.
1975-77:	Several new buildings completed. Architect: William Blurock and Partners ▪ New Administration (Bldg. 1) ▪ New Music Building (Bldg. 3) ▪ Fine Arts Lecture Hall (Bldg. 5) ▪ Tutorial Center (Bldg. 10, Special Services) ▪ Skills Center (Bldgs. 47 and 48) ▪ Literature and Language Building (Bldg. 70) Significant additions during this period include ▪ Drama Workshop wing to auditorium (Bldg. 2) ▪ Expansion of Business Education's Building 14
1979:	Chemistry Building (Bldg. 69) completed. Architect: William Blurock and Partners

1986: HVAC equipment and ducts added to covered walkways at

- Business Education (Bldg. 8 and 9)
- Science Building (Bldg. 35 and 36)

ca. 1992: Student Center (Bldg. 86) significantly expanded and altered.

Robert B. Moore Theater (Bldg. 2) auditorium interior renovated.

1994: Planetarium (Bldg. 39) received L-shaped wing to form interior courtyard. The rectangular wing north of the planetarium/classroom entrance may also have been added at this time. Architect: The Hill Partnership Inc.

1995: Technology Building, first permanent building on campus, demolished

ca. 1999: Seismic upgrades occurred at

- Building 7's north façades on both wings
- Building 12 and 13's north façades

ca.2002: Original Fine Arts Center demolished and new Arts Center Complex completed. Architect: Steven Erlich Architects

Measure C passes, a $372 million general obligation bond to fund facility improvements in the CCCD

2006: Renovations occurred to

- Student Success Center (Bldg. 7)
- Robert B. Moore Theater (Bldg. 2): New Scene Shop wing added.

2008: New Library (Bldg. 182) completed. Architect: tBP/Architecture Inc. (successor firm of the William Blurock Partnership). From Measure C funding.

2011: Renovations occurred to

- Business Education (Bldgs. 8 and 9)
- Math Wings (Bldgs. 35 and 36)
- Reprographics Building (Bldg. 37)

2012: Renovations occurred to Music Building (Bldg. 4)

Below are the chronologies of development for each contributor grouped by the original complex construction. The complexes within the core of the Orange Coast College Historic District are included first and arranged in chronological order of completion. The discontiguous features, the Swimming Pool complex (Bldg. 93) and the Stadium and Field House (Bldgs. 105 & 110) follow, with the landscape features at the end. The clock tower, attached to Building 7, is included with Building 7 while the armillary sphere sculpture is discussed with the Math and Planetarium complex (Bldgs. 35-39).

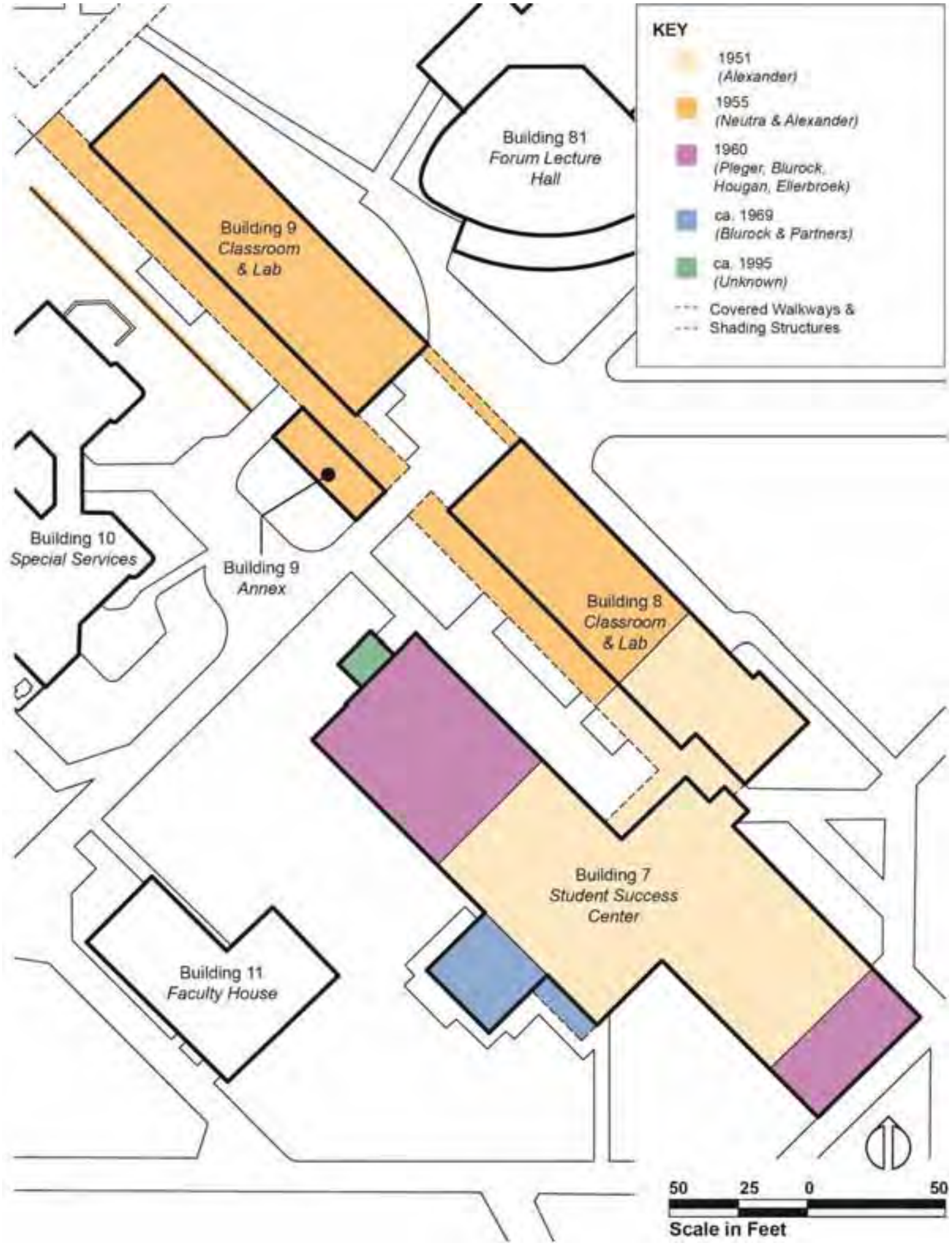

Figure 1B-16: Complex chronology plan of Student Success Center (Bldg. 7) and Classroom and Lab Buildings (Bldgs. 8 & 9).

Buildings 7, 8, 9 | Student Success Center and Classroom & Labs Complex

Built originally as the campus library with a classroom wing, the original parts of Buildings 7 and 8 were the second permanent building to be constructed on the Orange Coast College campus and are the oldest remaining buildings on campus.

Figure 1B-17: Facing west towards Building 7 (left-hand side) and Building 8 (right-hand side). Glazed doors in position at the east entrance to the walkway between the two buildings. Date unknown. Source: Manu. Box 74 folder 621-622, Garrett Eckbo Collection, Environmental Design Archives, University of California, Berkeley.

Designed by Robert E. Alexander and opened in 1951, Building 7 housed the school library with a reference room in the west wing and the reading room and book stacks in the east wing. Both large open areas had bi-lateral daylighting with clerestory windows facing south and a window wall facing north. Since the two wings had a shed roof along the north half and a lower flat roof along the south, the clerestory windows were at the center of the spaces with lower ceiling areas along the south end. A lounge with a fireplace was at the juncture where the two wings intersected.

Building 8 contained an office zone and two classrooms and was connected to Building 7 across a partially enclosed vestibule. The vestibule's east end had glazed doors and sidelites to separate it from Building 8's covered walkway.

Figure 1B-18: Building 7 (right) and Building 8 (left) prior to the first additions and looking east. Glazed doors in position at the east entrance to the vestibule/walkway between the two buildings. Exact date unknown, pre-1955. Source: Box 110, Robert Evans Alexander papers, #3087. Division of Rare and Manuscript Collections, Cornell University Library.

Figure 1B-19: Fireplace originally in Building 7 when it was constructed as the Library. Date unknown. Source: Box 110, Robert Evans Alexander papers, #3087. Division of Rare and Manuscript Collections, Cornell University Library.

In 1955, Building 8 was extended with the addition of two classrooms and service spaces. At the same time, Building 9 was constructed as part of the Library Addition project. Designed by the collaboration of Richard Neutra and Robert E. Alexander, the addition and new building closely emulated the material, style, fenestration pattern, and design of the 1951 portions. The new plans called for the tilt-up concrete wall at the west end of Building 8 to be removed and reused as the end wall of the addition was completed. The Restroom Building (Bldg. 9b), brick screen wall, and landscaped patio were added in 1955 as well, and the south covered walkway was extended.

Figure 1B-20: Facing south towards Building 7 (left-hand side) and Building 8 (right-hand side) prior to the first additions. Date unknown, pre-1955. Source: Box 99, Robert Evans Alexander papers, #3087. Division of Rare and Manuscript Collections, Cornell University Library.

Figure 1B-21: Facing south towards Building 7 (left-hand side) and Buildings 8 & 9 (right-hand side). Date unknown. Source: Box 99, Robert Evans Alexander papers, #3087. Division of Rare and Manuscript Collections, Cornell University Library.

Building 7 received additions in 1959 by Pleger, Blurock, Hougan and Ellerbroek. The west wing (Reference Room) was extended significantly, while a small addition at the east wing (Reading Room) extended the building toward the east. The additions' architectural features match the existing building. The tilt-up concrete end walls were removed and reset as exterior walls of the additions.

In 1969, Buildings 7, 8, and 9 were renamed as Counseling and Admissions. The Reference Room in Building 7's west wing was reused for student registration while the Reading Room and book stack area in the east wing was reconfigured for student counseling with perimeter offices. Air conditioning was also added to Building 7, which resulted in the mechanical room addition on the south façade and likely the large fascia with scuppers across the south façade to conceal new rooftop equipment and ducts. The rooftop equipment added on the lower roof along the south end of both wings also likely led to the removal and concealment of the aluminum louvers and clerestory windows in the original shed roof.

Around 1986, heating, ventilation, and air conditioning (HVAC) equipment and ducts were added on top of the covered walkways of Buildings 8 and 9, along with other buildings on campus. It is likely the clerestory windows along the buildings' south façades were painted over around this time. The standing seam roof on the south side of Building 7 appears to have been added around 1998.

Seismic retrofitting in 1999 added masonry shear walls to the north façades of both wings at Building 7. The brick walls typically replaced two bays of windows at the east and west ends.

In 2000, disabled access stalls were added to the restrooms in Buildings 7 and 8. The window near the south secondary entrance of Building 7 was infilled for a single-stall accessible bathroom. In 2006, Building 7 underwent additional alterations, including adaptively reusing the east wing as three classrooms and inserting new doors on the north elevation.

Building 7, 8, & 9 Construction Chronology

Year

1951: The Library Building (Bldg. 7 and east end of Bldg. 8) was completed and dedicated on September 19, 1951. Architect was Robert E. Alexander.

1955: "Classrooms in the "Library Addition" (Bldgs. 8 and 9) began to be used on September 12. Architects: Richard Neutra and Robert E. Alexander.

1960: The two additions to the Library (Bldg. 7) were completed.
3,085 square foot expansion of the Reference Room (west wing).
1,128 square foot expansion of the Reading Room/book stacks (east wing)
Architects were Pleger, Blurock, Hougan, and Ellerbroek.

ca. 1969: Buildings 7, 8, 9 renamed as Counseling and Admissions. As part of the change in use, air conditioning was added to Building 7, now called Able Counseling Admissions/Records. This includes adding the mechanical room on the south façade and may have included addition of the large fascia with scuppers across the south façade and covering over of south-facing clerestory windows.

1986: HVAC equipment and ducts added to Buildings 8 and 9's covered walkway.

1998: Roof of Building 7 replaced (per staff notes).

ca. 1999: Seismic Retrofit work began in 1999 on the Student Success Center (Bldg. 7). Architect and Engineer involved was The Bentley Company: Internal and external shear walls added.

2000: Restrooms in Buildings 7 and 8 upgraded with disable access stalls. The window near the south secondary entrance was infilled for a single-stall accessible bathroom.

2006: Alterations and tenant improvements to the Student Success Center (Bldg. 7) designed by LPA Inc.

Alterations undertaken at unknown times:

- Building 7
  - Sliding glass door on plan south façade replaced by window.
  - Small stucco addition to the west end (pre-1999).
  - Canted metal shed roof replaced former flat roof along south side.
  - Removal of fireplace after 1970.

- Building 8
  - Addition of doors to north façade after 1997.
  - Change of office configuration for mechanical room in office wing.
  - Change into current classroom configuration.
- Landscaping
  - Benches/features in landscaped patio removed from between Buildings 8 and 9.

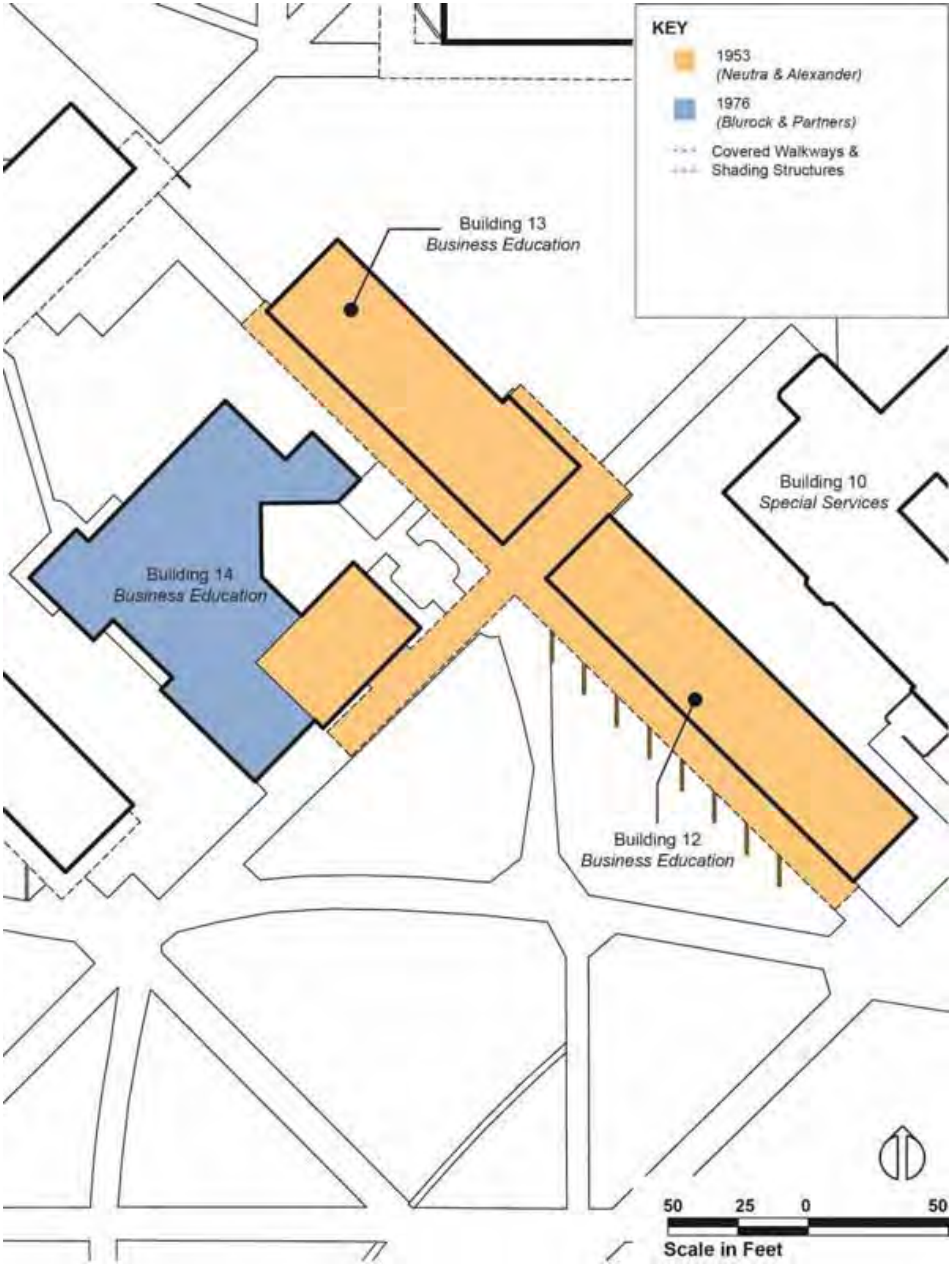

Figure 1B-22: Complex chronology plan of Business Education complex (Bldgs. 12, 13 & 14).

Buildings 12, 13, 14 | Business Education Complex

When completed in 1953, the Business Education complex consisted of Building 12, Building 13 and a smaller Building 14 than what exists today. Designed by Neutra and Alexander, the buildings were designed for teaching various aspects of business support, including typing and stenography, accounting, use of business machines, and merchandising. Building 14 housed merchandising classes and had a display window along its west façade for students to practice window dressing. The north façade at the east end of Building 13 projects slightly; this area housed faculty offices. A landscaped courtyard separated Buildings 13 and 14.

Figure 1B-23: Facing south through the breezeway between Buildings 12 (left) and 13 (right) towards Building 14's projecting display window visible. Date unknown. Source: Box 4, Robert Evans Alexander papers, #3087. Division of Rare and Manuscript Collections, Cornell University Library.

Building 14 was significantly altered and expanded around 1977. The original brick walls at the north, south, and east façades were retained and incorporated into the expanded building. The display window was covered with wood sliding and the interior reconfigured.

Seismic retrofitting completed in 1999 added plywood shear walls with brick cladding at the north façades of Buildings 12 and 13 (Figure 1B-24). Where inserted, the new walls typically replaced four bays of windows. Two small brick shear walls were also added to the south façade, where new tube columns where also added. HVAC equipment and ducts were added on top of the covered walkways of Buildings 12 and 13, possibly around 1986 when similar equipment was added to other buildings on campus.

Figure 1B-24: Breezeway between Buildings 12 (left) and 13 (right) with shear walls added on north façade.

Buildings 12 and 13 underwent refurbishment in 2011 which removed chalk boards, tack boards, and some built-in cabinetry. New whiteboards, carpeting, and lighting were installed. A workroom in Building 13 was expanded, though wood veneer built-in cabinetry and a set of pocket doors remained.


Figure 1B-25: Classroom 106, Building 13.Several original features remain including wood veneer paneling below window and cabinetry at rear office. Date unknown. Source: Box 110, Robert Evans Alexander papers, #3087. Division of Rare and Manuscript Collections, Cornell University Library.


Figure 1B-26: Classroom 106, Building 13. The clerestory windows have been painted or covered, original lighting fixtures replaced and the internal wall partition has been altered.

Buildings 12, 13, & 14 Construction Chronology

<u>Year</u>

1953:	Construction completed for Business Education, a T-shaped complex of three buildings. Buildings 12 and 13 are the main classroom buildings and Building 14 is a small Merchandizing Lab Unit. Architects: Richard Neutra and Robert E. Alexander.
ca. 1977:	Significant additions to Building 14. Three original brick walls remain and were incorporated into the expanded building. Architects: William Blurock & Partners.
1999:	Seismic upgrade with shear walls at the Building 12 and 13's north façades and tube columns at their south façades.
2000:	Restrooms in Building 13 upgraded with disable access stalls.
2011:	Refurbishment of Building 12 and 13 with new carpeting and other finishes.

Alterations undertaken at unknown times:

- Building 13
  - Reconfiguration of faculty office space into open classroom.

- Buildings 12 & 13
  - HVAC added on top of the covered walkways.

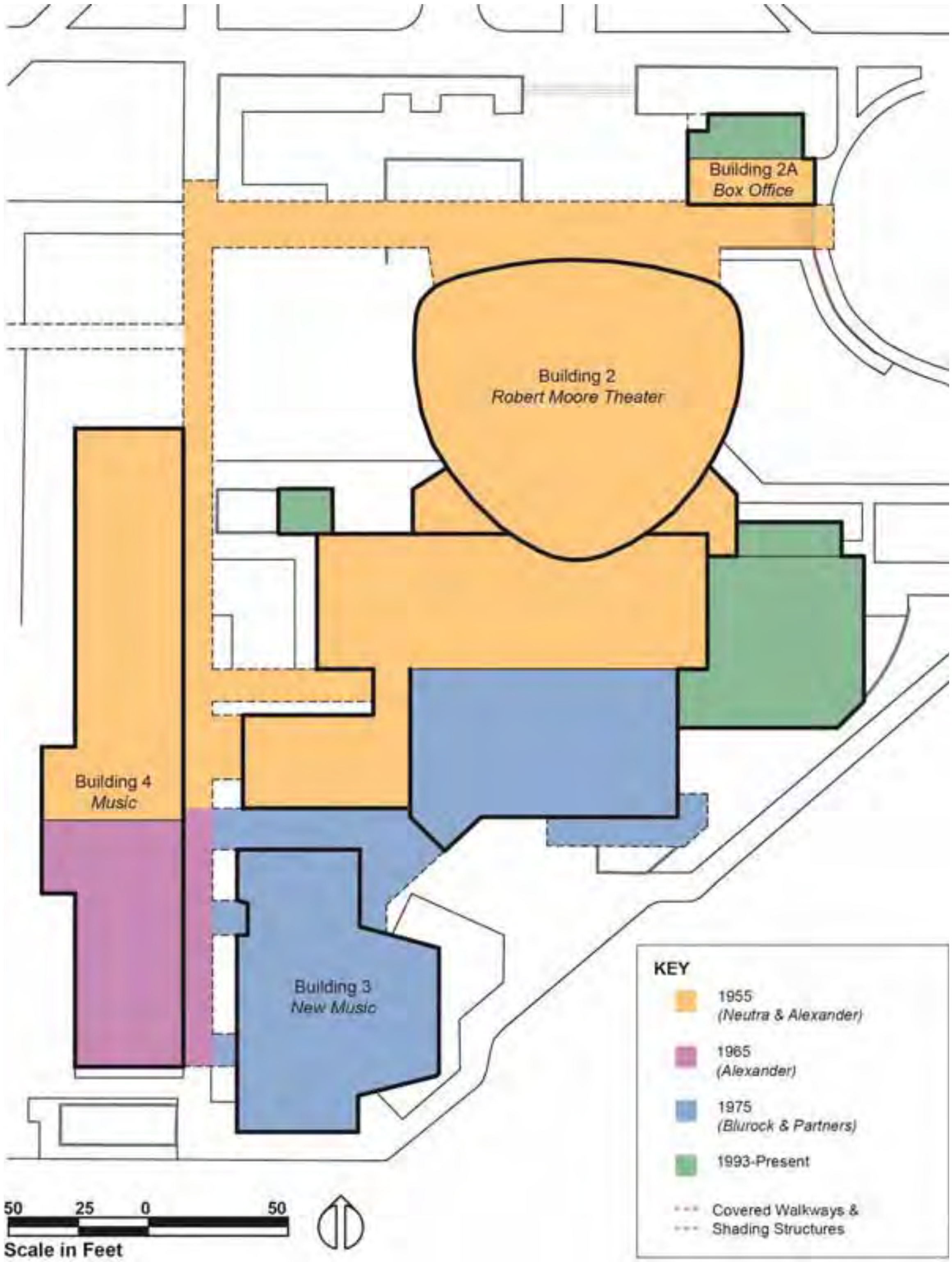

Figure 1B-27: Complex chronology plan of Robert Moore Theater (Bldg. 2), the New Music Building (Bldg. 3), and the Music Building (Bldg. 4).

Buildings 2, 4 | Theater and Music Complex

Completed in 1955, the Speech Arts Building comprised the 1,200-seat Auditorium and Stage House (Bldg. 2) and an adjacent Music Building (Bldg. 4) which housed choral and band practice rooms as well as office, instrument storage, and individual practice rooms. The original complex included a stand-alone Ticket Office and Restroom Building (Bldg. 2A) as well as an L-shaped wing toward the rear of Building 2 at the southwest corner for costume storage, dressing rooms, and restrooms that could also be accessed from the exterior.

Figure 1B-28: North façade of the Speech Arts Building (Bldg. 2). Date unknown. Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles. ID no.: gri_2004_r_10_b0080_f011_1952_51.

Designed by Neutra and Alexander for flexibility with Dr. Vern Knudsen from UCLA as the acoustical consultant, the auditorium's

> 45-foot stage has side entrances, movable seats, and independent heating, so that it may be used as a Little Theater for 250 persons. In addition, the 40-foot proscenium may be expanded to 80 feet merely by opening the motor-driven doors on each side of the arch. Automatically operated doors at the rear of the stage open to a natural amphitheater suitable for pageants and for graduation ceremonies.[41]

The stage could be transformed into various arrangements through the use of movable doors, curtains, stage platforms, side stages, and revolving scenery platforms. The auditorium had an

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[41] "Dedication: Auditorium and Music Building, Orange Coast College," March 30, 1955 program, in Orange Coast College Archives, Theater folders.

orchestra pit, organ loft, and projection booth. An exterior lobby was created at the front patio with a covered walkway and opaque glass screens that allowed transparency and open access from three directions: the circular car drop-off area to the east, the pedestrian approach from campus to the north, and the covered walkway path from the Music Building to the west.

The Music Building originally had two large classrooms, one for choral and one for band. Both had tiered platforms with acoustically absorbent wall materials in the form of perforated wood paneling that curved into the ceiling. The building also had a brick wing with individual practice rooms and offices. Original plans show wood doors with wood paneling surrounds and two areas with windows.

In 1965, an addition designed by Robert E. Alexander, F.A.I.A. & Associates extended the Music Building southward. The addition mirrored the original massing with a brick wing abutting the original brick wing, one large, non-tiered classroom space located at the south end, and a series of offices, practice rooms, and storage rooms between. The addition matched the original building's architectural features, but did not connect internally between the brick walls.

The firm of William Blurock and Partners designed a Drama Workshop addition to the Auditorium (Bldg. 2) as well as a New Music Building (Bldg. 3) in the complex in 1975. The Drama Workshop addition housed a Drama Lab with movable boxes to create various floor levels and configurations. The north wall of the Drama Lab was the 40-ft by 20-ft sliding doors that opened from the rear of the auditorium stage. It is not clear if the sliding doors remain or if the opening has been infilled. The Drama Workshop wing also included an intimate Small Lab. Both labs had their own entrance from the exterior through a triangular entry vestibule at the southwest corner.

The New Music Building (Bldg. 3) is positioned to the south of the Drama Workshop. This new stand-alone building is clad in brick as well as split-faced concrete masonry blocks that matched the exterior materials of the other buildings designed by William Blurock and Partners at the OCC campus during the 1970s. Building 3 and the Drama Workshop addition on Building 2 share a new covered walkway and a paved entry plaza from the parking lot to the Drama Workshop's triangular entry vestibule.

The auditorium was renamed the Robert B. Moore Theater in 1982 to honor the retirement of Dr. Moore, after an 18-year tenure as OCC's president.

In 1992 the Robert B. Moore Theater underwent renovation. The Hill Partnership, Inc. added a geometric plaster motif to the auditorium interior that also closed off the side stages of the theater. The orchestra pit was covered and a new low wall was built to extend the stage over the pit. The seats were refurbished, new flooring was added, and disable access seating spaces were provided. The auditorium's seating capacity decreased from 1,200 to 944 seats. A new utility enclosure with an electrical room and transformer was added to the west of the theater. A new disabled access ramp was added to the east near the circular drop-off area.

The large Scene Shop wing was added to the east of the Stage House in 2006. The stand-alone ticket office (Bldg. 2A) also received an addition to its north side that relocated the men's restroom and added an office. The L-shaped wing at Building 2's southwest corner was reconfigured on the interior to create a larger costume workshop. Interior access to the restrooms in this wing was eliminated.

The two Music Buildings (Bldg. 4 and Bldg.3) underwent renovations in 2012. At Building 4, the doors on the east façade were removed and replaced with contemporary hollow-metal doors within framing that required patching of the façade's stucco. Other openings on the façade, including windows, some doors, and fire hose cabinets, were also infilled with stucco. Similarly, vents on the west façade were also resized and infilled where needed.

On the interior, Building 4's original band room (Room 102) had its original curved wood-panel finishes removed from the back wall and ceiling, the new flooring added to the tiered platforms, and fixed seating installed. A new vestibule and door opening was added to the room's south side and the original door opening was infilled. The original choral room (Room 101) underwent fewer modifications during the renovation; the original wood panel curved wall and ceiling remain (Figure 1B-29 and Figure 1B-30). The choral room received new flooring as well as additional acoustical paneling on the side walls. The original wedge-shaped lab and storage between the band and choral rooms was reconfigured to provide a disabled access ramp to the top tier level at the back of both rooms, accessed via new doors installed at the rear of the rooms.

Figure 1B-29: Room 101 interior in Building 4. Date unknown. Source: Box 110, Robert Evans Alexander papers, #3087. Division of Rare and Manuscript Collections, Cornell University Library.

Figure 1B-30: Room 101 interior in Building 4.

At the south end of Building 4, an area of offices, storage rooms, and lab spaces were combined to create a large piano lab. Offices in one of the brick wings were also reconfigured, though most of the individual practice rooms remained. Most rooms received new interior finishes as part of the renovation. The building's mechanical system was also upgraded and current equipment placed on the roof of the covered walkways.

Building 2 & 4 Construction Chronology

Year

1955: Speech Arts Building (Bldg. 2) completed. Included are

- 1,200 seat auditorium
- 104ft wide by 45ft deep stage with flexibility for various configurations and where the rear wall slid open to an outdoor amphitheater
- Exterior lobby at the patio with stand-alone ticket office building (Bldg. 2A)
- Music Building (Bldg. 4) with two large tiered classrooms and a brick wing with individual practice rooms
- Covered walkways creating the outdoor lobby and connecting the buildings together.

1965: Robert E. Alexander returned to OCC campus to design a number of new buildings, including an addition to the Music Building (Bldg. 4). The addition expanded the building to the south and mirrored the original with a brick wing abutting but not connecting to the original's south brick wing. Not as long as the original section, the addition housed one new classroom and several practice, storage, and office rooms. The covered walkway on the east elevation was extended the full length of the building addition.

1975: Drama Workshop addition by William Blurock and Partners added to the Auditorium's rear (south) façade (Bldg. 2) where the outdoor amphitheater was located. A stand-alone New Music Building (Bldg. 3) was also added to the complex around this time.

1982 The auditorium (Bldg. 2) was renamed the Robert B. Moore Theater in honor of Dr. Robert B. Moore, the retiring president of OCC.

1989: Moore Auditorium (Bldg. 2) alteration plans by Dahl Taylor & Associates. Scope of work is unknown.

1993: The Robert B. Moore Theater (Bldg. 2) under goes renovation with plans by the Hill Partnership Inc. The renovation focused on interior finishes, work around the stage, and providing handicap access. The auditorium seating changed from 1,200 seats to 944 seats. Some structural, mechanical, and electrical work was also done.

2006: Cosmetic renovation of interior finishes to the auditorium (Bldg. 2)

Additions/Alterations to Building 2: addition and interior alterations to stand-alone ticket office (Bldg. 2b), large addition to east, interior alterations to brick offshoot on west side to form costume workshop and removal of interior restrooms

2012: Both Music Buildings (Bldgs. 3 and 4) undergo modernization. For Building 4, this includes new doors and door frames along the east façade and stucco infill of disused openings. All windows on the east façade were infilled while vents on the west façade are made smaller. The stucco wall finish is patched where needed.

On the interior, one original room (Room 101) retains its original curving wood panel wall and ceiling, while in Room 102, it is replaced with a new system. The wedge-shaped storage space between Rooms 101 and 102 receives a disabled access ramp to serve the top level of both rooms. A large Piano Lab is created from reconfiguring several smaller spaces toward the south end of the building.

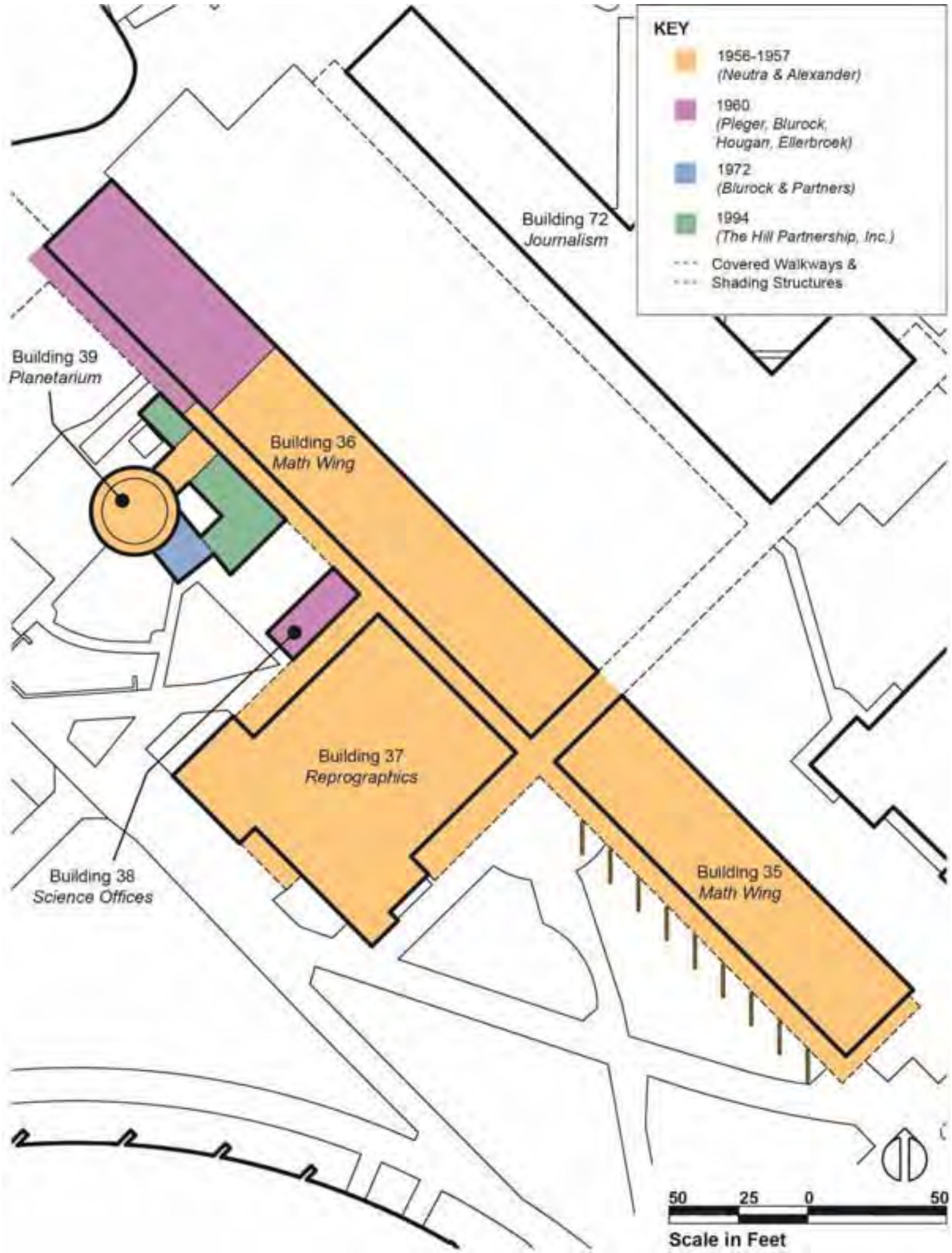

Figure 1B-31: Complex Chronology Plan of Math Wings (Bldg. 35 and 36), Reprographics (Bldg. 37), Science Offices (Bldg. 38), and Planetarium (Bldg. 39).

Buildings 35, 36, 37, 39 | Math and Planetarium Complex

Designed by Richard Neutra and Robert E. Alexander, the Science Building was completed in 1956-57 and originally contained four buildings:

- Classroom Wing (Bldg. 35) with three classrooms and one lab
- Laboratory Wing (Bldg. 36) with three labs and one lecture room with a raked floor
- Chemistry Wing (Bldg. 37) with three chemistry labs, one lecture room with a raked floor and an exterior stair to roof deck
- Planetarium (Bldg. 39) with the domed planetarium, a greenhouse, work room, and animal room

Figure 1B-32: 1957 photograph of Science Building facing west, showing Building 35 (right) and Building 37 (left). Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles. ID no.: gri_2004_r_10_b0082_f012_13_2453_01.

The clerestory windows along the south façades of Buildings 35 and 36 originally had aluminum louvers, as did the clerestories in the breezeway. The plywood door surrounds and accents on Buildings 35, 36, and 37 were not painted originally. Buildings 36 and 37 each had a raked lecture classroom with exterior stair access; the stair at Building 37 remains and stepped up while the Building 36 stair behind the stand-alone brick wall in the covered walkway stepped down and has been removed.

Building 39 originally included the domed planetarium and an L-shaped extension with a greenhouse, work room, and animal room along the covered walkway. A wedge-shaped reflecting pool was located south of the Planetarium, along with an arc of trees following the Planetarium's circular shape. A wood fence with offset boards connected the L-shaped extension of the Planetarium to the covered walkway along Building 37's west façade, but has since been razed. The covered walkway extended west beyond Building 36 and featured a wood-slat screen along the north edge.

The armillary sculpture - designed by Laguna Beach-based sculptor, Peterpaul Ott - was installed at the south end of the Science Building complex following the completion of the Science Building in 1957. It is located on a square concrete pad set adjacent to the walkway leading west along the south façade of Building 35. According to the historic photographs, there was an L-shaped half-wall that was set at the southeast corner of the square concrete pad. These have since been removed, but an L-shaped concrete patch remains.

In 1960, the firm Pleger, Blurock, Hougan, and Ellerbroek designed an addition to the west end of Building 36. The 2,800 sq. ft. addition contained two additional lab/classroom spaces separated by a shared prep/storage space. The addition matched Building 36's architectural features but had two stucco bays in place of windows on the north façade. The covered walkway along the building's south façade was also extended at this time and the wood-slat screen wall was removed.

William Blurock and Partners added the east volume attached to the domed planetarium/ classroom (Bldg. 39) in 1972. It appears that the new L-shaped wing was built on the footprint of the original greenhouse/work room/animal room wing of Building 39 around 1994 to create the internal courtyard; the addition west of the planetarium's main entry at the covered walkway also appears to date from 1994.

Building 37, which was originally the chemistry wing, was repurposed for new uses around 1980 when a new chemistry building was constructed on campus. It became the Reprographics Building around 1986 or 1987. Also around this time, its existing HVAC system was renovated and new duct work and vents installed. Similarly, HVAC equipment was added to the covered walkway along the south façade of Buildings 35 and 36 around 1986, when some of the jalousie clerestory windows were removed.

Buildings 35, 36 and 37 underwent renovation/refurbishment in 2011. The work included removing the raked floor in Building 36's classroom and infilling the stair opening behind the stand-alone brick wall. It also included removing original wood built-in casework as well as glued-on acoustical tile at the ceilings, where they remained. New acoustical ceiling tiles were installed; one room has a suspended ceiling. Chalkboards and tack boards were also removed and replaced with modern dry erase boards and new lighting was installed. One prep/storage room in Building 35 retains its original wood casework and other wood veneer features. Vinyl windows on Building 35's east end wing may have been installed at this time.

Building 35, 36, 37, 38, & 39 Construction Chronology

Year

1956: Buildings substantially complete; occupancy started in late 1956.

1957: Peterpaul Ott armillary sphere sculpture installed at the east end of Building 35.

The Science Building was officially dedicated on April 2, 1957. It consisted of four wings:
Classroom Wing (Bldg. 35) with three classrooms and one lab
Laboratory Wing (Bldg. 36) with three labs and one lecture room with a raked floor
Chemistry Wing (Bldg. 37) with three chemistry labs and one lecture room with a raked floor and an exterior stair to roof deck
Planetarium (Bldg. 39) with the domed planetarium, a greenhouse, work room, and animal room

1960: Pleger, Blurock, Hougan, and Ellerbroek designed an addition with two lab classrooms sharing a storage/prep area to the west end of Building 36. The addition matched Building 36's architectural features but added two stucco areas on the north façade. The covered walkway along the building's south façade was also extended.

Building 38, which housed three offices was added.

The Science Building additions were constructed at the same time as the Library (Bldg. 7) additions, also by Pleger, Blurock, Hougan, and Ellerbroek.

1972: Addition of attached east volume to the domed planetarium/classroom in Building 39. Designed by William Blurock & Partners.

1976: Interior alterations to classroom/lab in original part of Building 36 for additional duct, vent hoods and exhausts for student laboratory tables. Architect: William Blurock and Partners.

1980 Building 37, originally the chemistry wing, was renamed and reused for the IMC AV Center following the completion of a new chemistry building. The building was renamed Technical Services / College Materials in 1984.

1986: HVAC equipment and ducts added to Building 35 and 36's covered walkway. Engineered by F.T. Andrews.

1987: Removed existing HVAC ducts and vents and installed new system in the newly-renamed Reprographics Building (Bldg. 37). Architect: Dahl Taylor & Associates.

1994: Planetarium (Bldg. 39) L-shaped wing added to form interior courtyard. The rectangular wing north of the domed planetarium entrance may also have been added at this time. Architect: The Hill Partnership Inc.

1996: Alteration of the southwest corner classroom at Building 37 to form a Computer Classroom. Architect: The Bentley Company.

1997: Buildings 36 and 37 underwent a pendant lighting and suspended ceiling systems seismic retrofit along with other buildings on campus. Architects: Robbins Jorgensen Christopher Architects.

2011: Buildings 35, 36 and 37 underwent renovation/refurbishment. The work included removing the raked floor in the Building 36 classroom and infilling the stair opening behind the stand-alone brick wall. It also included removing original wood built-in casework and lab stations as well as glued-on acoustical tile at the ceilings where they remained. New acoustical tile ceilings installed including one room with a suspended ceiling. Chalkboards and tack boards were also removed and replaced with modern dry erase boards. New lighting installed. One prep/storage room in Building 35 retains original wood built-ins.

Vinyl windows on Building 35's east end wing may have been installed at this time. Architects: Dougherty.

Alterations undertaken at unknown times:

- Buildings 35 & 36
  - Removal of louvers over south façade and breezeway clerestory windows.
  - Additional classroom doors added at the south façade of Building 35.
- Building 37
  - Removal of south entrance and installation of rollup metal doors
  - Flattening of raked classroom floor
- Landscape
  - The reflecting pool located to the south of the Planetarium (Bldg. 39) was infilled with concrete at an unknown date, however the form is still visible
  - An arc of trees located to the south of the Planetarium were removed

Figure 1B-33: Historic photograph of the east façade of Building 37 showing exposed plywood with clear finish (low resolution image). ca. 1957. Source: Box 99, Robert Evans Alexander papers, #3087. Division of Rare and Manuscript Collections, Cornell University Library.

Figure 1B-34: East façade of Building 37.

Figure 1B-35: Under the breezeway between Buildings 35 (left) and 36 (right) facing towards Building 37. Date unknown. Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles. ID no.: gri_2004_r_10_b0082_f012_13_2453_15.

Figure 1B-36: Breezeway between Building 35 and 36 with HVAC duct added and louvers removed.

Figure 1B-37: 1957 photograph of the north and west façades of Building 36 and the Planetarium (Bldg. 39). Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles. ID no.: gri_2004_r_10_b0082_f012_13_2453_17.

Figure 1B-38: North façade of Building 36 with 1960 addition with stucco bays.

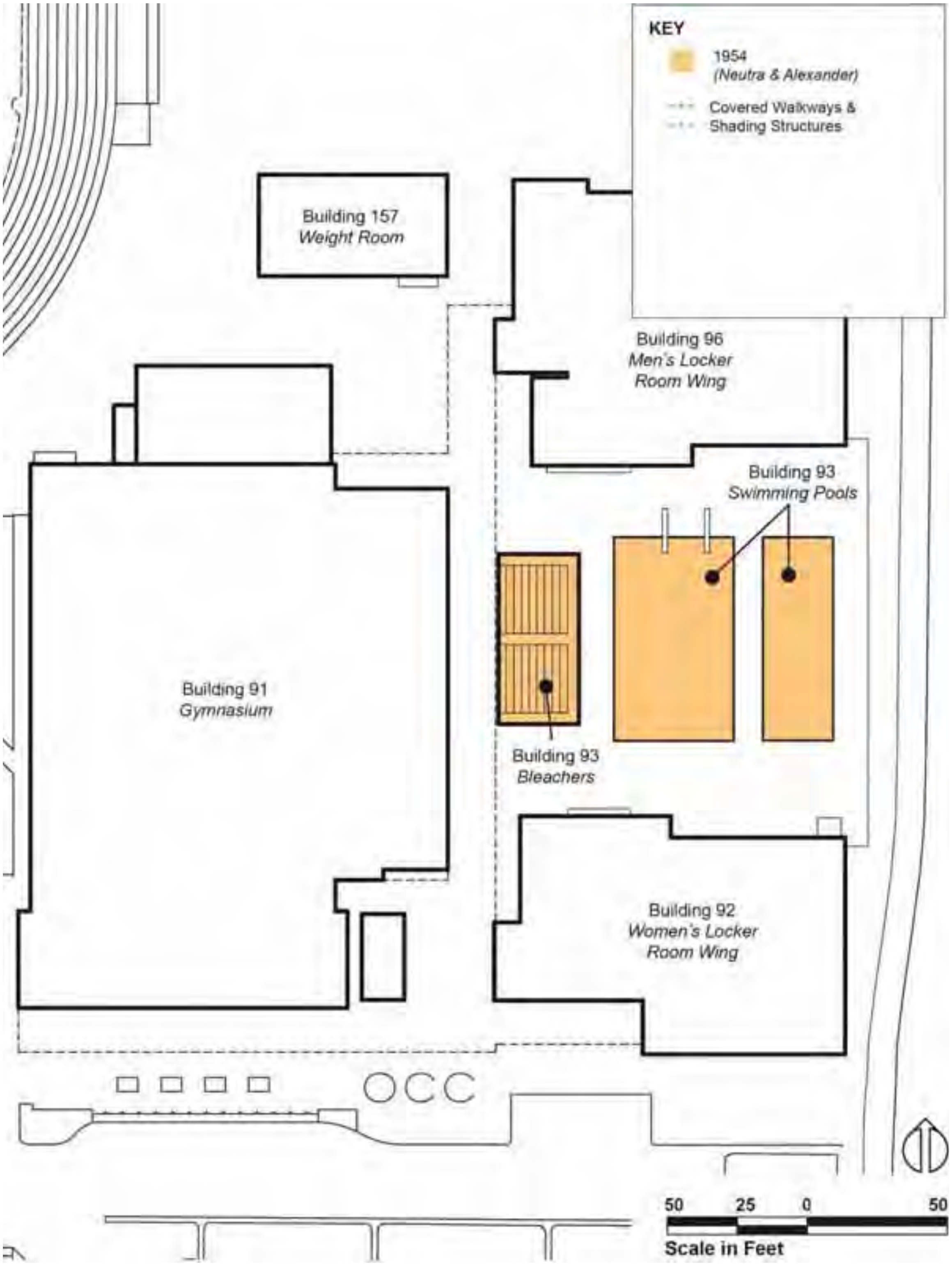

Figure 1B-39: Complex chronology of Swimming Pool complex (Bldg. 93)

Buildings 93 | Swimming Pool Complex

The Swimming Pool complex was completed in 1954. The complex included:

- Deep Pool that ranged from six to twelve feet deep (75' L x 44'W)
- Shallow Pool that was four to four and a half feet deep (75' L x 24'W)
- Originally three diving boards, including one sculptural concrete diving platform
- Concrete bleachers (seat 350)

The pools were poured concrete tubs with gunite finish. They had tiled curbs and gutters. Bordering the pools were 12ft wide concrete decks with radiant heating system built within.

Figure 1B-40: View of the swimming pools from the bleachers facing northeast. The handball courts in the background have been demolished and the Men's Locker Room (Bldg. 96) constructed in its place. Date unknown. Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles. ID no.: gri_2004_r_10_b0080_f001_1745_33.

In 1961-62, the new Gymnasium (Bldg. 91), Men's Locker Room (Bldg. 96), and Women's Locker Room (Bldg. 92) were constructed surrounding the pool. The Men's and Women's Locker Rooms provided the pool with changing rooms and opened directly to the pool deck. New decking without radiant heat was added between the existing pool paving and the new locker rooms. A new wood-framed stucco wall was constructed to enclose the space below the concrete bleachers, which housed the pool equipment. The new wall attached to the new covered walkway running between the bleachers and the new gymnasium.

The pools and pool deck were remodeled around 1992. The original concrete pool deck with embedded radiant heating was removed and the deck drainage system improved. The original tiled gutters around the pool were removed and deeper gutters installed. The new concrete pool deck extended over the new pool gutters.

Figure 1B-41: View of the swimming pool from the bleachers facing northeast. The Men's Locker Room (Bldg. 96) is in the background.

The pool basins had fiberglass coatings removed and were refinished with white plaster. New black ceramic tiles were added to mark lanes, depth, and ends; new lighting, pool steps, and grab rails were installed. Racing platforms were placed at the south end. The original concrete diving platforms were replaced and pool equipment was upgraded.

Features installed at unknown dates include the reinforced brick fence wall with integrated concrete benches along the east boundary and the tile around the drinking fountains at the low concrete masonry unit (CMU) wall between the pool and bleachers.

Building 93 | Swimming Pool Complex Construction Chronology

Year

1954: The Swimming Pool was completed and dedicated.

1961-62: New Gymnasium (Bldg. 91), Men's Locker Room (Bldg. 96), and Women's Locker Room (Bldg. 92) constructed around the Swimming Pool. A new wood-framed stucco wall was constructed to enclose the space below the concrete bleacher and attach to the new covered walkway running between the bleachers and the new Gymnasium.

1992 The pool and pool deck underwent remodeling.

- Original concrete pool deck with embedded radiant heating removed
- New concrete pool deck that extends over the pool gutters installed.
- Deeper gutters replaced the original gutters around each pool
- Fiberglass coatings that had been added to the pool interiors were removed and the pool refinished with white plaster.
- Black ceramic tile added for lane, depth, and end markers
- New lighting, pool steps, and grab rails added
- New diving stands replaced original concrete diving platforms and racing platforms added
- Pool equipment upgraded

Unknown date:

- Construction of reinforced brick wall with integrated concrete benches along the east boundary.
- Tile added around the drinking fountains at the low CMU wall between the pool and bleachers.

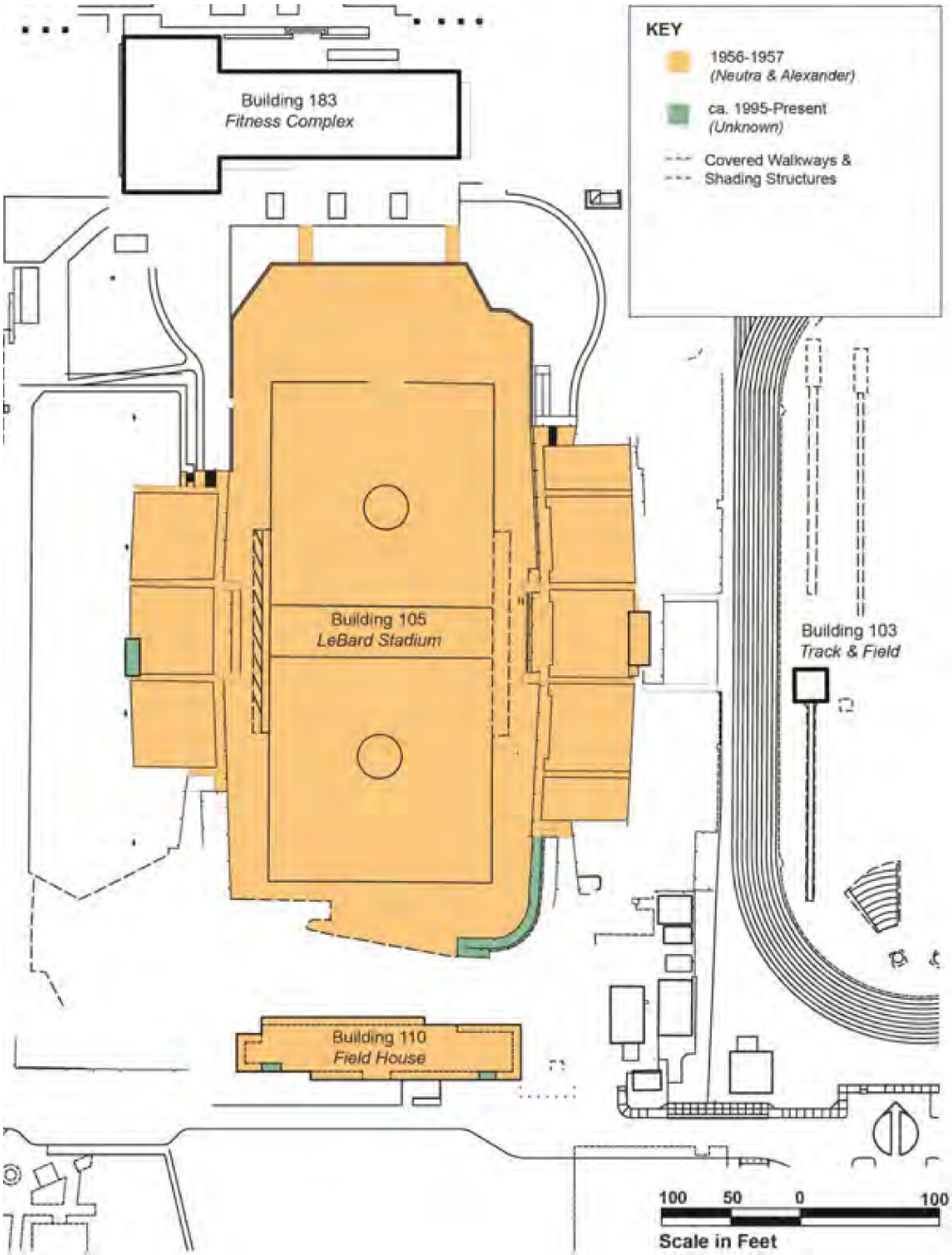

Figure 1B-42: Complex chronology of Swimming Pool (Bldg. 93).

Buildings 105 & 110 | Stadium and Field House

In 1955, the new 7,500-seat football stadium was completed. It was designed with the playing field 10ft below existing ground level. The excavated dirt was piled in berms upon which the concrete bleachers were constructed. A pump system was installed for drainage.

The Stadium's concrete bleachers ran along the east and west sides of the field. The bleacher sections were slightly curved to give a bowl effect and provide better sight lines. The east bleachers were for the home team while the west bleachers were for the visiting team. A press box was at the top of the east rim and was equipped for broadcasting. A platform on top of the box was for TV cameras. An electric score board and field lighting were also included.

Figure 1B-43: Close up of stadium seating (Bldg. 110). Date unknown. Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles. ID no.: gri_2004_r_10_b0080_f011_1952_47.

The Field House was constructed south of the Stadium. It housed showers and dressing rooms for the home and visiting teams. It also included public restrooms and concession booths.

In 1967, the Stadium was renamed LeBard Stadium in honor of Harry R. LeBard, a member of the Orange Coast Junior College District board from 1947 until his death in 1965.

The Stadium lighting was replaced around 1977. Accessibility upgrades for parking, seating and access to the east bleachers at the Stadium, and upgrades to the Field House occurred in 1997.

In 2004, D.S.E. Architecture prepared plans for remodeling the Stadium. The work included:
- Accessible seating and access ramp at the west bleachers
- Accessible bathrooms in the Field House
- Railing replaced at the top of the east press box.
- The addition of stairs to the east press box.

In 2007, new doors were added to the south façade of the Field House along with one window. Another window was also added to the north façade.

Buildings 105 & 110 | Stadium and Field House Construction Chronology

Year	
1955:	New 7,500-seat football stadium completed and dedicated.
1967:	Stadium renamed LeBard Stadium in honor of Harry R. LeBard, a member of the Orange Coast Junior College District board from 1947 until his death in1965.
1977:	Stadium lighting system was upgraded.
1997:	Accessibility upgrades for parking, seating and ramp at the east bleachers. Upgrades to the Field House.
2004:	Plans for the Athletic Stadium Remodel
2007:	New windows and doors added to the Field House.

Landscape

Landscape architect Garrett Eckbo categorized his work at Orange Coast College with his other public buildings. His approach for such projects was "to develop a really thorough and clear integration of building and site in terms of space, form, material, and function."[42] Trees and shrubs were placed to form strong spatial relationships with buildings. Analysis of the building uses helped to make decisions about how people looked in and out of the buildings.

Eckbo was part of the initial team who worked with Robert E. Alexander on the 1949 master plan for Orange Coast College (OCC) (Figure 1B-44). The plan's circulation pattern showed straight axial pathways at the site's east side to connect the general use buildings: Theater, Administration, Student Center, and toward the athletic fields. Another major east-west route was present and extended from the Theater to the Technology Building. In the classroom core set at a 45-degree angle, the pathways are diagonal and run perpendicular to and through the buildings. Secondary axes create a diamond pattern across open spaces between buildings. Near the Library (Bldg. 7), where the two pathway systems meet, Eckbo planned a central open space.

Following the master plan, Eckbo prepared a Master Tree Plan in 1950. His approach assumed permanence of the campus so the selected trees would have the opportunity to mature. The form and arrangement of the tree patterns was to assist in producing outdoor spaces of "maximum usability and pleasurable experience for students and faculty."[43] Wind directions and the formal relationships of buildings, circulation lines, and spaces with specific functions, such as sports fields and the parking areas, dictated the proposed tree patterns. A ring of perimeter trees set along the periphery of the campus was intended to define the campus against the surrounding open country.

Within the campus, tree plantings were to be arranged to serve as windbreaks, form circulation patterns, create visual interest and perspective, serve as unifying elements upon maturity, and fashion interrelationships with the buildings and their architecture. Eckbo intended to utilize trees of three different height categories, each serving a certain function: windbreaks (tallest), the shelter pattern (medium), and visual interest and screening (shortest). The initial OCC plan intended the windbreak plantings to be placed along the north side of the classroom buildings to help buffer winds on the open spaces between buildings. The shelter plants were to serve as buffers between the walkways and buildings, creating a vertical and natural transition between the hardscape and the building. The shelter plantings were interspersed within the landscape, often in open spaces and in a more sporadic pattern, intended to create informal moments.

[42] Eckbo, *Landscape for Living*, 183
[43] Eckbo, Royston, and Williams, "Master Tree Plan for Orange Coast College, Costa Mesa, California," transmitted to Robert E. Alexander on September 6, 1950. In Box 107, Robert Evans Alexander papers, #3087. Division of Rare and Manuscript Collections, Cornell University Library.

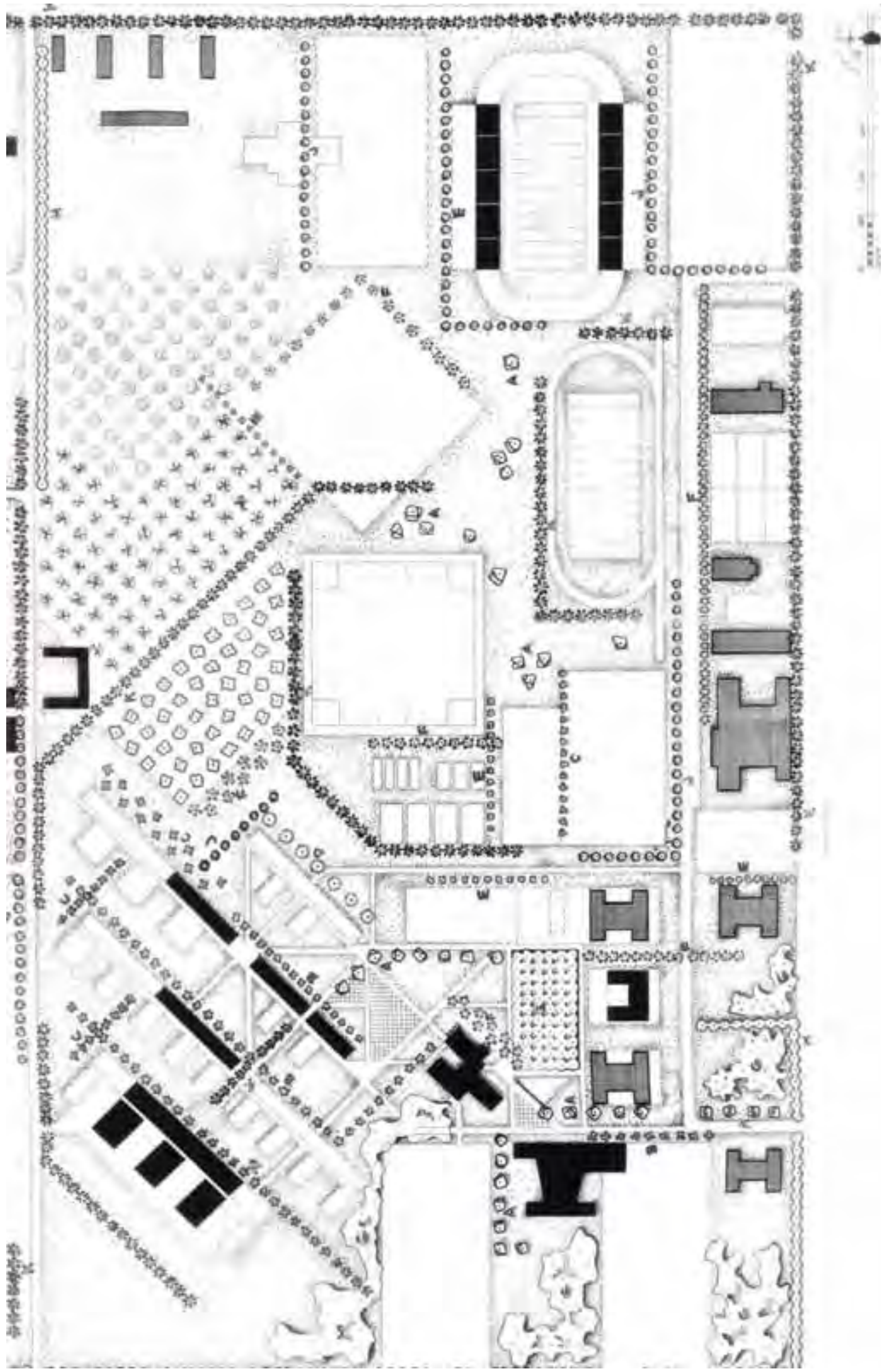

Figure 1B-44: Original master plan for Orange Coast College. Source: Garrett Eckbo Collection, Environmental Design Archives, University of California, Berkeley.

Although the landscape master plan by Eckbo and Alexander was approved by the Board of Trustees, the overall plan underwent substantial changes as the buildings were constructed. Each building complex was given an individual landscape design at the time of construction, which further impacted the overall plan. For example, the windbreaks were planted along the north side of the Technology Building but by the time Business Education (Bldgs. 12-14) was under construction in 1952, the tall windbreak trees were no longer being used for any campus buildings.

An additional walkway along the east-west axis was added to extend from the Student Center building through the breezeways of the Business Education complex and ultimately to the Science Building complex. This axis intersected the classroom area's diagonal circulation pattern at an angle to create major circulatory intersections where patios and intimate seating areas were designed for social interactions. In addition, a series of irregularly-shaped secondary paths were laid out across the classroom area's grid pattern creating an X-pattern in the diamond-shaped open space between buildings. The pavers for these X-pattern paths were jagged or curved to contrast with the straight lines of the buildings and major paths. The X-pattern was planned for the open space between the Business Education building and the Fine Arts Center to the southeast for a direct path of travel between the two complexes. Although an X-pattern was planned for the open space between the Business Education and Science Buildings as part of the Science Building's landscape plan, only a single pathway was built to extend the east-west path of travel from the Student Center. Another single pathway extended from the Science Building south, establishing a direct route to the Technology Building.

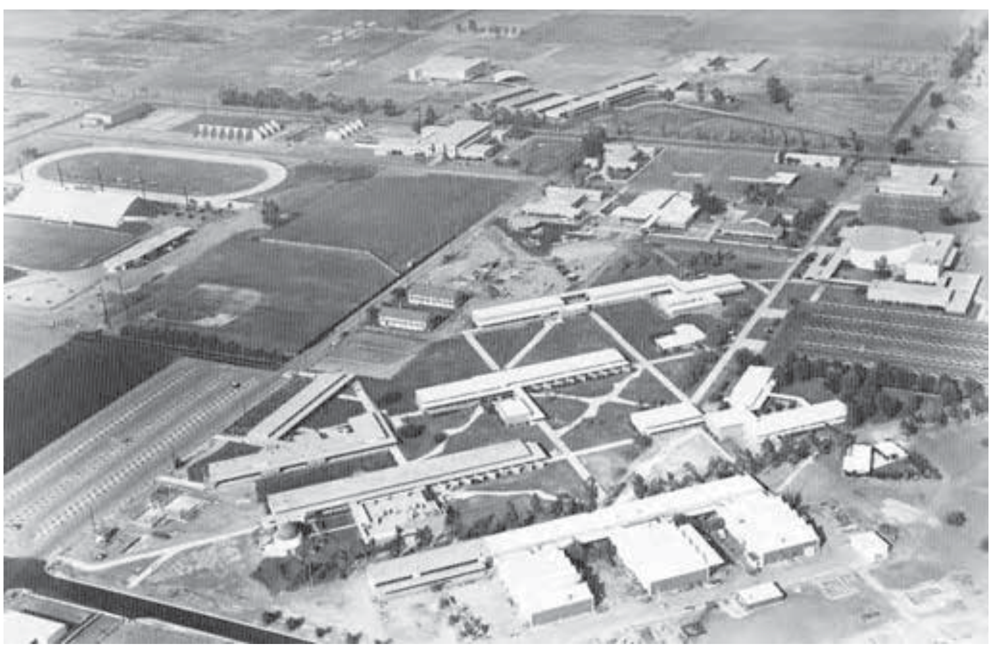

Figure 1B-45: Aerial view of Orange Coast College circa 1959 with circulation pattern and landscape areas visible. Source: OCC Archives.

Eckbo updated plans in 1956 for the central plaza envisioned between the Theater (Bldg. 2) and the Library (Bldg. 7). The design called for a raised concrete pad, several large planters with integrated bench seating, interstitial lawns, and plantings of varied size and scale. North of the planned plaza location was to be an expansive open lawn with various tree clusters, including a linear patter of palm trees set parallel to the façades of the Library and Classroom complex (Bldgs. 7, 8, & 9). The Orange Coast Junior College District Board felt the plan for the central plaza was too elaborate and therefore the full design was never realized.[44] Only the cluster of palm trees was planted.

It appears that much of Eckbo's proposed landscaping for each of the buildings were reduced or never executed. However, by 1957 when Neutra, Alexander, and Eckbo ended their work at OCC, a distinct classroom area with a diamond grid landscape with secondary cross paths is clearly visible. The significant east-west axis extending from the Student Center through the classroom complexes is also clearly present, as are the patios and seating areas at these intersection nodes (Figure 1B-45). Landscaping at the buildings outside the classroom areas, most notably the outdoor lobby for the Theater and the landscaping at the Stadium were realized to a point though it is not clear if Eckbo's proposed plantings were installed.

In the 1970s, the addition to the Business Education Building (Bldg. 14) and construction of Building 10 disrupted much of the original landscape, eliminating some of the X-pattern pathways that were set in these spaces as well as the primary east-west axis through the classroom area. New landscaping was added during this time that has since matured, such as the group of trees along the north side of Building 13 at Business Education.

The few remaining cross pathways with irregular pavers were replaced with more standard poured paving though the circulation pattern remains. Other hardscape elements were altered as well, including the quarter-circle reflective pool outside the Planetarium, which was filled in with concrete and evokes the shape of the original pool.

The demolition of the Technology Building and the Fine Arts Center and the subsequent new construction altered other aspects of the landscape. The windbreak plantings outside the Technology Building were lost, save a cluster set between the current Reprographics Building (Bldg. 37) and the new library built on the site of the demolished Technology Building. With the removal of the Fine Arts Complex, the east-west pathway from the Theater could be extended to the new library and creates the southern boundary for the Historic District.

[44] Board of Trustee meeting minutes, Jan 9, 1956.

1C. PHYSICAL DESCRIPTION

This part of the report provides a physical description of the Orange Coast College Historic District as defined by Page & Turnbull, including contributing buildings, objects, and landscape features. The order of this section is:

- OCC Historic District
- Buildings 7, 8, 9 | Student Success Center and Classroom & Labs complex
- Buildings 12, 13, 14 | Business Education complex
- Buildings 2, 3, 4 | Theater and Music complex
- Buildings 35, 36, 37, 38, 39 | Math and Planetarium complex
- Building 93 | Swimming Pool complex
- Buildings 105 & 110 | Stadium and Field House
- Armillary Sphere Sculpture
- Contributing Landscape Features
- Historic District Non-Contributors
- Surrounding Context

OCC Historic District

Page & Turnbull identified an eligible historic district on the campus of Orange Coast College. The OCC Historic District (Historic District) consists of buildings and features constructed as part of the initial campus development between 1950 and 1957. The Historic District is within the concentration of academic and administrative buildings at the southeast quadrant of the campus. The irregular district boundaries inscribe the original classroom area with a diamond-shaped grid pattern of diagonal pathways and buildings oriented 45° to the north-south axis. Its east and south boundaries are broad pedestrian walkways except at the southeast corner where the boundaries extend to include the nearby Robert B. Moore Theater and Music Building (Bldgs. 2 and 4) (Figure 1C-1).

In addition, two features, the Swimming Pool complex (Bldg. 93) and LeBard Stadium and Field House (Bldgs. 105 & 110) are discontiguous parts of the Historic District and located among the school’s athletic facilities toward the northeast quadrant of campus.

Figure 1C-1: Aerial image of Orange Coast College facing north with Historic District outlined in orange. Source: Google Maps, edited by Page & Turnbull, 2015.

OCC Historic District Contributors:

Com -plex	OCC Map No.	Resource Name	Original Name	Resource Type	Date	Architect(s)
Theater & Music	2	Robert B. Moore Theatre	Speech Arts Building	Building	1955	Netura and Alexander
	4	Music Wing	Speech Arts Building	Building	1955	Neutra and Alexander
SSC and C&L	7	Student Success Center (SSC)	Library	Building	1951	Robert E. Alexander
	8	Classrooms and Labs (C&L)	Library / Library Addition	Building	1951/ 1955	Neutra and Alexander
	9	Classrooms and Lab (C&L)	Library Addition	Building	1955	Neutra and Alexander
Business Education	12	Business Education	Business Education	Building	1953	Neutra and Alexander
	13	Business Education	Business Education	Building	1953	Neutra and Alexander

OCC Historic District Contributors, Continued:

Math & Planetarium	35	Math Wing	Science Building	Building	1956/ 1957	Neutra and Alexander
	36	Math Wing	Science Building	Building	1956/ 1957	Neutra and Alexander
	37	Reprographics Center	Science Building - Laboratory	Building	1956/ 1957	Neutra and Alexander
	39	Planetarium	Planetarium	Building	1956/ 1957	Neutra and Alexander
	93	Pool Stadium	Pool Stadium	Building	1954	Neutra and Alexander
	105 & 110	Stadium and Field House	Stadium and Field House	Building	1955	Neutra and Alexander
	N/A	Science Building Art piece	Armillary sphere sculpture	Object	1957	Peterpaul Ott
	N/A	Landscape ▪ Circulation pattern ▪ Open spaces / patios / courtyards ▪ Palms tree cluster ▪ Planters, etc.		Landscape	1950s	Eckbo

Within the boundaries of the Historic District are non-contributors that were constructed outside the period of significance (O), are not related to the significance of the Historic District (NR), or have been significantly altered (A).

Historic District Non-Contributors:

Rea-son	**OCC Map No.**	**Resource Name**	**Original Name**	**Resource Type**	**Date**	**Architect(s)**
O	3	Music	New Music Building	Building	c.1975	William Blurock & Partners
O	10	Special Services	Faculty Offices and Tutorial Center	Building	1975	William Blurock & Partners
NR	11	Faculty House	Faculty House	Building	1957	Rodney Lauter
A	14	Haley Business Learning Center	Business Education Building	Building	1953 / 1976	Neutra and Alexander with substantial addition by William Blurock & Partners
O	38	Science	Science Office	Building	1960	Pleger, Blurock, Hougan, Ellerbroek

Below are descriptions of each contributor grouped by the original complex construction. The complexes within the core of the Historic District are first and arranged in chronological order of completion. The discontiguous features are next, followed by the armillary sphere sculpture contributing object and the contributing landscape features. Finally, the non-contributors and the context surrounding the Historic District are described last.

As the distinctive clock tower is attached to Building 7, it is described and included with Building 7.

Buildings 7, 8, 9 | Student Success Center and Classroom & Labs Complex

The Student Success Center (SSC) and Classrooms & Labs (C&L) complex is a collection of four buildings at the southeast corner of the Orange Coast College Historic District. Consisting of the original Library (Bldg. 7) and its addition (Bldgs. 8 and 9), the complex is on the diagonal orientation intended for the classroom buildings and has the distinctive clock tower (Figure 1C-2).[1]

Figure 1C-2: North façade of Student Success Center (Bldg. 7) west wing with clock tower and part of Classroom & Lab (Bldg. 8).[2]

Bldg.	Year Completed	Original Name	Architect	Landscape Architect
7	1951	Library	Robert E. Alexander	Dick Besson
	1960 addition		Pleger, Blurock, Hougan, & Ellerbroek	
8	1951	Library	Robert E. Alexander	Dick Besson
	1955 addition	Library Addition	Neutra and Alexander	Eckbo, Royston & Williams
9	1955	Library Addition	Neutra and Alexander	Eckbo, Royston & Williams
9b	1955	Toilet Building	Neutra and Alexander	Eckbo, Royston & Williams

[1] As per the original plans for the diagonally-oriented buildings, this report considers the northeast-facing façade as plan north or north.
[2] All photographs in this section of the Historic Structures Report were taken by Page & Turnbull, 2014-2015, unless sourced otherwise.

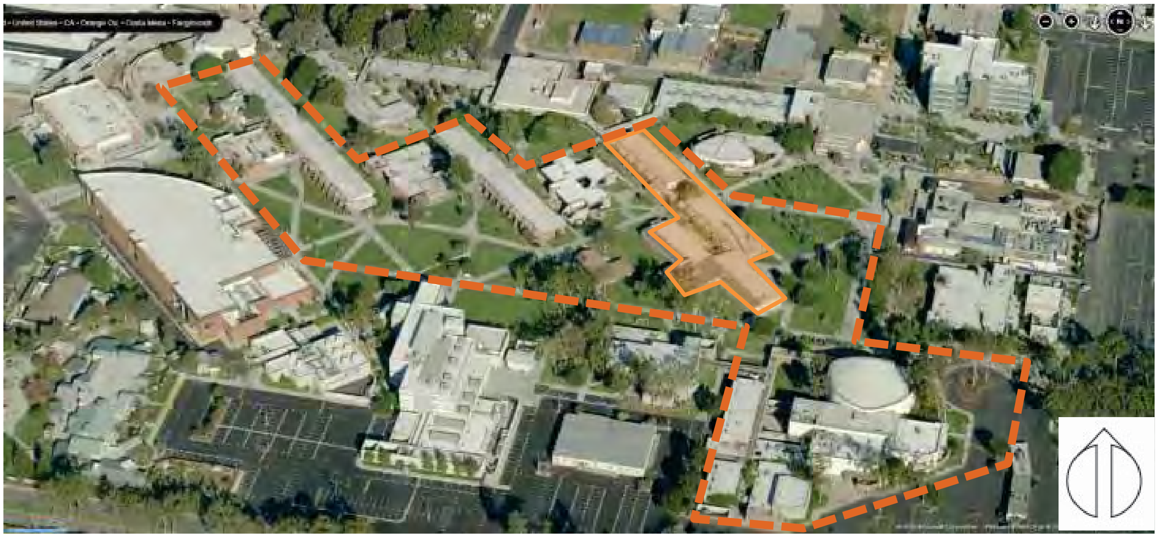

Figure 1C-3: OCC Historic District key plan with Student Success Center (Bldg. 7) and Classroom & Labs (Bldg. 8 and 9) highlighted. Source: Bing Maps, edited by Page & Turnbull, 2015.

Figure 1C-4: Student Success Center, Bldg. 7 and Classroom and Laboratory (Bldg. 8 and 9. The Historic District's north boundary is dashed above. Source: Bing Maps, edited by Page & Turnbull, 2015.

Building 7: Student Success Center (originally Library)

Figure 1C-5: North window wall façade of Student Success Center (Bldg. 7) west wing looking east.to the building's north elbow.

Exterior

Building 7 is a single-story building with wood-framed, tilt-up concrete and reinforced masonry walls constructed on concrete wall footings.

It is roughly S-plan in plan consisting of two wings that overlap and jog at the center creating a north and south elbow (Figure 1C-4). A courtyard is in the north elbow between Building 7's west wing and Building 8 (Figure 1C-5). The main entrance is nearby under a vestibule that is part of the covered walkway connecting Building 7 with Building 8 (Figure 1C-11). The distinctive clock tower near Building 7's north elbow is a 50-foot, open steel-frame structure with clock faces on both sides at the top.

The two wings are roughly similar in size and materials. The east wing is situated more north and the west wing more south. For both, the north façades are primarily aluminum-framed windows between wood framing posts and on a low brick wall. The windows and low brick wall are angled from the bottom out with the brick corbeled (Figure 1C-6). At the ends of the north facades are brick-clad shear walls. A projecting stucco and brick-clad restroom wing is near the east wing's western end where the clock tower is attached.

The south façades are brick below the metal roof and tall fascia with few openings; a brick-clad mechanical room projects southward near the west wing's east end (Figure 1C-7).

Figure 1C-6: North façade of Building 7 east wing with classroom door openings inserted into the angled glazed wall. The straight brick-clad shear wall is at the left and the clock tower at the right is attached to the brick-and-stucco restroom projection.

Figure 1C-7: South façade of Building 7 with west wing to the left, mechanical room addition in center, and east wing to the right, looking plan north.

The far east and west facades are tilt-up concrete walls with a small equipment shed addition at the west façade (Figure 1C-8 and Figure 1C-9). At the south elbow where the two wings meet, the west wing's east façade is also brick (Figure 1C-8). At the north elbow in the courtyard, the east wing's west façade is glazed with an end stucco panel (Figure 1C-10). The side-gabled building has membrane-covered shed roofs on the north half of both wings that create overhangs with stucco-clad boxed eaves (Figure 1C-8). The south halves originally had lower flat roofs on which pitched, standing seam metal-clad roofs have been added. Below the standing- seam metal roof are tall stucco paneled fascias with integrated scuppers that create slight overhangs (Figure 1C-7 and Figure 1C-9).

Figure 1C-8: Building 7's concrete east façade (east wing) with the west wing's brick east façade and recessed rear south entrance in the background, looking northwest. The building's original shed and flat roof outline is visible above the east façade, as is the added standing seam metal roof on the south half of the building.

Figure 1C-9: Building 7's west wing with its brick-clad and stucco fascia south façade and tilt-up concrete wall west façade and shed addition. Standing seam metal roof on the south half of the building visible.

Windows are primarily aluminum throughout with a mix of awnings, hoppers, and fixed windows. The north façades have continuous windows with concrete sills and occasional inset door openings (Figure 1C-5 and Figure 1C-6). The windows walls are three-lite or occasionally four-lite high where the lower pane is split horizontally. They typically have clear glazing with tined film. The west wing's south façade has awning clerestory windows between the tall fascia and the brick walls (Figure 1C-9). A previous sliding glass door opening also on this façade has fixed aluminum panes. At the south elbow, the west wing's east façade has a set of three awning windows above fixed panes (Figure 1C-8). The east wing's west façade at the north elbow (courtyard) has full-height fixed windows (Figure 1C-10).

Doors are primary on the north façades, including the main entrance on the east wing's north façade toward the building's center under a vestibule that is part of the covered walkway connecting Building 7 with Building 8 (Figure 1C-11). The main entry doors are a pair of hollow metal doors next to a full-height two-paned fixed window. Nearby are a pair of wood doors on piano hinges that lead to a closet.

Figure 1C-10: West glazed façade of Building 7's east wing overlooking the courtyard. The main entry vestibule is to the left (north).

Figure 1C-11: Vestibule to Building 7's main entrance at the north elbow of the building, looking plan south. The right openings leads to Building 7's courtyard and Building 8's south covered walkway.

The south façade has a secondary entrance, also near the building center that is recessed under a canopy supported by two perpendicular decorative brick walls (Figure 1C-8). The secondary entry doors are two single wood and glazed doors below the canopy.

At the east wing's north façade, four non-angled door openings have been inset into the window and brick wall for access into three individual classrooms; each door opening has a single hollow-metal doors with an opaque transom (Figure 1C-6). The west wing's north façade at the courtyard has three double door openings each with aluminum-framed glazed doors, transoms, and sidelites (Figure 1C-5).

The far east façade has a pair of doors and a single steel door that has been fixed closed (Figure 1C-8). The west façade has no doors. The mechanical room addition on the building's south façade has hollow metal doors on its east and west facades.

Interior

Building 7 is predominantly classrooms and study space. The east wing has three large classrooms that are accessed directly from the exterior (Figure 1C-12). The far west room, Room CL103 has a brick wall at its west wall.

Figure 1C-12: Typical classroom in Building 7's east wing, looking south. Note the full-height dividers to the left (south), which marked where the lower roof was originally.

The west wing is primarily a large open space with offices at the west end and along the lower, south side (Figure 1C-14). The east end has various study rooms and partitioned space, including an employee break room with the secondary entrance to the south façade. The main entrance at the north elbow leads to an open space that is divided with a partition wall toward the rear (south) (Figure 1C-13). A door connects this space to the west wing's open room.

The ceilings have all been dropped in all rooms throughout the building with different kinds of acoustical tile systems that may conceal original clerestory windows. Internal walls are mostly drywall partitions with occasional painted bricks. Flooring is carpet throughout other than in the restroom which has a tile floor.

Figure 1C-13: Open space from the main entry where the two wings intersect. The glazed wall overlooks the courtyard between Building 7 and Building 8.

Figure 1C-14: Room 103B, open space in Building 7's west wing. Offices line the south (right) side.

Buildings 8 and 9: Classrooms & Labs (originally Library Addition)

Figure 1C-15: North façades of Buildings 8 (right) and 9 (left). A landscaped patio is between the two buildings.

Exterior

Buildings 8 and 9 are single-story buildings with tilt-up concrete and reinforced masonry walls on concrete pile foundations that are similar in size, materials, and construction (Figure 1C-15). The buildings are rectangular in plan with a membrane-covered shed roof and oriented diagonally.[3] Building 8 has an office wing at the east end that is lower and offsets to the north (Figure 1C-16). The buildings' shed roofs extend to the north to create slight overhangs that are finished in stucco box eaves with metal flashing. They have a covered walkway along their plan south facades that break at the landscaped patio between the two buildings (Figure 1C-17). A stand-alone restroom building (Bldg. 9b) and a brick screen wall are on the south side of the covered walkway across from Building 9 (Figure 1C-4). Building 8 also is connected to Building 7 via a covered walkway at the east end.

The north façades are primarily aluminum-framed windows between steel framing posts on a low brick wall and angle from the bottom out; the bricks are slightly corbeled (Figure 1C-15). Building 8's office wing that projects north from the main building also has aluminum-framed windows over a low brick wall but the façade is not angled (Figure 1C-16).

The south façades of Buildings 8 and 9 are tilt-up concrete walls with regular door openings leading to classroom and laboratory spaces (Figure 1C-17). Clerestory windows with aluminum louvers are above the covered walkway's roofline and partially obscured or infilled by HVAC equipment. The south façade of Building 8's office wing is stucco on one side of a hallway and brick on the other; the office wing does not have clerestory windows.

[3] Although the original 1954 plans for the Building 8 addition and Building 9 marked the north façade as "east elevation," for the consistency, this report considers the northwest-facing façade as plan north or north.

Figure 1C-16: North façade of Building 8 with its smaller office wing and Building 7's clock tower.

Figure 1C-17: Typical south façade of Building 8 and 9 with louvers covering clerestory windows and added HVAC equipment above the covered walkway.

Buildings 8 and 9's west façades and Building 9's east façade are tilt-up concrete walls with no openings. Building 8's east façade is brick at the office wing as well as at the main building where it connects with the office wing and is visible below the covered walkway and above the office wing (Figure 1C-16).

Windows, which are on the north façades of both building, Building 8's office wing east façade, and the clearstories at the south façades, are primarily aluminum framed with a mix of awnings, hoppers, and fixed. The north façades have continuous windows on a concrete sill; Building 8 has occasional inset door openings. The windows walls are three-lite or occasionally four-lite high where the lower pane is split horizontally windows (Figure 1C-18); Building 8's office wing windows are three-lite high with a center awning. The windows typically have clear glazing with tined film or are obscured in some sections. Building 8's office wing east façade has a group of four three-lite windows where a few have blue colored glazing. The south façade's clerestory windows, which are fixed or two high with an operable pane, remain but the glazing has been painted on the interior or removed for HVAC vents.

Figure 1C-18: Building 9's north façade with typical windows.

Doors are primary on the south façades and are half-glazed wood or metal with matching frames and non-original lever or knob handles. Building 8 has had three pairs of fully glazed, aluminum framed doors added to the north façade with glazed transom above. At the office wing, half-glazed wood doors lead to offices from the hallway (Figure 1C-18).

Figure 1C-19: Building 8's office wing and its open hallway. This area is under the covered walkway that connects Building 8 and Building 7 and is the vestibule of Building 7.

Interior

Building 8 has three classrooms, a storage room, and two X-ray rooms in the main building and five offices and a women's restroom in the office wing. Building 9 has five classrooms (Figure 1C-20 and Figure 1C-21). The classroom partition walls are tilt-up concrete walls while newer room partitions are drywall. One classroom has non-historic faux wood veneer. The ceilings have acoustical board and flooring is typically carpet. The offices in the office wing have panelized partitions.

Figure 1C-20: Typical classroom in Building 8 and 9, looking south.

Figure 1C-21: Typical classroom in Building 8 and 9, looking north.

Building 9b

The one-story, flat-roofed restroom building is south of the patio and aligns with the brick screen south of Building 9 (Figure 1C-22). It is brick on the south, east, and west façades, which wraps around to the north façade at the west end The north façade has painted plywood-clad walls and four wood doors with lower vents (Figure 1C-23). Two doors are for the Men's and Women's restrooms, and the other two lead to a storeroom and a mechanical room. A full-height vent with louvers is also on the façade. The storeroom has original shelving. The restrooms have a tile floor with a tile wainscot with painted gypsum ceilings using plastic toilet partitions.

Figure 1C-22: Building 9b's south facades with adjacent brick screen wall, looking northwest.

Figure 1C-23: Building 9b's north façade below covered walkway and across from Building 9.

Covered Walkway

A wood-framed covered walkway is attached to the plan south elevation of Buildings 8 and 9 and the north side of the restroom building (Bldg. 9b) (Figure 1C-24). It jogs at the east end to connect Building 7 and the office wing of Building 8 (Figure 1C-25). It breaks at the landscaped patio between Building 8 and 9. The covered walkway supports are metal posts on its south outer edges. Some wood posts are also seen and a bulletin board case is set between two posts. Board and batten is at the underside of the covered walkways while HVAC units and conduits are mounted on top. Low parapet walls screen some of the equipment.

Figure 1C-24: Covered walkway and Building 8's west end at the patio, looking east.

Figure 1C-25: Covered walkway jogs at the east end where it connects to Building 7 (right). Also note typical classroom doors and concrete walls along Building 8 and 9's south façade under the covered walkway.

Landscape

Building 7 is surrounded by turf on the plan east, south and west sides. A concrete paved courtyard space is located between its west wing and the south façade of Building 8 (Figure 1C-5). In the courtyard, planting strips are set immediately adjacent to Building 7's north façade with low-profile semi-tropical plantings and palms and other trees. Hardscape borders are minimal, except for a raised concrete curvilinear curb set at the planting strip at the east end of the courtyard (Figure 1C-10). Two rectilinear planting strips are at the north edge of the courtyard adjacent to the covered walkways of Building 8.

Buildings 8 and 9 have planting strips between their north facades and an adjacent paved walkway. The plantings are small semi-tropical shrubs, wildflowers, and a single palm near Building 8's east office wing (Figure 1C-15). The planting strip wraps around Building 8's east office wing to become a larger planting area with similar vegetation (Figure 1C-16). The north facades of Buildings 8 and 9 face the expansive lawn with clusters of palm trees toward the east that is one of the campus's main quads.

Between Buildings 8 and 9 is a landscaped patio, which serves as both a seating space and circulatory passage (Figure 1C-26 and Figure 1C-27). The stucco box eave along the north facades of Building 8 and 9 connect as a soffit across the north side of the patio with a wood and metal trellis projecting over the patio. The trellis is supported by two tapered metal I-beams. The patio has brick and concrete paving as well as brick planters and movable picnic tables. A narrow rectilinear planter strip extends two-thirds the length of Building 8's west façade. It features a mid-rise shrub that encloses a small eucalyptus tree set immediately adjacent to Building 8. An L-shaped brick planter extends from the east façade of Building 9. The north façade of Building 9 features a narrow planting strip that runs the length of the façade. The eastern two-thirds have shrubs, whereas the western third has gravel fill.

Figure 1C-26: Landscaped patio with brick and concrete paving and a low L-shaped brick planter between Buildings 8 and 9. Note the trellis, soffit, and support posts.

A brick screen wall is located west of Building 9B in line with the building's south façade. Between the brick wall and Building 9's covered walkway are two planting strips separated by a concrete slab with picnic tables and concrete trash containers. Both planting strips feature manicured shrubs, low-profile palms, mulch topsoil, and are connected by a narrow planting strip set between the brick wind wall and the concrete patio slab.

Figure 1C-27: Patio between Bldg. 8 (left) and Bldg. 9 (right) as part of campus circulation, looking southwest.

Figure 1C-28: Brick screen wall with concrete slab and planting strips south of Bldg. 9's south covered walkway, looking west.

Buildings 12, 13, 14 | Business Education Complex

The Business Education complex is a collection of three buildings in the center of the historic academic core. The complex is roughly L-shaped with covered walkways connecting the three buildings. A covered breezeway separates Building 12 to the east and Building 13 the west; the covered walkway extends into the breezeway and out south toward Building 14. The complex is on the diagonal orientation historically intended for classroom buildings.[4]

Figure 1C-29: Business Education breezeway between Bldg. 12 (left) and Bldg. 13 (right), looking south to Bldg. 14.

Bldg.	Year Completed	Original Name	Architect	Landscape Architect
12	1953	same	Neutra and Alexander	Eckbo, Royston & Williams
13	1953	same	Neutra and Alexander	Eckbo, Royston & Williams
14	1953	same	Neutra and Alexander	Eckbo, Royston & Williams
	c. 1977 addition	same	William Blurock & Partners	

[4] As per the original plans for the diagonally oriented buildings, this report considers the northeast-facing façade as plan north or north.

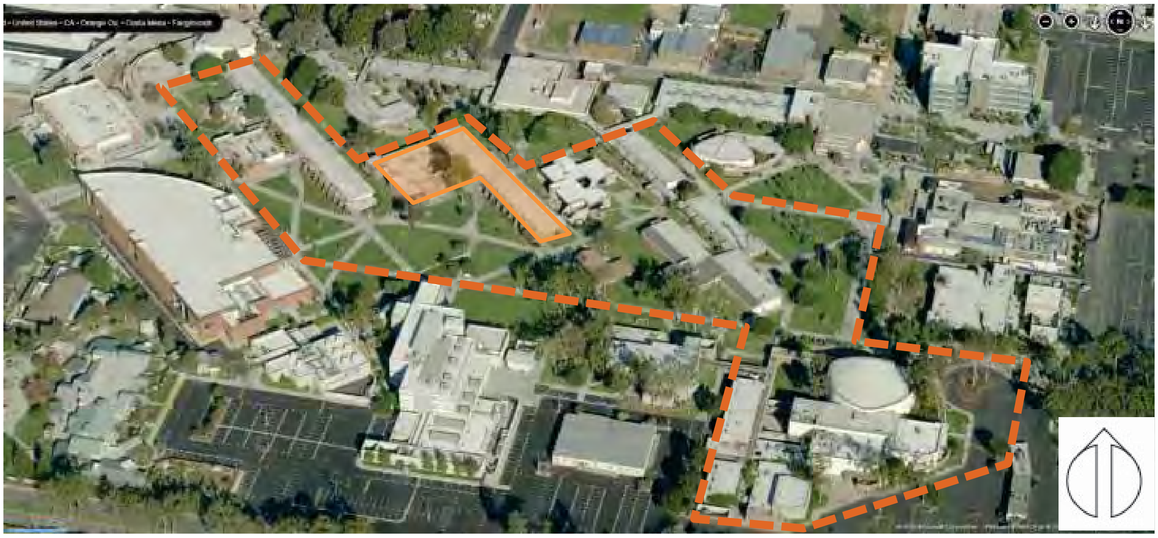

Figure 1C-30: OCC Historic District key plan with Business Education complex (Bldg. 12-14) highlighted. Source: Bing Maps, edited by Page & Turnbull, 2015.

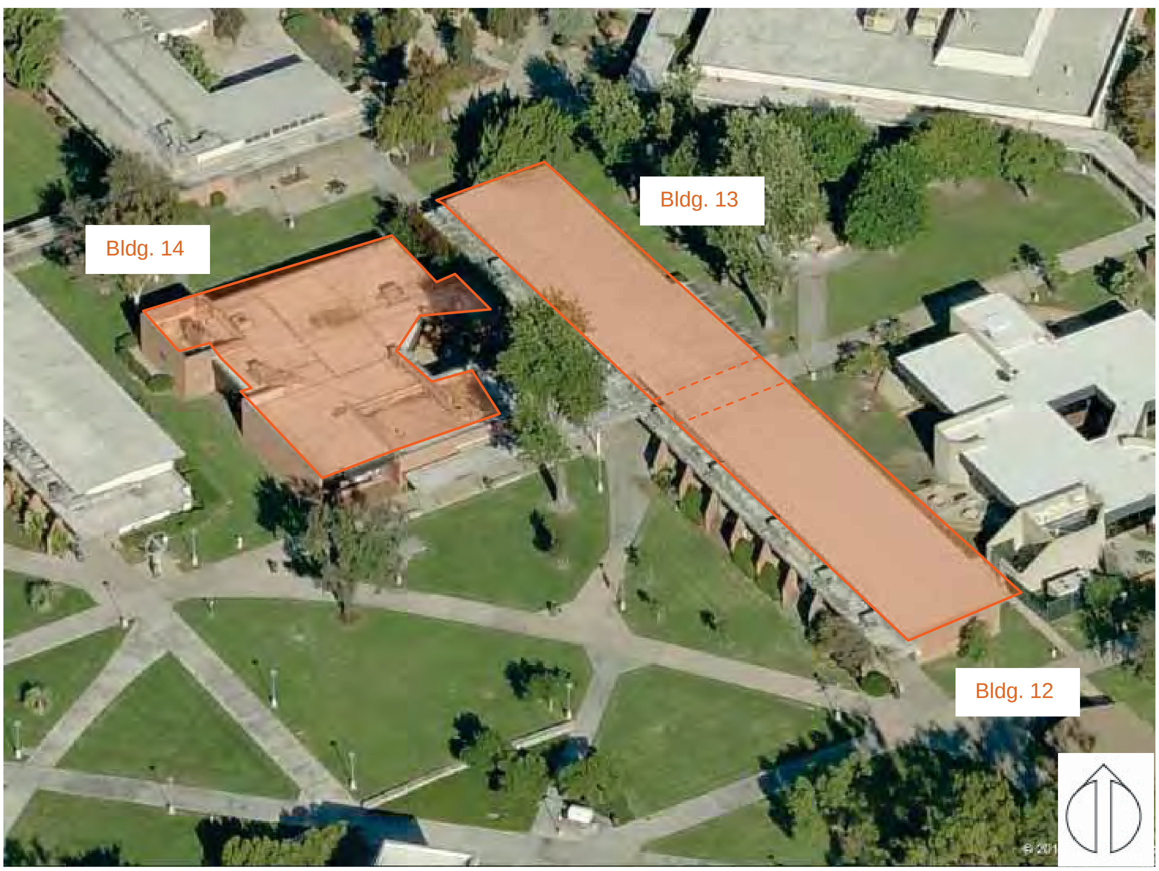

Figure 1C-31: Business Education complex with Buildings 12, 13 and 14. A covered breezeway separates Buildings 12 and 13. Source: Bing Maps, edited by Page & Turnbull, 2015.

Building 12 and 13

Figure 1C-32: The metal trellis on the north side of Building 13 at the breezeway.

Exterior

Buildings 12 and 13 are single-story, wood-framed and reinforced masonry buildings on caissons that are similar in size, materials, and construction. The buildings are generally rectangular in plan and share a membrane-covered side-gabled roof that covers the breezeway separating the two buildings (Figure 1C-29). Eaves with tongue and groove wood soffits overhang on both sides of the roof. Building 12 is longer than Building 13 and set slight more toward the north while the east end of Building 13 adjacent to the breezeway projects north. Aluminum metal sun shades or trellis supported by exposed wood rafters are at the north side of the breezeway and across Building 13's projecting east end (Figure 1C-32). The buildings share a covered walkway along their plan south facades that is supported by diagonal reinforced masonry wing walls at Building 12.

Brick as part of the reinforced masonry walls is the primary cladding material for Buildings 12 and 13. The principal façades (plan south) of both buildings are brick with a regular pattern of door openings to access individual classrooms and large steel tube columns from a seismic retrofit. There are also occasional projecting utility sheds. A band of near continuous aluminum-framed clerestory windows is above the covered walkway roofline and partially obscured or infilled by HVAC equipment (Figure 1C-33).

The plan north façades of Buildings 12 and 13 are aluminum-framed windows on a low brick wall interspersed with brick-clad shear walls (Figure 1C-34). The window and brick walls are angle from the bottom out with a slight corbeling to the bricks while the shear walls are not angled. The projecting east end of Building 13's north façade is primarily brick with a pair of window that are angled.

Figure 1C-33: South façade of Buildings 12 below covered walkway supported by brick wing walls. HVAC ducts are in the clerestory windows above the covered walkway.

The plan west façades of both buildings, and the plan east façade of Building 12 are brick with a tapered aluminum-clad section at the north end to transition to the north façade's angled wall (Figure 1C-39). The plan east façade of Building 13 is almost entirely glazed with full-height, wood-framed fixed windows and matching transoms between brick returns. A single wood door is offset at the center. At the base of the glazing are small louvers.

Windows are primarily aluminum throughout with a mix of awnings, hoppers, and fixed windows. The north façades have three-lite-high windows in pairs of fixed and awnings on precast concrete sills; the awnings are at the upper and lower lites, which are divided horizontally, and crank open as a set of four (Figure 1C-36). The typically have clear glazing with tined film. The south façades have hopper and fixed clerestory windows, and the glazing has been painted on the interior or removed for HVAC vents. Clerestory windows are also at the south side of breezeway above the intersecting covered walkway and are fixed.

Figure 1C-34: North façade of Buildings 12 and 13, looking southeast. Showing angled aluminum framed windows and brick walls with slightly corbeled sections.

Doors along both buildings' south façades are wood with wood frames. Classroom doors are half-glazed with non-original lever handles. Doors for the restrooms and a small mechanical room toward the east end of Building 13's south façade have wood doors. All doors have a painted plywood transom above and some have painted plywood paneling to the sides.

Figure 1C-35: East end of Building 12 with tapered aluminum section to transition from the north façade's angled wall. Brick-clad shear wall for seismic retrofitting seen here on the north façade.

Individual black metal lettering for “BUSINESS EDUCATION” are on Building 13 at the west façade and north façade’s projecting east end by the breezeway.

Figure 1C-36: Typical Building 12 and 13 windows with four awning windows connected and operated by one crank.

Interior

Building 12 has four large classrooms and Building 13 two large classrooms (Figure 1C-37). The interior partition walls are painted brick with a drywall separation in one of the classrooms of Building 13. Ceilings have a large steel beam down the center and acoustical board. A soffit faced with acoustical board runs around the east, west, and south walls below the clerestory windows. The flooring is primarily carpet. Wood veneer paneling with a built-in channel is below the windows along the north wall. A narrow, single-leaf, hinged wood shutter doors is at either end of the north windows. Other built-in wood-veneer cabinetry remains in some rooms.

Figure 1C-37: Typical classroom in Building 12 and 13. Note the shear wall at the right.

Building 14

Figure 1C-38: East façade of Building 14, looking west. Building 12 and 13 are to the right (north). The right brick façade is the original building before an addition (left) was added in the 1970s.

Building 14 is a one-story, brick-clad building located south of Building 13 and southwest of the where the covered walkways intersect (Figure 1C-38). The building is irregular in plan with a flat roof. Dark aluminum-framed window walls with dark glazing and a deep aluminum fascia are at some façades. At the east façade is a recessed display window with wood-clad walls. The brick facades at Building 14's northeast corner are part of the original building.

Covered Walkways

A wood-framed covered walkway runs the length of the plan south façade of Buildings 12 and 13 below the clearstories. An intersecting covered walkway extends from the breezeway toward the east façade of Building 14. The south side covered walkway has board and batten ceilings and supports on its south outer edges. Round metal posts with occasional reinforcing posts support the walkway in front of Building 13. Oblique angled reinforced masonry wing walls support the walkway in front of Building 12 (Figure 1C-39). HVAC equipment and ducts that run through and obscure the clerestory windows are on the south facade walkway roofs.

The covered walkway from the breezeway to Building 14 have round metal posts on both the east and west edges. The ceiling is tongue and groove wood.

Figure 1C-39: Building 12's south façade with clerestory windows concealed behind HVAC equipment on the covered walkway, which is supported by angled brick wing walls at this side The building's brick east façade is also visible.

Landscape

Expansive open space is south of Building 12, north of Building 13, and west of Building 14 (Figure 1C-31). The open space south of Building 12 is a turfed quad with concrete curved pathways in an X-pattern. A few trees are in the quad. Building 12's brick wing walls are along the quad's north border. The gaps between the wing walls feature shrubs or exposed topsoil.

North of Building 13 is an irregular-shaped courtyard created with the Computer Center (Bldg. 73) at the north. The courtyard is grass covered with two clusters of mature trees (Figure 1C-34). Two pathways cut through the courtyard and a circular concrete seating area is at the pathways' intersection. The open space east of Building 14 is a smaller space with a covered walkway and the Journalism Building (Bldg. 72) at the west edge and the Building 35 Math Wing at the south. It has lawn with a few trees and a pathway.

Between Building 13 and Building 14, just southwest of the breezeway is a brick and concrete paved patio space (Figure 1C-42). The patio has narrow irregularly shaped concrete edge planters with minimal groundcovers and low-profile shrubs and mulch top soil, bounding the patio space from both buildings. Aluminum picnic tables are present.

Figure 1C-40: Patio between Building 13 (right) and Building 14 (left and background) just southwest of the breezeway as noted by the intersection of covered walkways.

Also between Building 13 and 14 further west is a brick screen wall with a planting strip of mixed low-profile shrubs and small trees. Where the screen wall intersects with Building 14's north façade is vine plantings that cover the fascia as a green wall.

Figure 1C-41: Brick screen wall between Building 13 (left) and Building 14 (right) with planting strip, looking east.

Along both Building 12 and 13’s north façades are planting strips. At Building 12, the planting strip continues along the north façade beyond a concrete pad and is gravel filled with wood edging. The planting strip along Building 13’s north façade wraps around to the west façade and features a mixture of low-profile shrubs, semi-tropical ground cover, and exposed top soil. Adjacent to Building 13’s west façade are three trees and exposed top soil.

At the breezeway between Buildings 12 and 13 are two wood slat benches are set against Building 12 as well as a narrow brick planter at the north half of Building 13’s east façade that wraps around to its north façade. The brick planter wall extends approximately five feet before terminating next to the north façade’s planting strip.

Building 12 has a rectangular planting area at its east façade that separates the building from a major circulation intersection and that wraps around the building’s north façade (Figure 1C-35). A mixture of low shrubs, ground coverings, and a single tree are in this planting area with uncut rocks arranged in irregular patterns at the edges. An interstitial planting space of shrubs, small trees, exposed top soil, and ground coverings is set between Building 12 and the neighboring Special Services Building (Bldg. 10).

Buildings 2, 3, 4 | Theater and Music Complex

The Theater and Music complex, originally the Speech Arts Building, is composed of four unique buildings connected by covered walkways (Figure 1C-42). Most prominent is the Robert B. Moore Theater (Bldg. 2), which has a stand-alone ticket office building. Building 4, the original Music Building with a later addition is to the west while the New Music Building (Bldg. 3) is south and to the rear of the Theater (Bldg. 2). The complex is set at the ordinal directions at the southeast corner of the OCC campus and is surrounded by parking lots on east, south, and west. At the north, the complex faces into the campus interior.

Figure 1C-42: The Theater and Music complex with the Robert B. Moore Theater (Bldg. 2) and its outdoor lobby below the covered walkway. The Music Building (Bldg. 4) is out of frame to the right. Looking southeast.

Bldg.	Year Completed	Original Name	Architect	Landscape Architect
02	1955	Auditorium	Neutra and Alexander *Acoustical consultant: Vern Knudsen*	Eckbo, Royston & Williams
	1975 addition	Drama Workshop	William Blurock & Partners	Lang & Wood
	2006 addition	Scene Shop	MVE Architecture	
02b	1955	Ticket Office		
03	1976	New Music Building	William Blurock & Partners	Lang & Wood
04	1955	Music	Neutra and Alexander	Eckbo, Royston & Williams
	1965 addition	Music Addition	Robert E. Alexander & Associates	

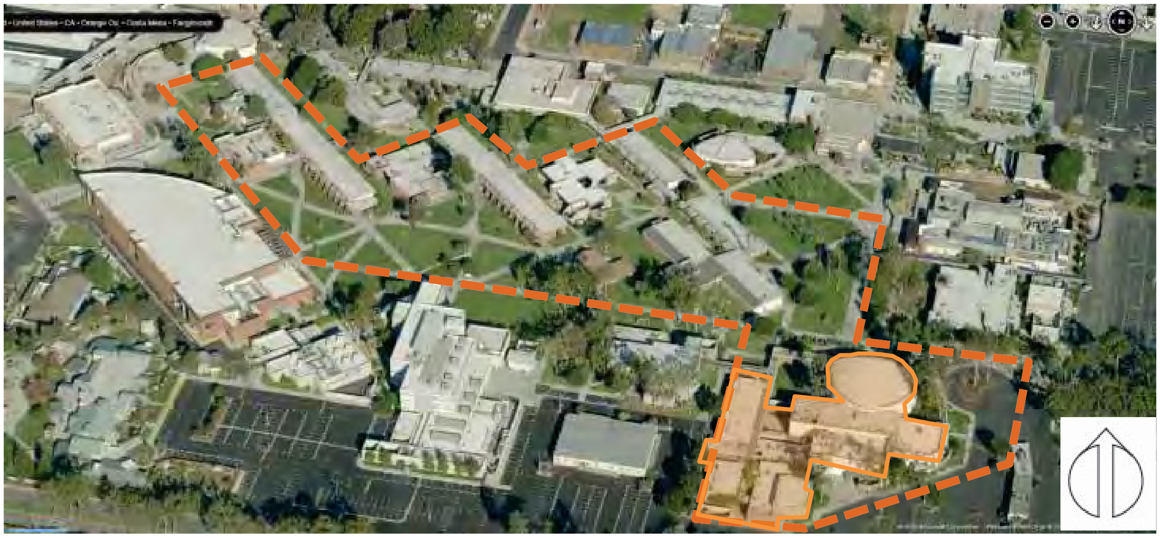

Figure 1C-43: OCC Historic District key plan with Theater and Music complex (Bldg. 2-4) highlighted. Source: Bing Maps, edited by Page & Turnbull, 2015.

Figure 1C-44: Theater and Music complex with Buildings 2, 3, and 4. Historic District's boundary is dashed above. Source: Bing Maps, edited by Page & Turnbull, 2015.

Building 2: Robert B. Moore Theater

Figure 1C-45: North façade of the Theater, showing the board formed curved concrete wall and tiered landscaping, looking south.

Exterior

Building 2 is composed of a series of one-story connected wings dominated by the tall Auditorium, Stage House, and Scene Shop wings. The tallest feature is the plectrum-shaped Robert B. Moore Theater auditorium at the primary north side of the building. The auditorium has a painted poured-in-place concrete exterior that is curved and textured (Figure 1C-44 and Figure 1C-45). The board-formed pattern is vertically oriented with narrowly set grooves that repeat throughout. The membrane-covered roof is curved along the north-south axis and there is a deep integrated copper gutter between the roof and the concrete parapet walls. The roof has internal downspouts that exit into an open concrete gutter at the edge of the building.

A soffit juts out from the north façade and connects with the covered walkway extending the length of the Building 2's north façade. A wooden panel screen is at the west end of the soffit. Below the soffit, the north façade wall of the auditorium is wood siding in a pattern matching the poured-in-place concrete and curving with the façade. Within the wood siding are four evenly spaced hidden double-door public entrances to the auditorium; only the far east set of doors have handles though the hinges visible marking the doors (Figure 1C-47).

Attached to the south of the auditorium is the Stage House (Figure 1C-47). It has a rectangular plan oriented east-west with matching painted and textured poured-in-place concrete walls. The roof is close to flat with a membrane cover, flashing over the wall heads, and an internal drain system. At the center of this roof there is a raised 'smoke tower' with a flat membrane covered roof overhanging on the south, stucco walls and closed vents on both sides. The southwest corner of the roof is lower to accommodate and screen mechanical equipment. This area is surrounded by a parapet wall to maintain a continuous roofline. There are no visible openings in this part of the building.

Figure 1C-46: North façade of the Theater, showing the wood siding with hidden doors and soffit above that connects with the covered walkway to create the outdoor lobby. Note the integrated strip of lighting in the covered walkway. Looking east.

Figure 1C-47: The Stage House south of the Theater Auditorium (left) is the rectangular mass at right. Note the overlapping walkways in the foreground as well as the later, c.1970s walkway to the Fine Arts Lecture Hall (Bldg. 5) at right foreground. Looking southeast.

Two low wedge-shaped wings are at the corners where the Auditorium and Stage House connect. These wings are brick clad with flat roofs. North of these wings are emergency exit double doors either side of the Auditorium within the concrete façade.

At the rear of the building, south of the Stage House is another rectangular wing also aligned east-west and with similar painted and textured poured-in-place concrete walls. Added in 1974 as the Drama Workshop, this wing houses a second performance space called the Drama Lab and a Small Lab (Figure 1C-46). The roof is close to flat with a membrane cover and parapet walls. At the southwest corner is a small triangular entrance hall and ticket office. One wall of the triangular massing is brick with dark aluminum doors while the other wall has three dark aluminum-framed fixed windows above an angled concrete base. A ribbed aluminum fascia is above the windows with an electronic marquee above the fascia. At the Drama Workshop's southeast corner is a brick service enclosure with a low canopy sheltering large sliding doors. The canopy and brick walls extend around the corner to conceal double doors in the Drama Workshop's east façade.

Figure 1C-48: Rear of the Moore Theater, which is the Drama Workshop addition from the 1970s. The triangular entrance to the second performance space is at left, as is Building 3, also from the 1970s. Looking north.

Attached at the east of the Stage House and Drama Workshop wings is the Scene Shop addition from 2006 (Figure 1C-50). The irregular plan wing has walls of panelized stucco with metal reveals. There are tall double doors on the south façade. On the east facade there is a tall roll-up door at the north end and a single door around the corner at the north façade. A lower wing is also at the north façade. Stretching between the east façade and the north façade's lower wing sheltering both openings is a metal fascia canopy supported on metal posts and a brick wall. A low curved brick wall screens mechanical equipment from view on the east facade.

At the Stage House's southwest corner is an attached L-shaped brick-clad wing original to Building 2's initial construction (Figure 1C-50). This wing is also attached to the Drama Workshop wing's west façade. The wing currently houses the costume shop as well as the men's and women's restroom serving the complex and accessed from the covered walkway. The wing has a flat membrane roof with wood fascia that is integrated into the covered walkway roofs with mechanical and venting equipment above. The wing primarily has aluminum-framed clerestory windows on its north and south façades. The south façade also has a pair of hollow-metal entry doors with a glazed transom that is adjacent to the triangular entrance hall of the Drama Workshop wing. Adjacent to the north façade of the wing, connecting between the Stage House and the wing, are a pair of hollow-metal doors with view lites and an opaque glazed transom above. Two full-height aluminum-framed fixed windows are next to the doors.

Attached to the northwest corner of the Stage House is a small one-story mechanical enclosure with brick and stucco walls and also attached to the covered walkway. A chain-link fenced enclosure for electrical equipment is also nearby.

Figure 1C-49: Scene Shop addition east of the Theater Building. The auditorium is at right. Looking west.

Figure 1C-50: Brick-clad L-shaped wing at the southwest corner of the Theater Building. Looking east.

Interior

Robert B. Moore Theater Auditorium walls are painted plaster with a geometric motif and wood veneer accents (Figure 1C-51). The flooring is linoleum below the seats and carpet in the aisles. The auditorium is raked and currently seats 916 with four aisles leading toward the stage, one from each entrances. At the north end of the auditorium above the public entrances is the projection booth and storage with stair access at either side. At each public entrance is a small vestibule with a pair of wood veneer doors angled north. The unadorned, rectangular proscenium frames a stage that extends over an area where the orchestra pit originally was, with metal stairs at each side providing stage access from the seating area; it is not clear if the orchestra pit remains below the stage extension. The ceiling has a series of coves in which lighting is hidden. The small wings behind the geometric wall motif on either side of the stage contain the make-up rooms, storage and office space.

The stage and back of house is in the Stage House wing, with the west end used for additional offices and labs (Figure 1C-52). The west end also includes a second story containing mechanical rooms and access to the space above the auditorium ceiling. A door in the west wall leads to the L-shaped wing. At the east end of the stage is an opening connecting to the Scene

Shop wing. The poured-in-place concrete east façade of the Stage House that was once the exterior is visible in the Scene Shop, which is primarily a large open space.

Figure 1C-51: Moore Theater interior.

Behind the stage is the Drama Workshop, which contains a Drama Lab and Small Lab. The Drama Lab is a second performance space with a sunken seating area in a tiered horseshoe configuration (Figure 1C-53). Its north wall was once the sliding doors that opened the Auditorium's stage to an outdoor amphitheater. The west end of the Drama Lab is a glazed mezzanine under which is the Small Lab. A small workshop space, the Small Lab has risers on the south end. The mezzanine, accessed by stairs down a hallway, has a large office space to the south and small rooms and storage to the north. Both the Drama Lab and the Small Lab have doors from the triangular vestibule entry at the wing's southwest corner, where a ticket box office is located. The two labs are also accessible from the main auditorium through the Scene Shop or the L-shaped wing.

Figure 1C-52: Moore Theater stage housed in the Stage House.

Figure 1C-53: Second performance space in the Drama Workshop wing with mezzanine at rear.

The L-shaped wing includes a corridor and green room as well as a costume workshop with a small storage room and laundry room. The men's and women's restroom are west of the costume workshop but only accessible from the exterior covered walkway.

Building 2B

Figure 1C-54: Building 2B at right and the Moore Theater (Bldg. 2) is at left. Note the integrated strip of lighting in the covered walkway connecting the two buildings. Looking west from circular drop-off driveway.

In front of the auditorium at the northeast corner is a small single-story standalone building that houses the ticket booth, office and restroom (Bldg. 2B) (Figure 1C-54). The flat-roof building is roughly rectangular in plan and has two wings. The original part of Building 2B is brick and stucco clad and shares the covered walkway with the Moore Theater. The east façade of the original wing faces a drop-off circle and has lettered signage for the theater as well as a bronze theater mask sculpture with a plaque: "'Masks' by Peterpaul Ott donated by Orange Coast College's Class of 1955."

An integrated cantilevered concrete bench is below the signage and sculpture. The ticket booth with a glazed window is at the south façade, marked by a perpendicular brick wall with "TICKETS" lettering (Figure 1C-55). The women's restroom is also here. To the north of the original wing is a stucco-clad addition that is slightly smaller and shorter (Figure 1C-56). The addition has the men's restroom and an office. Both are accessed in the northwest corner, which is notched with a canopy.

Figure 1C-55: Ticket window and perpendicular brick wall at Building 2B's south façade.

Figure 1C-56: North (left) and west (right) façade of Building 2B. Note the north half of the building is an addition with stucco cladding. The brick planter is part of the complex's landscaping.

Building 3: New Music Building

Building 3 is a standalone New Music Building completed in 1974 and constructed at the same time as the Drama Workshop addition to Building 2 (Figure 1C-57). It is considered part of the complex as it is connected by extended covered walkways to Buildings 2 and 4 that was constructed along with Building 3. The irregular plan building has two wings, one clad primarily in brick and the other in split-faced scored concrete masonry units. Its doors and windows are dark aluminum-framed with tinted glazing. The interior includes a music lab, instrument storage space, practice rooms, and mechanical rooms.

Figure 1C-57: Building 3's east façade with the rear Drama Workshop wing of Moore Theater (Bldg. 2) at right.

Building 4: Music Building

Exterior

Building 4 was the original Music Building with a 1964 addition to the south (Figure 1C-58). It is a rectangular, linear, wood framed and masonry building sited west of the Robert Moore Theater (Bldg. 2) and connected by covered walkways. The building is primarily one-story, with taller north and south ends flanking an off-center brick-clad section that is lower in height and which projects toward the west. A vertical unbonded joint at the center of the brick east and west elevations marks the division between the original Music Building (to the north) and later addition (to the south). The rest of the building is stucco-clad with no window openings. The wood-framed roofs of the taller north and south ends are slightly sloped to the west while the lower brick section has a flat roof with a membrane coating. The building rests on a concrete slab on grade with footings and foundation walls.

Figure 1C-58: South façade of Building 4 (left) and its east façade with door openings below the attached covered walkway.

Door openings with hollow-metal doors lead to individual classrooms along the east façade under the covered walkway. Areas of patched or different stucco is around the door openings, as well as in other patches on the east façade. Above the covered walkways is a door to a mechanical room at the north half of the building. Doors flanking the brick section each lead to a hall with individual practice rooms and/or faculty offices.

Figure 1C-59: West façade of Building 4 (left) with the brick-clad section centered.

The brick-clad section at the west façade is larger than that on the east façade and projects westward toward a parking lot (Figure 1C-59). Two exit doors are on this façade, with one in the brick section having an entry canopy. There are some vents on the west façade's second floor at both sides of the brick section and all with patched stucco around them.

The east and west facades have no openings. Attached to the north façade of the Music Building is a walled off area containing mechanical equipment. A brick, stand-alone equipment building is separated from Building 4's south façade by a paved walkway. Attached to the two-story part of the 1964 addition on the upper northern corner of the east façade and the upper west corner of the south façade there is attached individual lettering 'MUSIC'.

Interior

The Music Building (Bldg. 4) contains four large music classroom spaces. In the northern (original) half of the building are a guitar lab (Room 101) and recital room (Room 102) separated by a wedge-shaped storage area with a disabled access ramp to the top of the two rooms. These rooms are similar with tiered wood floors and a large wood-paneled back wall that curves to become a wood-paneled ceiling. The curved wall in Room 101 is original while it has been replaced with a similar but non-original wall in Room 102 (Figure 1C-60).

In the south (1964 addition) half, a large classroom (Room 106) space is at the building's southern end. It is a tall, double-high space with a flat, carpeted floor, an acoustical tile suspended ceiling, and painted walls with absorptive panels and pyramid diffusers above whiteboards. Next to it is an L-shaped piano lab (Room 105A) with a flat, carpeted floor, painted walls, and an acoustical tile suspended ceiling. Two small rooms are between the doors to Room 106 and Room 105A, each with its own door on the east façade. One is a mechanical space with access to the upper floor mechanic room. The other is a small classroom.

Figure 1C-60: Room 101 of Building 4 with original wood curved wall and ceiling.

In the brick-clad section are two sets of practice rooms and office lining hallways. A, solid brick wall divides the original building from the addition. The partition walls of the various rooms are painted drywall and covered masonry unit walls. There is an emergency exit at the end of each corridor to the back (west side) of the building.

Despite the apparent two stories at the north and south ends as seen from the exterior there is no second floor apart from the mechanical room at the north half. The height allows for raised ceilings in the classroom performance spaces.

Covered Walkways

The covered walkways have stucco ceiling finishes, metal posts, and concrete pavers. Covered walkways run east-west across the principal (north) façade of Building 2, ending where it overlaps with the end of a north-south covered walkway that is attached to and runs the length of the principal (east) façade of Building 4. Small perpendicular sections of covered walkway connect the north-south walkway at Building 4 to Building 2’s L-shaped wing at its southwest corner and to the entrances to Building 3. The north-south covered walkway along Building 4 has an integrated gutter system along its eastern edge.

The east-west walkway along Building 2’s front façade extends at its eastern end over stairs leading from the circular drop-off drive and has additional support of a brick wall as well as Building 2a. At its western end where it extends over the north-south covered walkway, there are also a set of stairs and a free-standing reinforced brick wall that is not attached to the walkway. A row of recessed florescent lights with transparent panels flushed with the stucco ceiling is along the walkway’s south edge lighting the walkway and the theater’s entries.

Landscape

The landscape along the primary (north) façade of Building 2 is the theater's outdoor lobby (Figure 1C-61). It has two large rectilinear terraces that span east-west. The top level terrace is adjacent to the theater entrances, is primarily covered by the covered walkway, and features strips of both smooth and rough aggregate concrete pavers (Figure 1C-62). The east end of the terrace extends between the box office annex (Bldg. 2B) and the north façade of the theater (Bldg. 2). Stairs and an access ramp at the eastern most end lead to a traffic circle.

Figure 1C-61: Outdoor lobby at Moore Theater's north side (Bldg. 2). Looking southeast.

The second, lower terrace has square rough aggregate concrete paving slabs (Figure 1C-63). This terrace is bounded by a series of plantings to form patio enclaves. The planters along the south side of the terrace feature brick masonry retaining walls, low-profile shrubs, and simple ground covers. These planters are at grade with the upper entrance terrace. The north planters are at grade with the secondary terrace and feature more elaborate plantings, including orange trees, wildflowers, and other small species of trees. Brick masonry retaining walls of these planters are set on the north, bordering the campus walkway. A wide set of stairs lead from this terrace down to the walkway.

The western end of the terrace extends into stairs, leading down to a perpendicular covered walkway. A wood-slat screening fence is set towards west end of the upper terrace and separates Building 2 from an expansive turf lawn that slopes to the south and west to reach grade. This lawn is irregular in shape, features trees, and is bounded by curved planters. These planters have brick masonry edging, low-profile shrubs, and a mulch top soil. Two Eucalyptus trees are set in a planter set between the lawn and the west façade of the Theater (Bldg. 2).

Figure 1C-62: Upper terrace of outdoor lobby adjacent to the theater's north public entrances (left). Looking southwest.

Figure 1C-63: Lower terrace of outdoor lobby with brick planters and exposed aggregate pavers. Looking west.

Figure 1C-64: West end of terrace with overlapping covered walkways and lawn to the south.

Figure 1C-65: East side of Moore Theater with disabled access ramp and lawn.

The east façade of Building 2 features irregularly shaped sections of turf lawn, the largest of which is bounded by an extensive planting strip that slopes from the entrance terrace level down to grade. It features mulch top soil, large trees, simple ground coverings, low-profile shrubs, wildflowers, and a concrete curvilinear retaining wall along the northern edge. This retaining wall defines the disabled access ramp leading from the upper terrace. The ramp is also bounded by a concrete edged planting strip that follows the ramps contours. Building 2's south façade is primarily paved walkways with brick strips, but narrow planting strips with low-profile shrubs are set against the façade and a curvilinear brick masonry mechanical screening wall.

Between Building 2's L-shaped brick wing and the Music Building (Bldg. 4) is an open concrete paved patio space and rectilinear planting strips next to the brick wing with semi-tropical plantings of mixed-profiles bounding separating hardscape elements from the building.

Building 4's west and south façade feature a series of rectilinear planting strips. At the base of the building is a strip of gravel with wood edging. Between the gravel strip and the surrounding parking lots and walkways are a mix of low-rise shrubs, mulch top cover, and some semi-tropical plantings. Large Eucalyptus trips are spaced regularly within the planting strips along the west façade.

Buildings 35, 36, 37, 38, 39 | Math and Planetarium Complex

The Math and Planetarium complex, originally the Science Building, is a collection of five buildings located towards the western end of the Historic District. Covered walkways connect the buildings, with Buildings 35 and 36 on the north side and Building 37, 38, and 39 on the south side. A covered breezeway separates Building 35 to the east and Building 36 the west; the covered walkway extends into the breezeway and out south toward Building 37. The complex is on the diagonal orientation intended for the classroom buildings.[5]

Figure 1C-66: East façades of Building 35 (right) and 37 (left background), looking west. The armillary sphere sculpture is in the foreground.

Bldg.	Year Completed	Original Name	Architect	Landscape Architect
35	1957	Science Bldg.	Neutra and Alexander	Eckbo, Royston & Williams
36	1957	Science Bldg.	Neutra and Alexander	Eckbo, Royston & Williams
	1960 addition	Science Bldg. Addition	Pleger, Blurock, Hougan, Ellerbroek	Eckbo, Royston & Williams
37	1957	Science Bldg.	Neutra and Alexander	Eckbo, Royston & Williams
38	1960	Science Bldg. Addition	Pleger, Blurock, Hougan, Ellerbroek	

[5] As per the original plans for the diagonally oriented buildings, this report considers the northeast-facing façade as plan north or north.

39	1957	Planetarium	Neutra and Alexander	Eckbo, Royston & Williams
	1972 addition		William Blurock & Partners	
	1994 addition		Hill Partnership	

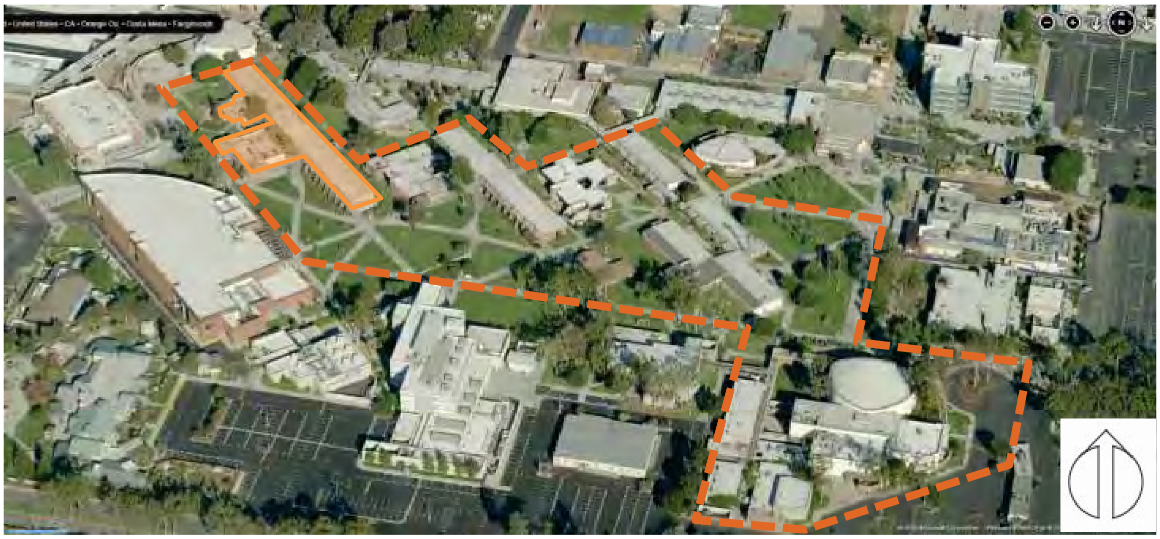

Figure 1C-67: OCC Historic District key plan with Math and Planetarium complex (Bldgs. 35-39) highlighted. Source: Bing Maps, edited by Page & Turnbull, 2015.

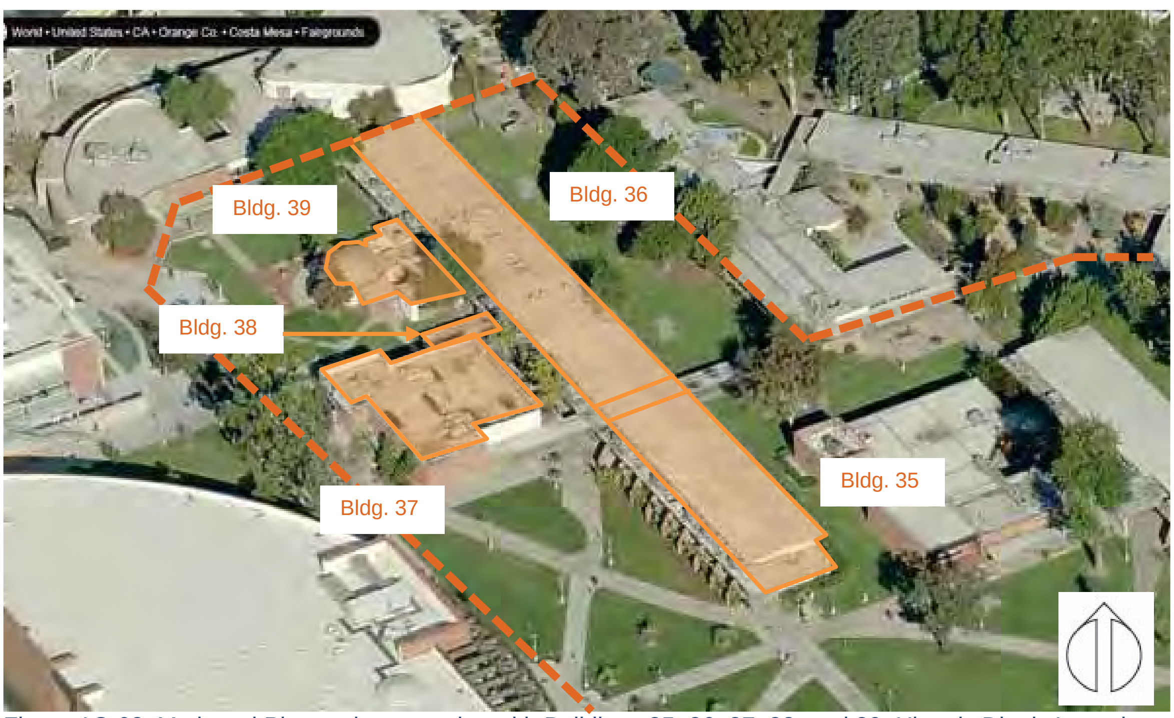

Figure 1C-68: Math and Planetarium complex with Buildings 35, 36, 37, 38, and 39. Historic District's north and west boundaries are dashed above. Source: Bing Maps, edited by Page & Turnbull, 2015.

Buildings 35 and 36: Math Wings

Figure 1C-69: Building 36s west end wall with the tapered aluminum section transitioning to the building's angled north glazed wall.

Exterior

Buildings 35 and 36 are single-story, wood-framed buildings on caissons that are similar in design, materials, and construction (Figure 1C-69). The two rectangular buildings share a membrane-covered side-gabled roof that covers the breezeway separating the two buildings (Figure 1C-72). Building 36, on the west side of the covered breezeway, is longer than Building 35. Eaves with tongue and groove wood soffits overhang on both sides of the roof. The buildings share a covered walkway along their plan south facades that is supported by diagonal reinforced masonry wing walls at Building 35. A one-story wing is at the east end of Building 35 that is lower than the main building and has a flat roof integrated with the walkway canopy which wraps around to the plan east side of the addition.

The buildings are clad primarily in stucco. The principal façades (plan south) of both buildings are stucco with occasional door openings to access individual classrooms (Figure 1C-70). A freestanding brick wall with added attachments is in front of Building 36 in the covered walkway. A band of clerestory windows and stucco panels is above the covered walkway roofline and partially obscured or infilled by HVAC equipment.

The north façades of Buildings 35 and 36 are aluminum-framed windows on a low brick wall. The window wall angles from the bottom out while the brick wall is perpendicular to the ground.

Toward the west end of Building 36 are two stucco panels in place of two window bays (Figure 1C-71). The north façade of Building 35's end wing is stucco with no openings.

Figure 1C-70: Typical south façade of Building 36 showing the clerestory windows, stucco panels and HVAC units mounted on the walkway canopy.

Figure 1C-71: North façade of Building 36 with two stucco panels in the glazed wall marking the later addition.

Both buildings' east and west façades are stucco with no openings (Figure 1C-69). Tapered aluminum-clad section is at the north end to transition to the north façade's angled window wall. The east façade of Building 35's end wing is clad in painted plywood with a low stucco wall below three window openings (Figure 1C-66). A single-leaf wood door is at the north end.

Windows are primarily aluminum throughout. The north façades have alternating pairs of windows: one set that are two-lite fixed glazing with a taller upper lite and one set of four-lite awning and fixed windows. The windows are on concrete sills and typically have clear glazing. The south façades have fixed and jalousie clerestory windows. The fixed glazing has been painted on the interior and some jalousie windows removed for HVAC equipment. Clerestory windows are also at the south side of the breezeway above the intersecting covered walkway and are fixed. Three vinyl sliding windows are on Building 35's end wing east façade.

Doors along both buildings' south façades are wood with wood frames. Classroom doors have vertical single-lite view windows of tempered glass and non-original lever handles. Other doors for offices and labs have no glazing. Painted plywood cladding surrounds some doorways (Figure 1C-73). Individual black metal lettering for "MATH WING" are on Building 35's east façade and Building 36's west façade; the lettering is different sizes at each façade.

Figure 1C-72: Breezeway between Buildings 35 (left) and 36 (right) towards Building 37. Clerestory windows are present between the walkway canopy and breezeway roof on south façade.

Figure 1C-73: Typical plywood surrounds around some doorways in Building 35 and 36. Note the wide board and batten ceiling of the covered walkway.

Interior

Buildings 35 and 36 house classroom and office spaces (Figure 1C-74). Building 35 has four classrooms with an office and prep/ lab storage area between the two west classrooms. Original wood veneer built-in cabinetry remains in one prep/lab storage area (Figure 1C-75). Two offices and storage are in the building's east end wing. Building 36 has six classrooms with office and lab storage areas between and shared by pairs of classrooms. The classroom interiors have plaster walls and carpet flooring. There is a structural I beam running continuously down the roofline at the center of both buildings. Acoustical tiles are adhered to the ceilings.

Figure 1C-74: Typical classroom in Building 35 and 36. Note the original internal doors and I beam and attached acoustical board tiles at the ceiling.

Figure 1C-75: Room 150 Building 35. Prep/storage area between classrooms with intact wood veneer paneling.

Building 37: Reprographics

Exterior

Building 37 is a tall one-story, reinforced masonry and wood-framed building on caissons (Figure 1C-76). It is roughly square in plan structure and clad primarily in brick, stucco and painted plywood. The building has a flat roof with parapet wall, accessible as an observation deck from exterior stairs on the east façade. The roof and inner parapet walls have a membrane coating.

Figure 1C-76: South façade of Building 37. At the right is the east façade with exterior stairs to the roof-top observation deck.

The south façade is two volumes and primarily brick. The east volume has a band of aluminum-framed windows behind aluminum louvers and a stucco panel above. The west volume has a canopy at a roll-up door and a fabric awning above a pay telephone. The north façade is stucco-clad with the upper half of the façade set back (Figure 1C-77). There are two doors and a band of vents leading to a mechanical room.

Figure 1C-77: Building 37's north façade along the covered walkway.

The east façade has two volumes, with the south volume clad in brick and the north volume in stucco (Figure 1C-78). The brick volume has a set of concrete stairs with metal railings leading up to the roof observation deck secured by a metal gate. An extended brick wall partially screens the exterior stair. Below the stairs and concealed by the extended brick wall is a set of concrete stairs leading to an interior classroom. At the stucco volume, the covered walkway extending from the breezeway bisects the façade with door and window opening below the walkway canopy. Toward the north end is the door and clerestory windows for the men's restroom and toward the south is a band of windows above a stucco wall and an entry door surrounded by painted plywood. In the brick volume's return is a door with a wide, full-height sidelite.

Figure 1C-78: East façade of Building 37 with covered walkway connecting to the breezeway between Building 35 and 36, looking west.

Similar to the east façade, the west façade also has two volumes with the south volume clad in brick and the north half in stucco (Figure 1C-79). A covered walkway extends perpendicularly from Buildings 35 and 36's south covered walkway and bisects the stucco volume (Figure 1C-85). Under the covered walkway is a band of windows as well as the door and clerestory windows for the women's restroom. Next to the band of windows is painted plywood cladding around two doors to the south; a third door surrounded by plywood is in the return of the brick volume.

The windows on the east and west facades are fixed wood framed windows. The windows on the south façade are aluminum framed, set behind louvres (Figure 1C-80). All the doors are wood with vertical side glazing in the upper half except for the restroom doors which have a lower vent and no glazing.

Lettering attached to the plan west brick façade says 'GEORGE HOAG FAMILY FOUNDATION.' Lettering attached to the plan east painted plywood says 'REPROGRAPHICS.'

Figure 1C-79: West façade of Building 37 with Building 38 at the left.

Figure 1C-80: West (left) and south (right) façade of Building 37. Note the aluminum louvers screening clerestory windows on the south façade. The stucco south façade of Building 38 is also visible at the left.

Interior

The Reprographics Building (Bldg. 37) houses two classrooms in the southeast and southwest corners of the building with a service room between. The classrooms and office have painted brick walls, suspended acoustical tile ceilings and carpeted floors. In the classroom in the plan southeast corner of the building, steps lead up to an external exit (below the exterior stair on the east façade) that remains from when the classroom had a tiered floor (Figure 1C-81). The classroom at the southwest corner has an at-grade exterior entry door and an attached office. The suspended ceiling in the room hides the clerestory louvered windows on the south façade.

Figure 1C-81: Southeast classroom of Building 37 with stairs leading to the east exit below the exterior stairs.

At the center of the building there are two large reprographics rooms connected by a service room with partial glazing on both sides (Figure 1C-82 and Figure 1C-83). These rooms have painted walls, carpeted flooring, and suspended acoustical tile ceilings. Exterior doors access each of the space from the east and west.

The service room between the classrooms has an exposed concrete slab floor, brick walls, and has external access from roller door on the south façade. It retains several areas of original wood veneer finishes including book-match paneling, fire hose housing, and an integrated built-in cabinetry. At the northeast and northwest corners of the building are the men’s and women’s restrooms that serve the complex.

Figure 1C-82: A large, open space reprographic area in Building 37.

Figure 1C-83: Glazed service room between the two reprographic areas in Building 37.

Building 38

Building 38 is a small one-story, rectangular plan building with a flat roof (Figure 1C-84). It is across covered walkways from the south façade of Building 36 and the west façade of Building 37. The building has stucco finished walls with three wood doors on the east façade leading into individual offices (Figure 1C-85). The west façade has six aluminum-framed sliding windows above a stucco wall. Its north and south facades are stucco with no openings.

Figure 1C-84: View along Buildings 35 and 36's south covered walkway facing east with Buildings 38's stucco north façade and glazed west façade. Just visible in the background is the north façade of Building 37.

Figure 1C-85: Building 37's west façade along the covered walkway with door to the southeast classroom at the background. Building 38's east façade is at the right. The walkway with the tongue-and-groove ceiling is perpendicular of Building 35 and 36's south façade walkway.

Building 39: Planetarium

The Planetarium (Bldg. 39), across the covered walkway from Building 36, is irregular in plan and composed of two main wings: a round concrete section that is a planetarium/classroom, and a series of one-story rectangular volumes that surround the domed section on the north and east (Figure 1C-86). As viewed from the covered walkway, Building 39 is a stucco-clad wall with a chair-rail height reveal and one painted brick section.

Figure 1C-86: Planetarium (Bldg. 39) at left with Building 36 in the background and Building 38 to the right. The west façade of Building 37 is at the right edge.

Exterior

The circular domed wing is toward the south. It has poured-in-place concrete walls with a ribbed texture created by tongue-and-grove board forms. The concrete dome clad in copper panels is setback from the circular building. Around the edge of the dome is a narrow flat roof with a membrane cover and internal drainage toward the north. Squared downspouts are attached to the concrete walls toward the south. There are no external entrances or fenestration on this part of the building.

The one-story section is comprised of several additions with flat membrane-covered roofs. Only two sections are attached to the domed planetarium. To the north is a narrow, rectangular wing that is part of the original construction. It is brick clad on the west and north (at the covered walkway) and stucco at the east façade facing an interior courtyard. The only opening is on the painted brick north façade with a projecting door that is the main entrance into the planetarium classroom from the covered walkway (Figure 1C-87).

Attached to the east of the planetarium is a mostly square wing clad in red brick on its east and south façades. Its west façade in the interior courtyard is stucco (Figure 1C-88). The only opening is a door on the east façade as a secondary entry for the planetarium/ classroom. This façade also has attached lettering at high level for ‘PLANETARIUM’.

Figure 1C-87: North façade of the Planetarium (Bldg. 39) below the covered walkway.

Figure 1C-88: Planetarium (Bldg. 39) viewed from the east. Note the east massing and the east façade of the L-shaped wing.

Connecting the attached north and east wings is an L-shaped wing that creates a small internal courtyard. This wing has a flat roof with membrane cover and deep overhangs into the courtyard. The walls have a stucco finish on the north façade along the covered walkway (west of the brick north façade of the planetarium entry) as well as at the south façade and in the facades of the interior courtyard. Its east façade is stucco with a band of dark aluminum clerestory windows above a red brick wall. There are two entrance doors on the north façade below the covered walkway. Within the courtyard there are two doors, a wood door on the north side and a metal roll-up door on the east side.

A small rectangular addition is attached to the west of the north attached volume. Its stucco-clad north façade with the reveal is west of the brick entryway to the planetarium under the covered walkway. It has a flat roof, higher than the other flat-roofed structures of Building 39, and stucco walls. There is one door entry on the north elevation and a skylight in the center of the roof. A wood board fence encloses a service yard between this addition and the circular planetarium (Figure 1C-89).

Figure 1C-89: Planetarium's west façade, with the mechanical room addition to the left and the enclosed service area in center.

Interior

The planetarium classroom in the circular domed wing building of Building 39 has painted paneled perforated wood walls and the inside of the dome is plastered. The floor is a concrete slab with carpet cover and a raised tier around the edge at the back of the classroom. Around the base of the dome there is a ledge for concealed lighting and electric cabling. There are two original wood doors leading to the main (north) and secondary (east) entries.

The rectangular volume attached to the north of the planetarium classroom provides access along a corridor from the door in the covered walkway. The corridor is brick clad matching the exterior walls, with the curved concrete textured wall of the planetarium at the south end. There is an internal storage room in this corridor. Original built-ins, including a display case and wood-paneled duct covers, are present. The transom above the north entry door is wood veneer paneling.

The rectangular volume attached to the east of the planetarium classroom provides exit access along a corridor from a door on the east façade. There is also an internal storage room in this space and the curved concrete external wall of the planetarium classroom is also visible.

Figure 1C-90: Planetarium Classroom Interior, Building 39.

The L-plan structure has two laboratory spaces connected by north-south double glass doors. Both rooms have a tile wainscot with gloss painted upper walls and ceiling and a tile floor. This room is accessed by two doors, one into each lab space, to the north side from the covered walkway. There is also access to the courtyard from each room, one wood door and one metal roll-up door.

The small rectangular wing to the north of the planetarium's entry corridor is a mechanical room with a concrete slab floor, painted walls and ceiling, and a center skylight. It has an external access door to the north leading to the covered walkway.

Covered Walkways

A wood-framed covered walkway is between Building 35 and 36 at the south and Buildings 37, 38, and 39 at the north. The covered walkway is supported by rounded metal posts toward the west (between Bldgs. 36, 37, 38, and 39) and oblique angled brick wing walls at the east in front of Building 35. The ceiling is wide board and batten. HVAC equipment and ducts that run through and obscure Building 35 and 36's the clerestory windows are on the walkway's roof.

Two covered walkways are perpendicular to the above. One intersects the breezeway between Buildings 35 and 36 and extends along the east façade of Building 37. Clerestory windows are between the canopy and the breezeway roof. The other extends along Building 37's west façade from where the stand-alone brick wall is in front of Building 36. The ceilings of these covered walkways are tongue-and-groove wood.

A later covered walkway extends north from the breezeway between Buildings 35 and 36.

Figure 1C-91: Intersecting covered walkway in breezeway. Note the different ceiling treatments and the clerestory windows.

Figure 1C-92: Covered walkway along the south façade of Building 36 looking west. Note the intersecting roof at the brick wall extending south along Bldg. 37's (left) west façade.

Landscape

Open space inscribed by buildings is to the southeast, north, and southwest of the complex. At the southeast is a rectangular, turf quad with Building 35 and its oblique brick wing walls at the northern edge and Building 37 at the western edge. The gaps between the wing walls feature low-profile palms, birds of paradise, and mulch top soil. The quad is crisscrossed with pathways in an X-pattern and a few small new palm trees have been added. A patio space is at the northwest corner that opens up from the breezeway and covered walkways at the intersection of Buildings 35, 36, and 37. Set in the center of the patio space is a series of circular concrete paving, indicative of a planter that was original to the space. Currently aluminum picnic tables are in the space (Figure 1C-93).

Figure 1C-93: Expansive quad south of Building 35 (with brick wing walls) with X-pattern walkways. Note the patio area between Building 37 (left) and Building 35 with circular concrete paving.

North of Buildings 35 and 36 are grassy courtyards between buildings. At Building 35, the courtyard is less expansive with Building 14's large addition occupying much of the space. The lawn extends around Building 35's east façade to the armillary sphere sculpture and the two wood benches at the set around the sculpture. A long, rectangular expanse is between Building 36 and the Journalism Building (Bldg. 72) with a few mature trees (Figure 1C-94). A narrow planting strip is at the base of both Building 35 and 36's north facades with low-profile shrubs, aloe plants, other succulents, exposed top soil and a single large tree at Building 36 near the shared breezeway. Further west of Building 35 is a large open quad between the new Library (Bldg. 182) and Building 12 of Business Education with crisscrossing X-pattern pathways.

Figure 1C-94: Grassy courtyard between Building 36 (right) and the Journalism Building (Bldg. 72) at left, looking east.

Figure 1C-95: Open space surrounding the Planetarium (Bldg. 39) with the Reprographic Building (Bldg. 37) at right, looking southeast.

At the complex's southwest corner is open space with Building 36 at the north, Building 37 at the east, the Science Hall (Bldg. 40) and Math Lecture Hall (Bldg. 41) at the west (outside the Historic District boundaries) and the Lewis Center for Applied Sciences (Bldg. 42) at the south (also outside the Historic District). The Planetarium (Bldg. 39) extends into the open space, which is a mix of lawns, paved patios, and circulation paths (Figure 1C-95). West of the Planetarium is a large lawn between it and the Science Hall (Bldg. 40) and Math Lecture Hall (Bldg. 41); a mature tree is in the lawn. East of the Planetarium is a small lawn between it and Building 38; a mature tree is here near Building 36's covered walkway.

Around the Planetarium's southwest quadrant is a patio that has a quarter-circle concrete paving following the contours of the Planetarium's curved façade. This mimics a reflecting pool that was part of the original landscape, but has since been removed. Around the concrete is brick paving. Concrete and wood benches and aluminum picnic tables are in this patio area. Further south are lawns and a network of walkways bounded by low concrete walls extend through the lawns.

Building 37's rear (south) façade faces onto a major axial pathway. An irregularly shaped planting strip is toward the east end with low-profile shrubs, simple ground covering, and two medium-profile trees. The building's north façade is defined by the covered walkway shared with Building 36's south façade. Small rectilinear gravel-filled strips are set between the covered walkway and the north façade of Building 37, which are separated by extended walkways to entrances.

Building 93 | Swimming Pool complex

The Swimming Pool complex (Bldg. 93) is at the northeast corner of the campus in the athletics area (Figure 1C-96). There are two swimming pools oriented north-south with concrete bleachers on the west side of the pool facing east. Below the bleachers is the mechanical room for the pool filters and equipment.

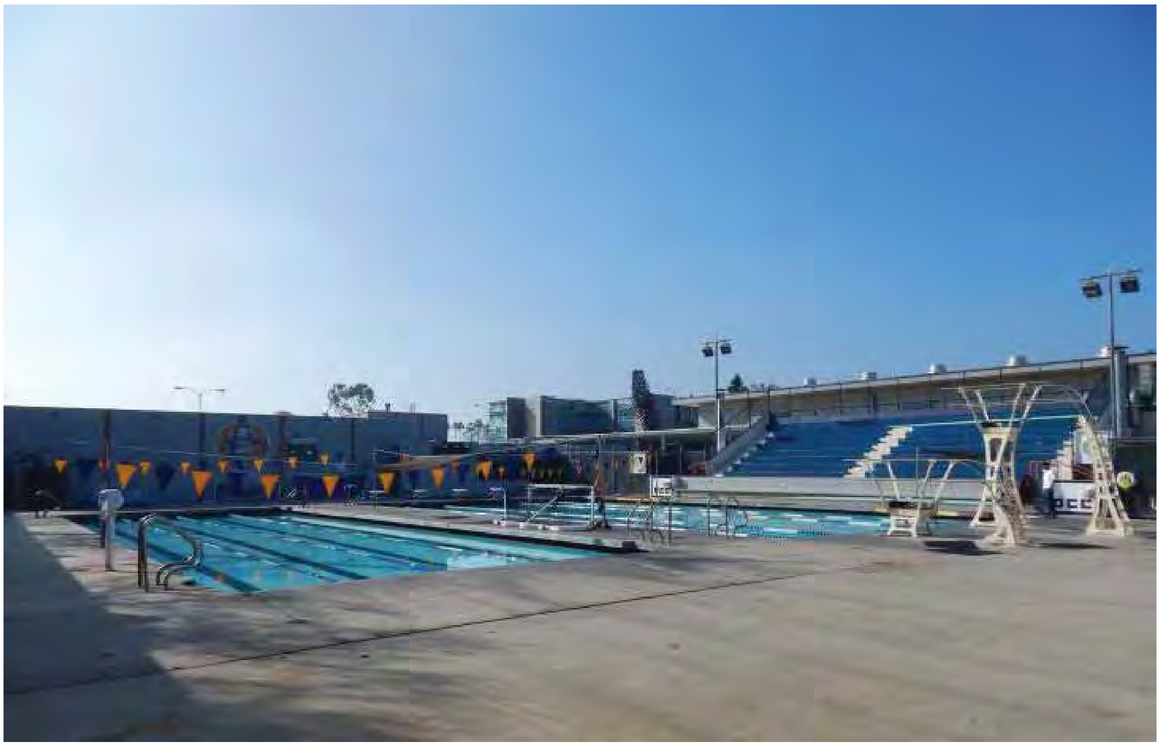

Figure 1C-96: Swimming Pool complex with the two pools in the foreground and bleachers to the back right, looking southwest.

Bldg.	Year Completed	Original Name	Architect	Landscape Architect
93	1954	Swimming Pools	Neutra and Alexander	Eckbo, Royston & Williams

Swimming Pools

The two pools are equal in length, approximately 75-feet long. The east swimming pool is the smaller of the two pools. It is narrower at about 24 feet wide and shallower at three and a half to four feet deep across its length. The west swimming pool is wider at approximately 44 feet wide. It is six feet at its shallow end toward the south and about 12-feet deep at its north end for diving.

Figure 1C-97: OCC Historic District key plan with the discontiguous Swimming Pool (Bldg. 93) highlighted. Source: Bing Maps, edited by Page & Turnbull, 2015.

Figure 1C-98: Swimming Pool complex (Bldg. 93) surrounding by the Gymnasium (91) to the west, Men's Locker Room (Bldg. 96) to the north and Women's Locker Room (Bldg. 93) to the south. Source: Bing Maps, edited by Page & Turnbull, 2015.

The pools are poured concrete bottoms with a recent plaster finish. They have tiled edges as well as black tile lane lines at the bottom and targets at pool ends. Both pools have deep integrated gutters at all sides below the non-original concrete paving. The smaller east pool has four lanes while the larger west pool has six lanes. Two diving boards of different heights are at the north end of the larger west pool, with smaller starting platforms at the south end. The metal diving boards replaced the original concrete diving boards during a 1992 renovation.

The swimming pool area is bounded on its north and south sides by the Men's (Bldg. 96) and Women's (Bldg. 92) Locker Rooms. At its east side is a tall brick wall with an integrated concrete bench marking the campus boundary along Fairview. At the west end is a concrete masonry unit (CMU) low wall with an integrated concrete bench (Figure 1C-99). At each end of the CMU wall is a tiled pony wall with a drinking fountain and black tiles forming "OCC" lettering. Chain-link fencing and gates encloses the pool area at the west end.

Figure 1C-99: Pool bleachers with CMU wall at its base, looking northwest.

Figure 1C-100: Sculptural concrete pier in the mechanical room below the bleachers.

Bleachers

The concrete bleachers are west of the larger pool behind the CMU wall (Figure 1C-99). It is poured-in-place concrete with a smooth finish and some painted areas. The concrete seating rows are topped with plastic bench seats. There are three stair aisles, one each at the north and south end and one in the middle. Wood board fencing with a metal top rail are at the north and south ends of the bleachers topped with chain link fencing, which also run along the top of the bleachers. Side stairs at the north and south ends with square metal railing provides access to the bleachers.

Three large sculptural concrete piers support the upper part of the bleachers and create space for mechanical and pool equipment below the bleachers (Figure 1C-100). There is an upper and lower levels mechanical space separated by chain link fencing. The underside of the bleachers and the concrete piers have a board-form finish showing the wood grain of the forms. Large metal exhaust pipes rise to the north and south of the bleachers.

The stucco-clad rear wall of the bleachers encloses the mechanical spaces and creates a solid wall along the covered walkway shared with the Gymnasium (Bldg. 91). A pair of large doors are along this blank wall to access the mechanical spaces.

Building 105 & 110 | Stadium and Field House

The LeBard Stadium (Bldg. 105) and Field House (Bldg. 110) are in the athletic section of OCC campus in the northeast corner. The Field House serves the Stadium and is located at its southern end. The Track is east of the Stadium and a Fitness Complex is to the north. West of the Stadium is the Adams parking lot. South of the Stadium and Field House is an open lot on which a new classroom building is under construction.

Figure 1C-101: LeBard Stadium with below grade field, east (left) and west (right) bleachers, looking south toward the Field House.

Bldg.	Year Completed	Original Name	Architect	Landscape Architect
105	1955	Stadium	Neutra and Alexander	Eckbo, Royston & Williams
110	1955	Field House	Neutra and Alexander	Eckbo, Royston & Williams

Figure 1C-102: OCC Historic District key plan with the discontiguous Stadium and Field House (Bldgs. 105 and 110) highlighted. Source: Bing Maps, edited by Page & Turnbull, 2015.

Figure 1C-103: LeBard Stadium (Bldg. 105) and Field House (Bldg.110). Source: Bing Maps, edited by Page & Turnbull, 2015.

Building 105: LeBard Stadium

Oriented north-south, the Stadium consists of a below-grade football field with berms to the east and west in to which concrete bleachers are built; the east berm's east side also supports smaller bleachers for the track to the east (Figure 1C-101). The bleachers curve slightly to give the Stadium a bowl effect and improve sight lines. Low, poured-in-place concrete walls create planters and a southern end to the Stadium that is broken for a vehicular access ramp from grade to the field (Figure 1C-105). The north end has a low berm with two sets of concrete stairs. Disabled access ramps with concrete masonry unit walls extend to the field at the north and south ends.

The east (home stand) bleachers are wider with five seating sections divided by four stair aisles as well as end aisles (Figure 1C-104). The west (visitor) bleachers are smaller with three sections divided by two stair aisles and aisles at each end. The north and south sections have a cross aisle not quite half way up. Metal pipe hand rails are centered along each stair aisle. The ends of the bleachers have chain link fencing while the top is a concrete wall. A concrete wall separates the bleachers from the lower field. The bleachers have aluminum metal bench seats.

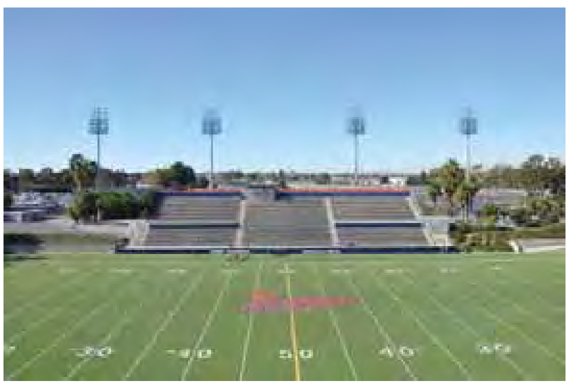

Figure 1C-104: East "Home" bleachers extending up into the berm with light stations in the background, looking east.

Figure 1C-105: South end of the Stadium showing grade transition and vehicle ramp, looking southeast.

A press box is at the top of each bleacher. The east press box is larger, original to the Stadium, and spans across the center seating section. It is rectangular in plan with a flat roof and deep overhang that is also an observation/camera deck. The roof deck has non-original metal railing and is accessed from a ladder on the press box's south façade and by a set of non-original stairs at the north end. The overhang shelters the west façade overlooking the field and has a wood trellis extending at the south end. The north half of the west façade is glazed that cants out toward the field while the south half is two open bays without glazing. Below the openings is a Flexboard fascia that also extends to the south like the trellis. Flexboard is a particleboard material. The press box door is at the south façade, where a ladder provides access to the roof deck and poured-in-place concrete steps leads to the door. A set of stairs added to the north façade also access the roof deck.

Figure 1C-106: East press box with canted glass, extended trellis, and Flexboard fascia, looking north.

The press box centered at the top of the west bleachers is smaller and in the southern corner of the central seating section. It is also rectangular in plan with a flat roof and overhangs but is simpler than then east press box. It is partially glazed on the west façade facing the field and does not have a roof deck. Landscaping and trees are at each corner of the Stadium on the berms and at the north and south ends.

Building 110: Field House

The Field House is a one-story, rectangular building with a flat, wood-rafter roof that creates deep overhangs around most of the building (Figure 1C-107. The overhangs have exposed rafters and a box eave. The foundation is concrete slab on grade while the building is wood-framed with alternating areas of stucco, plywood, and Flexboard and batten cladding. The Flexboard panels have an aluminum-framed hopper window at the top of each board.

Figure 1C-107: South façade of Feld House (Bldg. 105).

Figure 1C-108: North and east façade of Field House with deep roof overhang, looking southwest.

The north façade facing the Stadium is mostly Flexboard and batten with two sets of non-original entry doors toward the center (Figure 1C-108). Stucco walls toward the east and west ends mark and conceal restroom entrances and divide the concession areas at the far east and west ends from the rest of the building. The concession areas have lift-up plywood boards securing the sales areas above Flexboard and batten.

The south façade has a projecting, stucco-clad middle section as well as stucco wall screening a restroom entrance toward the west end. An L-shaped brick wall toward the east side screens two doors. Altered ticket areas toward the east and west ends project from the building façade and are stucco with dark glazing. At the south side of the Field House is a lawn with mature trees.

Figure 1C-109: Concession area on the west façade, looking east.

Figure 1C-110: Entrances and L-shaped brick screening wall at North Façade, looking northeast.

Original wood doors are found throughout the building. Non-original windows with dark glazing are in some of the stucco walls. The building is currently used as offices and storage and have drywall partitions. The ceiling is exposed wood rafters with V-joint tongue and groove diagonal wood boards. The flooring is mostly carpeting and concrete though some of the original tile flooring remains from the original locker room and shower uses.

Armillary Sphere Sculpture

The armillary sphere sculpture by Peterpaul Ott is a freestanding sculpture set directly southeast of Building 35 on a square concrete pad (Figure 1C-111). A medieval device that modeled and mapped astrological elements and events, the armillary sphere is a large, open metal sphere made of two large and two small concentric rings. The sculpture is set on a stepped rectilinear concrete plinth. The south and east facing sides of the plinth feature bas-relief engravings showing abstracted and expressionist scientific instruments. The north and west facing sides of the plinth are flush concrete, although the north facing side has a small outwards step near the base. Set into this base is a bronze plaque that reads “O.C.C. Survey BM1 1956.” It does not appear the sculpture has a formal name.

Figure 1C-111: Armillary Sculpture in the foreground with Building 35 directly behind.

Contributing Landscape Features

The primary landscape features that remain from the Historic District's period of significance are the pedestrian circulation pattern, the open spaces between buildings, and the patios and courtyards at each complex in the central core of the District.

The circulation pattern is dominated by a diamond-shaped grid that is a result of the classroom complexes placed at a 45-degree angle to capture natural daylighting from two façades while protecting the buildings from prevailing winds. The major walkways are wide, straight paths that run through the classroom complexes at breezeways or patios between the linear bar classroom buildings. Secondary pathways crisscross the expansive diamond-shaped open space created by the walkways in X-patterns. These secondary pathways are more informal with curves, narrow and wider points, and irregular-shaped intersections where they cross the major walkways. Other secondary pathways also exist in the Historic District with varying patterns, locations, and sizes. At the south and east border of the diamond grid are broad axial walkways lined by mature trees in some areas. These broad walkways run orthogonally and transition from the classroom area to other parts of the campus. The circulation paths in the Historic District are typically poured concrete paving with no bordering material.

The circulation pattern defines the open space in the Historic District along with the buildings. There are the expansive lawns in diamond or triangle shapes crisscrossed or bisected by pathways. Buildings anchor these sprawling spaces at one or two edges to avoid an uncomfortable openness but they are low-scaled and blend into the landscape with integrated features such as the brick wing walls of Buildings 12 and 35 and the north window walls at Buildings 8 and 9. These spaces are typically grass ground cover with concrete paths and occasional trees. Most notable is the cluster of mature palm trees at the Historic District's eastern edge near the Student Success Center and Classroom & Labs complex (Bldgs. 7, 8, and 9).

Between the three classroom complexes are also diamond-shaped spaces that are infilled with buildings and smaller open spaces. These spaces are more intimate with buildings on two to three sides. The spaces here also typically have grass as ground cover with scattered trees. Because the complexes are staggered, one-half of each complex relates to different, neighboring complexes. The staggering is most notable in the spatial relationship between Building 35 and Building 12 where their brick wing walls create a dynamic interplay across the campus.

Each of the complexes in the core of the Historic District has patios and courtyards that are described with the complex.

Historic District Non-Contributors

Non-contributors that are not described elsewhere include the Special Services Building (Bldg. 10) and Faculty House (Bldg. 11). The Special Services Building (c. 1975) is a one-story, flat-roof building with an irregular plan (Figure 1C-112). It is clad with concrete masonry units and bisected by a circulation path at its entrance. It has dark aluminum windows with tinted glazing and its own landscaping.

Figure 1C-112: The Student Service Center constructed after the period of significance.

The Faculty House (Bldg. 11) is a one-story Ranch-style building that resembles a residence (Figure 1C-113). It is L-shaped in plan with side-gabled roofs and stucco walls. It has a brick chimney that no longer extends much above the roofline. Constructed in 1957 during the Historic District's period of significance, it was designed by a graduate of OCC (Rodney Lauter) and constructed by the Building Trades class, and is not associated with the Neutra and Alexander development on campus.

Figure 1C-113: The Faculty House (Bldg. 11) built during the period of significance but not designed by Neutra and Alexander.

Surrounding Context

The core of the OCC Historic District is surrounded by academic and administrative buildings developed after 1957, the end of the period of significance. North and west of the Historic District are one- to two-story buildings constructed between 1958 and 1965 that are oriented east to west and used for classroom, lecture hall, and student services like bookstore and computer center. These buildings create a north edge to the campus center and divide it from the athletic facilities.

Figure 1C-114: Computing Center (Bldg. 73, 1963) north of the Historic District, looking east.

Figure 1C-115: The Forum (Bldg. 81, 1960), northeast of the Historic District, looking west. C&L (Bldg. 9) in the Historic District is to the left.

Figure 1C-116: Journalism (Bldg. 72, 1958) and Writer's Row (Bldg. 71, 1958, right) adjacent to the northwest corner of Historic District boundaries, looking northwest.

As they were constructed directly after the initial campus development and by architects associated with the original construction (Richard Pleger and Robert E. Alexander), they share features with the historic buildings, such as covered walkways and similar materials (Figure 1C-114 though Figure 1C-116). However, they are distinctly different from the initial construction and reflect changes in construction methods, materials, and programmatic needs from the late 1950s and early 1960s. Additional multi-story classroom buildings from the 1970s are north of the 1960s buildings.

South and east of the Historic District's broad orthogonal walkway boundaries are the buildings used by all campus groups– Library (Bldg. 182), Theater (Bldg. 2, in the Historic District), Administration (Bldg. 1), Student Center (Bldg. 86) and Art Center and Arts Pavilion (Bldgs. 158 and 180) (Figure 1C-117 to Figure 1C-119). Because these buildings often interact with the broader community, they generally have parking lots on their other side toward Fairview Road and Merrimac Way. The Student Center (Bldg. 86) to the east was designed by Neutra and Alexander and built within the Historic District's period of significance. However, it has been substantially altered and was excluded from the Historic District. The other buildings are from later in the campus' development, such as Administration (Bldg. 1) and Fine Arts Lecture Hall (Bldg. 5) from the 1970s as well as larger-scale, more recently constructed buildings, including the current Library (Bldg. 182, 2008) and Arts Center (Bldg. 158, c.2002) that were constructed on the sites of the former Technology Building and original Fine Art center from the initial campus development.

Figure 1C-117: The altered Student Center (Bldg. 86, 1953, altered ca. 1992) and Administration (Bldg. 1, ca.1975) east of the Historic District, looking north.

Figure 1C-118: Library (Bldg. 182, 2008) south of the Historic District, looking southeast. The Historic District's Planetarium (Bldg. 39) is in the foreground.

Figure 1C-119: Historic District's south boundary along axial walkway with Historic District to the left (Bldg. 7 in the foreground), looking west toward the Library (Bldg. 182).

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1D. EVALUATION OF SIGNIFICANCE

This section typically includes a statement of significance that summarizes the historic importance of the historic resource—the Orange Coast College (OCC) Historic District in this case—and documents the relative zones of its significance to aid in developing appropriate treatments. However, Page & Turnbull was asked to review a previous historic evaluation by Ostashay & Associates and conduct additional research as needed to confirm their findings as part of preparing this Historic Structures Report (HSR). Based on supplemental research and analysis, Page & Turnbull identified a smaller historic district with a narrower period of significance and fewer contributors than the previous evaluation. As such, Page & Turnbull evaluated the redefined OCC Historic District (Historic District) for listing in the National Register of Historic Places (National Register) and California Register of Historical Resources (California Register). Also in this section are the character-defining features of the OCC Historic District as identified by Page & Turnbull and significance diagrams illustrating the relative zones of significance in the Historic District.

National Register of Historic Places

The National Register of Historic Places (National Register) is the nation's most comprehensive inventory of historic resources. The National Register is administered by the National Park Service and includes districts, sites, buildings, structures and objects significant in American history, architecture, archeology, engineering, and culture. These resources contribute to an understanding of the historical and cultural foundations of the nation at the national, state, or local level. Typically, properties over fifty years of age may be eligible for listing in the National Register if they meet any one of the four significance criteria and if they retain sufficient historic integrity to convey that significance. However, properties under fifty years of age may be determined eligible if it can be demonstrated that they are of "exceptional importance." Other criteria considerations apply to cemeteries, birthplaces, graves of historical figures, properties owned by religious institutions or used for religious purposes, structures that have been moved from their original locations, reconstructed buildings, and properties primarily commemorative in nature. National Register criteria are defined in depth in *National Register Bulletin Number 15: How to Apply the National Register Criteria for Evaluation.*

Historic Significance

The National Register has four basic criteria under which a property may be considered eligible for listing. It can be found significant under one or more of the following criteria:

> Criterion A (Event): Properties associated with events that have made a significant contribution to the broad patterns of our history;
>
> Criterion B (Person): Properties associated with the lives of persons significant in our past;
>
> Criterion C (Design/Construction): Properties that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or

that possess high artistic values, or that represent a significant distinguishable entity whose components lack individual distinction; and

Criterion D (Information Potential): Properties that have yielded, or may be likely to yield, information important in prehistory or history.

A property may be considered significant on a national, state, or local level to American history, architecture, archaeology, engineering, and culture.

Integrity

In addition to qualifying for listing under at least one of the National Register criteria, a property must be shown to have sufficient historic integrity in order to be considered eligible for listing in the National Register. The concept of integrity is essential to identifying the important physical characteristics of historic resources and hence, in evaluating adverse changes to them. Integrity is defined as "the authenticity of an historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance." For historic districts to retain integrity as a whole, the majority of the components that make up the district's historic character must possess integrity. In addition, the relationships among the district's components must be substantially unchanged since the period of significance.[1]

According to the *National Register Bulletin Number 15: How to Apply the National Register Criteria for Evaluation*, these seven aspects are generally defined as follows:

Location is the place where the historic property was constructed.

Design is the combination of elements that create the form, plans, space, structure and style of the property.

Setting addresses the physical environment of the historic property inclusive of the landscape and spatial relationships of the building/s.

Materials refer to the physical elements that were combined or deposited during a particular period of time and in a particular pattern of configuration to form the historic property.

Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history.

Feeling is the property's expression of the aesthetic or historic sense of a particular period of time.

[1] National Park Service, *National Register Bulletin Number 15: How to Apply the National Register Criteria for Evaluation*, (Washington D.C.: National Park Service), 46.

Association is the direct link between an important historic event or person and a historic property.

Integrity is a "yes" or "no" determination. A historic property either has adequate integrity, or it does not. To retain historic integrity, a property will often possess several, if not all of the aforementioned aspects. Specific aspects of integrity may also be more important, depending on the criteria for which it is significant.

It is important to note that historic integrity is not synonymous with condition. A building or structure can possess all or many of the seven aspects of integrity, even if the condition of the materials has degraded. Condition comes into consideration when there is a substantial loss of historic material or other character-defining features.

California Register of Historical Resources

The California Register of Historical Resources (California Register) is "an authoritative guide in California to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change."[2] A property may be eligible for listing in the California Register if it meets one or more of the following criteria:

- Criterion 1: Associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- Criterion 2: Associated with the lives of persons important in our past;
- Criterion 3: Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- Criterion 4: Has yielded, or may be likely to yield, information important in prehistory or history.

These criteria are based upon National Register of Historic Places criteria; however, the California Register does not impose as specific requirements for integrity and age as the National Register. Properties eligible for listing in the California Register must retain enough of their historic character or appearance to be recognizable as historic resources and to convey the reasons for their significance. While the National Register guidelines for integrity can be applied for California Register eligibility, it is possible that resources which may not retain sufficient integrity for listing in the National Register may still be eligible for the California Register. Moved or reconstructed buildings, structures, or objects may also be considered for listing in the California Register under specific circumstances. In addition, properties that were constructed less than fifty years ago or which achieved significance less than fifty years ago may be eligible for inclusion in the California Register provided that sufficient time has passed to understand their significance within a historic context.

[2] *Public Resources Code Section 5024.1(a)*

Properties may be listed in the California Register through a number of methods. State Historical Landmarks and National Register-listed properties are automatically listed in the California Register. Additionally, properties formally determined eligible for listing in the National Register are automatically listed in the California Register. Properties may also be nominated to the California Register by local governments, private organizations, or citizens.

The California Register of Historical Resources follows nearly identical guidelines to those used by the National Register, but identifies the Criteria for Evaluation numerically (1 through 4). With the exception of some properties with additional criteria consideration (50 years or less, moved buildings, etc.), properties that meet the National Register criteria typically also meet the California Register criteria and vice versa and are often evaluated together.

Evaluating Historic Districts

For a property to be found eligible for the National Register and California Register, it must be classified as either: a building, structure, object, site or district. As specified by the National Park Service, "… the National Register is oriented to recognizing physically concrete properties that are relatively fixed in location." Historic districts are defined by the National Park Service in *National Register Bulletin Number 15:*

> A district derives its importance from being a unified entity, even though it is often composed of a wide variety of resources. The identity of a district results from the interrelationship of its resources, which can convey a visual sense of the overall historic environment or be an arrangement of historically or functionally related properties. For example, a district can reflect one principal activity, such as a mill or a range, or it can encompass several interrelated activities, such as an area that includes industrial, residential, or commercial buildings, sites, structures, or objects.[3]

District Boundaries

National Register Bulletin Number 15 also provides guidance in delineating the boundaries of districts. The boundaries of a district typically encompass the area of land containing the significant concentration of buildings, sites, structures, or objects that convey a shared significant context. A district's significance and historic integrity should help determine the boundaries with consideration of visual barriers, visual changes, boundaries of a specific time, and clearly differentiated patterns of historic development. A historic district may contain discontiguous elements in the following limited circumstances:

- When visual continuity is not a factor of historic significance, when resources are geographically separate, and when the intervening space lacks significance.
- When manmade resources are interconnected by natural features that are excluded from the National Register listing.

[3] *National Register Bulletin Number 15,* 5.

- When a portion of a district has been separated by intervening development or highway construction and when the separated portion has sufficient significance and integrity to meet the National Register criteria.[4]

Contributors and Non-Contributors

In addition, historic districts may have contributing and non-contributing buildings, sites, structures or objects.[5] A contributor adds to the historic associations, historic architectural qualities, or archeological values for which a property is significant because:

- It was present during the period of significance, relates to the documented significance of the property, and possesses historic integrity or is capable of yielding important information about the period; or
- It independently meets the National Register criteria.

A non-contributor does not add to the historic associations, historic architectural qualities, or archeological values for which a property is significant because:

- It was not present during the period of significance or does not relate to the documented significance of the property;
- Due to alterations, disturbances, additions, or other changes, it no longer possesses historic integrity or is capable of yielding important information about the period; or
- It does not independently meet the National Register criteria.

District Integrity

For a district to retain integrity, the majority of the components that make up the district's historic character must possess integrity even if they are individually undistinguished. The relationships among the district's components also must be substantially unchanged since the period of significance. Intrusions within a district may impact its integrity based on the relative number, size, scale, design, and location of the components. A district is not eligible if it contains so many alterations or new intrusions that it no longer conveys the sense of a historic environment.[6]

Review of Previous Historic Evaluation

Ostashay & Associates prepared a Historic Resources Technical Report (HRTR) in May 2014 as part of the environmental review of Coast Community College District's (CCCD) Vision 2020 Facilities Master Plan for OCC as required under the California Environmental Quality Act (CEQA). The HRTR identified a historic district at the OCC campus eligible for the California Register under:

- Criterion 1
  - for its early master planning concepts of a community college located within Orange County

[4] National Park Service, *National Register Bulletin: Defining Boundaries for National Register Properties*, (Washington D.C.: National Park Service), 12.
[5] National Park Service, *National Register Bulletin 16A: How to Complete the National Register Registration Form*, (Washington D.C.: National Park Service), 16.
[6] *National Register Bulletin Number 15,* 16.

- Criterion 3
  - for its distinctive architectural and design qualities as interpreted in an educational facility, and
  - for its direct association with master planner and architect Robert E. Alexander; master architect Richard Neutra; landscape architect Garrett Eckbo; and Orange County architect William E. Blurock.

The HRTR-identified historic district includes 23 contributing buildings (several joined in complexes), the armillary sphere art piece, and landscape features such as the main quad area, walkways, maritime flagpole, planters, mature trees, shrubs and plantings. It has a period of significance of 1948 to 1964 starting with the school's founding and encompassing the initial master planning and design by Robert E. Alexander with collaborators including landscape architect Garrett Eckbo as well as the design and planning work of Alexander's partnership with Richard Neutra through 1957. The period of significance extends to capture buildings designed by Pleger, Blurock, Hougan and Ellerbroek in subsequent campus development through 1964.

The HRTR also finds the Robert B. Moore Theatre Building (Bldg. 2) is individually eligible for the California Register for its unique and distinctive architectural styling and direct association with master designers: architect Richard Neutra; landscape architect Garrett Eckbo; and acoustical engineer Dr. Vern Knudsen. Page & Turnbull concurs with the HRTR's finding that the Moore Theater is individually eligible for the California Register, and it is not further evaluated below.

Page & Turnbull also agrees an eligible historic district is present at the OCC campus. However, based upon the information provided within the HRTR and supplemental research, we have a difference of professional opinion regarding the historic district's boundaries, period of significance, and the number of contributors within the district. Based on our additional research and evaluation (detailed below), Page & Turnbull identified a National Register and California Register-eligible historic district significant under Criterion A/1 (Events) in the context of education for its direct association with the postwar expansion of access to higher education in Orange County. It also meets Criterion C/3 (Design/Construction) as an excellent example of Mid-Century Modern campus planning and design as applied to a junior college, involving the work of master architects Neutra and Alexander in collaboration with landscape architect Garrett Eckbo.

At this time, Page & Turnbull is not providing an opinion on the eligibility of buildings constructed between 1958 and 1964 in the subsequent phase of development. Rather, it is our opinion that the existing determination of eligibility for these additional buildings is not sufficiently supported in the HRTR.

Orange Coast College Historic District Identified by Page & Turnbull

Page & Turnbull identified an Orange Coast College Historic District (Historic District) that "possesses a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development."[7] The Historic

[7] *National Register Bulletin Number 15,* 5.

District's period of significance starts in 1950 with the construction of OCC's first permanent building and ends in 1957 when the final Neutra and Alexander-designed building was completed. The end date also corresponds to the end of the seven-year limited local tax that funded the initial campus development.

Considering this shortened period of significance, the revised Historic District boundaries encompass only the Neutra and Alexander buildings and landscapes from this period. Page & Turnbull developed the Historic District boundaries based on the significant concentration of related buildings, sites, structures and objects in the central core that are associated with the initial development of the campus. The Student Center (Bldg. 86) was constructed during the period of significance and designed by Neutra and Alexander but it has been substantially altered and has lost integrity (see 'Subsequent Development' section in part 1B 'Chronology of Development and Use' of this report). Because the Student Center is no longer a contributing resource and was at the periphery of the Historic District, it was excluded from the Historic District boundaries under this analysis.

Page & Turnbull proposes the inclusion of two discontiguous athletic facilities dating to the seven-year period and designed by Neutra and Alexander: the Swimming Pool complex (Bldg. 93) and Stadium and Field House (Bldgs. 105 and 110). These resources have integrity and do not depend on visual continuity with the central campus to convey their significance.

Table 1 compares the contributors and non-contributors in the HRTR-identified historic district with the Historic District identified by Page & Turnbull.

Table 1D-1: The HRTR table of contributors. Buildings and features within the revised OCC Historic District are highlighted in grey. Italics indicate information that is different from the HRTR.

OCC Map No.	**EIR ID #**	**Resource Name [Original Name]**	**Resource Type**	**Date**	**Architect(s)**	**HRTR District Status**	**OCC Historic District**
1	15	Administration	Building	1975		Non-Contributor	Outside of District
2	19	Theatre (Auditorium) / Drama Lab/Studio [Speech Arts Building]	Building	1954	Netura & Alexander	Contributor	Contributor
3	N/A	Music [New Music Building]	Building	19776	William Blurock & Partners	N/A	Non-Contributor
4	31	Music Wing [Speech Arts Building]	Building	1954	Neutra & Alexander with Pleger	Contributor	Contributor
7	17b	Counseling Admission - Student Success Center [Library]	Building	1950	Alexander, Pleger	Contributor	Contributor

8	17a	Classroom and Lab w/ Library extension [Library Addition]	Building	1950/ *1955*	Neutra & Alexander with Pleger	Contributor	Contributor
9	17a	Classroom and Lab	Building	*1955*	Alexander, Pleger	Contributor	Contributor
10	17c	Special Services [Faculty Offices and Tutorial Center]	Building	1975		Non-Contributor	Non-Contributor
11	16b	Faculty House	Building	1957		Non-Contributor	Non-Contributor
12	16a	Business Education Wing	Building	1953	Neutra & Alexander with Pleger	Contributor	Contributor
13	16a	Business Education Wing	Building	1953	Neutra & Alexander with Pleger	Contributor	Contributor
14	16a	Business Education Wing	Building	1953/ 1976	Neutra & Alexander with Pleger *Addition by William Blurock & Partners*	Contributor	Non-Contributor
35	25a	Math Wing - Science [Science Building]	Building	1956/ *1957*	Neutra & Alexander with Pleger	Contributor	Contributor
36	25a	Math Wing - Science [Science Building]	Building	1956/ *1957*	Neutra & Alexander with Pleger	Contributor	Contributor
37	25b	Reprographics Center – Science [Science Building]	Building	1956/ *1957*	Neutra & Alexander with Pleger	Contributor	Contributor
38	25a	Science	Building	*1960*	*Pleger, Blurock, Hougan, Ellerbroek*	Contributor	Non-Contributor
39	26	Planetarium [Science Building]	Building	1956	Neutra & Alexander with Pleger	Contributor	Contributor
40	24	Science Hall	Building	1964	Pleger, Blurock, Hougan, Ellerbroek	Contributor	Outside of District
41	24	Math Lecture Halls 1&2	Building	1971		Non-Contributor	Outside of District
71	36	Writer's Row [Home Economics]	Building	1958	Pleger, Blurock, Hougan, Ellerbroek	Contributor	Outside of District

72	27	Journalism [Home Economics]	Building	1958	Pleger, Blurock, Hougan, Ellerbroek	Contributor	Outside of District
73	28	Computing Center [Data Processing Center]	Building	1963	Pleger, Blurock, Hougan, Ellerbroek	Contributor	Outside of District
80	29a	Social and Behavioral Sciences	Building	1965		Non-Contributor	Outside of District
81	32	Social and Behavioral Sciences Forum	Building	1960	Pleger, Blurock, Hougan, Ellerbroek	Contributor	Outside of District
83	29b	Bookstore	Building	1965		Non-Contributor	Outside of District
86	14	Student Center	Building	1952	Neutra & Alexander with Pleger	Non-Contributor	Outside of District
87	1a	Watson Hall	Building	1969		Non-Contributor	Outside of District
89	1b	Student Health Center	Building	1978		Non-Contributor	Outside of District
91	18	Gymnasium	Building	1961	Pleger, Blurock, Hougan, Ellerbroek	Contributor	Outside of District
92	18	Women's Locker Room Wing	Building	1962	Pleger, Blurock, Hougan, Ellerbroek	Contributor	Outside of District
93	18	Pool Stadium	Building	*1954*	Neutra, Alexander	Contributor	Contributor
96	18	Men's Locker Room Wing	Building	1962	Pleger, Blurock, Hougan, Ellerbroek	Contributor	Outside of District
97	–	Handball Courts	Structure	1962		Non-Contributor	Outside of District
103	–	Track & Field	Landscape	1942		Non-Contributor	Outside of District
105 & 110	7	Stadium and Field House	Building	1955	Neutra & Alexander with Pleger	Contributor	Contributor
149	33	Bursar's Office	Building	1993		Non-Contributor	Outside of District
150	38	Classroom & Lab	Building	1993		Non-Contributor	Outside of District

N/A	–	Science Building Art Piece	Structure	1957	Peterpaul Ott, Alexander	Contributor	Contributor
N/A	–	Landscape (quad, walkways, flagpole, planters, plantings, etc.	Landscape	1950s	Alexander, Eckbo	Contributor	Contributor
N/A	–	Tennis Courts	Landscape	1960s		Non-Contributor	Outside of District

Significance Evaluation

The following section examines the eligibility of the Orange Coast College (OCC) Historic District identified by Page & Turnbull for listing in the National and California Registers.

Criterion A/1 (Event)

The OCC Historic District is significant under Criterion A/1 (Events) in the context of education in California for its direct association with the postwar expansion of access to higher education through the local development of junior colleges. OCC was among a handful of junior colleges established statewide in the post-World War II years specifically as junior colleges to provide civic, vocational, and continuing education for local high school graduates and other residents. Seen as integral to growing communities' ability to educate its youth and provide trained workers for local businesses, a growing group of high school graduates as well as returning soldiers with access to the GI Bill had access to higher education through local junior colleges. OCC was the only junior college established in Orange County in the immediate postwar years to meet these goals and needs before the 1960 adoption of the California Higher Education Master Plan, which spurred the remarkable expansion of the junior (or community) college system in the 1960s and 1970s.

In Orange County, the addition of Orange Coast College (then Orange Coast Junior College) to the earlier Fullerton College and Santa Ana College provided a modern, public higher education option particularly for the growing postwar Orange County communities further to the south in Huntington Beach, Newport Harbor, and Laguna Beach. The establishment of OCC in 1947 by local community and business leaders and supported by votes of the general electorate, reflected the community's desire to have a higher education option locally and a willingness to fund the junior college with local taxes. This is further supported by the passage of the ballot measure in 1949 to fund the construction of new buildings for Orange Coast College especially when no state funds were available. Course offerings at OCC were tailored to the local industries in Orange County, particularly the petroleum and agriculture fields, and helped to train and educate the local residents and workforce in support of the booming postwar growth of these communities. As with other junior colleges, OCC also provided programs and facilities for the physical welfare and social and cultural enrichment of their students with swimming pools, stadiums, tracks, and an auditorium for theatrical performances.

OCC remained the only postwar community college in Orange County until the mid-1960s when the California Higher Education Master Plan codified the state's tripartite higher education system of community colleges, California State Universities (Cal State), and University of California (UC) campuses. The Master Plan recognized the important role of community colleges in providing broad access to higher education, in addition to taking enrollment pressures off the limited UC and Cal State universities; this resulted in the allocation of state funds for the construction of community colleges for the first time.

Criterion B/2 (Person)

The OCC Historic District does not appear to be significant under Criterion B/2 (Person). Although the inaugural District Superintendent and Orange Coast College President Basil H. Peterson is strongly associated with the initial development of the school, cursory research has not identified him as a significant individual in the broader context of higher education or the community of Costa Mesa. Significance for the property's association with the architect or landscape architect is provided in the analysis under Criterion C (Design/Construction).

Criterion C/3 (Design/Construction)

The OCC Historic District is significant under Criterion C (Design/Construction) as a resource that embodies the distinctive characteristics of a type and period and represents the work of masters Richard Neutra and Robert E. Alexander in collaboration with Garret Eckbo.

Embodies the Distinctive Characteristics of a Type and Period

The OCC Historic District is an excellent example of Mid-Century Modernism in its planning, architecture, and landscape architecture as applied to a higher education campus. Unlike existing four-year colleges and universities that had buildings dating from before World War II, the postwar junior college was a new interpretation of the higher education campus. Although a few colleges had constructed purpose-built junior college campuses during the Great Depression, OCC was among the earliest examples in California of a full campus designed and constructed specifically as a junior college in the Mid-Century Modern style. The campus was planned to meet the programmatic needs of a junior college, with zones for academics, technical training, athletics, and campus life (student union, library, etc.). It was also forward thinking in anticipating some features, such as the theater that could also be used by the greater community in which the campus was located.

The campus design embodies the attention to local climate conditions that characterizes the Mid-Century Modern style in Southern California. Instead of symmetrical settings with axial walkways and traditional quads, OCC's site design placed practicality and site conditions over formal and traditional campus planning. Instead of enclosed buildings, multiple buildings with related uses form complexes connected by covered walkways as outdoor hallways. The siting of the classroom complexes at 45-degree angles protected them from predominate westerly and southwesterly winds while allowing for natural lighting and cross ventilation through windows on two sides. In the days before florescent lighting was the norm and when heat from incandescent bulbs had to be controlled, classrooms depended on natural lighting. The classroom buildings' expansive window walls faced northeast with wide overhangs to provide bright but indirect light during instructional hours. Louvered clerestory windows to the southwest limited direct sun and mitigated glare.

The classroom building orientation created a diagonal pattern with major axial walkways, secondary paths and open spaces. Patios and courtyard spaces allowed for causal gathering while the spaces between and enclosed by buildings acted as outdoor rooms. The small-scale landscaped features of wing walls and screen walls further tie the buildings with the landscape and with the site's environmental conditions.

The non-academic facilities, such as the Speech Arts Building (now Theater and Music complex, Bldgs. 2 & 4), Swimming Pool complex (Bldg. 93), and the Stadium and Field House (Bldgs. 105 and 110), were also rendered in the modern idiom and with modern materials like concrete and particle board (Flexboard).

As a particularly early example of a postwar junior college campus specifically designed and constructed for this nascent typology, Orange Coast College received widespread attention through the national and international architectural journals. The February 1952 issue of *Progressive Architecture* highlighted junior college buildings and used OCC as one of two case studies. The article's introduction detailed Alexander's approach to calculating space requirements, noting his "completely rational space analysis" is interesting and should be considered along with other standard techniques.[8] OCC was also offered as a case study in school planning publications for campus planning and the design of building types specific to junior colleges, such as its original Technology Building (1950, demolished ca.1997) and Science Building (now Math Wings, Reprographics, and Planetarium, Bldgs. 35-39). Alexander and OCC's then Assistant Superintendent William F. Kimes participated in a summer institute at Stanford University's School Planning Laboratory in 1958 focused on the planning of new junior colleges in recognition of their growing role in California's higher education system. "Persons who had successfully met and solved some of the many problems of junior college planning were invited to share their knowledge and experience with other educational leaders."[9] Alexander and Kimes authored papers on facilities for technology and science in the publication *New Dimensions in Junior College Planning* that resulted from the summer institute.

The OCC Historic District is an intact example of the postwar junior college campus that embodies the Mid-Century Modern design in California. Of the other junior college campuses built as a cohesive whole in the postwar years of the 1950s to early 1960s, few appear to retain a cohesive district. Only Foothill College in Los Altos Hill in Northern California appears comparable to Orange Coast College.

Represents the Work of Masters

The OCC Historic District exemplifies the design and planning approach of Richard Neutra and Robert E. Alexander during their decade-long partnership from 1949 to 1958. The campus

[8] "College Buildings: Space Analysis," *Progressive Architecture,* February 1952, 61.
[9] James D. MacConnell, "Foreword," in *New Dimensions in Junior College Planning*, (Palo Alto, CA: Stanford University School Planning Laboratory, 1958).

conveys the skills of both designers. It combines Neutra's focus on the human experience and connection to the outdoors with Alexander's large-scale site planning to result in a unique collection of buildings that span their partnership.

The buildings reflect Neutra's biorealism philosophy in their indoor-outdoor relationship, human scale, and attention to the occupant's experience. They have an elegant play of spatial relationship in massing and planes, solids and voids, and openness and compression. The subtle details that use proportion, shapes, angles, and light to transform simple materials and give them texture are emblematic of Neutra's skills. Mindful of a limited budget set by the seven-year tax, Neutra and Alexander used simple, modern materials in creative and dynamic ways, including the angled north[10] window walls at the classroom complexes and overlapping and extending planes of walkway roofs at the breezeway to building ends that are well-proportioned and well-balanced. OCC allowed Neutra an opportunity to expand on his early innovative elementary school designs into a higher education setting and to design specific building types, such as a planetarium, a theater, and a stadium.

According to Alexander's oral history, OCC was a significant client for him when he first started his own architecture firm after the success of Baldwin Hills Village.[11] Alexander took the lead on master planning the campus, requiring careful study of functional needs of the faculty, the rational calculation of needed space, and progressive approaches to educational facilities. These issues are reflected in the overall plan for OCC. Following his work on the master plan, Alexander brought OCC as a client into the Neutra and Alexander partnership.

Landscape architect Garrett Eckbo, who had recently relocated to Southern California and shared office space with Alexander, was part of the original team for the master plan. In his book *Landscape for Living*, Eckbo credited Alexander with the "primary planning role," and himself as "the landscape architect [who] functioned as consultant to him—a very productive collaboration."[12] Eckbo described OCC as:

> A complete and integrated college plant, satisfying both functionally and esthetically. Site flat and fanned by persistent southwest breezes which are cooling to the point of establishing a need for windbreaks. General pattern of buildings and trees will do this. Central quad pattern of paving, grass, water and trees is small enough for intimacy and warmth, large enough for spatial imagination.[13]

OCC was among the earliest completed projects Neutra and Alexander worked on together. After completing his master plan, Alexander received the initial building and site improvement commissions just as he and Neutra started collaborating. The first three permanent buildings, the Technology Building, the Library (Bldg. 7 and part of Bldg. 8), and the Fine Arts Center were

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[10] As per the original plans for the diagonally oriented buildings, this report considers the northeast-facing façade as plan north or north.
[11] Robert E. Alexander, interview by Marlene L. Laskey, 3 October 1986, UCLA Oral History Program, Tape number: VII, Side One (October 3, 1986), http://oralhistory.library.ucla.edu/Browse.do?descCvPk=27599.
[12] Garrett Eckbo, *Landscape for Living* (1950; repr., Santa Monica, CA: Hennessey + Ingalls, 2002), 201.
[13] Eckbo, *Landscape for Living*, 201.

designed by Alexander following his master plan; only the Library Building remains today as the Student Success Center (Bldg. 7) and part of Classroom and Lab (Bldg. 8). The Orange Coast Junior College District's Board of Trustees considered seeking other architects for new building projects in 1952, but with Neutra newly teamed with Alexander, the two continued to receive the OCC commissions through the seven-year building plan.[14] The identified Historic District conveys the Neutra and Alexander partnership with collaboration from Eckbo in the individual buildings as well as the overall spatial relationships between built features.

In addition to being part of the initial master plan team with Alexander, Eckbo also was the landscape architect for almost all of the buildings constructed during the initial seven-year plan. As the landscaping was not fully realized according to Eckbo's plans and has had some alterations, it does not appear to meet Criterion C/3 as it currently exists as a representative work of Eckbo. Nonetheless, his exclusive collaboration with Neutra and Alexander for OCC over the initial seven-year period and the elements of the landscape plan that remain, including circulation paths, outdoor spaces, and integration of buildings and site, are noteworthy.

Among Neutra and Alexander's work, the buildings and plan at OCC received substantial media coverage nationally and internationally over the building period and well after. The individual buildings were published in *Progressive Architecture*¸ *College & University Business, American School and University*, and international journals in Germany and Japan. They also received several awards from the AIA Southern California Chapter and Business Education (Bldgs. 12-14) received a National AIA Merit Award in 1954.

Although Neutra and Alexander collaborated on the design of several elementary and high school campuses, OCC is one of the few higher education projects where they designed multiple buildings. It remains a rare collection of higher education buildings by Neutra and Alexander with the collaboration of master landscape architect Garrett Eckbo.

Integrity Evaluation

As stated above, in addition to qualifying for listing under at least one of the National Register or California Register criteria, a property must be shown to have sufficient historic integrity in order to be considered eligible for listing in the National Register and California Register. The process of determining integrity is similar for both the California Register and the National Register. The same seven variables or aspects that define integrity—location, design, setting, materials, workmanship, feeling and association—are used to evaluate a resource's eligibility for listing in the California Register and the National Register.

The guidelines for integrity in the *National Register Bulletin: How to Apply the National Register Criteria for Evaluation*, allow for a broad interpretation of the aspects of integrity so that these

[14] According to the Board's meeting minutes, Alexander spoke to the Board about his recent partnership with Neutra, "a world-renowned architect" with considerable experience in school design. He also pointed to the recent 15-page profile about OCC's new buildings in *Progressive Architecture*. Alexander's recalled in his oral history that Neutra was part of the interview for the Speech Arts Building (Theater) commission and that changed the Board's mind. See Board of Trustees meeting minutes, Orange Coast Junior College District, March 10, 1952 and Alexander oral history, Tape number: IX, Side Two, October 4, 1986.

aspects can be applied to any property type. For the OCC Historic District, the integrity discussion will evaluate the district as a whole as well as the contributing buildings and landscape.

Location

The OCC Historic District is in its original location, as are all the contributing buildings. Therefore, the Historic District retains integrity of location as whole.

Design

The design of the campus as it was at the end of the period of significance in 1957 generally remains. Two buildings present during the period of significance have been demolished (the Technology Building and the Fine Arts Center) and one building is substantially altered (Student Center, Bldg. 86). However the Historic District remains recognizable and able to convey its significance through the grouping of classroom complexes and their relationship to the Theater (Bldg. 2) as well as the athletic facilities. The new buildings constructed in the locations of the Technology Building and Art Center Building are outside the boundaries of the OCC Historic District and sufficiently separated as to not overwhelm the contributing buildings.

Building 10 and the large addition to Building 14 are the only significant additions into the core of the Historic District from after the period of significance. Though they mar the open space between buildings and disrupt the original circulation paths, these two non-contributors are relatively in scale with the classroom complexes, and the campus' original spatial relationships are still perceivable around the buildings.

The design of the contributing buildings remains in place and visible, despite the addition of HVAC equipment on several covered walkway roofs that conceal clerestory windows and are unsightly. Building 7 has altered roof forms and additions on the south (rear) side slightly change its massing, but the alterations are not considered to be substantial enough to compromise this building's integrity and its contributor status within the Historic District. Similarly, the additions to the Theater (Bldg. 2) and Music Building (Bldg. 4) are at secondary façades and the buildings relate to the Historic District as they were originally designed.

Setting

The setting within the OCC Historic District has had some intrusions, such as the addition to the Business Education Building (Bldg. 14) and construction of Building 10 that altered the spatial relationship and open space between some buildings. These two buildings also disrupted the primary east-west pedestrian axis that extended from the Student Center (Bldg. 86) through the classroom complexes. However, the distinct diamond grid with secondary cross paths in the center core remains visible and most of the circulation pattern continues to function as originally designed. In addition, because linear classroom buildings are staggered, the buildings' relationship to each other can still be experienced from other approaches despite Building 10 and the Building 14 addition.

Other alterations to the landscape and setting have also occurred, such as the removal or addition of a few secondary (X-pattern) pathways and the replacement of the irregular pavers at these pathways with more standard concrete paving. However, the character of the Historic District—the indoor/outdoor relationships, low-scale buildings set among open space, the open spaces bounded by built features—remain sufficiently to have integrity of setting.

The setting of the OCC campus has changed as subsequent phases of development expanded the institution. Most of the newer construction is at the periphery of the campus, allowing the center core with the classroom complexes to maintain its integrity of setting. The 1960s buildings north of the classroom complexes are similar in scale and massing so as not to disrupt the Historic District's historic educational and institutional setting.

Materials

Many interior finishes have been removed or altered from the contributing buildings; however, they retain the majority of their exterior materials. They have original building cladding, windows, doors, and covered walkways. As the preservation of exterior materials is more relevant to the integrity of historic districts, the OCC Historic District retains integrity of materials as a whole.

Workmanship

Although some material replacements have occurred, the contributing buildings generally retain the original workmanship especially in the subtle design details and their execution that mark these as modern buildings. For example, the corbeled brick units on the angled walls of classroom buildings as well as the poured-in-place concrete at the Theater (Bldg. 2) and Planetarium (Bldg. 39) retain their original workmanship. Additionally, the use of early postwar mass-produced materials and construction methods continue to be reflected in the buildings' physical fabric.

Feeling

The OCC Historic District retains its integrity of feeling. It continues to function for academic and campus life uses on a community college campus. It retains its Mid-Century Modern buildings and landscape that reflect the period of its original construction.

Association

The OCC Historic District remains a community college campus and continues its association with the history and development of the junior or community college. Unlike most community colleges from the same era that have lost significant portions of their original classroom buildings and landscapes or have had intrusions from later periods of development within the original campus cores, the OCC Historic District retains significant components associated with the postwar junior college campus.

The OCC Historic District is eligible for the National and California Registers. The Historic District is significant under Criterion A/1 in the context of education in California for its direct association with the postwar expansion of higher education through the local development of junior colleges. It also meets Criterion C/3 as an excellent example of a Mid-Century Modern junior college campus and is also significant as a work by master architects Neutra and Alexander in collaboration with landscape architect Garrett Eckbo. The Historic District has a period of significance of 1950 to 1957 and retains all aspects of the integrity.

Character-Defining Features & Significant Spaces

Character-defining and significant spaces of a historic property are those tangible elements that embody its significance or its association with specific events. They are the physical parts of both the exterior and interior that should be retained and preserved.

- **Character-defining features** are those elements or architectural components that establish the visual character of the property.
- **Significant spaces** are rooms or spaces that are important to a property because of their size, height, proportion, configuration, or function. Multiple spaces might be visually or physically related and/or arranged in a sequence that is important in defining the character of the property.

The character-defining features and significant spaces of the identified Orange Coast College Historic District include the following:

Overall Historic District:

- Central campus academic core with separate athletic facilities
- Low-scale, Mid-Century Modern design
- Buildings organized in complexes
- Original classroom complexes placed at 45-degree angles and offset to the northeast
- Specialized complexes sited north-south and placed near parking lots
- Within the central core of the Historic District;
  - Pedestrian-oriented space with paved walking paths in straight and diagonal patterns
  - Open spaces connecting complexes
  - Courtyard and patio spaces around and between buildings and their built-in features, such as planters and trellises
- Clock tower (attached to Building 7)
- Armillary sphere sculpture (near Building 35 and associated with Buildings 35-39)

Figure 1D-1: Aerial image of Orange Coast College campus with the identified Historic District bounded by orange. Image from Google Maps, 2015, edited by Page & Turnbull.

Classroom Complexes – Shared Features

Within the central campus are three classroom complexes that share similar features. These complexes, set at 45-degree angles, are:

- Buildings 7, 8, 9 | Student Success Center and Classrooms & Labs complex
- Buildings 12, 13, 14 | Business Education complex
- Buildings 35, 36, 37, 38, 39 | Math & Planetarium complex

Their shared character-defining features include:

1. One-story massing
2. Two linear, rectangular classroom buildings separated by breezeway/patio
    a. Low pitched roofs
    b. Aluminum window walls canted outwards on low brick walls at north façades
    c. Solid walls with door openings and clerestory windows at south façades
    d. Solid east and west walls
3. Mixed-use buildings south of the linear structures connected by covered walkways
4. Covered walkway between the linear classrooms and mixed-used buildings
5. Landscaped features include:
    a. Brick screen and wing walls
    b. Paved patio/courtyard spaces adjacent to buildings
    c. Brick and concrete planters, trellis, etc.

In addition to the shared characteristics, each classroom complex has specific character-defining features as detailed below.

Figure 1D-2: Historic image of the Science Complex (Bldg. 35-39) with character defining features identified by red callouts. Original photo by Julius Shulman, edited by Page & Turnbull.

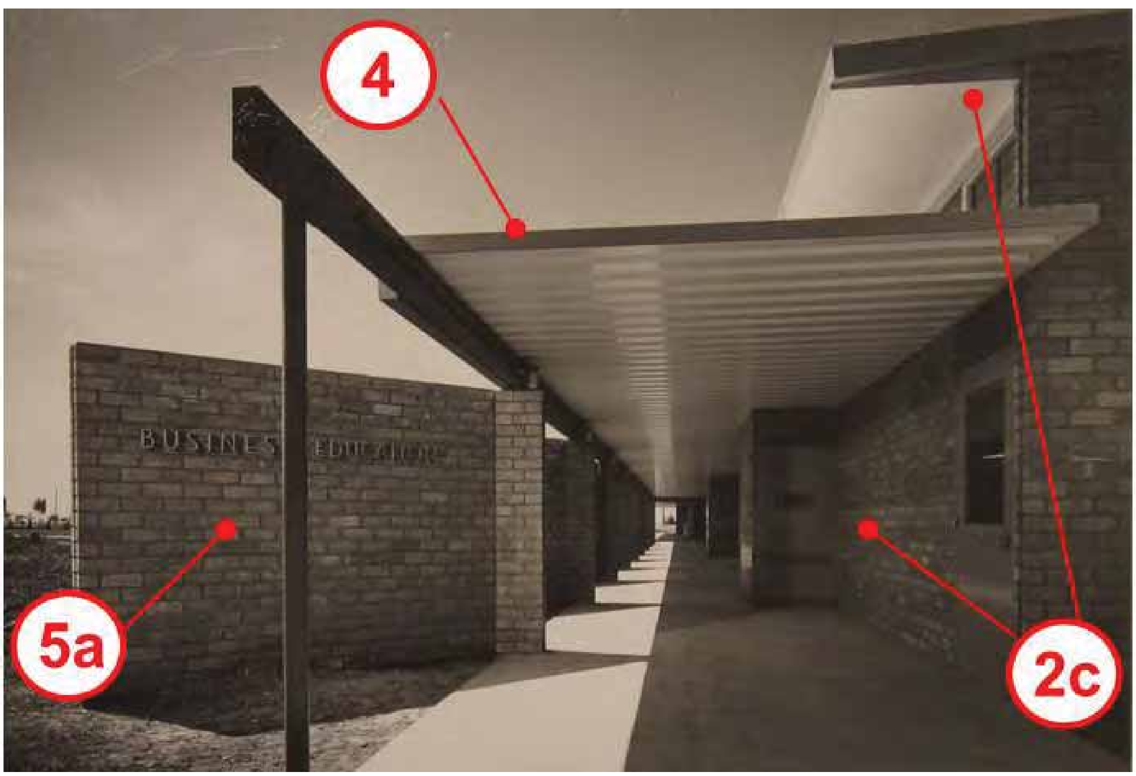

Figure 1D-3: Historic image of Business Education (Bldg. 12 in photograph) with character defining features identified by red callouts. Original photo by Julius Shulman, ca.1954, edited by Page & Turnbull.

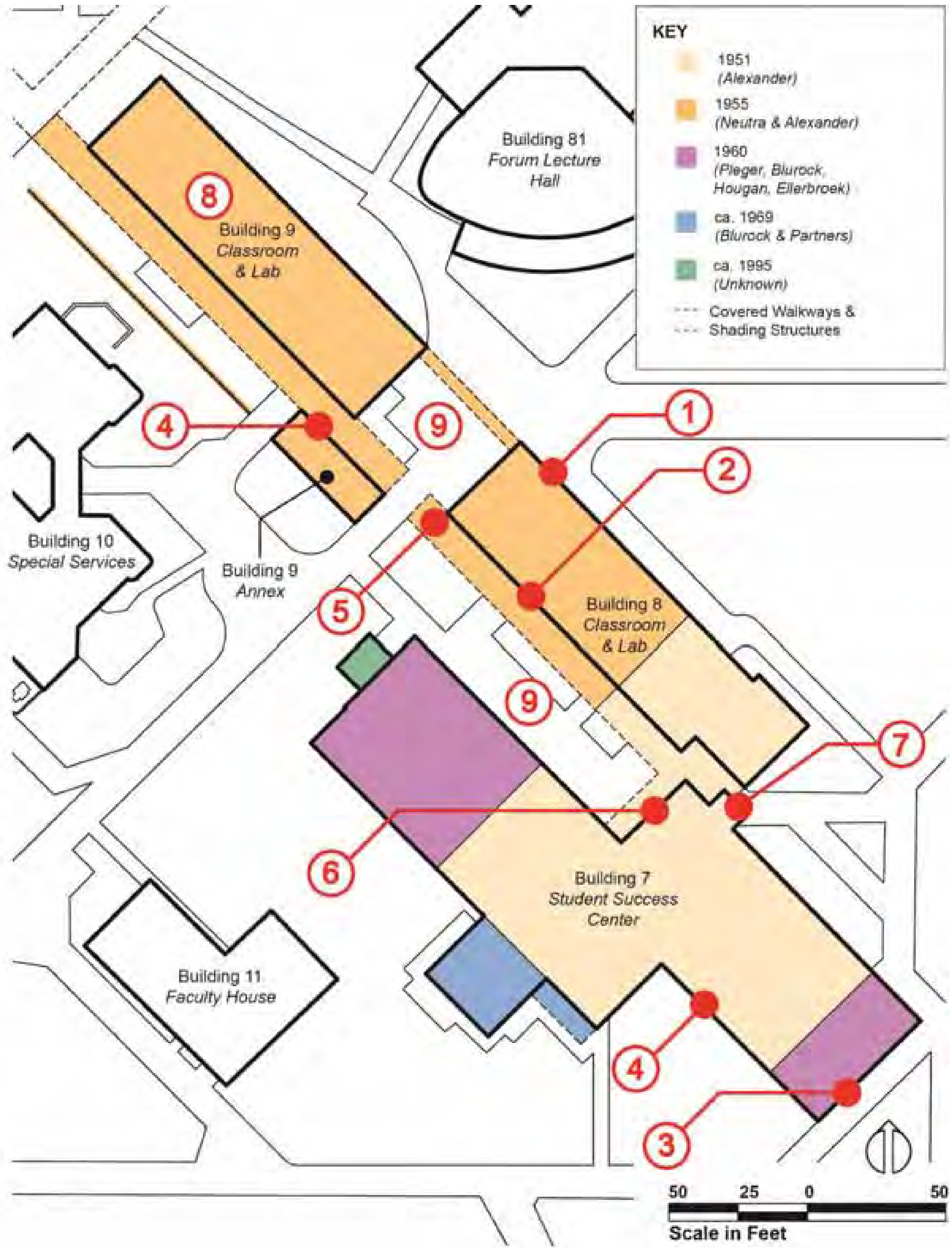

Figure 1D-4: Map illustrating the chronological development of the Student Success Center and Classroom & Labs complex (Bldgs. 7-9) and the location of character defining features. Image by Page & Turnbull.

Buildings 7, 8, 9 | Student Success Center and Classrooms & Labs complex

Complex-specific character-defining features:

1. Window walls on low brick walls
2. Wood doors and clerestory windows
3. Concrete walls
4. Brick and plywood/wood veneer cladding
5. Covered walkways
6. Glazed wall
7. Clock tower
    a. Open structure
    b. Both clock faces and hands
8. Typical classrooms with
    a. Visible sloped roof
    b. North window wall
    c. South clerestories
9. Landscape patio and courtyard
    a. Planters
    b. Trellis
    c. Tapered supports
    d. Stucco box eave

Figure 1D-5: Historic image of the Student Success Center and Classroom & Labs complex (Bldgs. 7 & 8 in image). Photo from Robert E. Alexander Collection, ca. mid-1950s, Cornell University.

Figure 1D-6: Contemporary image of the Student Success Center and Classroom & Labs (Bldgs. 7 & 8) with character defining features identified by red callouts.[15]

Figure 1D-7: Contemporary image of the Student Success Center and Classroom & Labs complex (Bldg. 8 in photograph) with character defining features identified by red callouts.

[15] All photographs in this section of the Historic Resources Report were taken by Page & Turnbull, 2014-2015, unless sourced otherwise.

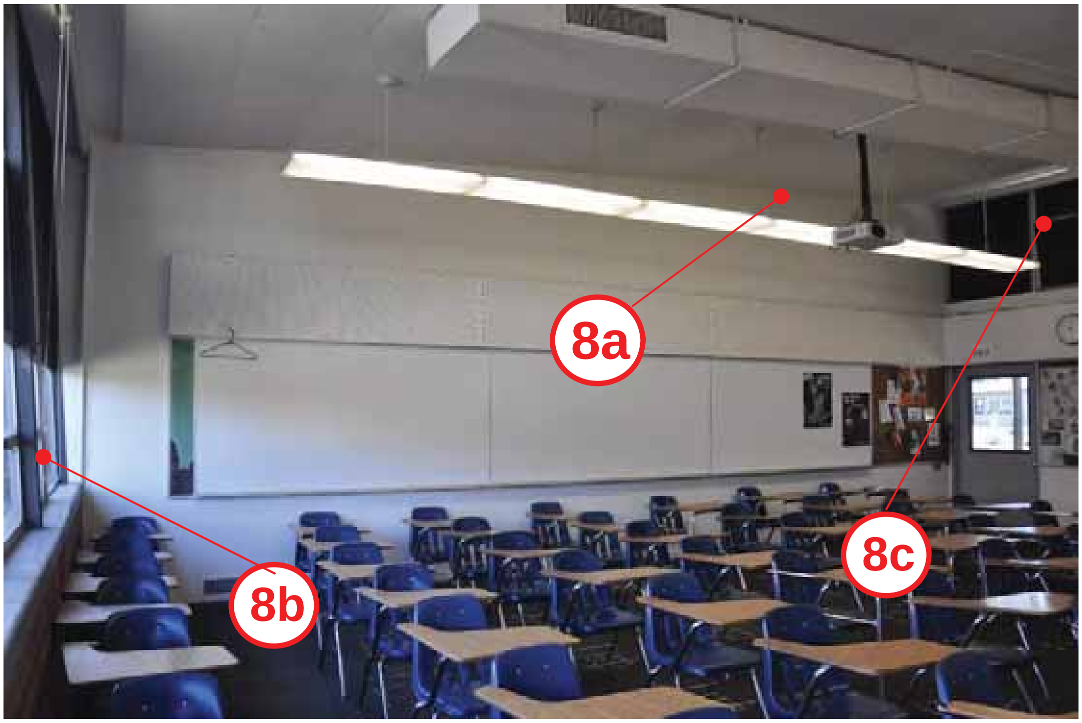

Figure 1D-8: Contemporary image of classroom interior in the Classroom and Lab Buildings (Bldg. 8) with character defining features identified by red callouts.

Figure 1D-9: Contemporary image of the Student Success Center and Classroom & Labs (Bldgs. 8 & 9 in photograph) with character defining features identified by red callouts.

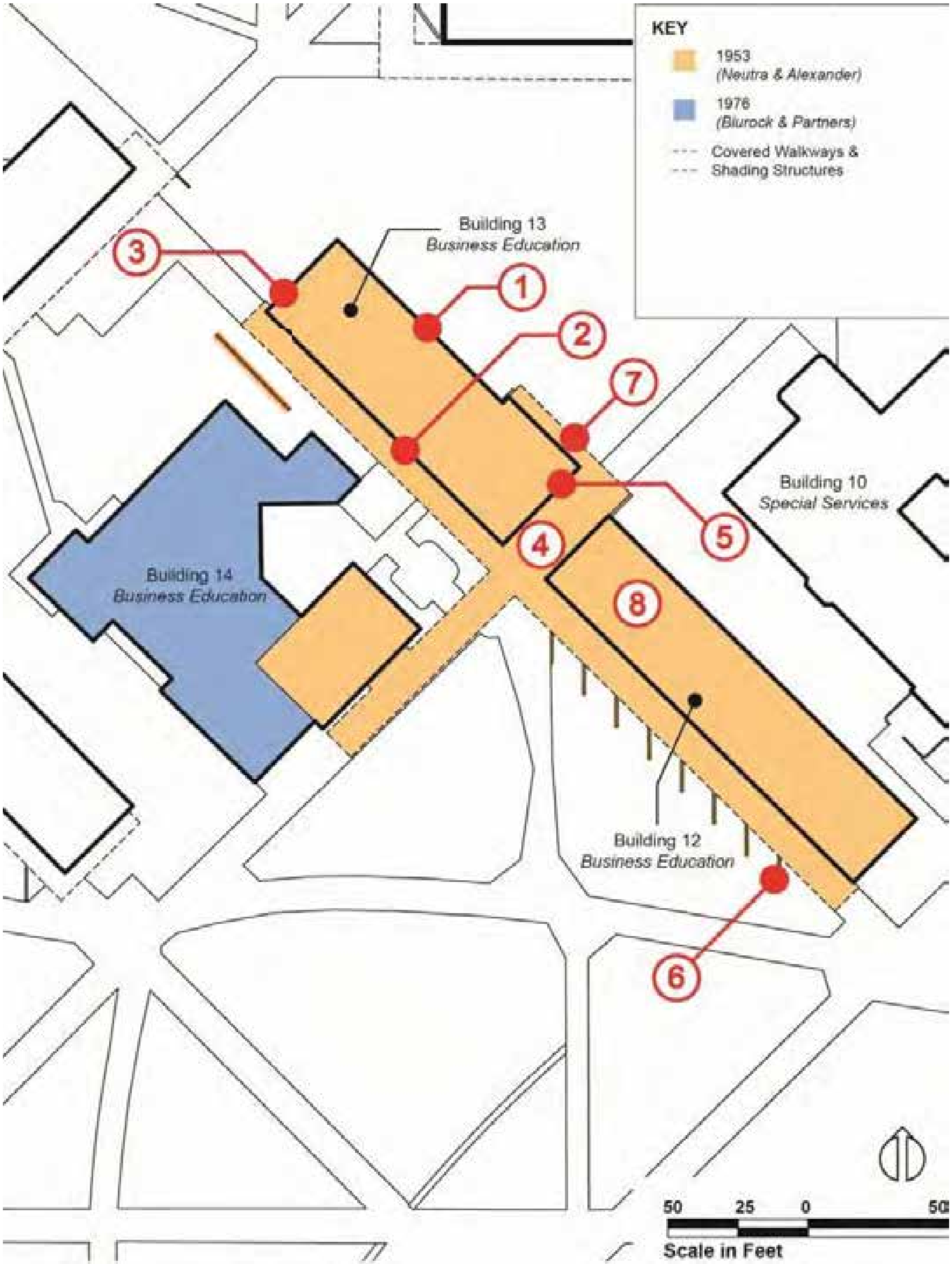

Figure 1D-10: Map illustrating the chronological development of the Business Education complex (Bldgs. 12-14) and the location of character defining features. Image by Page & Turnbull.

Buildings 12, 13 | Business Education complex

Complex-specific character-defining features:

1. Window walls on low brick walls
2. Wood doors and clerestory windows
3. Brick cladding
4. Covered walkways with overlapping planes at breezeway
5. Glazed wall
6. Brick wing walls and screen wall
7. Trellis
8. Typical classroom with
    a. Visible pitched roof and steel ridge beam
    b. North window wall
    c. South clerestories
    d. Brick partition walls
    e. Wood veneer paneling and built-ins, where extant

Figure 1D-11: Historic image of Business Education (Bldgs. 12 & 13). Photo from Robert E. Alexander Collection, date unknown, Cornell University.

Figure 1D-12: Contemporary image of Business Education (Bldgs. 12-14) with character defining features identified by red callouts.

Figure 1D-13: Contemporary image of Business Education (Bldg. 12) with character defining features identified by red callouts.

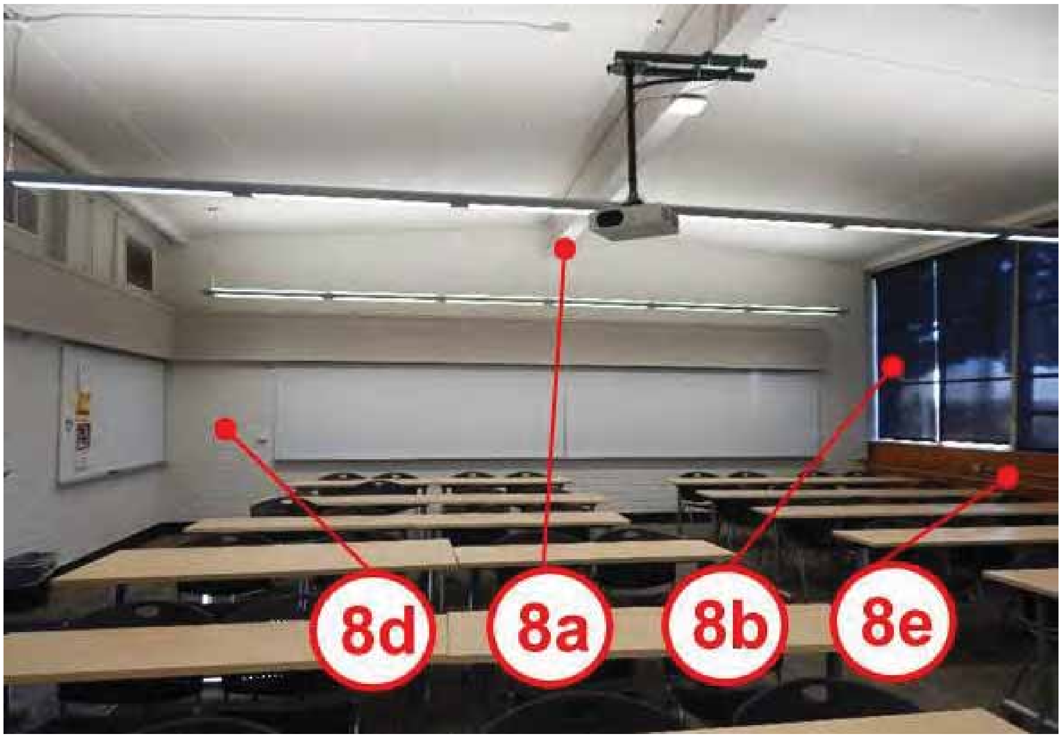

Figure 1D-14: Contemporary image of classroom interior in Business Education (Bldgs. 12 & 13) with character defining features identified by red callouts.

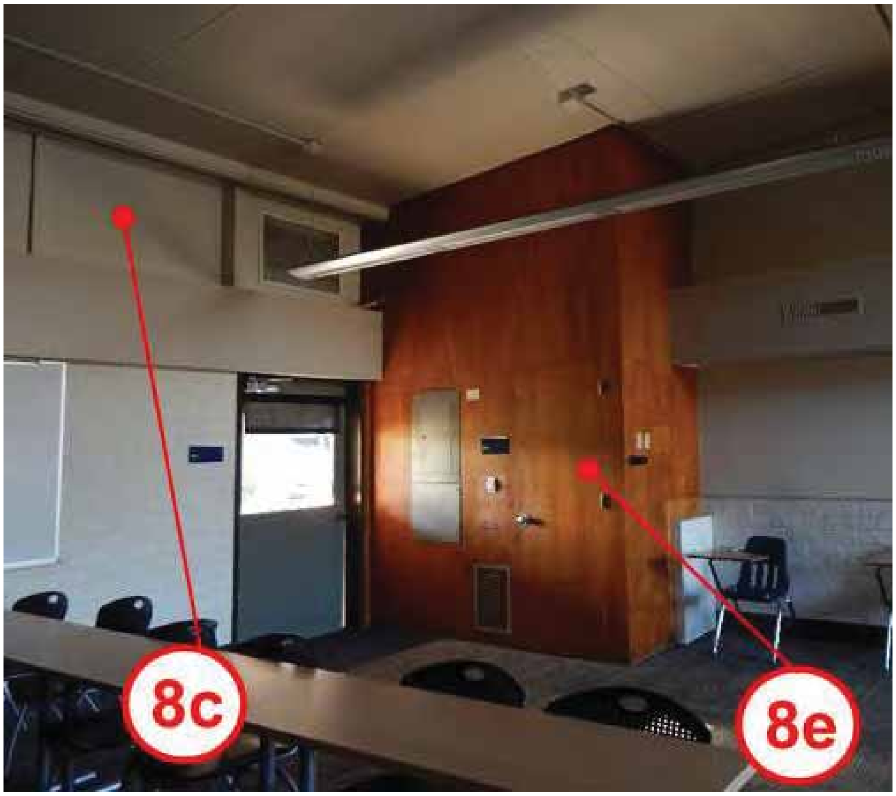

Figure 1D-15: Contemporary image of Business Education interior (Bldgs. 12 & 13) with character defining features identified by red callouts.

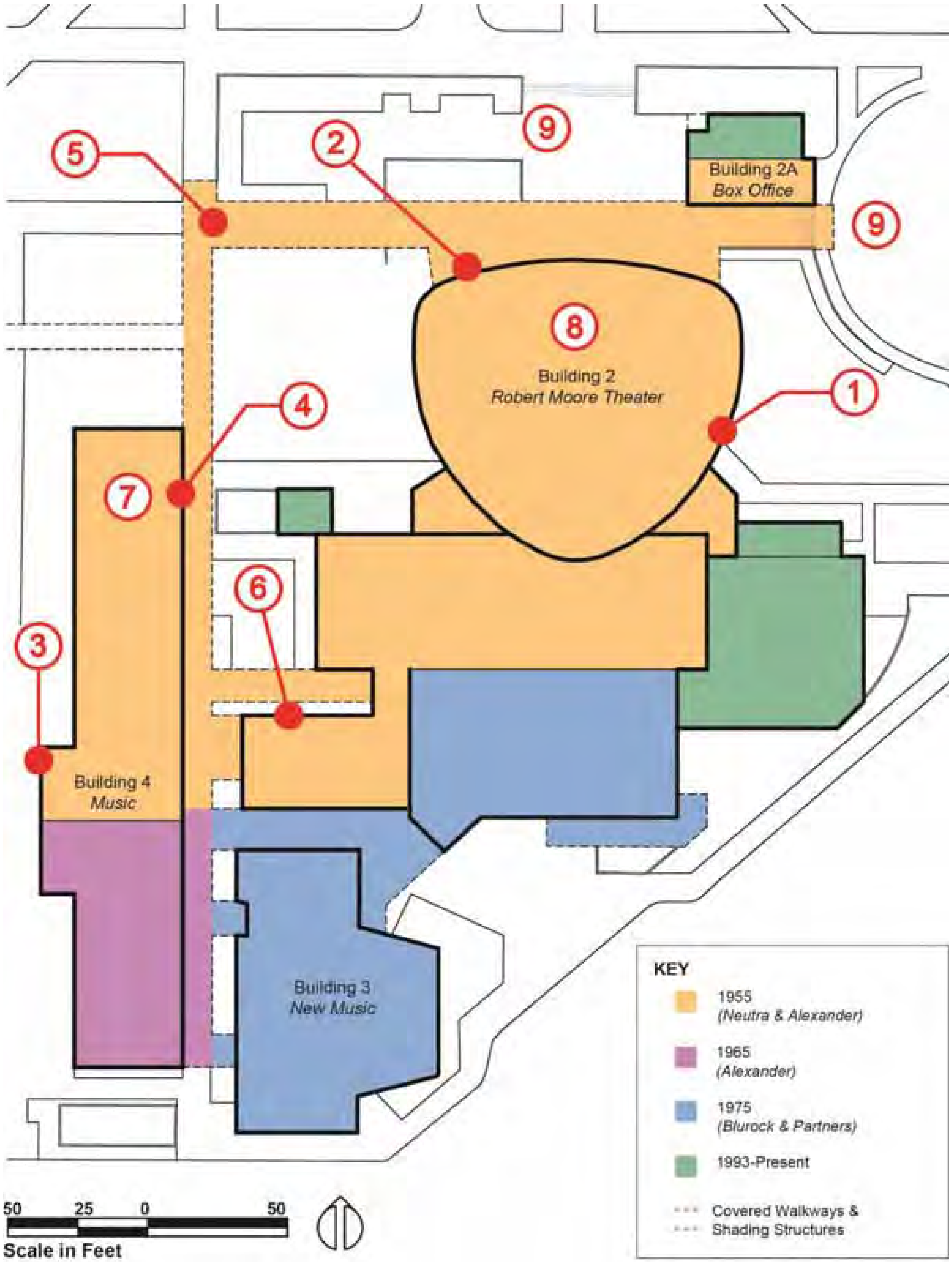

Figure 1D-16: Map illustrating the chronological development of the Theater and Music complex (Bldgs. 2 & 4) and the location of character defining features. Image by Page & Turnbull.

Buildings 2, 4 | Theater and Music complex

Complex-specific character-defining features:

1. Poured-in-place concrete walls
2. Wood cladding and doors
3. Brick cladding
4. Stucco cladding
5. Covered walkways overlapping planes and integrated lighting/gutter
6. Wood and aluminum windows
7. Curved wood wall/ceiling and tiered floor in classroom
8. Auditorium interior
    a. Overall volume
    b. Entry vestibules and interior wood doors
    c. Coved ceiling
    d. Orchestral pit (if extant) & rear stage
9. Landscape features
    a. Entry stairs/sequence
    b. Outdoor lobby/patio
    c. Brick planters
    d. Brick walls

Figure 1D-17: Historic image of the Theater and Music complex (Bldg. 2 & 4). Photo by Julius Shulman, 1955, Getty Research Institute.

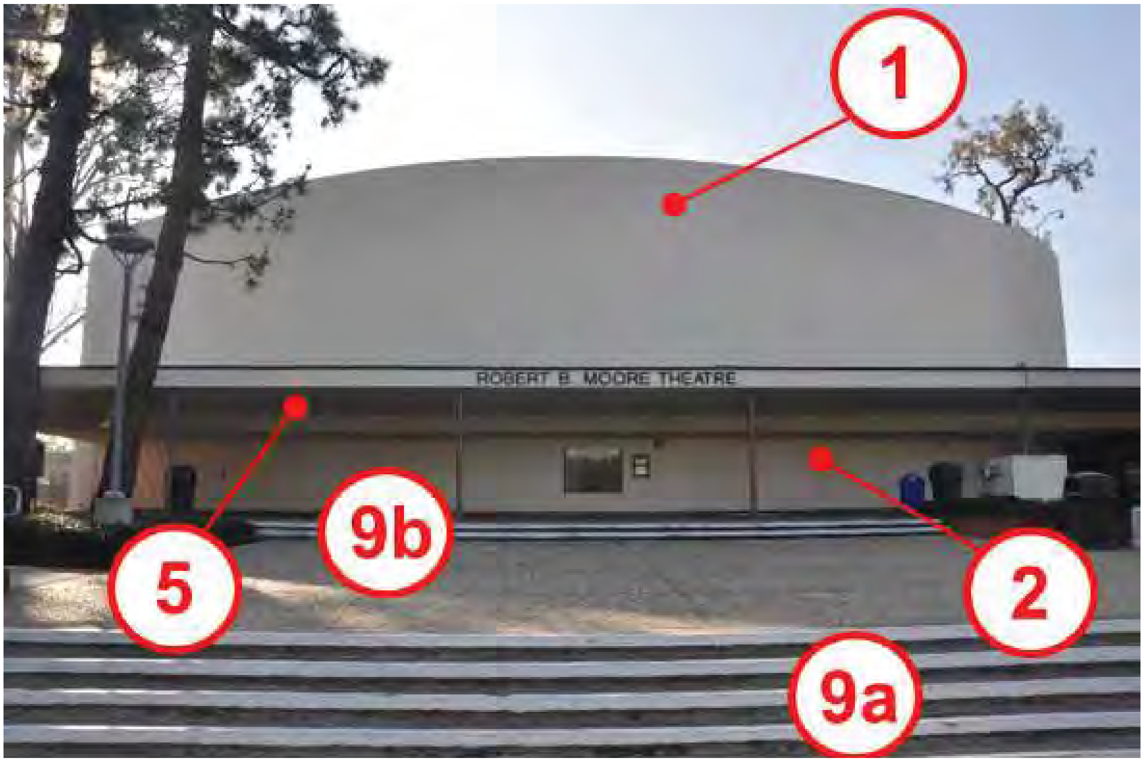

Figure 1D-18: Contemporary image of the Theater Building (Bldg. 2) with character defining features identified by red callouts.

Figure 1D-19: Contemporary image of the Music Building (Bldg. 4) with character defining features identified by red callouts.

Figure 1D-20: Contemporary image of the Music Building (Bldg. 4) with character defining features identified by red callouts.

Figure 1D-21: Contemporary image of the Theater (Bldg. 2) with character defining features identified by red callouts.

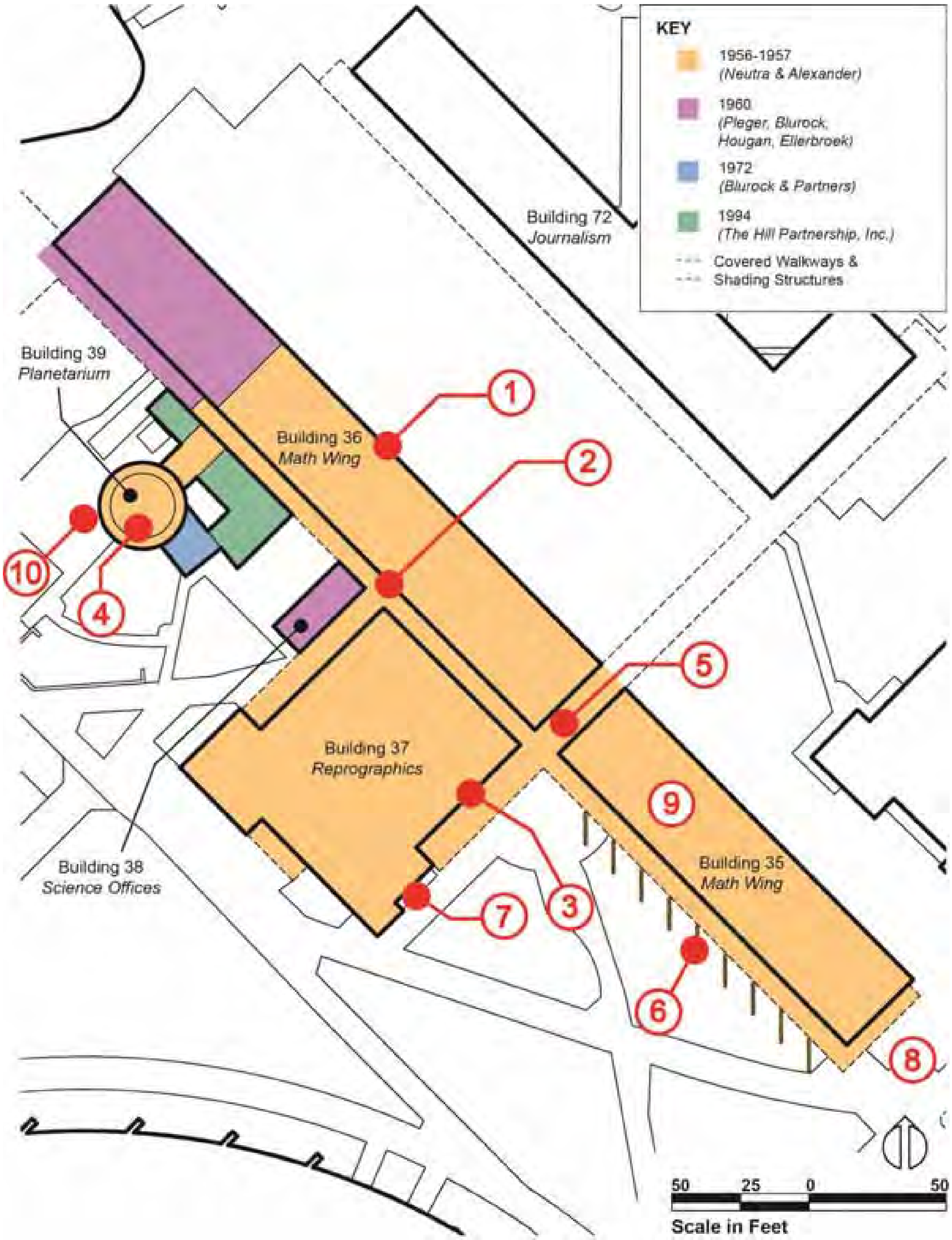

Figure 1D-22: Map illustrating the chronological development of the Math & Planetarium complex (Bldg. 35-39) and the location of character defining features. Image by Page & Turnbull.

Buildings 35, 36, 37, 39 | Math & Planetarium complex

Complex-specific character-defining features:

1. Window walls on low brick walls
2. Wood doors and clerestory windows
3. Brick, stucco and plywood/wood veneer cladding
4. Planetarium' s concrete walls and copper-clad dome
5. Covered walkways with overlapping planes at breezeway
6. Brick wing walls
7. Exterior stair at Bldg. 37
8. Armillary sphere sculpture
    a. Metal sculpture
    b. Carved concrete base
9. Typical classroom with
    a. Visible pitched roof and steel beam
    b. North window wall
    c. South clerestories
    d. Spatial layout of prep rooms shared between classrooms
    e. Wood veneer paneling and built-ins, where extant
    f. Interior wood doors, where extant

Figure 1D-23: Historic image of the Math & Planetarium complex (Bldg. 35-39). Photo by Julius Shulman, 1957, Getty Research Institute.

Figure 1D-24: Contemporary image of the Reprographics Building (Bldg. 37) with character defining features identified by red callouts.

Figure 1D-25: Contemporary image of the Planetarium (Bldg. 39) with character defining features identified by red callouts.

Figure 1D-26: Historic image of Math Wing (Bldg. 35) with character defining features identified by red callouts. Photo from Garrett Eckbo Collection, Environmental Design Archives, University of California, Berkeley.

Figure 1D-27: Contemporary interior image of Instructor Preparation Office (Bldg. 35) with character defining features identified by red callouts.

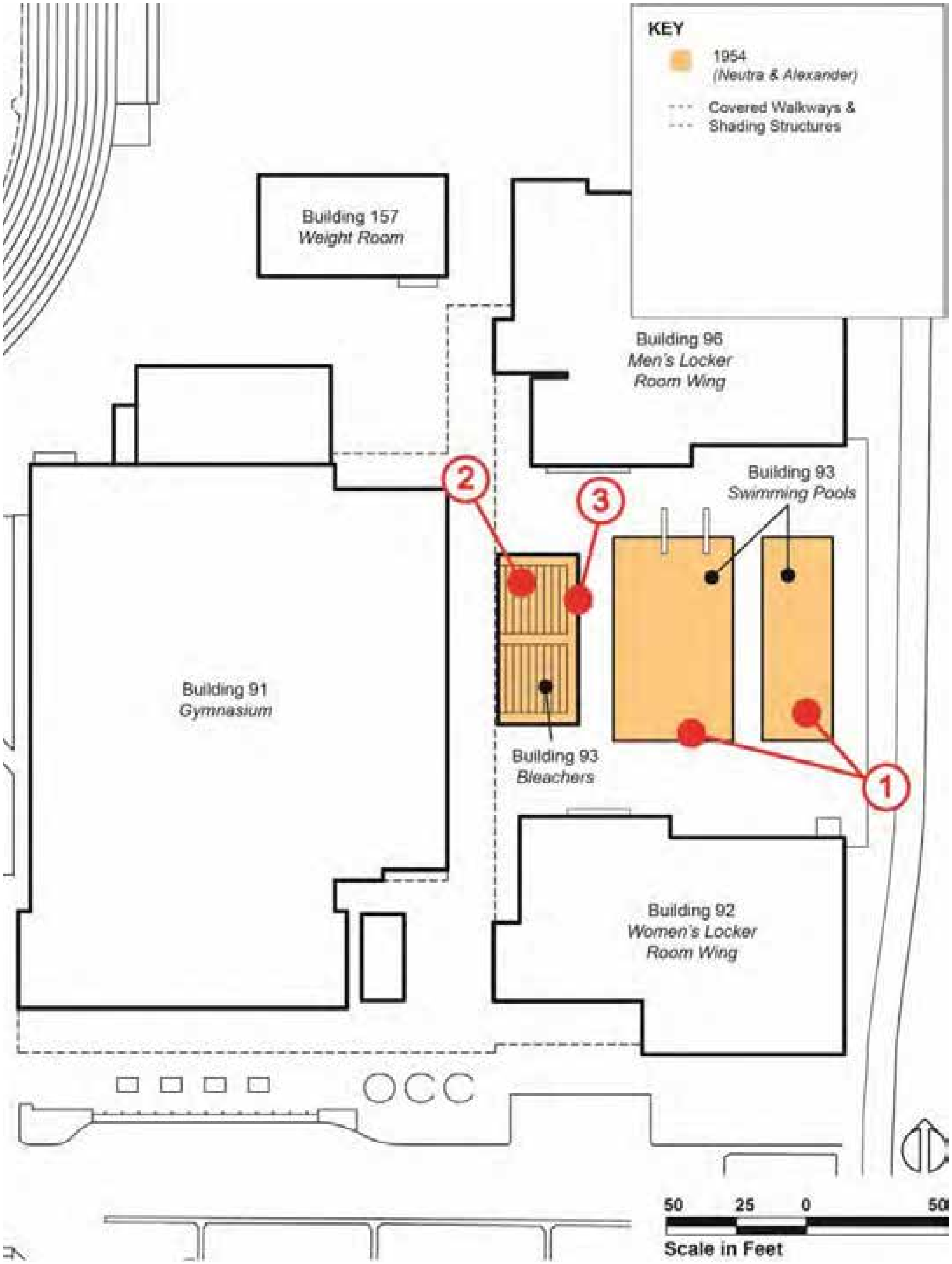

Figure 1D-28: Map illustrating the chronological development of the Swimming Pool complex (Bldg. 93) and the location of character defining features. Image by Page & Turnbull.

Building 93 | Swimming Pool complex

Complex-specific character-defining features:

1. Two pools
   a. Overall size, shape, and relationship
   b. Concrete/gunite bowls
2. Concrete bleachers
   a. Concrete tiers
   b. Wood side fence
   c. Structure and columns
3. CMU wall with integrated bench

Figure 1D-29: Historic image of the Swimming Pool complex (Bldg. 93). Photo by Julius Shulman, Getty Research Institute.

Figure 1D-30: Contemporary image of the Swimming Pool complex (Bldg. 93) with character defining features identified by red callouts.

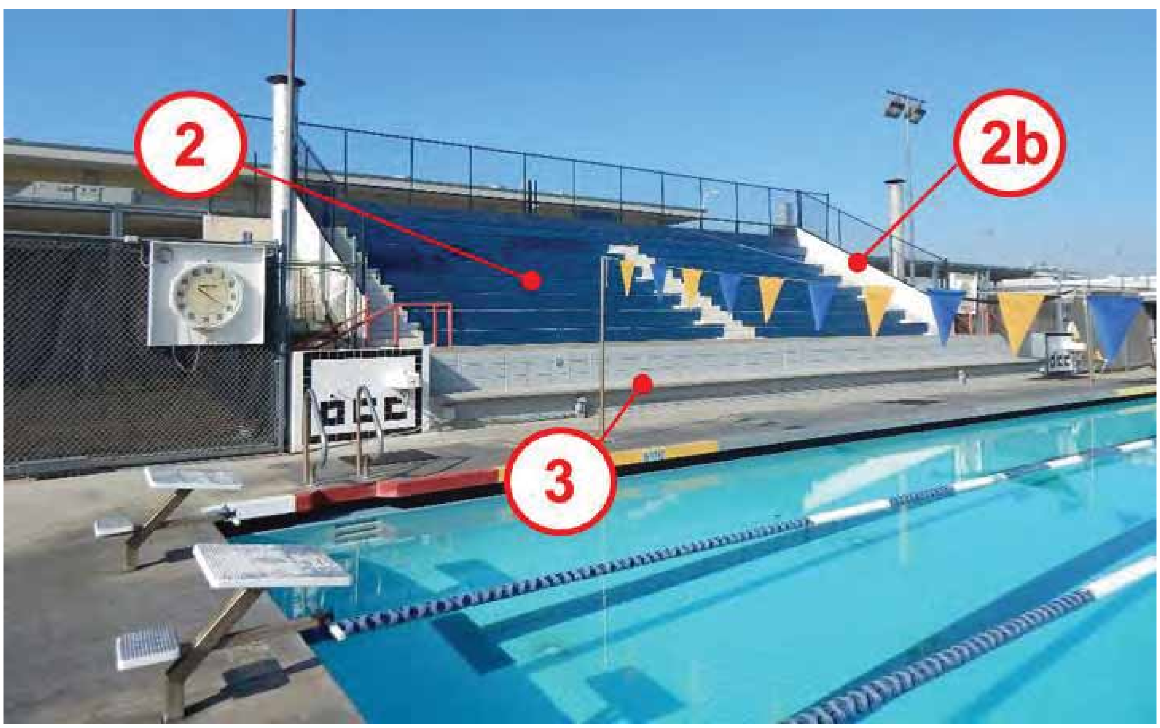

Figure 1D-31: Contemporary image of the Swimming Pool complex (Bldg. 93) with character defining features identified by red callouts.

Figure 1D-32: Contemporary image below the Bleachers (Bldg. 93) with character defining features identified by red callouts.

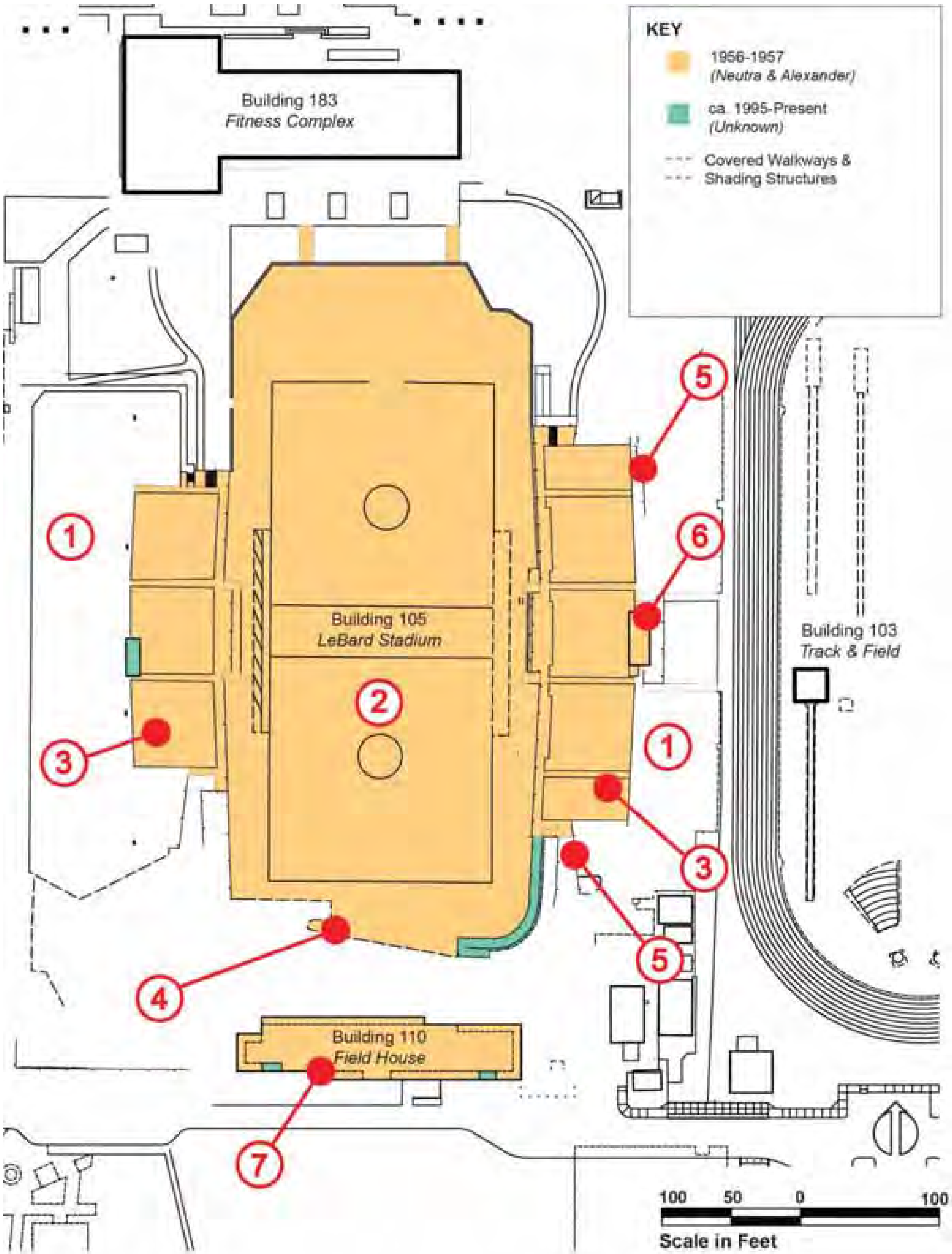

Figure 1D-33: Map illustrating the chronological development of the Stadium and Field House (Bldgs. 105 and 110) and the location of character defining features. Image by Page & Turnbull.

Buildings 105 & 110 | Stadium and Field House

Complex-specific character-defining features:

1. Berms
2. Below grade field
3. Curved concrete bleachers
    a. Concrete aisles and stairs
    b. Metal pipe hand rails
4. Field access ramp
5. Poured-in place concrete walls and stairs
6. Original press box
    a. Rooftop deck
    b. Overhang and trellis
    c. Canted glazing
    d. Solid band below glazing
7. Field House
    a. Overhanging exposed rafter roof
    b. Board and batten and stucco cladding
    c. Aluminum windows

Figure 1D-34: Historic image of the Stadium and Press Box (Bldg. 105). Photo from Robert E. Alexander Collection, Cornell University.

Figure 1D-35: Contemporary image of the Stadium and Field House (Bldg. 105 & 110) with character defining features identified by red callouts.

Figure 1D-36: Contemporary image of the Stadium and Press Box (Bldg. 105) with character defining features identified by red callouts.

Figure 1D-37: Contemporary image of the Field House (Bldg. 110) with character defining features identified by red callouts.

Figure 1D-38: Contemporary image of the Stadium (Bldg. 105) with character defining features identified by red callouts.

Significance Diagrams

This section provides an analysis of the relative zones of significance present in the Orange Coast College Historic District. Utilizing accepted standards for the evaluation of historic resources, the major historical features have been identified and visually documented within a series of significance diagrams. The zoning seeks to identify the difference between more and less significant interior and exterior building areas and assigns a level to each zone. The zone ratings establish management and treatment requirements for each zone, i.e. highly significant area may be in a restoration zone where maintenance is controlled and replacements are restricted. At the other end of the spectrum, non-historic areas allow for greater latitude to change or demolish. The treatment guidelines for each level convey the general principles of preservation to be applied within the zone.

For the purposes of this analysis, Page & Turnbull surveyed the buildings, including all exterior façades and interior spaces, and evaluated their relative significance by categorizing them as follows:

Level 1 – Primary Significance
Level 2 – Secondary Significance
Level 3 – Contributing
Level 4 – Non-Contributing

The significance levels at the Swimming Pool complex (Bldg. 93) and Stadium and Field House (Bldgs. 105 and 110) are specific to those resources and less related to the Historic District as a whole.

Primary Significance (Red)

Definition: Spaces, elements or materials characterized by a high degree of architectural significance and a high degree of historic integrity.

Description: Features of primary significance in the OCC Historic District are the contributing buildings' overall form and massing, fenestration pattern, exterior materials, and architectural details. Also of primary significance are the spatial relationship of buildings within each complex, the distinctive brick wing walls at Buildings 12 and 35, the prominent clock tower at Building 7, and major circulation paths in the Historic District. The bleachers at the Stadium (Bldg. 105) are also in this level.

- Building exteriors
  - Overall massing
  - Cladding
  - Fenestration pattern and windows
  - Wood doors
  - Overhangs and trellises
- Spatial relationship of buildings within complexes
- Brick wing walls

- Clock tower
- Major circulation paths
- Stadium bleachers

Preliminary Guideline: Primary significant exterior features and materials should be retained and preserved, or where alterations have occurred, be restored. Deteriorated materials should be repaired rather than replaced. Where replacement is necessary due to extensive material deterioration or failure, replacement materials should match the original materials and forms. Restoration projects to remove alterations deemed inappropriate should be undertaken where necessary. Maintenance and preservation of these areas should be the highest priority.

Secondary Significance (Orange)

Definition: Spaces, elements or materials that are ancillary or supportive of the primary significant features that contribute to the understanding of the overall design.

Description: Features of secondary significance to the OCC Historic District include the covered walkways that connect buildings within a complex, brick screen walls, and ancillary buildings in complexes, such as the restroom Building 9a and the ticket office Building 2a. Landscape elements are also of secondary significance, including patios and courtyards, and their associated built-in features (planters, trellis, etc.), the open space between buildings and complexes, and the armillary sphere sculpture. One interior space has secondary significance: Room 101 in the Music Building (Bldg. 4) with its original curved wood wall/ceiling and tiered floor. The Swimming Pool complex (Bldg. 93) and the press box and textured concrete walls at the Stadium (Bldg. 110) are also in this level.

- Covered walkways
- Ancillary buildings
- Brick screen walls
- Patios and courtyards adjacent to buildings
  - Built-in planters and features
- Open space between complexes
- Armillary sphere sculpture
- Room 101, Music Building (Bldg. 4) –Original choral room

Preliminary Guideline: Similar to the primary significant features, secondary significant features should be retained and preserved. Deteriorated materials should be repaired rather than replaced. Where replacement is necessary due to extensive material deterioration or failure, replacement materials should match the original materials and forms. Alteration or removal of these features may be necessary for programmatic or building system requirements; however removal of these features should be minimized or mitigated.

Contributing (Yellow)

Definition: Elements characterized by a lesser degree of architectural significance, yet retain a high degree of historic integrity, or historically important, yet altered elements.

Description: Contributing features of the OCC Historic District include the general interiors of contributing buildings, specifically their character-defining features of overall volume (i.e. ceiling heights), interior expressions of exterior character-defining features (brick and concrete walls, fenestration, roof shape), significant interior spatial relationships (prep. rooms between classrooms at Building 35-37), and wood veneer built-ins where extant. The secondary pedestrian circulation paths and the Field House (Bldg. 110) are also considered Contributing.

- Classroom building interiors
- Theater auditorium and stage house interior
- Secondary circulation paths
- Altered open space between complexes
- Field House (Bldg. 110)

Preliminary Guideline: Contributing elements should be retained wherever possible, but are not essential to the Historic District's ability to convey its overall significance. Where required, alterations and additions should be designed to be compatible with the existing elements and materials. New materials and assemblies at reconstructed areas should be similar to the original.

Non-Contributing (Grey)

Description: Non-Contributing elements are generally non-historic elements or elements that have been altered to the extent that their original character is absent.

Description: Non-Contributing features of the OCC Historic District include the compatible and non-compatible additions to various buildings after the period of significance. They also include original but not significant restroom, mechanical, and janitorial interiors as well as significantly altered interiors, such as in Building 7 (Student Success Center) and back-of-house parts of Building 2 (Theater).

- Additions outside the period of significance. Note: Some additions are compatible and can remain. These include
  - Building 7's 1960 additions
  - Building 36's 1960 addition
  - Building 4's 1964 addition
- Restroom interiors
- Mechanical and janitorial spaces
- Significantly altered or non-significant interiors
  - Building 7
  - Back-of-house areas of Building 2

Preliminary Guideline: Non-Contributing elements are not specifically limited by preservation recommendations, except to note that the overall character of alterations to an historic building must meet the general requirements set forth in the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (Standards). Alterations to these areas may be undertaken as long as changes do not effect adjoining Significant or Contributing areas. While there are no specific recommendations for the treatment of Non-Contributing spaces, the building's general organization should be preserved where possible. Furthermore, Non-Contributing additions could be removed to improve the building's overall integrity.

Overall Historic District

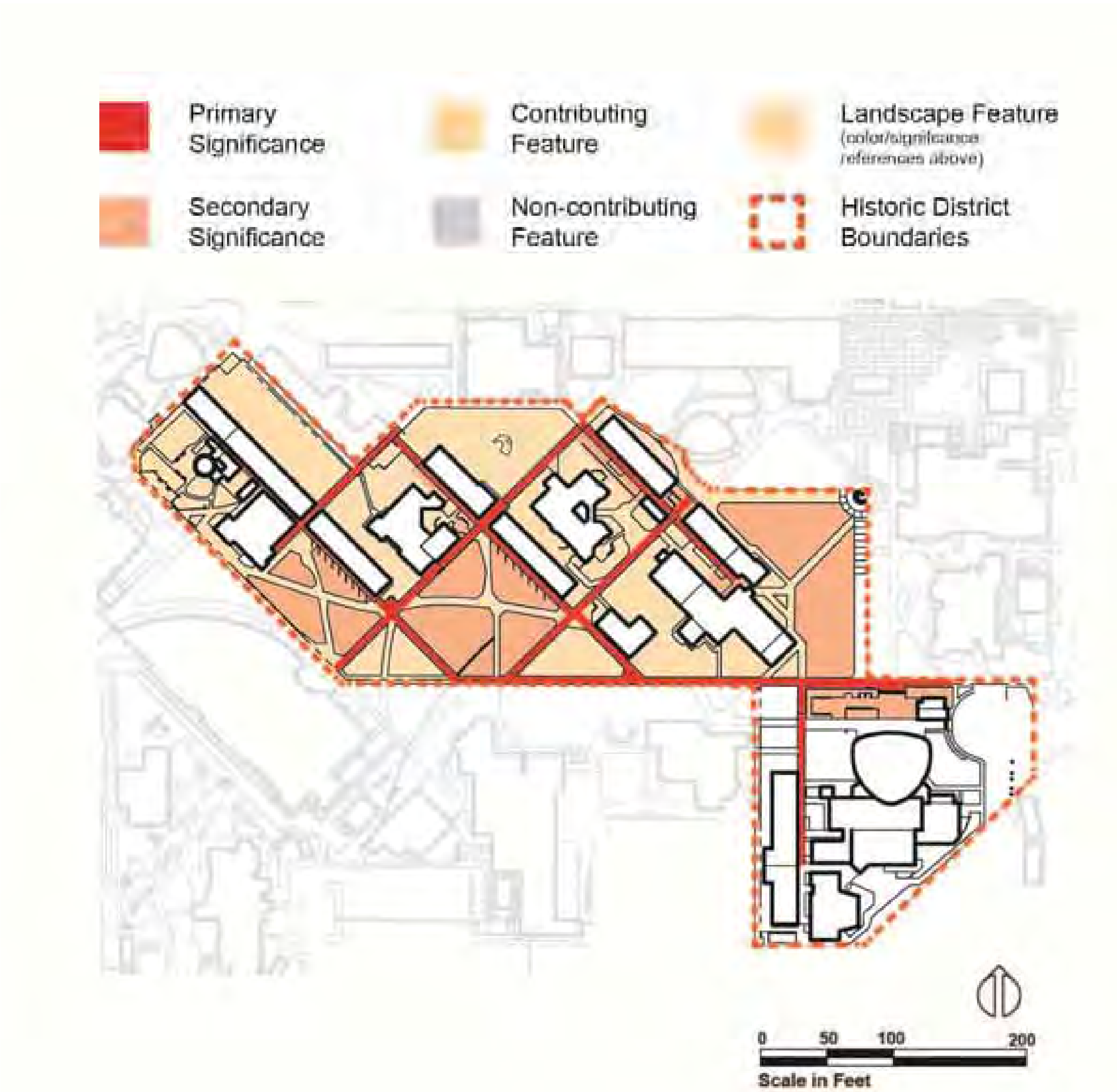

Figure 1D-39: Significance diagram for OCC Historic District's site elements. Significance diagrams for individual building contributors (in white) are separate. Image by Page & Turnbull.

Buildings 7, 8, 9 | Student Success Center and Classroom & Labs complex

Figure 1D-40: Significance diagram for Buildings 7-9 – Student Success Center and Classroom & Labs complex. Image by Page & Turnbull.

Buildings 12, 13 | Business Education complex

Figure 1D-41: Significance diagram for Buildings 12 & 13 – Business Education. Image by Page & Turnbull.

Buildings 2, 4 | Theater and Music complex

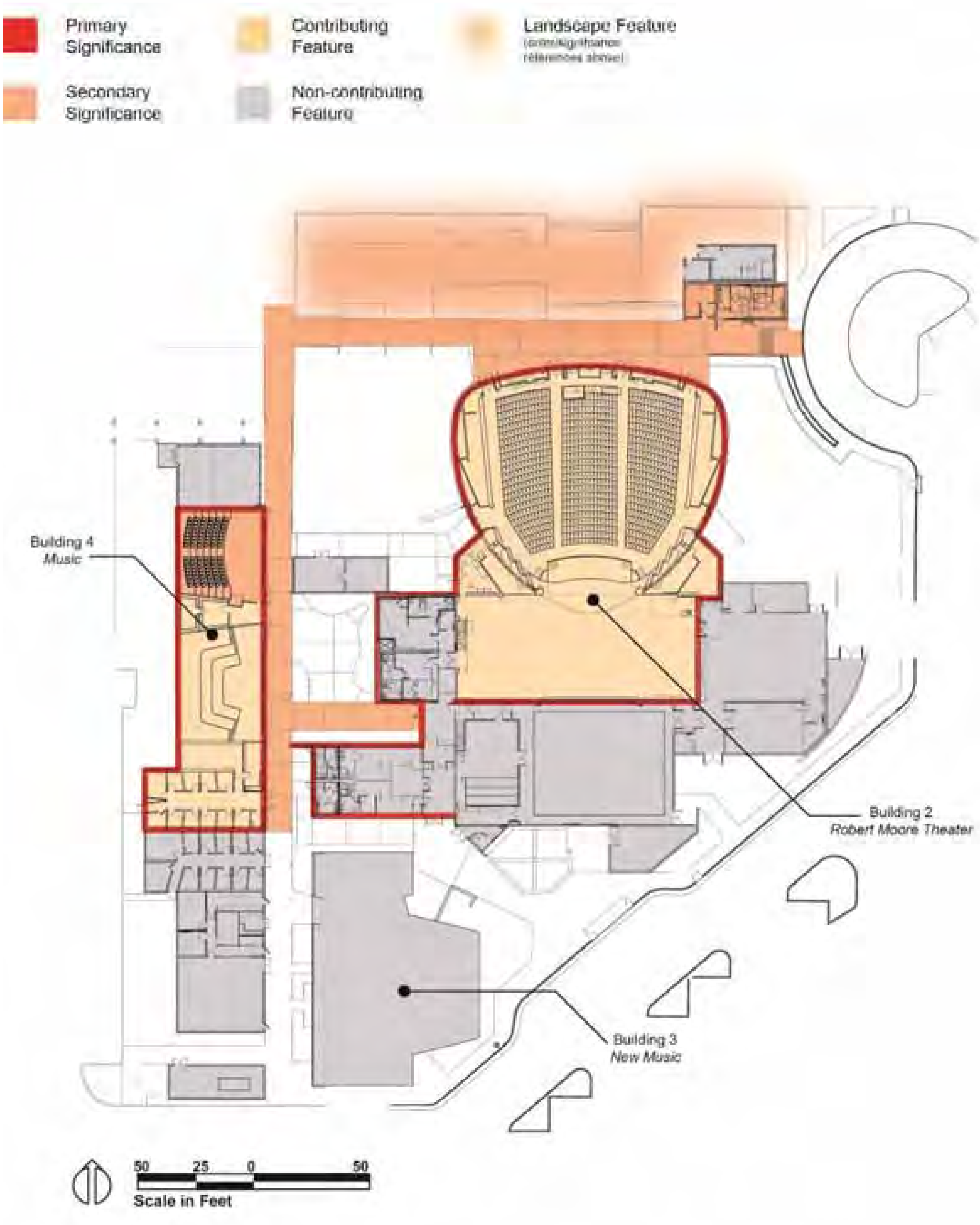

Figure 1D-42: Significance diagram for Buildings 2 & 4 – Theater and Music complex. Image by Page & Turnbull.

Buildings 35, 36, 37, 39 | Math & Planetarium complex

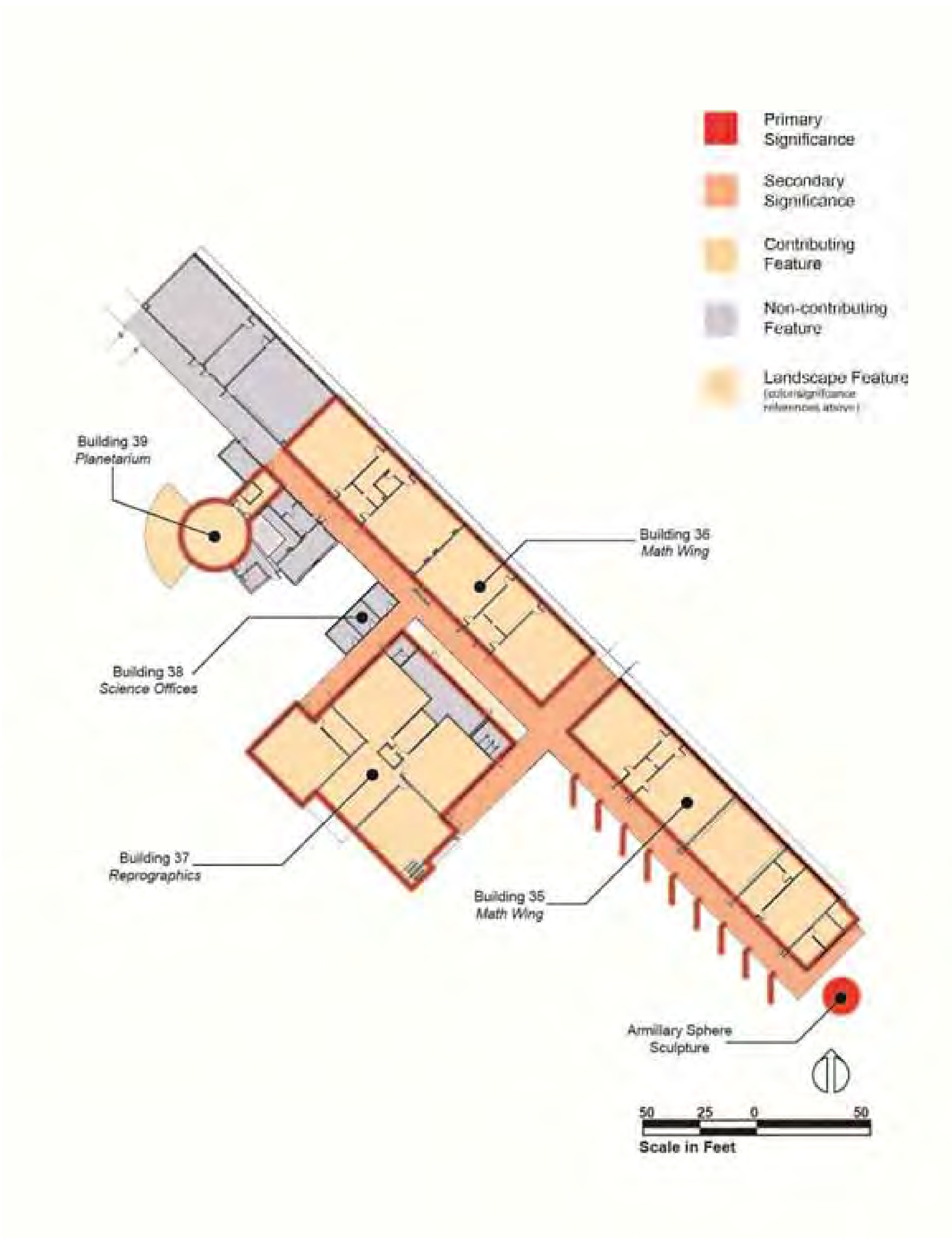

Figure 1D-43: Significance diagram for Buildings 35-39 – Math and Planetarium complex. Image by Page & Turnbull.

Building 93 | Swimming Pool complex

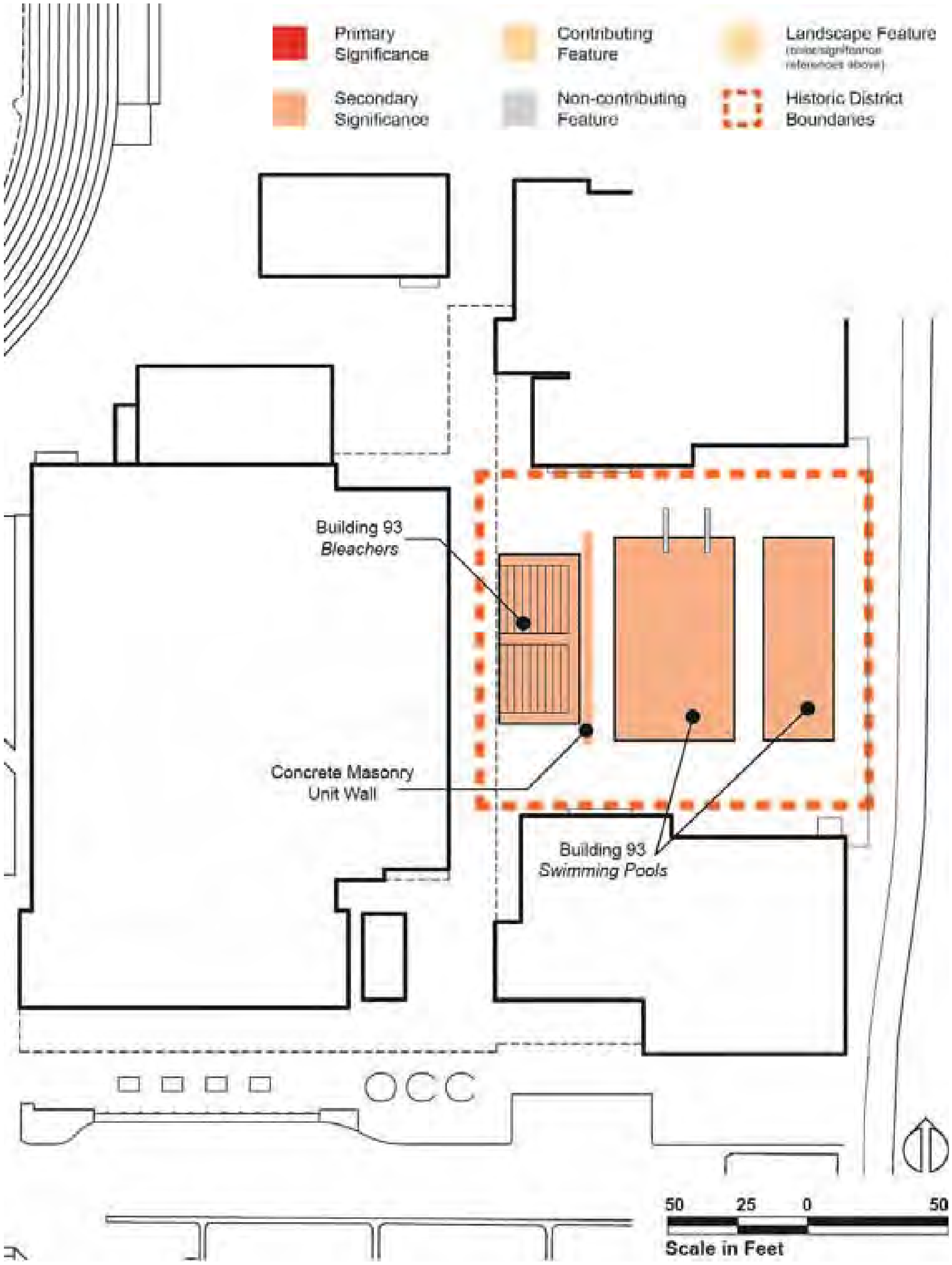

Figure 1D-44: Significance diagram for Building 93 – Swimming Pool complex. Image by Page & Turnbull.

Buildings 105 & 110 | Stadium and Field House

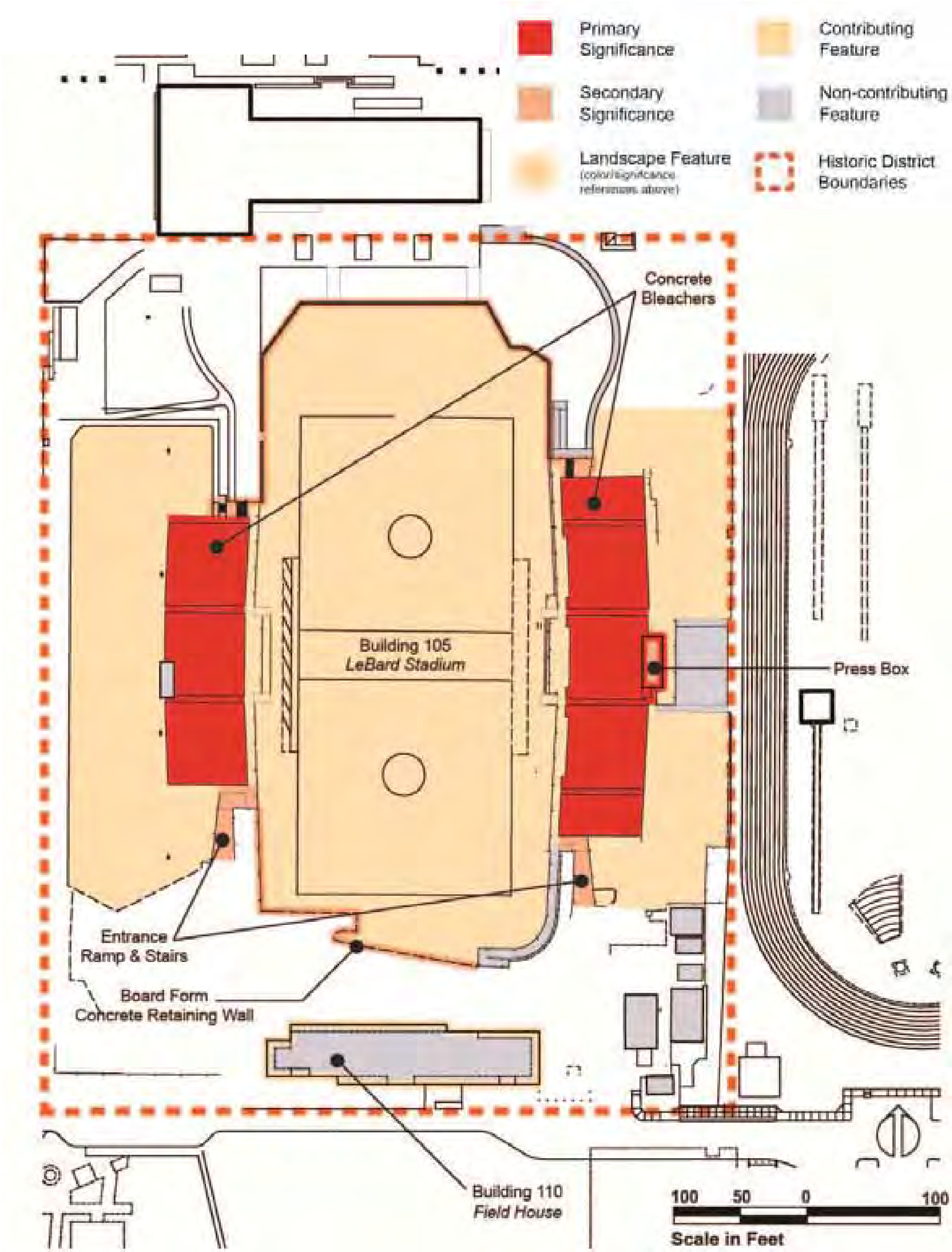

Figure 1D-45: Significance diagram for Buildings 105 and 110 – Stadium and Field House. Image by Page & Turnbull.

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1E. EXISTING CONDITION ASSESSMENT

Introduction

An existing condition assessment of campus buildings and facilities was completed to document and assess the condition of the existing buildings, to identify areas of immediate concern, and to identify and recommend treatments and repair strategy. Buildings included in the assessment are considered eligible for inclusion in the Historic District at Orange Coast College (Figure 2: Campus Map).

The buildings assessed in this study were designed by architects Richard J. Neutra and Robert E. Alexander and constructed between 1951 and 1957. The buildings have been grouped into complexes for discussion as follows:

- Student Success Center and Classrooms & Labs complex (1951/1955) - Buildings 7, 8 and 9
- Business Education complex, original construction only (1953) - Buildings 12, 13 and 14
- Theater and Music complex (1955) - Buildings 2 and 4
- Math Wing and Planetarium complex (1956-7) - Buildings 35, 36, 37, 38 and 39
- Swimming Pool complex (1954) - Building 93
- Stadium and Field House complex (1955) - Buildings 105 and 110

Figure 1[i]: The Student Success Center and Classroom & Labs complex (Bldgs. 7-9), facing plan east.[ii]

[i] Note: All figure references within the body of the text in report Part 1E refer to the figures produced in Part 1E only.

[ii] All photographs in this part of the Historic Structures Report were taken by Page & Turnbull, 2014-2015, unless sourced otherwise. As per the original plans for the diagonally oriented buildings, this report considers the northeast-facing façade as plan north or north, southeast-facing façade as plan east or east, southwest-facing façade as plan south or south, and northwest-facing façade as plan west or west.

Figure 2: Campus map identifying the buildings that were included in the condition assessment (orange).

Methodology

The buildings contributing to the Historic District at Orange Coast College (OCC) were visually surveyed during a week of site visits conducted January 12 through 16, 2015 by the Page & Turnbull Team (the Team). The survey consisted of visual observations of the buildings' exteriors and interiors. Materials testing and/or laboratory analysis was not completed during the assessment. The Team was able to access the majority of the spaces at this time and was assisted on site by the Orange Coast College Maintenance and Operations staff.

Documentation was undertaken in the form of field notes on field inspection checklists prepared for the site. Digital photographs were taken throughout the interior and exterior of the buildings. The assessment was further aided by historic drawings and photographs that were referenced during the survey enabling some construction details to be field verified.

The structural system, mechanical, electrical, and plumbing systems (MEP), fire and life safety, and hazardous materials (HazMat) were surveyed. These evaluations are summarized in this part of the report and are included in full in the Appendices.

The weather was dry at the time of the survey, but heavy rainfall the weekend immediately prior to survey commencement highlighted areas of water dispersal deficiencies.

The results of the condition assessments have been recorded in this report as a series of material systems for the complexes with similarities in design, construction techniques, and materials, followed by condition assessments for each of the individual complexes.

Condition Definitions

Throughout this report conditions of various building elements are described on a good, fair, poor as well as a heavy, medium, light rating system. These terms are defined in Table 1 below.

Table 1: Condition Definitions (used throughout the report).

Rating	Description
Good (G)	The material or feature is intact, structurally sound, or performing its intended purpose in a manner that is not damaging to another feature or material. The material or feature does not need repair or rehabilitation, but should be routinely maintained to prevent deterioration or damage.
Fair (F)	The material or feature exhibits signs of wear, failure, or deterioration, but is still structurally sound and performing its intended purpose. The material or feature may be in need of repair or rehabilitation.
Poor (P)	The material or feature is either missing; no longer functioning or performing its intended purpose; or is deteriorated or damaged to the point that hinders its ability to convey historical significance. Rehabilitation, restoration, or reconstruction is recommended.
Heavy (H)	The material or feature requires significant repair and/or alteration.
Medium (M)	The material or feature requires a moderate level of repair and/or alteration.
Light (L)	The material or feature requires a low level of repair and/or alteration.

Summary of Findings

The survey was undertaken as described in the methodology above. The results of the condition assessment indicate that the buildings that contribute to the Historic District are generally in good to fair condition for their age and there are no major safety or failure issues. The original construction methods and previous seismic upgrades have addressed many structural deficiencies, however some additional structural upgrades are needed; there are sensitive ways to complete this work and maintain the appearance of the building. There have been varying levels of MEP systems upgrades with some buildings needing full rehabilitation while others only need minor improvements. Table 2 below gives a summary rating for the conditions of each individual building and Table 3 summarizes the conditions of the material systems.

Table 2: Summary of Condition Assessments Findings (* = Building does not currently have a sprinkler system. Condition assumes no future sprinkler system although installing a sprinkler system may offer code advantages under the California Historic Building Code (CHBC)).

Buildings		Overall Condition (**G**ood, **F**air, **P**oor)	Architectural Repair Required (**H**eavy, **M**edium, **L**ight)	Structural Upgrade Work Required (**H**eavy, **M**edium, **L**ight)	Mechanical/Plumbing Upgrade Required (**H**eavy, **M**edium, **L**ight)	Electrical System Upgrade Required (**H**eavy, **M**edium, **L**ight)	Fire and Life Safety Upgrade Required (**H**eavy, **M**edium, **L**ight)
02	Robert Moore Theater	G/F	L/M	M	M	M	L
04	Music Building	G	L	L	L	L	L*
07	Student Services Center	G/F	M	L/M	M	M	L
08	Classroom & Lab	F	M	M	M	M	L*
09	Classroom & Lab	F	M	M	M	M	L*
12	Business Education (east)	G/F	M	L	M	M	L*
13	Business Education (west)	G/F	M	L	M	M	L*
14	Business Education (orig. const.)[iii]	G/F	M	-	-	M	L*
35	Math Wing (east)	F	M	M	M	M	L*
36	Math Wing (west)	F	M	M	M	M	M*
37	Reprographics	F	M	L/M	H	M	L*
38	Science Office Annex	G/F	L	L	M	M	L*
39	Planetarium	F	M	L/M	H	H	L*
93	Swimming Pools & Bleachers	F	M	L	M	M	L*
105	LeBard Stadium	F	M	M	L	L	L*
110	Field House	F	M/H	L	H	M	L*

[iii] Categories are blank because these investigations were not undertaken for this building.

Table 3: Summary of system conditions.

System	Condition
Brick Walls	▫ Overall Condition: Fair to Good ▫ No significant damage ▫ Brick spalls at isolated locations, typically screen walls
Concrete Walls	▫ Overall Condition: Good ▫ No significant damage ▫ A few small hairline cracks and surface texture loss at Theater (Bldg. 2)
Stucco- and Wood-Clad Walls	▫ Overall Condition: Fair to Good ▫ No significant damage ▫ Minor moisture damage includes peeling paint at base of some walls ▫ Some visible repairs and patches due to mismatched color / texture
Aluminum Window Walls	▫ Overall Condition: Fair to Good ▫ Units remain operable ▫ Glazing putty is cracked and deteriorated ▫ Aluminum surfaces are dirty ▫ Minor surface staining from corrosion of steel ▫ Concrete sills have isolated, minor hairline cracks
Clerestory Windows	▫ Overall Condition: Fair ▫ Some clerestory windows have been modified to accommodate HVAC ducts ▫ Some aluminum sun control louvers have been removed ▫ Glazing has been painted or boarded up to control light
Doors	▫ Overall Condition: Good ▫ Original wood doors at classrooms are in good condition ▫ Aluminum entry doors are in good condition ▫ Some steel doors are in poor condition with corrosion present
Roof	▫ Low-slope, single-ply membrane roofs are overall in Fair-to-Good condition ▫ Soffit and fascia boards are in good condition ▫ Parapets are in good condition ▫ Copper clad dome at Planetarium is in good condition
Appendages	▫ Overall condition of wood appendages is Fair-to-Poor ▫ Some wood outriggers have extreme wood decay
Canopy Roofs	▫ Overall condition of canopy roofs is fair ▫ Canopies with rooftop mechanical units most impacted – weight of units and ponded water has impacted the structure ▫ Concrete slabs exhibit significant cracking / settlement in some locations ▫ Wood and stucco ceilings are in good condition

Structural (ASCE 31-03 Tier 1 Screening)	▫ Overall condition of structural systems is good to fair ▫ Typical non-compliant items are related to wood diaphragms (roofs), moment frames at window walls, and wall anchorage at roofs and foundations ▫ Non-compliant, non-structural items include equipment anchorage and supports for light fixtures and tall and narrow furnishings
Mechanical	▫ Overall Condition: Fair ▫ Some units are new, others are past their service life ▫ Units at canopy roofs overload structure and cause excessive roof ponding
Electrical	▫ Overall Condition: Fair ▫ Many components are beyond their expected service life and need to be replaced ▫ Most lighting has been upgraded and is in good condition
Plumbing	▫ Overall Condition: Fair ▫ No leaks detected ▫ Some restrooms have been upgraded recently ▫ Some fixtures are showing extended signs of use
Fire and Life Safety	▫ Overall Condition: Good ▫ The means of egress (exits) is compliant except for a few classrooms ▫ Buildings 2 & 7 are the only buildings with fire sprinklers; sprinklers are not currently required at other buildings ▫ Fire alarms & extinguishers are in good condition; many manual pull boxes need to be relocated to inside of building
HazMat	▫ Visual survey identified potentially hazardous materials ▪ Asbestos-containing material (ACM) ▪ Lead based paints ▪ Mercury (Fluorescent light bulbs) ▪ Hydrochlorofluorocarbon (HVAC System) ▪ Polychlorinated biphenyls (Ballast at fluorescent fixtures, caulking ▪ Tritium gas ▫ Sampling has not been completed

Material Systems: Condition Assessment

This section identifies and describes a series of material systems that are common to four of the complexes on the Orange Coast College campus; Student Success Center and Classrooms & Labs complex (Buildings (Bldgs.) 7, 8, and 9), Business Education complex (Bldgs. 12, 13, and 14), Theater & Music complex (Bldgs. 2 and 4), and Math Wing and Planetarium complex (Bldgs. 35 through 39). These complexes have been identified as having similarities in design, construction techniques, and materials. In advance of addressing the condition assessments for each individual complex, the systems and materials common to the complexes have been grouped and illustrated in terms of their common features and common defects.

The Swimming Pool complex (Bldg. 93) and the Fieldhouse and Stadium complex (Bldgs. 105 and 110) have not been included in this section as they do not fit the systems described. There is however, some commonality of material and design within all complexes.

Exterior Walls

Brick Walls - Typical Features

Bearing Walls

Brick bearing walls are present at Buildings 2, 4, 7, 8, 9, 12 (Figure 3), 13, and 14 on multiple façades. The walls are constructed from two wythes of brick separated by a fully grouted collar joint (Figure 4). Horizontal and vertical steel reinforcing is located within the walls. The overall wall thickness is 9 inches.


Figure 3


Figure 4

The bonding patterns used for construction are running bond and 1/3 running bond. The brick units are an unusual size and shape being slightly larger than standard bricks at a height of 2 ¾ inches high (Figure 5). The brick color is fairly uniform pale red-orange with minimal fire skin resulting in a relatively 'soft' (porous) texture. In several locations wire cutting manufacture marks are visible on the faces of the brick (Figure 6).


Figure 5


Figure 6

The mortar joints are typically 5/8 inch in width. The horizontal mortar joints are concave, finished with a curved recess and a smooth surface, whilst vertical joints have been finished flush and exhibit more texture (Figure 5). The mortar is pale gray in color and aggregate-rich, with a cement binder.

Exterior wall surfaces are unpainted. However in areas where the walls are adjacent to landscaping a damp proof application with a painted black appearance is presently visible on the lower one or two courses of the brickwork.


Figure 7


Figure 8


Figure 9


Figure 10

Brick Walls - Condition

Bearing Walls and Brick Clad, Wood-Framed Walls

The overall condition of brick masonry walls is fair to good with localized bricks in poor condition.

Cracking: Minor hairline cracking appears on individual bricks in localized areas likely related to their manufacture (Figure 7). There is also localized cracking at the brick-mortar interface.

Missing pieces: Corners of brick broken on exposed ends of walls appear to have impact damage as observed at the corner of the west offshoot at Building 2 and the base of the wall at the east façade of Building 12.

Spalling: The fired face of brick has spalled off in isolated areas. The depth of spalls is generally 1/4 inch deep (Figure 8 and Figure 9).

Efflorescence: Localized areas of efflorescence at the base of walls appears to be related to landscaping where, in our experience, efflorescence is enhanced due to additional water from irrigation and the possible introduction of salts in fertilizers (Figure 8).

Biological colonization: Limited algal growth at base of walls associated with areas where water is concentrated, including where landscaping is adjacent to walls and in locations where rainwater control devices have failed.

Loss of surface finish: The damp proofing at the base of brick walls adjacent to landscaping is heavily deteriorated in all locations. It is either missing or patchy (Figure 10).

Previous repairs: Previous repairs to concrete window sills on the north façade of Building 8 have left unsightly deposits of cement slurry on the brickwork below.

Brick Walls- Typical Features

Brick Wing-Wall Canopy Supports

Brick wing-wall canopy supports are present on the south side of Buildings 12 (Figure 11) and 35 (Figure 12). The walls are 'check' shaped with the ends closest to the building façade that support the walkway canopy being short and perpendicular to the building façade and the larger portion of the walls oriented at an approximately 45 degree oblique angle to the façade oriented true north-south (Figure 13).

The brick construction and characteristics match the bearing walls. The walls sit on a visible concrete plinth and are capped by a cement-based mortar visually of the same composition of the collar joint mortar (Figure 14). There is no visible damp-proof application.


Figure 11


Figure 12


Figure 13

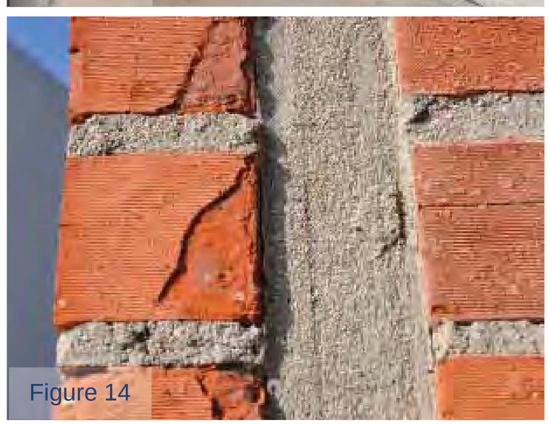
Figure 14


Figure 15


Figure 16


Figure 17


Figure 18

Brick Walls - Condition

Brick Wing-Wall Canopy Supports

The overall condition of the brick wing walls is fair with some isolated areas in poor condition.

Cracking: Similar to the brick bearing walls.
Corrosion: Corrosion of the mechanical fasteners attaching the walkway canopy on Building 35 to the wing wall has resulted in rust jacking causing loss of the surrounding brick and mortar (Figure 15).
Missing pieces: See 'corrosion' above.
Spalling: The fired face of the brick has spalled off in many areas on all wing walls which, in our experience, appears to have been enhanced by the actions of salts below the surface of the bricks. The depth of the spalls is generally 1/4 inch deep; a few spalls are as deep as 1-3/4 inches deep (Figure 16 - Figure 18).
Efflorescence: Efflorescence is visible in patchy areas on the lower halves of all wing walls commonly associated with spalled bricks. The efflorescence is mainly visible on the exposed porous surfaces of spalled bricks (Figure 16 - Figure 18).

Concrete Walls - Typical Features

Poured-in-Place Concrete

Poured-in-place concrete walls are a distinctive feature of two individual buildings - the Theater (Bldg. 2) and the Planetarium (Bldg. 39). The auditorium section of the Theater and the Planetarium building both have curved walls. There are several door openings in the poured-in-place concrete walls but no windows.

The concrete pour lines are well disguised but distinguishable at approx. 8 foot intervals (Figure 19). Vertically-oriented 1 inch x 4 inch, tongue and groove boards with an additional center “vee” were used to create a distinctive vertical raised rib detail at approximately (approx.) 2 inches on-center spacing (Figure 20 and Figure 21). According to the original drawings the walls contain steel reinforcing. The wall surfaces have an applied lightly-dashed surface texture and are painted (Figure 20).

Precast Tilt-up Concrete

Pre-cast tilt-up concrete walls are a distinctive feature of the Student Success Center and Classroom & Labs complex (Bldgs. 7, 8, and 9). The east façades of Buildings 7 (Figure 22) and 9, south façades of 8 and 9, and west façades of 7, 8, and 9 are precast tilt-up concrete.

The monolithic reinforced concrete slabs are joined in sections by steel Ts. The slabs are 5 inches thick. There are several door openings in these concrete walls but no windows. All surfaces and steel channels are painted.

Figure 19

Figure 20

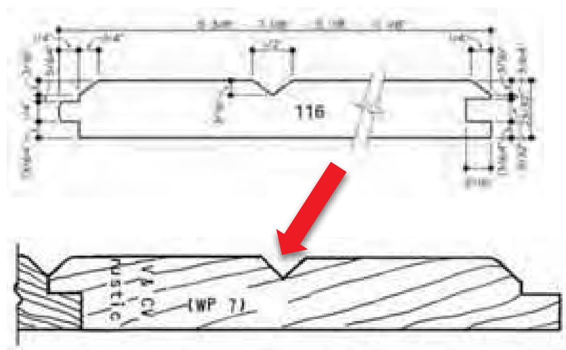

Figure 21

Figure 22


Figure 23

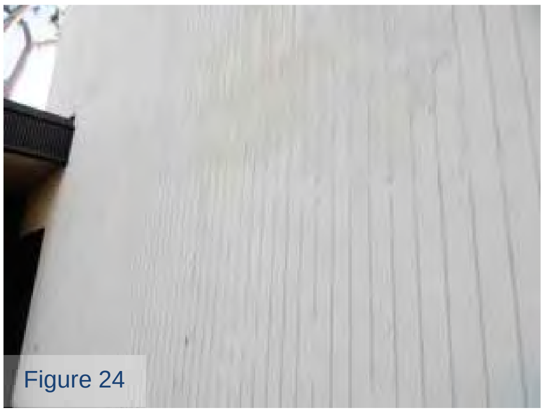
Figure 24


Figure 25


Figure 26

Concrete Walls - Condition

Poured-in-Place Concrete

The poured-in-place concrete is generally in good condition.

Cracking: An isolated fine diagonal crack with associated small scale paint and surface texture loss was identified on Building 2 (Figure 23). In our experience, this type of crack is associated with structural movement.
Corrosion: Minor rust staining was identified where the concrete is in contact with sheet metal (for example: at drip edges).
Biological colonization: There is widespread lichen growth on the parapet wall head of the Theater auditorium (Bldg. 2).
Loss of surface finish: Small scale loss of paint and surface texture occurs near parapet wall head and in the area associated with the crack noted above.
Previous repairs: An area (approx. 4ft x 8ft) of the concrete on the east side of the Theater auditorium (Bldg. 2) has a patchy appearance. It seems this location experienced a repair from the removal of a previous attachment (such as an awning) (Figure 24).

Precast Tilt-up Concrete

The precast tilt-up concrete is in good condition.
Corrosion: The steel Ts between tilt-up concrete panels on the exposed west ends of Buildings 7 and 9 have light surface corrosion at their bases (Figure 25). This does not yet appear to have affected the concrete.
Water damage: The west ends of Buildings 7 and 9 have a low level of soiling and paint loss at the bottom 6 inches of the walls associated with exposure to moisture (Figure 26).
Loss of surface finish: See ‘water damage’ above.

Stucco-Clad Wood-Frame Walls - Typical Features

The stucco-clad wood-frame walls are present at Buildings 2, 4, 35, 36, 37, 38, 39. In addition there is non-contributing stucco on the west addition of Building 7 and panelized stucco on the east addition to Building 2.

These walls are typically composed of 2 x 4 inch and 2 x 6 inch wood studs and finished with painted cement plaster over plywood shear panels (Figure 27 through Figure 30).

Figure 27

Figure 28

Figure 29

Figure 30

Figure 31

Figure 32

Figure 33

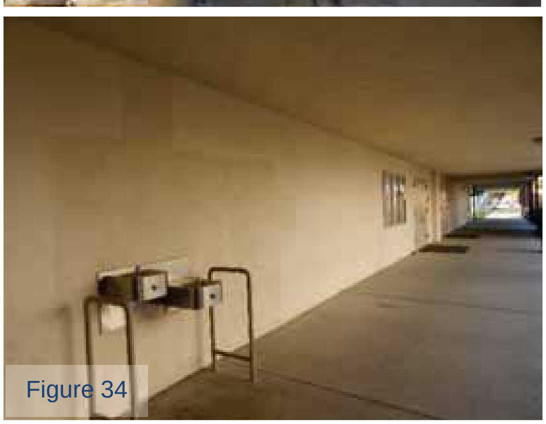

Figure 34

Stucco-Clad Wood-Frame Walls - Condition

The overall condition of the stucco-clad wood-frame walls is fair to good.

Cracking: A long horizontal crack on the west side of the original (north) part of the Music Building (Bldg. 4) at the transition from the concrete plinth to the stucco-clad wood-frame walls covered by stucco (Figure 31). Isolated cracks identified in non-contributing stucco additions at Buildings 2 and 7 (Figure 32- Bldg. 7).

Missing pieces: One corner missing on non-contributing west addition on Building 7 potentially as a result of impact or water damage.

Loss of surface finish: Minor paint/aesthetic damage to the base approximately 6 inches above grade of exposed walls on Buildings 35, 36, 37, 38 (Figure 33).

Previous repairs: Stucco patching around previous or new openings is visible at the east façade of Building 4 and south façade of Building 36 due to color and/or textural differences (Figure 34).

Wood-clad Walls - Typical Features

Plywood-Clad Walls

Plywood-clad walls originally had a clear varnish and are a finish detail uniting the contributing complexes on the campus; they are present on Buildings 2, 9, 12, 13, 35 (Figure 35), 36 (Figure 36), 37. These walls are commonly paired with doors, windows and storage areas and are only present below covered walkways. All of the external plywood has been painted.

Tongue and Groove Sheathing

Tongue and groove sheathing is only present at the entrance of the Theater auditorium (Bldg. 2) (Figure 37 and Figure 38). This tongue and groove matches the dimensions of the formwork texture on the surrounding board-formed poured-in-place concrete. The tongue and groove does not run to ground level; there is an approx. 6 inch base board. The doors are concealed with just the hardware visible. All tongue and groove detailing is painted.


Figure 35


Figure 36


Figure 37


Figure 38


Figure 39


Figure 40


Figure 41

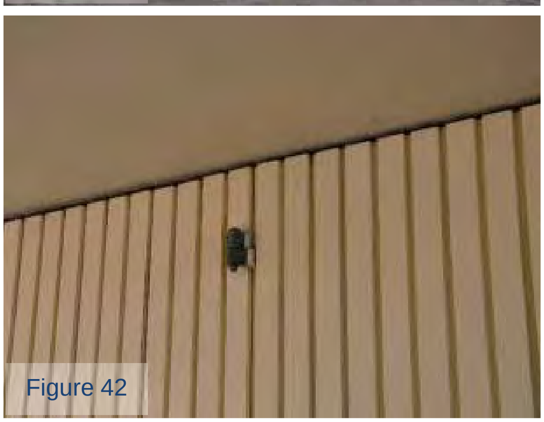
Figure 42

Wood-clad Walls - Condition

Plywood-Clad Walls

The plywood-clad walls are in fair condition (Figure 39) with most damage confined to their lower 6 inches. However, the painted surface obscures the condition of the plywood face underneath.

Water damage: The lower edges of plywood on most boards that reach the concrete slab are delaminated, swelling and splitting from exposure to moisture. This is generally limited to the lower 6 inches (Figure 40 and Figure 41).
Loss of surface finish: As well as small scale flaking of paint associated with areas of the plywood with water damage, limited areas of paint were lost in the center of panels. This is likely to be related to physical damage to the painted surface.
Poor original detailing: The proximity of plywood paneling to potential moisture exposure could be identified as poor original detailing.
Previous repairs: The plywood panels may have been painted as a previous repair if the exposed surfaces of the plywood were in poor condition. Alternatively, it could have simply been undertaken as an aesthetic alteration.

Tongue and Groove Sheathing

The tongue and groove sheathing appears to be in good condition. However, the painted surface obscures the condition of the wood face underneath (Figure 42).

Windows

Aluminum Windows - Typical Features

Window Walls

Multi-pane aluminum window walls are present on the north façades of Buildings 7, 8, 9, 12, 13, 35 and 36. They are set on an angle tilting out at the top (Figure 43a *left*). Each window wall is made up of a set of adjacent bays two panes wide and two to five panes high with steel mullions between (Figure 43b *right*). The bays are vertically oriented and the panes are horizontally oriented, the exceptions are Buildings 35 and 36 where every other bay has two-over-two panes, the upper panes being vertically oriented (Figure 44). The upper panes are two thirds of the height of the window. Each complex has a unique window configuration.

The windows have a combination of fixed and operable sections. Units with two-over-two or -three panes are fixed. The smaller panes tend to be the operable parts of the window; Buildings 35 and 36 are the exception where it is the larger panes in the two-over four panes that are operable. The operable units open from a top hinge, operation mechanisms vary. The glazing is tinted or coated. Below the windows are continuous concrete sills composed of concrete units the same width as the window panes and with a slurry coat to hide the unit divisions.

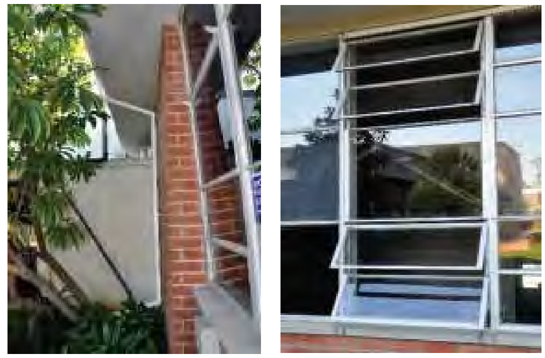

Figure 43 a & b

Figure 44

Figure 45

Clerestory Windows

Buildings 2 (Figure 45), 7, 8, 9, 12, 13, 35 and 36 have aluminum clerestory windows on their south façades. Building 2 also has clerestory windows on the north façade of the brick offshoot. Steel mullions are in place between pairs of windows similar to the window walls. Some of the clerestory windows are operable (locations not confirmed). The clerestory windows at Buildings 8 and 9 are covered by metal louvers (Figure 46). Concrete sills were present below the clerestory windows at Building 2.

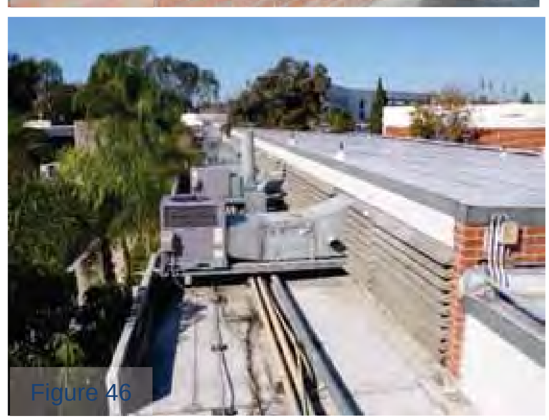

Figure 46


Figure 47


Figure 48


Figure 49

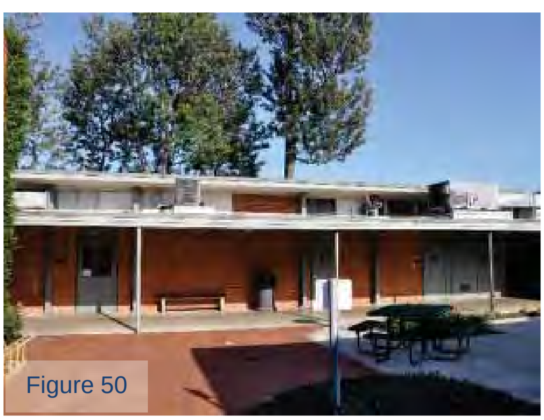
Figure 50

Aluminum Windows - Condition

The aluminum windows are in fair to good condition.

Cracking: The glazing putty is in poor condition and is heavily cracked in around 80% of all areas where present (Figure 47). Cracks are common running through the concrete sill in line with the concrete unit sections (Figure 48). These are generally hairline cracks, but up to 1/8 inch wide as measured on Building 8. On Building 7 crazing was identified on one sill; likely to be shrinkage cracks from the time of application.

Corrosion: The fasteners in the steel mullions were corroded in approximately half of the locations with limited associated rust staining below.

Missing pieces: A corner of the window sill was missing at Building 7, probably as a result of impact damage.

Pitting: The aluminum surface is lightly pitted and soiled in all locations (Figure 49).

Previous repairs: The clerestory windows are variously blocked, boarded up, and boxed in at around half of their locations. Some units have been replaced with mechanical ducts (Figure 50). Repairs to the concrete sill on the north façade of Building 8 have left a cementitious slurry residues in lumps on the sill and brickwork below.

Windows (other) - Typical Features

Wood-Framed Windows

Wood-framed windows are present at Buildings 12 and 37 (Figure 51) below covered areas. The frames are undetailed, wide, squared, painted wood. These windows are fixed-pane with tinted or coated glass in the larger windows and obscured glass in restroom clerestory windows at Building 37. The glass panes are large and vary in proportion. At the base of the windows are similarly undetailed, modest, painted wood sills.

Vinyl Windows

Vinyl replacement windows are present at the east façade of Building 35 (Figure 52). These are contemporary with sliding panes.

Jalousie Windows

Buildings 35 and 37 have small jalousie windows between clerestory windows with aluminum frames and steel mullions (Figure 53).

Louvers

Aluminum louvers are present as sun shields over aluminum-framed clerestory windows on the south façades of Buildings 8 (Figure 54), 9, and 37. Aluminum louvers for mechanical room ventilation are present on the north façades of Buildings 9b (Bldg. 9 annex) and 37.


Figure 51


Figure 52


Figure 53


Figure 54


Figure 55

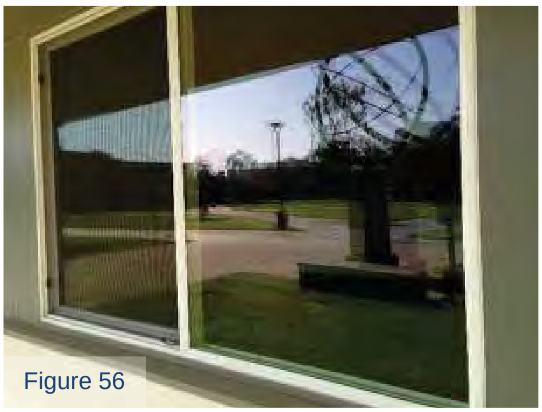
Figure 56


Figure 57

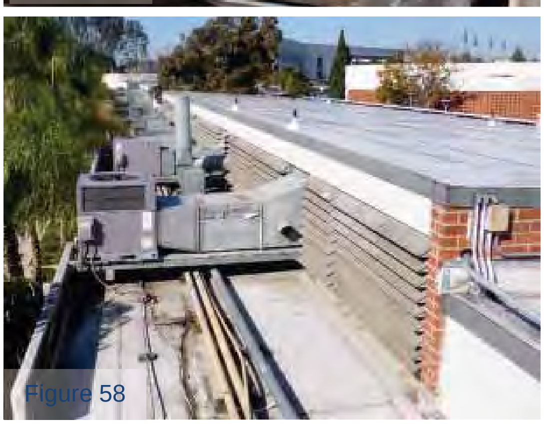
Figure 58

Windows (other) - Condition

Wood-Framed Windows

The wood-framed windows appear to be in good condition. However, the painted surface obscures the condition of the wood face underneath (Figure 55).

Vinyl Windows

The vinyl windows appear to be in good condition (Figure 56).

Jalousie Windows

The jalousie windows are in fair to poor condition.

Missing pieces: In one location on Building 36 one of the glass slats was missing (Figure 57).
Pitting: The steel mullion surface is lightly pitted and soiled in all locations.
Previous repairs: Some units have been replaced with mechanical (HVAC) ducts.

Louvers

The aluminum louvers are in a fair condition.

Corrosion: The fasteners in the steel mullions were corroded in approximately half of the locations with limited associated rust staining below.
Pitting: The aluminum surface is lightly pitted and soiled in all locations.
Previous repairs: All of the clerestory windows behind louvers are now either blocked, painted, or covered by dropped ceilings and are therefore no longer in use. Some of the louvers on Buildings 8 and 9 have been removed to install HVAC ducts (Figure 58).

Doors

Doors - Typical Features

Wood Doors

Exterior wood doors are present at Buildings 2, 7, 8, 9, 12 (Figure 60), 13, 14, 35 (Figure 59), 36, 37, 38, and 39. The wood doors are below walkway canopies or breezeways in all locations except for the double doors on the east façade of Building 7. The doors for restrooms and storage rooms commonly contain a louver at their base. Classroom doors have a full- or half-width glazed panel in the upper half. The doors are painted on all external surfaces.

Steel Doors

Steel doors are present on mechanical rooms at Buildings 2, 7 (Figure 61) and 39. These doors have integrated vents at their bases.

Non-ferrous Metal Doors

Modern non-ferrous metal and glass doors are present at Buildings 2, 4 and 7 (Figure 62).

Figure 59

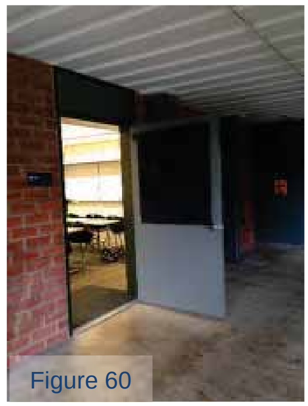

Figure 60

Figure 61

Figure 62


Figure 63


Figure 64


Figure 65


Figure 66

Doors - Condition

Wood Doors

The wood doors are in fair to good condition with most damage confined to their lower 6 inches. However, the painted surface obscures the condition of the wood face below.

<u>Wood-boring insect damage</u>: A door to the mechanical room at the north of Building 37 shows evidence of wood-boring insect (probably termite) damage.
<u>Water damage</u>: The lower edges of the doors are swelling and splitting from exposure to moisture. This is generally limited to the lower 6 inches (Figure 63).
<u>Loss of surface finish</u>: As well as small scale flaking of paint associated with areas of the plywood with water damage, limited areas of paint loss occurred in the center of panels (Figure 64). This is likely to be related to physical damage to the painted surface.

Steel Doors

The steel doors are in poor condition.

<u>Corrosion</u>: There is heavy corrosion at the base of all identified steel doors (Figure 65). On the steel door on the east façade of Building 7 there is also patchy, dispersed corrosion showing through the painted surface on the body of the door (Figure 66).
<u>Water damage</u>: See 'corrosion' above.

Non-Ferrous Metal Doors

The non-ferrous metal doors are generally new and in good condition.

Roofs

Low-Slope Roof - Typical Features

Low-slope roofs are common at all complexes. Shed roofs sloping to the north are present at Buildings 2, 4, 8, 9, 14, 38, and 39. Gabled roofs are present at Buildings 7, 12 (Figure 67), 13, 35, 36, and 37. Buildings 2, 38, and the Building 9 annex have low-slope roofs with parapet walls.

Membrane

All of the low-slope roofs have a single-ply pale gray/off-white membrane cover (Figure 68).

Flashing and Trim

Roof edges and parapet walls are finished with a sheet metal flashing and overlapping membrane.

Gutters and Downspouts

Gutters and downspouts are not present on most of the buildings. Building 7 has gutters and downspouts on the north and south façades but not in a consistent style. The Planetarium Building (Bldg. 39) has downspouts but no gutters. The roofs with parapet walls and some of the low slope roofs have integrated roof drains. Roofs sloping to the south drain onto the walkway canopy but gutters and downspouts are not present at roof level, nor on the canopies.

Eaves and Soffits

The buildings commonly have a wooden soffit below the flashing and on the north façades buildings 7, 8 (Figure 69) and 9 have stucco-boxed eaves and Buildings 12, 13, 35 and 36 have wood board closed eaves. On the south façade of Building 7 there are non-contributing stucco-paneled boxed eaves (Figure 70).

Other

Various mechanical equipment is attached to the low slope roofs.
Note: There are some later roof additions including a metal low slope roof (Bldg. 7) not addressed here (Figure 70).


Figure 67


Figure 68


Figure 69


Figure 70


Figure 71


Figure 72


Figure 73

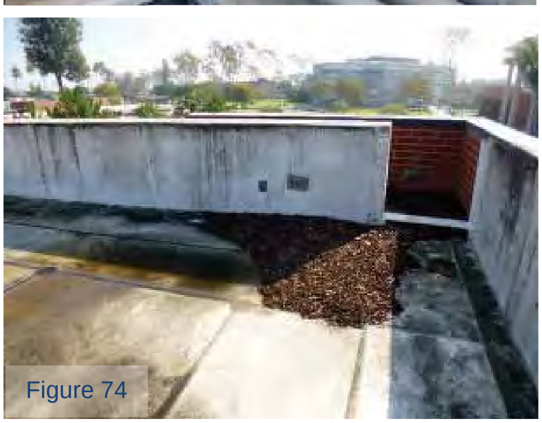
Figure 74

Low-Slope Roof - Condition

The low-slope roofs are in fair to good condition.

Cracking: A vertical crack runs through the boxed eaves at Building 8 at the connection to the addition. Fine isolated cracks have been identified in non-contributing stucco boxed eaves and additions at Building 7.
Corrosion: Gutters at Building 7 are heavily corroded and compromised. Vents and mechanical equipment commonly had a low level of surface corrosion near their bases.
Water damage: The soffits are lightly soiled with minor water damage in all locations (Figure 71).
Biological colonization: Flashing commonly has algal growth and light soiling. Areas of water pooling have algal growth.
Loss of surface finish: Paint is peeling from the parapet flashing at Building 37 and soffits (Figure 72).
Poor original detailing: A lack of gutters and downspouts has resulted in soiling of soffits. Internal drains have surrounding lips approx. ½ inch high preventing full drainage. In addition there are areas of water pooling, such as in the corner of the low offshoot at Building 2 (Figure 73) where internal drains are not present.
Maintenance issues: There is an accumulation of plant detritus on the roof of Building 37 within the parapet walls (Figure 74).

Other Roofs - Typical Features

Copper Dome

The small segmented copper dome is present at the Planetarium Building (Bldg. 39) (Figure 75 and Figure 76). The copper dome is surrounded by a low slope membrane covered roof.

Convex Roof

The theater auditorium roof (Bldg. 2) is a convex low-slope roof with a single-ply membrane cover (Figure 77). Between the edge of the convex roof and the concrete wall there is a deep integrated copper gutter (Figure 78). The gutter feeds into internal downspouts that exit into an open concrete gutter at the edge of the foot of the building to the north and out onto the low-slope roof to the south.


Figure 75


Figure 76


Figure 77

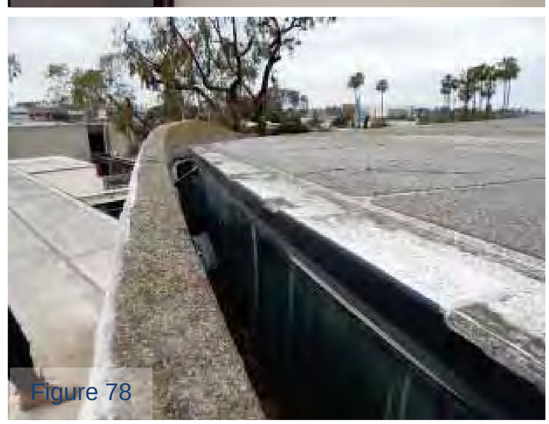
Figure 78


Figure 79


Figure 80


Figure 81


Figure 82

Other Roofs - Condition

Copper Dome

The copper dome roof is in fair to good condition.

Corrosion: Rust staining is visible below the copper flashing at the base of the roof around the full circumference (Figure 79). This could infer that there are issues with the condition of the concrete dome structure below. It is also likely to be related to the water pooling observed on the low slope roof surrounding the dome (Figure 80).

Convex Roof

The convex roof is in fair to good condition (Figure 81).

Maintenance issue: Accumulation of plant detritus in gutter (Figure 82).

Appendages

Covered Walkways - Typical Features

Covered walkways are present at all complexes discussed in this section.

Roof

All walkway canopies have low-sloping membrane-covered roofs. The canopies are directly attached to the neighboring building façades positioned below clerestory windows where present or flush with low one-story building roofs (Bldgs. 2 and 4). Walkway canopies carry the HVAC units for adjacent buildings (Figure 83).

Sides

The exposed edges of the canopies have a wooden fascia trim and either an attached or an integrated gutter with multiple downspouts leading directly into the ground. The wood fascia projects outwards from the canopy at the ends of Buildings 12, 13, 35 as a design detail (Figure 84). The walkway to the north of the theater (Bldg. 2) has stucco at the sides.

Ceilings

The walkway ceilings, originally stained or varnished, are commonly painted board and batten on the east-west walkways (Figure 85) and tongue and groove on the north-south walkways; the exceptions being Buildings 2 and 4 where the ceilings have a stucco finish.

Supports

The common walkway support system is a series of round, coated metal columns (Figure 86).

Floors

The paving below the canopies is poured concrete slab.


Figure 83


Figure 84


Figure 85

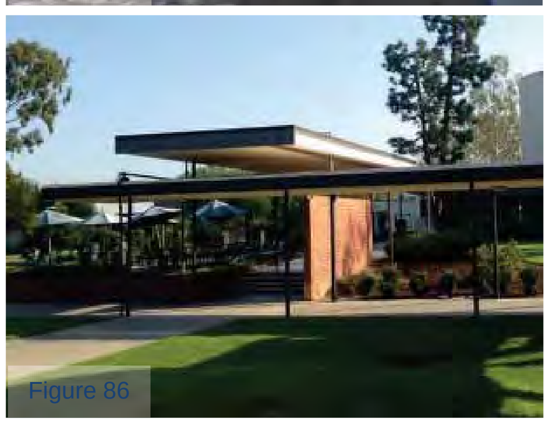
Figure 86


Figure 87

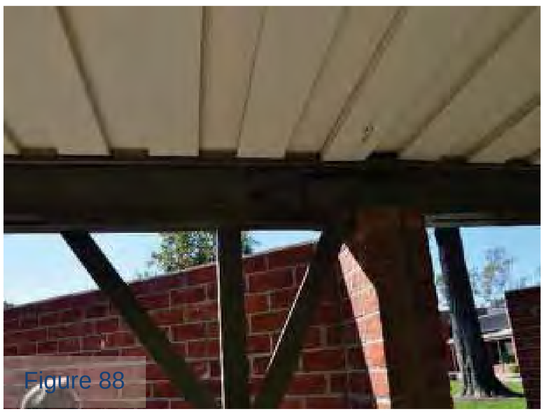
Figure 88


Figure 89


Figure 90

Covered Walkways - Condition

The covered walkways are in fair condition with some isolated areas in poor condition.

Cracking: Cracking, associated with deterioration of the wood fascia at Buildings 9, 12, and 13, is present in a few isolated locations. The slab is cracked in the majority of locations although this does not appear to be posing a trip hazard at present (Figure 87).

Corrosion: Corrosion of a connector between the canopy and brick wing wall at Building 35 has resulted in loss of material from the brick wing wall.

Wood decay: Wood decay, affecting limited areas of the wooden fascia at Buildings 9, 12 (Figure 88), and 13, is resulting in a significant weakening of the structure.

Wood-boring insect damage: An area showing evidence of wood-boring insect damage (probably termite damage) was identified in the wood fascia at Building 9 where the canopy attaches to the Building 9 annex.

Water damage: The wooden fascia and flashing are commonly soiled and have minor water damage.

Previous repairs: The addition of rooftop HVAC units is causing the canopy roof structures to sag, most notably at Buildings 35 and 36 (Figure 89). Water is pooling atop the canopies and adding additional weight in these areas. Deterioration of the strength of the canopy sides and/or supports at Buildings 9, 12, 13, 35 has required the addition of extra wooden supports and metal plates.

Maintenance issues: The canopy roofs commonly have some level of accumulation of plant detritus on the roofs and in the gutters (Figure 90).

Miscellaneous Features - Typical Features

Trellis between Buildings

There are trellises present at the north sides between Buildings 8 and 9, and Buildings 12 and 13.

The trellis between Buildings 8 and 9 is attached to a boxed stucco-finished structure supported on steel columns at the north edge of the buildings. The trellis projects to the south with steel rafters supporting wooden slats (Figure 91).

The trellis between Buildings 12 and 13 projects to the north from the edge of the roof line supported by wooden beams or rafters and with metal slats and framework (Figure 92).

External stairs

Two external staircases, one over the other, are present on the east façade of Building 37 running parallel and adjacent to the building façade (Figure 93). A brick wall surrounds the lower steps (Figure 94) and the top portion of the upper steps. A gate blocks access to the roof at the upper section of the upper stairs; the gate is in line with the edge of the brick wall. The upper staircase has metal railings and handrail on the outer edge.


Figure 91


Figure 92


Figure 93


Figure 94

Figure 95

Figure 96

Figure 97

Figure 98

Miscellaneous Features - Condition

Trellis between Buildings

The trellises are in fair to poor condition.

Wood decay: One rafter adjacent to the north face of Building 13 is significantly decayed and the support for the trellis is compromised (Figure 95). The beam to the east of this appears to have been cut short possibly indicating that it had previously been in poor condition and the deteriorated wood has been removed

Other: The wooden slats at the trellis between buildings 8 and 9 have warped and are no longer straight (Figure 96).

External stairs

The external stairs are in good condition (Figure 97).

Maintenance issue: There is an accumulation of plant detritus at the upper part of the upper steps potentially increasing the accumulation of water (Figure 98).

Building Complex Condition Assessments

This section presents the results of the condition assessments for each of the six complexes contributing to the Historic District; Student Success Center and Classroom & Labs complex (Bldgs. 7, 8, and 9), Business Education complex (Bldgs. 12, 13, and 14), Theater & Music complex (Bldgs. 2 and 4), Math and Planetarium complex (Bldgs. 35 through 39), Swimming Pool complex (Bldg. 93) and Fieldhouse and Stadium complex (Bldgs. 105 and 110). The complexes are reported on in order of date of construction.

The condition of the exterior architectural features and building systems – structural, MEP, fire and life safety, environmental, and disabled access – are summarized in tables at the beginning of each complex condition assessment. Following this is a brief architectural description of the buildings in each complex (full architectural descriptions can be found in Part 1C: ‘Physical Description’). The conditions assessments include summaries of the consultants’ reports for the structural system, MEP systems, fire and life safety, and hazardous materials. Each building complex condition assessment is organized as follows:

- Structural System
- Exterior Closure
- Interior
- Plumbing
- Mechanical (Heating, Ventilating, and Air Conditioning (HVAC))
- Fire and Life Safety
- Electrical
- Hazardous Materials (HazMat)

The conditions assessments undertaken by Page & Turnbull for the exterior closures and interiors, as described in this section, give details of all notable defects observed during the condition survey. Building 14 in the Business Education complex was not fully documented due to the original portion of the building having been largely consumed by an addition in 1977; however the original part of the building remains largely intact in the north east corner (as highlighted on the Figure 2: campus map).

Buildings 7, 8, 9 | Student Success Center and Classroom & Labs Complex

Figure 99: North façade of Student Success Center (Bldg. 7) west wing with clock tower and part of Classrooms & Labs (Bldg. 8).

Brief Physical Description

The Student Success Center (SSC) and Classroom & Labs (C&L) complex is a collection of four single-story buildings (Buildings 7, 8, 9, and 9b) at the southeast corner of the Historic District. Buildings 8 and 9 have rectangular plans while Building 7 joins two, offset rectangular wings at a hinge point. The west wing of Building 7 is south of Building 8 and they are connected by a covered walkway between the west end of the south façade of Building 8 and the west end of the north façade of the east wing of Building 7.

The buildings have wood-framed, tilt-up concrete, and reinforced masonry walls constructed on concrete wall footings. The north façades of all buildings have aluminum-framed window walls over low brick walls. There are aluminum-framed clerestory windows on the south façades of all buildings with the exception of the east wing of Building 7. The clerestory windows at Buildings 7 and 8 are covered by aluminum louvers. The east wing's west façade has full-height fixed aluminum-framed windows. Doors on Buildings 7 and 8 are primarily on the north façades with secondary entrances on the south façades. Building 9 is accessed only from the south façade.

All three buildings have low-slope membrane-covered shed roofs tilting to the north. Building 7 includes a non-original shed roof added on its south side creating the appearance of a gabled roof.

Building 9b is a small annex building south of Building 9. It has brick bearing walls at the east, south and west and plywood-clad walls at the north. This building has a flat roof with parapet walls.

A full architectural description can be found in Part 1C: 'Physical Description.'

Complex Condition Summary

The Student Success Center and Classroom & Labs complex is generally in fair to good condition with minor material defects. The tables below summarize the exterior architectural condition (Table 4) and the condition of the building systems (Table 5).

Table 4: Table summarizing the exterior architectural conditions at the Student Success Center and Classroom & Labs Complex. [iv]

Exterior Architectural Conditions														
	Walls			Windows			Doors			Roofs				
Material	Brick	Concrete	Wood-Framed	Aluminum-Framed	Wood-Framed	Other	Wood	Steel	Other	Low Slope	Copper Dome	Convex	Exterior Walkway	Miscellaneous
Condition: Bldg.														
7	G	G	F/P[1]	F			F	P	F[4]	F				F[5]
8	F	F		F		F[2]	F		F[4]	F			F	F[6]
9	G	F		F		F[2/3]	F			F			F	F[6]

1. Addition to west end and stucco on eaves.
2. Louvers on façade above walkway canopy.
3. Louvers for ventilation on mechanical room, north façade, Building 9b.
4. Non-ferrous metal doors.
5. Steel-framed clock tower.
6. Awning between Buildings 8 & 9, north side.

[iv] G = good condition, F = fair condition, P = poor condition (see Table 1 for details).

Table 5: Table summarizing the building systems conditions at the Student Success Center and Classroom & Labs Complex.[v]

Building Systems																	
		Structural			MEP			Fire / Life Safety		Environmental[14]					Disabled Access		
		Vertical	Lateral	Non-Structural	Mech.	Elec.	Plumb.	Fire	Life Safety	ACM	Lead Paint	Mercury	HCFC	PCB	Site	Entry Doors	Other
Condition	Bldg																
	7	G	F[1]	F[4]	F/P[6]	F[7/9]	F	G/F[10/11/12]	G	✓	✓	✓	✓	✓	G	G	-
	8	G	F[2]	F[4]	F	F[8/9]	F	G/F[11/12/13]	G	✓	✓	✓	✓	✓	G	G	-
	9	G	F[3]	F[5]	F	F[8]	F	G/F[11/12/13]	G	✓	✓	✓	✓	✓	G	G	-

Notes:

1. Inadequate precast wall panel connections, and inadequate steel braced frames.
2. The number of steel braced frame bays in each line is redundant, inadequate precast wall panel connections inducing cross-grain bending in wood ledgers, wall panels not adequately connected to the foundation, inadequate steel braced frames, covered walkway canopy wood framing supporting mechanical equipment showed signs of moderate deterioration, infill walls in moment frames are not isolated properly, and unacceptable drift at moment frames.
3. Infill walls in moment frames are not isolated properly, unacceptable steel moment frames, there are typically no cross ties between diaphragm chords, inadequate wall anchorage of precast concrete wall panels and reinforced masonry walls to diaphragm, inadequate precast wall panel connections inducing cross-grain bending in wood ledgers, and wall panels are not adequately connected to the foundation.
4. Unanchored tall narrow contents, deterioration is typical at wood support framing at units.
5. Screen projectors typically are not adequately braced.
6. The equipment within this building appears be old and past its life expectancy.
7. *Code Violation*: there is a water heater that is in the clearance of the existing 800A distribution panel.
8. Replacement of older Zinsco panelboards recommended.
9. It should be noted that any demolition should consider the interconnection of the electrical distribution systems between buildings 7 and 8. If building 7 were to be demolished, building 8 would be affected.
10. Ceiling tiles in many locations need to be replaced to ensure proper sprinkler coverage.
11. Fire hose reels not required, if kept should be fed from dedicated fire water supply.
12. Manual fire alarm boxes needed on the interior of the building located next to each exit door.
13. Building does not currently have sprinkler system.
14. Hazardous Materials assessment consists of visual survey only. Sampling is required to confirm presence.

Structural Condition Assessment

The following is a summary of the findings from the structural evaluation of Buildings 7, 8 and 9 by Risha Engineering (see Appendix 3: Structural Evaluation for full report).

---

[v] G = good condition, F = fair condition, P = poor condition (see Table 1 for details), ✓ = present.

Building 7 – Student Success Center

Building 7 is a one story structure consisting of a steel framed roof with wood sheathing supported on wood framed, precast concrete and reinforced masonry walls. The walls act as shear walls.

The building is in generally good condition. Precast panels contain noncompliant connections to the diaphragm, and steel braced frames are noncompliant. The building's close proximity to adjacent unattached structures is noncompliant. Non-structural items that are noncompliant are: unanchored tall narrow building contents; deteriorated mechanical anchorages; improperly braced fire suppression piping, and flexible couplings are not provided.

Buildings 8 & 9 – Classroom and Labs

Buildings 8 and 9 are one story structures consisting of a steel framed roof with plywood sheathing supported on steel columns, precast concrete walls or reinforced masonry walls which in turn are supported by the continuous concrete grade beam and piles. Steel moment frames and braced frames, in conjunction with the walls, provide the lateral force resisting system.

The buildings are generally in good condition, although walkway canopy framing exhibits deterioration in some locations. The building's close proximity to adjacent unattached structures is noncompliant. The steel moment frames and braced frames are noncompliant, precast wall panel anchorage to the roof diaphragm and wood ledgers are noncompliant, the precast wall panel foundation connections are noncompliant, and lack of cross ties in the roof diaphragm is noncompliant. Non-structural items that are noncompliant are: tall narrow building contents are unanchored; mechanical anchorages are deteriorated, and; fire suppression piping is not braced properly, and flexible couplings are not provided.

Exterior Closure Condition Assessment

Exterior Walls

Brick Walls

The brick walls in the SSC and C&L complex are in fair condition with localized areas of deterioration.

Hairline cracking was noted on bricks on the north façade of the west wing of Building 7 in fewer than 5% of the bricks. In our experience this is likely to be related to the brick manufacturing.

Spalls were noted in localized areas on the east façades of Buildings 7 and 8, and on the south façade of the Building 9 annex (Bldg. 9b) and the stand-alone wall. The spalling on Buildings 7 and 8 and the stand-alone wall was focused at the corners of the bricks, including approximately 10% of the bricks on these façades (Figure 100). The spalling at Building 9b involved thin spalls from large areas of the brick surfaces and approximately 20% of the bricks on this façade.

The bond at the brick-mortar interface is poor in a few isolated locations on Buildings 7 and 8. On Building 8 a crack was running along the brick-mortar interface up several courses at the north end of the east façade which indicates structural movement.

Algal growth was identified in patches at the base of the brick walls where the gutters above are failing on the south façade of the east wing of Building 7, and where there are no drains at the base of the downspouts on the south façade of the west wing of Building 7. There was also algal growth at the base of the north façade of the east wing.

The damp-proof coating at the base of the wall on Building 7 is heavily deteriorated in all locations (Figure 101).

Below the breezeway between Buildings 7 and 8 the plaster over the brickwork on Building 7 is chipped at the corner and the paint over the brickwork on Building 8 is peeling near the east corner.

Poor repairs have been undertaken at the window sills on the north façade of Building 8 resulting in cement slurry having been allowed to coat an area of the brickwork below (Figure 102).

On the north elevation of the east wing of Building 7 the integrated vent is warping and displaced, resulting in fracturing the neighboring brick (Figure 103).

On the large addition to the south of Building 7 the area below a water faucet has a heavy amount of lime staining.

Figure 100: Spalling brickwork on the east façade of Building 8.

Figure 101: Deteriorating black painted damp proof course on the east façade of Building 7.

Figure 102: Cement slurry coating brickwork below concrete sill.

Figure 103: Integrated vent on the north façade of the east wing of Building 7 with fractured brickwork.

Concrete Walls

Precast, Tilt-up

The tilt-up concrete walls are in fair to good condition. The steel channels between tilt-up concrete panels are showing signs of surface corrosion at their bases on the west façades of Buildings 7 and 9 (Figure 104). At the base of the same elevations there is a low level of paint peeling or blistering and some light soiling. On the northern panel on the west façade of Building 9 there is a crack along the join between the concrete foundation slab and the concrete tilt-up panel (Figure 105).

Figure 104: Corrosion at the base of the concrete channels between tilt-up concrete panels on the west façade of Building 7.

Figure 105: Crack/separation from the foundation slab at the base of the west façade of Building 9 and corrosion at corner.

Stucco-Clad Wood-Frame

The stucco-clad wood-framed walls are in poor condition.

The non-contributing wood-framed stucco walls of the addition on the west end of Building 7 are in poor condition with a crack that has previously been repaired above the door on the north façade, paint blistering, missing material from the lower northwest corner, and light soiling (Figure 106 and Figure 107).


Figure 106: Blistered paint, soling and missing stucco on the north façade of the addition to Building 7.


Figure 107: Crack at the top of the door frame on the north façade of the addition to Building 7.

Wood-clad Walls

Plywood-Clad Walls

Plywood on the north façade of Building 9 annex is in good condition, although it has been painted, obscuring its original natural finish.

Windows

Aluminum Windows

The aluminum windows in the SSC and C&L complex are in fair condition. All aluminum frames and louvers have a dull patina with a low level of surface pitting. The glazing putty is cracked around all panes (Figure 108) and a few areas (less than 5%) have lost their putty entirely.

Approximately half of the fasteners within the window mullions on the north façades of each building as well as in the louvers on the south façades of Buildings 8 and 9 have corroded.

The window on the east façade of Building 8 has a corroded steel bracket at the top of the mullion.

The concrete sills are cracked at the joints between concrete units, in approximately 75% of these joint locations, with cracks up to 1/8” wide as seen on the north façade of Building 8 (Figure 109). A lower corner of a window sill on the north façade of the east wing of Building 7 has been lost. There appears to have been a phase of window sill repair undertaken on the north façade of Building 8 which has left the sill with a patchy finish and drips of cement on the sill as well as cement slurry coating some of the brickwork below (Figure 102).


Figure 108: Cracked glazing putty on the north façade of Building 9.


Figure 109: Cracked window sill on the north façade of Building 8.

Exterior Doors

Wood Doors

The wooden doors are generally in good condition. One door at the far west end of the north façade of Building 9 has water damage at its base causing paint loss and the wood to split and swell (Figure 110). The door at the west end of the north façade of Building 9b had a low level of water damage. The double doors on the east façade of Building 7 have a small area of paint loss.

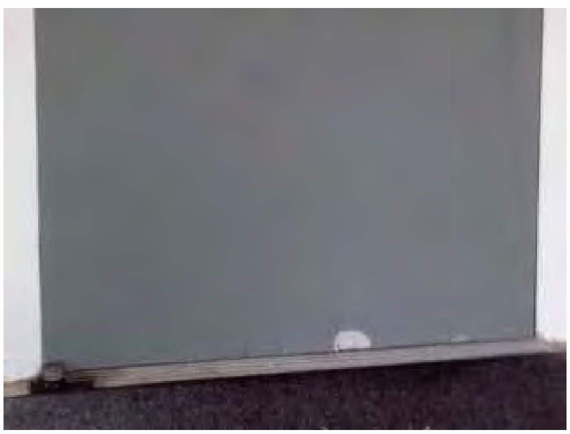
Figure 110: Door at the west end of the south façade of Building 9 with water damage to the base causing splitting and peeling paint.

Steel Doors

The steel doors are in poor condition. The steel door on the east façade of Building 7 has small patches of corrosion across the body of the door showing through the paintwork (Figure 111). The steel doors on the more recent additions to Building 7 have heavy corrosion at their bases (Figure 112).


Figure 111: Corrosion showing through the paintwork on the steel door on the east façade of Building 7.


Figure 112: Heavy corrosion at the base of the door on the north façade of the addition on the west end of Building 7.

Non-Ferrous Metal Doors

The non-ferrous metal doors are in good condition.

Roofing

Low-Slope Roof

The low-slope roofs at the SSC and C&L complex are in fair condition with minor issues of deterioration. The capping near the edges of the metal roof is corroding in patches and some of the paint/coating is peeling (less than 5% of area) (Figure 113). Roof mounted vents, fasteners and HVAC units have corrosion around their bases.

There is an accumulation of plant detritus in some areas of the metal roof.

The gutters on the south façade of the east wing of Building 7 are heavily corroded through their thickness and are no longer functional (Figure 114). The downspout on the north façade of the east wing of building 7 has a large incision made through it and it is corroded.

The wood-framed stucco-finished boxed eaves all have light soiling and algal growth in patches (Figure 115). On Building 8 the stucco is cracked on both the north and south façades at the line of the building addition (Figure 116).

Figure 113: Plant detritus accumulation and paint peeling from the metal roof on Building 7.

Figure 114: Heavily corroded gutter on south façade of east wing of Building 7.

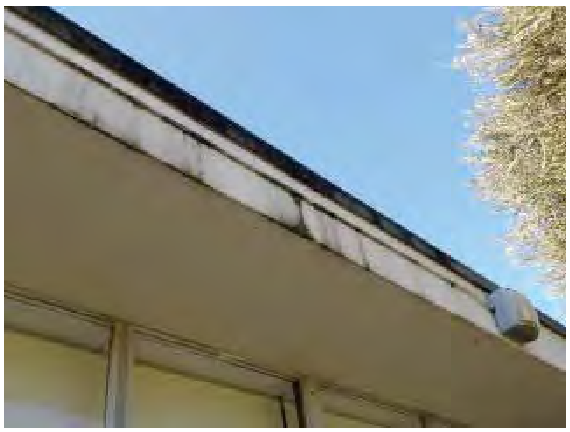

Figure 115: Soiling and algal growth on the north façade of Building 8.

Figure 116: Crack running through the face of the soffit on the south façade of Building 8 at the line of the building addition.

Covered Walkways

The covered walkways at the SSC and C&L complex are in fair condition.

There was a small amount of plant detritus on the walkway roofs and algal growth where water was seen to pool in small patches. Multiple pipes run along the walkway roof, some of which were seen to have corroded.

The wood soffit was observed to have rotted at the point at which it intersects with Building 9b (Figure 117). Significant material has been lost and a new support and base plate has been added to stabilize the area. A few small cracks are present in other locations.

In one location a small area of the ceiling is delaminating or the paint is peeling.

The segmented concrete paving slab that runs below the covered walkway has a meandering crack running down the center through several sections (Figure 118). This crack and other minor cracks are not observed to pose a trip hazard.

Evidence of wood-boring insect (probably termite) damage was present in one location on the soffit neighboring Building 9b.

Figure 117: Wood decay in the walkway soffit at Building 9.

Figure 118: Cracks in the concrete slab neighboring Building 9.

Miscellaneous Features

Trellis Between Buildings

The trellis and stucco boxed eave between Buildings 8 and 9 are in fair to good condition. There is a low level of patchy soiling and algal growth on the flashing and stucco sides (Figure 119) and a couple of the wood slats in the trellis are warped (Figure 120).

Figure 119: Algal growth and light soiling on the flashing and stucco sides of the trellis and boxed eaves between Buildings 8 and 9.

Figure 120: Slight warping of some of the wood slats on the trellis between Buildings 8 and 9.

Interior Condition Assessment

Buildings 7, 8 and 9 are predominantly classrooms and office space plus storage rooms, restrooms and two x-ray rooms in Building 8. Internal walls are tilt-up concrete walls, drywall partitions, and occasional painted or exposed brick. On the exposed brickwork inside office C in Building 8 there is efflorescence on small isolated areas of brick (Figure 121).

There are suspended ceilings with acoustical tile systems. Areas of water staining were observed on the acoustical tile in rooms 102 (Figure 122), and 1237 in Building 7. The ceiling tile in rooms 103A and 103B is sagging and coming out of its framing (Figure 123).

Flooring is mainly carpet other than linoleum in the lab spaces and tile in the restroom. The carpet in Building 9 room 112 was considered to be in poor condition due to staining. The linoleum in the south x-ray room in Building 8 was damaged and in poor condition (Figure 124).

In Building 8 room 106 it was observed that the windows to the north were screwed shut and the clerestories had been painted over.

In Building 9 original chalk boards and tack boards are still present behind modern dry erase boards although the visible area shows some loss of surface (Figure 125). The storage room in Building 9b contains some original built-in shelving.

Figure 121: Efflorescence on exposed brickwork inside Office C, Building 8.

Figure 122: Areas of water staining on the acoustical tile in Room 102, Building 7.

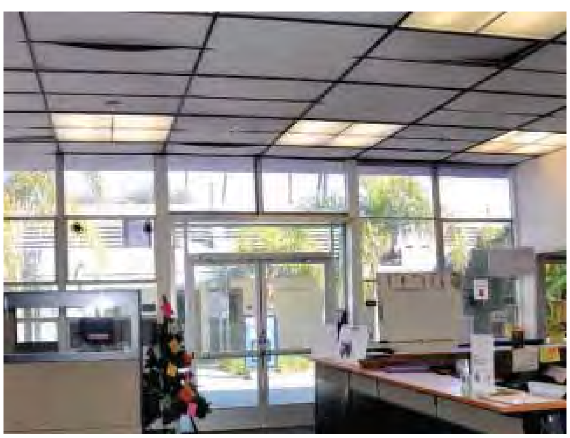

Figure 123: ceiling tile sagging and coming out of its framing in Room 103B, Building 7.

Figure 124: Damaged linoleum flooring in x-ray room South, Building 8.

Figure 125: Damaged chalkboard behind modern white board in Room 111, Building 9.

Plumbing Assessment

The following are notes from the MEP Evaluation report produced by Design West Engineering (see Appendix 4 for full report).

- The restrooms in this area are in fair condition; the fixtures are starting to show signs of extended use. No major defects or leaks were visible from the fixtures.

Mechanical (heating, ventilating, and air conditioning) Assessment

The following are notes from the MEP Evaluation report produced by Design West Engineering (see Appendix 4 for full report).

Building 7 – Student Success Center

Building 7 has a dedicated chiller, tower, boiler and multizone air handling unit (AHU) unit. The equipment within this building appears be old and past its life expectancy.

- The hydronic hot water boiler is a Raypak Boiler, 546,000 BTU/H input with a 2 HP base mounted pump system circulation pump. Boiler is in fair condition
- The air handler is a custom 4* pipe multizone Trane Climate Changer.
- The chiller is a Trane CG*60D 60 ton chiller, with a 10 hp base mounted end suction pump. The pipe insulation has a lot of repair tape over the existing insulation and shows signs of leaking water.
- The cooling tower is a RSD*070 fiberglass cooling tower with a 1.5 hp fan motor.
- The building also has ceiling mounted fan coils that are tied to the chiller and boiler and are in fair to good condition
- The building has an old Honeywell EMS system that should be replaced and updated with a newer current direct-digital-control (DDC) system.

Building 8 – Classroom and Lab

Building 8 has ductless split systems that serve the office area and rooftop gas units (RTU). The RTU serve the classrooms. There is one RTU per classroom.

- The ductless split systems consist of a wall mounted fan coil located within each office. The condensing unit is located on the roof. The systems appear to be in fair condition and are about half way thru their life expectancy.
- The RTUs for the classrooms are located above the covered walkway foyer and have side discharge ductwork within the classrooms. The RTUs range from three to five ton units and are in fair condition.

Building 9 – Classroom

Building 9 is similar to building 8 classrooms with rooftop gas units (RTU) that serve the classrooms. There is one RTU per classroom. The units are in fair condition.

Fire and Life Safety Assessment

The following is a summary of the visual examination undertaken by Jensen Hughes of the fire protection systems and life safety features of the facilities at Buildings 7, 8, and 9 (see Appendix 5: 'Fire and Life Safety Evaluation' for full report). No system testing or intrusive inspections were conducted by Jensen Hughes personnel.

Table 6: Student Success Center and Classrooms & Labs complex fire protection/life safety systems- the following table shows the surveyed buildings in the complex identifying the systems currently provided.

Bldg. No.	Building Name	Sprinklered	Fire Alarm	Fire Extinguisher	Fire Hose Reel	Adequate Egress	Comments
7	SSC	Y	Y	Y	Y	Y	-
8	C&L	N	Y	Y	Y	Y	-
9	C&L	N	Y	Y	Y	Y	-

Note: N means the system is not provided for the building. Y means the system is provided for the building.

Table 7: Observations on the fire protection/life safety systems at the Student Success Center and Classrooms & Labs complex made during the 2015 survey.

Item No.	Bldg. No.	Bldg. Name	System	Observation
1	7	SSC	Fire Sprinkler	The spare fire sprinklers do not match the currently installed sprinklers in the building.
2	7	SSC	Fire Sprinkler	The ceiling tiles in many locations appear to have some sort of damage leaving gaps around sprinkler escutcheons.
3	7	SSC	Fire Alarm	Only one manual fire alarm box is provided on the outside of the building.
4	7	SSC	Fire Hose Reel	The fire hose reels are not required for this building, and should be removed with permission of the AHJ.
5	8	C&L	Fire Alarm	Only one manual fire alarm box is provided on the outside of the building.
6	8	C&L	Fire Hose Reel	The fire hose reels are not required for this building, and should be removed with permission of the AHJ.

7	9	C&L	Fire Alarm	Only one manual fire alarm box is provided on the outside of the building.
8	9	C&L	Fire Hose Reel	The fire hose reels are not required for this building, and should be removed with permission of the AHJ.

Electrical Assessment

The following are notes from the MEP Evaluation report produced by Design West Engineering (see Appendix 4 for full report).

The electrical system for both Buildings 7 and 8 are located within Building 7. Building 9 is fed from a separate 4160 volt feed. The electrical switchgear is aged but appears to be in good working condition at Building 7. There are older panelboards within the classrooms that are beyond their useful life expectancy and should be replaced. Lighting is primarily T*8 fluorescent. There is abandoned 4160V equipment that should be removed. The buildings are equipped with wall mounted emergency battery lighting units and have some illuminated exit signs.

Building 7 – Student Success Center

Buildings 7 and 8 are fed from two 5 KV switches providing 4160 volts to two transformers. The first is a 150 KVA transformer that delivers 480 volt, 3*phase, 3*wire power to the motor control center, which primarily feed the HVAC equipment. The second is a 300 KVA transformer that provides 800 amps of 120/208 volt, 3*phase, 4*wire power to local distribution. There are some older Zinsco panelboards that are original to the building and should be replaced, along with newer load centers that could be reused. The existing motor control center consists of fuses and HOA controls which have most likely been bypassed with the installation of the EMS. There are abandoned 4160V switches with exposed cabling that has been cut that should be removed.

Lighting is primarily T*8 fluorescent using an EMS system by Edward's Tech with occupancy sensors, timers and typical switches and outlets. The building is equipped with wall mounted emergency battery lighting units. The building has illuminated exit signs. There is a water heater that is in the clearance of the existing 800A distribution panel, which is a code violation. No mechanical ventilation was found in the transformer room at the north side of the building.

Building 8 – Classroom and Lab

The electrical system is fed from Building 7 providing 400 amps of 120/208 volt, 3*phase, 4*wire power. There are some older Zinsco panelboards that are original to the building and should be replaced, along with newer load centers that could be reused.

Lighting is primarily T*8 fluorescent using an Edward's Energy Management System (EMS) with occupancy sensors in some locations with typical switches and outlets. The building has a limited amount of emergency lighting or illuminated exit signs. This building does not have a noted emergency generator.

Building 9 – Classroom

The electrical system is fed from a 5 KV switch providing 4160 volt power to a 500 KVA transformer that delivers 1600 amps of 120/208 volt, 3*phase, 4*wire power to Distribution Board DPS. The switchgear appears to have been recently installed and is in good working condition. There are some older Zinsco panelboards that are original to the building and should be replaced, along with newer load centers that could be reused.

Lighting is primarily T*8 fluorescent using an Edward's EMS system with motion switches in some locations with typical switches and outlets. The building is not equipped with emergency lighting. Exit signs are present. This building does not have an emergency generator.

It should be noted that any demolition should consider the interconnection of the electrical distribution systems between buildings 7 and 8. If building 7 were to be demolished, building 8 would be affected.

Hazardous Materials (HazMat) Assessment

A visual survey was carried out in the Student Success Center and Classroom & Labs complex by Omega Environmental Services Inc. to identify the potential presence of hazardous materials (full report in Appendix). Based on the visual observations made during the limited assessment it is Omega's professional opinion that the following potentially hazardous materials may be present in the subject buildings:

Building 7 – Student Success Center

Table 8: Table identifying potentially hazardous materials at Building 7.

Asbestos-containing material (ACM)	▫ 1'x1' acoustic ceiling tile with associated mastic ▫ 2'x4' acoustic ceiling tile ▫ Drywall and joint compound with rough texture ▫ Vinyl base cove mastic ▫ Carpet mastic ▫ Vinyl floor covering (12" x12" tiles) and associated mastic ▫ Fireproofing on structural members ▫ Grout ▫ Insulation, registered ▫ Exterior Window putty ▫ Exterior paint/skim coat ▫ Exterior stucco ▫ Concrete ▫ Exterior concrete expansion joints ▫ Exterior sub-surface transite pipes ▫ Roofing material ▫ Roof mastic ▫ HVAC system components
Lead based paints (LBP)	▫ Painted door and window systems ▫ Painted wall surfaces ▫ Ceramic tiles ▫ Toilet bowls, Sinks & Urinals

	▫ Floor drain ▫ Roof systems (fascia, eves, gutters, etc.) ▫ Exterior painted walls
Mercury	▫ Fluorescent light bulbs
Hydrochlorofluorocarbon (HCFC)	▫ HVAC system
Tritium gas	▫ None noted
Polychlorinated biphenyls (PCB)	▫ Ballast (fluorescent fixtures) ▫ Concrete expansion joint caulking ▫ Window caulking

Building 8 – Classroom & Laboratory

Table 9: Table identifying potentially hazardous materials at Building 8.

Asbestos-containing material (ACM)	▫ 2'x4' acoustic ceiling tiles ▫ Drywall and joint compound ▫ Vinyl base cove and mastic ▫ Carpet mastic ▫ Vinyl floor covering (12" x12" tiles) and associated mastic ▫ Vinyl sheet flooring ▫ Counter top ▫ Mastic under sink ▫ Transite panels ▫ Exterior Window putty ▫ Exterior stucco ▫ Exterior paint/skim coat ▫ Concrete ▫ Exterior concrete expansion joints ▫ Exterior sub-surface transite pipes ▫ Roofing material ▫ Roof mastic ▫ HVAC system components
Lead based paints (LBP)	▫ Painted door and window systems ▫ Painted wall surfaces ▫ Floor drain ▫ Painted structural columns and beams ▫ Roof systems (fascia, eves, gutters, etc.) ▫ Exterior painted walls
Mercury	▫ Fluorescent light bulbs
Hydrochlorofluorocarbon (HCFC)	▫ HVAC system
Tritium gas	▫ None noted
Polychlorinated biphenyls (PCB)	▫ Ballast (fluorescent fixtures) ▫ Concrete expansion joint caulking ▫ Window caulking

Building 9 – Classroom and Laboratory

Table 10: Table identifying potentially hazardous materials at Building 9.

Asbestos-containing material (ACM)	▫ 2'x4' acoustic ceiling tiles ▫ Drywall and joint compound ▫ Vinyl base cove and mastic ▫ Carpet mastic ▫ Vinyl floor covering (12" x12" tiles) and associated mastic ▫ Vinyl sheet flooring ▫ Counter top ▫ Mastic under sink ▫ Transite panels ▫ Exterior Window putty ▫ Exterior stucco ▫ Exterior paint/skim coat ▫ Concrete ▫ Exterior concrete expansion joints ▫ Exterior sub-surface transite pipes ▫ Roofing material ▫ Roof mastic ▫ HVAC system components
Lead based paints (LBP)	▫ Painted door and window systems ▫ Painted wall surfaces ▫ Floor drain ▫ Painted structural columns and beams ▫ Roof systems (fascia, eves, gutters, etc.) ▫ Exterior painted walls
Mercury	▫ Fluorescent light bulbs
Hydrochlorofluorocarbon (HCFC)	▫ HVAC system
Tritium gas	▫ None noted
Polychlorinated biphenyls (PCB)	▫ Ballast (fluorescent fixtures) ▫ Concrete expansion joint caulking ▫ Window caulking

Exterior Restrooms

Table 11: Table identifying potentially hazardous materials at the exterior restrooms.

Asbestos-containing material (ACM)	▫ Ceiling system
Lead based paints (LBP)	▫ Painted door and frames ▫ Ceramic tiles ▫ Sinks, Toilet bowls and Urinals
Mercury	▫ Fluorescent light bulbs
Hydrochlorofluorocarbon (HCFC)	▫ None noted
Tritium gas	▫ None noted
Polychlorinated biphenyls (PCB)	▫ Ballast (fluorescent fixtures)

Buildings 12, 13, 14 | Business Education Complex

Figure 126: North façade of Business Education west wing (Bldg. 13).

Brief Physical Description

The Business Education complex is a collection of three buildings (Bldgs. 12, 13, and 14). The complex is roughly L-shaped with covered walkways connecting the three buildings. A covered breezeway separates Building 12 to the east and Building 13 the west; the covered walkway extends into the breezeway and out south toward Building 14.

Buildings 12 and 13 are single-story, wood-framed and reinforced masonry buildings on caissons. They are similar in size, materials, and construction. The buildings are generally rectangular in plan and share a membrane-covered side-gabled roof that covers the breezeway separating the two buildings. The eaves with tongue and groove wood soffits overhang on both sides of the roof. A metal trellis supported by exposed wood rafters is at the north side of the breezeway and across Building 13's projecting east end. The buildings share a covered walkway along their plan south façades that is supported by reinforced masonry wing walls at Building 12.

Reinforced brick masonry walls are the primary construction material for Buildings 12 and 13. On the south (principal) façade, plywood-clad storage units are attached in a number of locations between classroom doors. A band of near continuous aluminum-framed clerestory windows is located above the covered walkway roofline and partially obscured or infilled by HVAC equipment. On the plan north façades of Buildings 12 and 13 are aluminum-framed windows on a low brick wall interspersed with brick-clad shear walls. The plan east façade of Building 13 is almost entirely glazed with full-height, wood-framed fixed windows. A single wood door is offset at the center. At the base of the glazing are small louvers.

Wood entrance doors are along the south façades of both buildings. All doors have a painted plywood transom above and some have painted plywood paneling to the sides.

Building 14 is a one-story, brick-clad building located south of Building 13 and southwest of where the covered walkways intersect. The building is irregular in plan with a flat roof. Dark aluminum-framed window walls with dark glazing and a deep aluminum fascia are at some façades. At the east façade is a recessed display window with wood-clad walls.

A full architectural description can be found in Part 1C: 'Physical Description.'

Complex Condition Summary

The Business Education complex is in a fair to good condition with minor areas of deterioration. The tables below summarize the exterior architectural condition (Table 12) and the condition of the building systems (Table 13).

Table 12: Table summarizing the exterior architectural conditions at the Business Education complex. [vi]

Exterior Architectural Conditions															
		Walls			Windows			Doors			Roofs				
Material		Brick	Concrete	Wood-Framed	Aluminum-Framed	Wood-Framed	Other	Wood	Steel	Other	Low Slope	Copper Dome	Convex	Exterior Walkway	Miscellaneous
Condition	Bldg.														
	12	G/F[2]			F			F			G			F	
	13	G			F	G		F			F			F	P[4]
	14[1]	G						F			[3]			F	

1. Only the original parts of Building 14 were surveyed.
2. Includes brick wing walls.
3. Not viewed.
4. Wooden awning above breezeway, north façade.

[vi] G = good condition, F = fair condition, P = poor condition (see Table 1 for details).

Table 13: Table summarizing the building systems conditions at the Business Education complex.

Building Systems																	
		Structural			MEP			Fire / Life Safety[7]		Environmental[8]					Disabled Access		
		Vertical	Lateral	Non-Structural	Mech.	Elec.	Plumb.	Fire	Life Safety	ACM	Lead Paint	Mercury	HCFC	PCB	Site	Entry Doors	Other
Condition	Bldg.																
	12	G	F[1]	F[3]	F	F/P	F	F	G	✓	✓	✓	✓	✓	G	G	-
	13	G	F[1]	F[4]	F	F/P	F	F	F	✓	✓	✓	✓	✓	G	G	-
	14	G	F[2]	F[3/5/6]	-	F/P	F	F	G	✓	✓	✓	✓	✓	G	G	-

Notes:

1. The clear distance between the reinforced masonry and walkway canopies does not meet the limit, and the maximum unblocked plywood diaphragm horizontal span is greater than the 40 feet limit for Life Safety.
2. Unacceptable steel moment frames, unacceptable drift at moment frames, there are no cross ties between diaphragm chords, unblocked diaphragm span exceeding life safety limit, the south longitudinal direction does not contain any plywood shear walls, no wood structural panel shear walls are present for bracing at the south longitudinal wall, wood shear walls exceed the maximum life safety limits for aspect ratio and shear stress.
3. Inadequate attachment of projector screens in classrooms.
4. Inadequate attachment of contents: 2 server racks, 2 file cabinets in Room 105A, and 1 shelf system in Room 106A are not anchored.
5. Bookshelves in the staff office are unanchored.
6. Light fixtures in Rooms 152 and 153 are not supported independent of the suspended ceiling.
7. Building does not currently have sprinkler system.
8. Hazardous Materials assessment consists of visual survey only. Sampling is required to confirm presence.

Structural Condition Assessment

The following is a summary of the findings from the structural evaluation of Buildings 12 and 13 by Risha Engineering (see Appendix 3: Structural Evaluation for full report). Building 14 was not assessed.

Buildings 12 & 13

Buildings 12 and 13 are one story structures consisting of wood roof rafters with diagonal wood sheathing typically supported by a central steel beam and exterior reinforced masonry walls, wood framed walls or steel posts and wood beams. Reinforced masonry and wood shear walls provide lateral force resistance. Wood shear walls, out-of-plane wall anchorage, and roof ties were added as part of a 1999 seismic retrofit.

The buildings are generally in good condition. The roof diaphragm span is noncompliant. Anchorage of projector screens is typically noncompliant. Several tall narrow contents are unanchored, which is also noncompliant.

Exterior Closure Condition Assessment

Exterior Walls

<u>Brick</u>

The brick walls in the Business Education complex are in good condition with small localized areas of deterioration.

Hairline cracking was only noted on a few isolated bricks on Building 13. On Building 12 two isolated incidents of cracked bricks were noted. A brick at the top southeast corner had a single wide crack through its full height but was still in place. A second brick on the northeast corner was heavily cracked from base to top in several locations with material loss occurring (Figure 102).

Spalls were observed in a small localized area near the base of the east side of the projecting west façade of Building 12. These appeared to be focused at the south side of each brick.

The lowest course of brick on the east façade of Building 12 was chipped along its base (Figure 103).

On the east façade of Building 12 a small proportion of vertical mortar joints were failing near the top of the joint (less than 1% of total on façade). The bond at the brick-mortar interface was poor in limited locations on Building 12 (less than 5% of total).

Heavy efflorescence was present on the north façade of Building 13 above the planter up to the height of the top of the 'no skateboarding' sign (Figure 129). On the projecting west façade of Building 12 efflorescence and algal growth was present on the east side located around a pipe and on the west side below the open awning efflorescence and algal growth affected 40% of the exposed projecting part of the wall (Figure 130).

Figure 127: Chipped brick at the base of the east façade of Building 12.

Figure 128: Heavily cracked brick with material loss at the northeast corner of Building 12.

Figure 129: Heavy efflorescence on the north façade of Building 13.

Figure 130: Efflorescence and algal growth on the west side of the projecting west façade.

Brick Wing-Wall Canopy Supports

The brick wing walls on Building 12 are in fair to poor condition. There is significant efflorescence reaching ½ to ¾ of the way up the height of each wall. Within the areas where efflorescence is present some of the bricks (approx. 5% of total) are spalling or have lost material particularly focused at the edges of the bricks (Figure 131).

Figure 131: Wing wall on Building 12 showing efflorescence up to ¾ of the height of the wall and spalling brickwork particularly at the right-hand side of the image.

Wood-clad Walls

Plywood-Clad Walls

The plywood detailing on the south façades of Buildings 12 and 13 is in fair condition. Water damage is affecting the base of the external storage units of Building 12 resulting in small splits and swelling (Figure 132). Paint on the plywood panels between doors has minor chips at the corners (Figure 133).

Figure 132: Water damage at the base of the plywood external storage units on Building 12.

Figure 133: Chipped paint at the edges of the plywood side panel.

Windows

Aluminum Windows

The aluminum windows at the Business Education complex are in fair condition. All of the aluminum frames and the louvers have a dull patina with a low level of surface pitting. The glazing putty is cracked and deteriorating around all panes (Figure 134).

Fasteners in the mullions of the clerestory windows above the walkway between Buildings 12 and 13 have corroded.

The concrete sills on the north façade of Buildings 12 and 13 are cracked at the joints between units in several locations (approx. 25%) (Figure 135).

Figure 134: Deteriorated glazing putty as seen on the north façade of Building 12.

Figure 135: Crack at join between window sill units.

Wood-Framed Windows

The wood-framed windows on the east façade of Building 13 are in good condition.

Exterior Doors

Wood Doors

The wooden doors are in fair condition with a limited amount of water damage at their bases (approx. 90% of doors) causing the wood to split and swell and paint loss (Figure 136).

Figure 136: Water damage at the base of a wood door on Building 12.

Roofing

Low-Slope Roof

The low-slope roofs at the Business Education complex are in good condition. There is a low level of soiling and algal growth across the membrane cover (Figure 137).

Figure 137: Light soiling and algal growth on the low-slope roof over Building 12.

Covered Walkways

The covered walkways at the Business Education complex are in fair to poor condition.

There was a build-up of plant detritus on the principal walkway roof amongst the pipework and algal growth in areas where water has pooled (Figure 138). Many of the conduits have signs of corrosion.

The gutter for the secondary walkway connecting Building 14 was blocked and full.

The wood soffit was observed to be rotten in several different locations along the principal walkway and additional supports have been implemented to support the walkway at these locations (Figure 139). In addition in some of these locations decay could also be seen in the neighboring wood ceiling.

The concrete paving slab that runs in sections below the covered walkway has a meandering crack running down the center along the length of the walkway and many secondary cracks (Figure 140). These cracks are not observed to pose a hazard at present. Near the east end of Building 13 there is a large patch of iron rust staining on the concrete slab.

Figure 138: Network of pipes on the walkway canopy roof neighboring Building 12 with a build-up of plant detritus.

Figure 139: Rotten wood soffit and ceiling wood finish on the walkway canopy at Building 12.

Figure 140: Crack in the concrete paving slab below the covered walkway at Building 12.

Miscellaneous Features

Trellis between Buildings

The trellis extending from the roofline on the north façade of Building 13 is in poor condition. One rafter is severely rotted at the roofline and a neighboring metal slat has deformed. The neighboring rafter appears to have been cut short because unlike the others it only extends to the edge of the roofline and not out to the edge of the trellis indicating a potential reduction in support for the trellis (Figure 141).

Figure 141: Rotten beam and damaged slat at the roof edge, plus stunted wooden beam in the background.

Interior Condition Assessment

The interiors at Buildings 12 and 13 are in good condition. The interiors at Building 14 were not assessed.

The clerestory windows, where present, are painted or boarded up in all rooms (Figure 142). Original plywood paneling below the windows along the north wall of both Buildings 12 and 13 is in good condition (Figure 143) with one section in the storage room at Building 13 painted. An original full-height built-in plywood cabinet in room 104, Building 12, remains and is in good condition (Figure 144**Error! Reference source not found.**).

Figure 142: Blocked clerestories in Room 107, Building 13.

Figure 143: Plywood paneling with channel below the windows on the north wall in Room 101, Bldg.12.

Figure 144: Plywood inbuilt cupboard in Room 104, Building 12.

Plumbing Assessment

The following are notes from the MEP Evaluation report produced by Design West Engineering (see Appendix 4 for full report).

- The restrooms in this area are in fair condition, the fixtures are starting to show signs of extended use. No major defects or leaks were visible from the fixtures.

Mechanical (heating, ventilating, and air conditioning) Assessment

The following are notes from the MEP Evaluation report produced by Design West Engineering (see Appendix 4 for full report).

Buildings 12 & 13

Buildings 12 and 13 are classroom buildings that are served by a roof top package unit, one per classroom.

- The RTU units for the classrooms are Carrier Gas Electric units which are located above the walkway foyer and have side discharge ductwork within the classroom. The RTUs range from 3 – 5 ton units and are in fair condition. The unit is approximately 50% thru its useful life and should have another 5 to 10 years of service life. The units were manufactured in late 2007.
- The units are tied to an Alerton EMS DDC control system.

Fire and Life Safety Assessment

The following is a summary of the visual examination undertaken by Jensen Hughes of the fire protection systems and life safety features of the facilities at Buildings 12, 13, and 14 (see Appendix 5: 'Fire and Life Safety Evaluation' for full report). No system testing or intrusive inspections were conducted by Jensen Hughes personnel.

Table 14: Business Education complex fire protection/life safety systems- the following table shows the surveyed buildings in the complex (Bldgs. 12-14) identifying the systems currently provided.

Bldg. No.	Building Name	Sprinklered	Fire Alarm	Fire Extinguisher	Fire Hose Reel	Adequate Egress	Comments
12	Business Education	N	Y	Y	Y	Y	-
13	Business Education	N	Y	Y	Y	N	Room 106 does not have adequate egress. See Fire and Life Safety Report for more details.
14	Business Education	N	Y	Y	Y	Y	-

Note: N means the system is not provided for the building. Y means the system is provided for the building.

Table 15: Observations on the fire protection/life safety systems at the Business Education complex (Bldgs. 12-14) made during the 2015 survey.

Item No.	Bldg. No.	Building Name	System	Observation
1	12	Business Education	Fire Alarm	Only one manual fire alarm box is provided on the outside of the building.
2	12	Business Education	Fire Hose Reel	The fire hose reels are not required for this building, and should be removed with permission of the AHJ.
3	13	Business Education	Fire Alarm	Only one manual fire alarm box is provided on the outside of the building.
4	13	Business Education	Fire Alarm	In room 105 a 30cd strobe is installed in the room. A 30cd strobe can cover a room that is 28 x 28 feet in accordance with NFPA 72. The room measures to be 20’8” by 34’2”.
5	13	Business Education	Egress	Room 106 measures to be 1,208 square feet. This room is provided with only one exit. Since this room has an occupant load greater than 49, it is required to have a minimum of two exits.
6	13	Business Education	Fire Hose Reel	The fire hose reels are not required for this building, and should be removed with permission of the AHJ.
7	14	Business Education	Fire Alarm	Manual fire alarm boxes are provided on the outside of the building.
8	14	Business Education	Fire Hose Reel	The fire hose reels are not required for this building, and should be removed with permission of the AHJ.

Electrical Assessment

The following are notes from the MEP Evaluation report produced by Design West Engineering (see Appendix 4 for full report).

Buildings 12 & 13

The electrical system for both buildings 12 and 13 are powered from Building 14 with 400 amps of 120/208 volt, 3*phase, 4*wire power. The electrical system at building 14 is fed from a 5 KV switch providing 4160 volts to two transformers. The first is a 75 KVA transformer that delivers 400 amps of 120/208 volt, 3*phase, 4*wire power. The second is a 225 KVA transformer that provides 600 amps of 120/208 volt, 3*phase, 4*wire power for HVAC equipment in buildings 12, 13, and 14. Most of the panels are aged beyond their rated useful life expectancy.

The lighting for both buildings was recently upgraded to direct/indirect linear T*8 fluorescent pendant lighting using occupancy sensors with an Edward's system. The buildings are not equipped with emergency lighting or illuminated exit signs. These buildings do not have an emergency generator.

Hazardous Materials (HazMat) Assessment

A visual survey was carried out in the Business Education complex by Omega Environmental Services Inc. to identify the potential presence of hazardous materials (see full report in Appendix). Based on the visual observations made during the limited assessment it is Omega's professional opinion that the following potentially hazardous materials may be present in the subject buildings:

Building 12 – Business Education Wing

Table 16: Table identifying potentially hazardous materials at Building 12.

Asbestos-containing material (ACM)	▫ 1'x1' acoustic ceiling tile with associated mastic ▫ 2'x4' acoustic ceiling tile ▫ Drywall and joint compound ▫ Transite panels ▫ Vinyl base cove mastic ▫ Carpet mastic ▫ Vinyl floor tile and associated mastic ▫ Exterior grout ▫ Insulation, registered ▫ Exterior Window putty ▫ Exterior paint/skim coat ▫ Exterior stucco ▫ Concrete ▫ Exterior concrete expansion joints ▫ Exterior sub-surface transite pipes ▫ Roofing material ▫ Roof mastic ▫ HVAC system components

Lead based paints (LBP)	▫ Painted door and window systems ▫ Painted wall surfaces ▫ Roof systems (fascia, eves, gutters, etc.) ▫ Exterior painted walls
Mercury	▫ Fluorescent light bulbs
Hydrochlorofluorocarbon (HCFC)	▫ HVAC system
Tritium gas	▫ None noted
Polychlorinated biphenyls (PCB)	▫ Ballast (fluorescent fixtures) ▫ Concrete expansion joint caulking ▫ Window caulking

Building 13 – Business Education Wing

Table 17: Table identifying potentially hazardous materials at Building 13.

Asbestos-containing material (ACM)	▫ 1’x1’ acoustic ceiling tile with associated mastic ▫ 2’x4’ acoustic ceiling tile ▫ Drywall and joint compound ▫ Transite panels ▫ Vinyl base cove mastic ▫ Carpet mastic ▫ Vinyl floor tile and associated mastic ▫ Exterior grout ▫ Insulation, registered ▫ Exterior Window putty ▫ Exterior paint/skim coat ▫ Exterior stucco ▫ Concrete ▫ Exterior concrete expansion joints ▫ Exterior sub-surface transite pipes ▫ Roofing material ▫ Roof mastic ▫ HVAC system components
Lead based paints (LBP)	▫ Painted door and window systems ▫ Painted wall surfaces ▫ Roof systems (fascia, eves, gutters, etc.) ▫ Exterior painted walls
Mercury	▫ Fluorescent light bulbs
Hydrochlorofluorocarbon (HCFC)	▫ HVAC system
Tritium gas	▫ None noted
Polychlorinated biphenyls (PCB)	▫ Ballast (fluorescent fixtures) ▫ Concrete expansion joint caulking ▫ Window caulking

Building 14 – Business Education Wing

Table 18: Table identifying potentially hazardous materials at Building 14.

Asbestos-containing material (ACM)	▫ 1'x1' acoustic ceiling tile with associated mastic ▫ 2'x4' acoustic ceiling tile ▫ Drywall and joint compound ▫ Transite panels ▫ Vinyl base cove mastic ▫ Carpet mastic ▫ Vinyl floor tile and associated mastic ▫ Exterior grout ▫ Insulation, registered ▫ Exterior Window putty ▫ Exterior paint/skim coat ▫ Exterior stucco ▫ Concrete ▫ Exterior concrete expansion joints ▫ Exterior sub-surface transite pipes ▫ Roofing material ▫ Roof mastic ▫ HVAC system components
Lead based paints (LBP)	▫ Painted door and window systems ▫ Painted wall surfaces ▫ Roof systems (fascia, eves, gutters, etc.) ▫ Exterior painted walls
Mercury	▫ Fluorescent light bulbs
Hydrochlorofluorocarbon (HCFC)	▫ HVAC system
Tritium gas	▫ None noted
Polychlorinated biphenyls (PCB)	▫ Ballast (fluorescent fixtures) ▫ Concrete expansion joint caulking ▫ Window caulking

Buildings 2, 4 | Theater and Music Complex

Figure 145: North façade of Robert Moore Theater (Bldg. 2), *center*, and west façade of Ticket office (Bldg. 2b), *left*.

Brief Physical Description

The contributing buildings within the Theater and Music complex are the Robert Moore Theater (Building 2), which has a stand-alone ticket office building (Building 2b), and the original Music Building with later addition (Building 4).

The Theater Building (Bldg. 2) is made up of several connected spaces; a curved-wall auditorium and two rectangular spaces to the south, all with board-formed poured-in place concrete walls. These walls have a textured and painted finish. To the west of these is a low L-shaped brick bearing wall offshoot. To the east is a modern addition with panelized stucco walls. Multiple entrances and exits are present around the building. The only windows are aluminum-framed clerestory windows on the north and south of the brick offshoot, a large shop-front window at the south entrance to the additional performance spaces, and an opaque glass floor-to-ceiling window at the brick offshoot. The roofs are all membrane covered. The auditorium has a distinctive convex roof and behind the parapet wall is a deep copper gutter with internal downspouts that exit into an open concrete gutter at the base of the building. The other roof surfaces also have internal drainage but no gutters.

Covered walkways with membrane-covered roofs, stucco and wood soffits, stuccoed ceilings and poured concrete slab floors run east-west across the north façade of the Theater Building (Bldg. 2) and north-south along the east façade of the Music Building (Bldg. 4) as well as smaller offshoots running from this to the Theater Building (Bldg. 2).

A soffit connects the walkway canopy to the building. Below this, the north façade wall of the auditorium is tongue and groove sheathing matching the pattern of the board-formed concrete and curving with the façade. Within the wood siding are four evenly spaced hidden double-door public entrances to the auditorium.

In front of the auditorium at the northeast corner is a small single-story standalone building that houses the ticket booth, office and restroom (Building. 2b). The low-slope roof building is roughly rectangular in plan and has two wings. The original part of Building 2b is brick and stucco clad and shares the covered walkway with the Auditorium. The ticket booth has a glazed window. An integrated cantilevered concrete bench is below the signage and sculpture. The addition is stucco-clad and is slightly smaller and shorter. The northwest corner of the building is notched with a canopy overhead and two entrance doors.

Building 4 is a rectangular, linear, wood framed and masonry building. The building is primarily one-story, with taller north and south stuccoed ends flanking an off-center brick-clad section that is lower in height and which projects toward the west. There are no window openings. The wood-framed roofs of the taller north and south ends are slightly sloped to the west while the lower brick section has a flat roof with a membrane coating. The building rests on a concrete slab on grade with footings and foundation walls. Door openings with hollow-metal doors lead to individual classrooms along the east façade under the covered walkway. Above the covered walkways is a door to a mechanical room at the north half of the building. There are two exit doors on the west façade.

A full architectural description can be found in Part 1C: 'Physical Description.'

Complex Condition Summary

The Theater and Music complex is in a fair to good condition with minor areas of deterioration. The tables below summarize the exterior architectural condition (Table 19) and the condition of the building systems (Table 20).

Table 19: Table summarizing the exterior architectural conditions at the Theater and Music complex. [vii]

Exterior Architectural Conditions															
		Walls			Windows			Doors			Roofs			Exterior Walkway	Miscellaneous
	Material	Brick	Concrete	Wood-Framed	Aluminum-Framed	Wood-Framed	Other	Wood	Steel	Other	Low Slope	Copper Dome	Convex		
Condition	Bldg.														
	2	F	G	G[1/2]	F			F	F	G[3]	F		G	G	F[4]
	4	F		F						G[3]	F			G	

1. Wood paneling at theater public entrance.
2. Stucco wood-framed walls (non-original).
3. Non-ferrous metal doors (non-original).
4. Peterpaul Ott sculpture attached to Building 2b.

[vii] G = good condition, F = fair condition, P = poor condition (see Table 1 for details).

Table 20: Table summarizing the building systems conditions at the Theater and Music complex.[viii]

Building Systems																	
		Structural			MEP			Fire / Life Safety		Environmental[9/10]					Disabled Access		
		Vertical	Lateral	Non-Structural	Mech.	Elec.	Plumb.	Fire	Life Safety	ACM	Lead Paint	Mercury	HCFC	PCB	Site	Entry Doors	Other
Condition	Bldg.																
	2	G	F[1/2]	F[5/6/7]	F	F	G	G	G	✓	✓	✓	✓	✓	G	G	-
	4	G	F[3/4]	F	G	G	G	G[8]	G	✓	✓	✓	✓	✓	G	G	-

Notes:

1. Stage & auditorium: structural deficiencies related to spacing of reinforcing steel, strength of concrete wall anchorages to diaphragm, lack of cross-ties between diaphragm chords, exceeding the maximum limit for unblocked plywood diaphragm horizontal span, and piles inadequately anchored to pile caps below stage.
2. The interior mezzanine level is not anchored to the lateral force resisting elements of the main structure and does not have independent bracing.
3. Inadequate anchorage of masonry walls to diaphragm, and lateral restraint of integrated suspended ceilings at exits and corridors are not compliant.
4. Stage: Various tall and/or heavy items are unanchored/not braced, and flexible couplings not present at required piping type.
5. Auditorium: Fire suppression piping not braced, inadequate lath and plaster ceiling support, and no independent light fixture support.
6. A sign at the Drama Workshop was not adequately braced.
7. No independent light fixture support, and inadequate stair and smoke duct bracing.
8. Building does not currently have sprinkler system.
9. Hazardous Materials assessment consists of visual survey only. Sampling is required to confirm presence.
10. Tritium gas also potentially present in exit signs in Buildings 2 and 4.

Structural Condition Assessment

The following is a summary of the findings from the structural evaluation of Buildings 2 and 4 by Risha Engineering (see Appendix 3: Structural Evaluation for full report).

Building 2 – Stage and Auditorium, Drama Workshop

Building 2 is a one story structure. It contains an auditorium and stage, both consisting of a wood framed roof supported by steel trusses and concrete bearing walls. The Drama Workshop was added in 1974 and comprises insulating concrete over metal deck diaphragm supported by steel framing and with concrete walls Exterior walkway canopies which connect adjacent buildings are supported by exterior building walls on one side and cantilever columns on the opposite side. A mechanical mezzanine enclosure was added as part of 1992 renovations.

[viii] G = good condition, F = fair condition, P = poor condition (see Table 1 for details), ✓ = present.

The buildings are generally in good condition. The building's close proximity to adjacent unattached structures is noncompliant. Other noncompliant structural items are: inadequate mezzanine bracing; noncompliant concrete shear wall reinforcing; unblocked wood diaphragm spans exceed the maximum limits; concrete wall anchorage to wood diaphragm is inadequate; no cross-ties in the wood roof diaphragm, and; inadequate pile cap anchorage. Non-structural items that are noncompliant are: tall narrow building contents are unanchored; miscellaneous equipment is inadequately braced; inadequate ceiling support at exits or corridors; a sign at the Drama Workshop is inadequately braced; light fixtures in the suspended grid ceilings are not supported independently of the ceiling suspension system, and; fire suppression piping is not braced properly, and flexible couplings are not provided.

Building 4 – Music

Building 4 is a one story structure consisting of a steel framed roof with wood sheathing supported on wood framed and reinforced masonry walls brick walls.

The building is in generally good condition. The masonry wall anchorage to the roof diaphragm is inadequate. Non-structural systems that have noncompliant bracing are the integrated ceiling, the light fixtures in the suspended ceilings, and smoke control ducting.

Exterior Closure Condition Assessment

Exterior Walls

<u>Brick</u>

The brick walls in the Theater and Music complex are generally in fair to good condition, with localized areas of deterioration.

Hairline cracks are present in around 25% of the bricks on Building 4 possibly related to their manufacture. The west wall of Building 4 has an area of original bricks (less than 5% of total on west façade) that have lost material from their edges (Figure 146).

Around five bricks on the end of the projecting brick wall from the west of the Theater Building (Bldg. 2) have lost a small amount of material apparently by impact damage.

The bond at the brick-mortar interface is poor in a few isolated locations on the east façade of the Ticket Office (Bldg. 2b) and east façade of the Music Building (Bldg. 4).

A minor amount of efflorescence was observed neighboring mortar joints on the Theater Building (Bldg. 2) and Ticket Office (Bldg. 2b) covering an area the size of a couple of bricks or less in each case.

A small area of graffiti ghosting (following removal) is just visible on the south façade of the brick offshoot on the west side of Building 2.

A new door opening that has been cut into the west façade of Building 4 has been over cut resulting in extended cutting lines through the brickwork at the upper corners of the door (Figure 147).

Figure 146: West façade of the Music Building showing loss of brick surface (Bldg. 4).

Figure 147: Cutting lines through the brickwork at the location of a new door insertion on the west façade of the Music Building (Bldg. 4).

Concrete

Poured-in-Place

The poured-in-place concrete walls at the Theater Building (Bldg. 2) are generally in good condition with localized areas of damage.

An isolated fine diagonal crack with associated small scale paint and surface texture loss was identified on Building 2. In our experience this type of crack is associated with structural movement. At these locations there is some loss of the textured and painted surface. The textured and painted surface is also starting to deteriorate and peel at the top of the parapet walls in localized areas (Figure 148). A hairline crack is present running up the joint between the two parts of Building 2 composed of straight poured concrete walls. The exposed concrete plinth of the Ticket Office (Bldg. 2b) has a vertical crack on the east façade near a joint line approx. 1/16" wide. In addition there were one or two minor vertical hairline cracks observed in this area.
The exposed end of an internal downspout from the auditorium roof that exits the concrete wall to the south just a few feet below the parapet to allow drainage onto the low-slope roofs below is heavily corroded (Figure 149).

There is widespread lichen growth on the parapet wall head of the theater auditorium (Bldg. 2) (Figure 150).

An area (approx. 4ft x 8ft) of the concrete on the east side of the theater auditorium (Bldg. 2) has a patchy appearance (Figure 151). It appears that in this location there was previously an attachment (such as an awning) which has been removed and the surface has been repaired (Figure 24).

Figure 148: Crack on the west façade of Building 2 with textured finish and paint loss.

Figure 149: Rusted end of downpipe feeding water to flat roof to the south of the auditorium (Bldg. 2).

Figure 150: Widespread lichen growth (yellow) on the auditorium (Bldg. 2) parapet wall.

Figure 151: Patched finish on the east façade of Building 2.

<u>Stucco-Clad Wood-Frame</u>

Wood-framed walls are generally in fair to good condition, several of which are on recent additions. The stucco on Building 4 has two areas of cracking noted. A horizontal crack runs the length of the west façade of the original (north) stuccoed portion of the building at a height of 26" (Figure 152). This crack occurs at the interface between the concrete plinth and the wood framed walls. At the southwest corner of the stucco on the addition there is hairline cracking around the top and bottom corners.

On the recent addition to the east side of Building 2 there is hairline cracking running horizontally across several of the stucco panels.

Alterations to the Music Building (Bldg. 4) fenestration have resulted in a multiple large visible patches on the east and west façades (Figure 153). Cracking was identified at the edges of some patches (approx. 5% of boundary).

Figure 152: Horizontal crack on the west façade of the original (north) portion of the Music Building (Bldg. 2).

Figure 153: Visible patching of stucco on east façade of Music Building (Bldg. 2).

Wood-clad Walls

Plywood-Clad Walls

A plywood accent panel on the Ticket Office (Bldg. 2b) has been painted, obscuring its original natural finish. The lower edge of the plywood has water damage and is visibly swelling and splitting.

Windows

Aluminum Windows

The limited number of windows on the Theater Building (Bldg. 2) are in fair to good condition. The clerestory windows on the brick offshoot on the west side of the building have a low level of surface pitting on the frames giving them a dull patina. The majority of the screws in the mullions are corroded (Figure 154).

The ticket booth on the south façade has minor surface scratches to the frames.

Figure 154: Clerestory windows on the west offshoot from Building 2 with corroded fasteners.

Exterior Doors

The doors at the Theater and Music complex are in good condition.

Roofing

Low-Slope Roof

The low-slope roofs at the Theater and Music complex are in fair condition, the roof of the Ticket Office (Bldg. 2b) was not viewed.

Areas of water pooling were observed on several areas of the roof. Water was visibly pooling where no drainage was present in the following locations:

1. On the low one-story brick offshoot on the west side of the Theater Building (Bldg. 2) beside the straight concrete walls (Figure 155);
2. On the Theater entrance porch at the north side of the building; and
3. Close to the west and north edges of the roof on the Music Building (Bldg. 4).

Water was visibly pooling beside and surrounding internal drains where the low lip surrounding the drain was preventing complete drainage in the following locations:

1. On the small low porch over the Theater (Bldg. 2) fire exit on the west façade;
2. Within the area of the Theater roof with the parapet wall containing mechanical equipment/vents (Figure 156); and
3. On the low one-story brick offshoot on the west side of the Theater Building (Bldg. 2).

In areas of observed water pooling there was an accumulation of soiling and algal growth. There was a low level of plant detritus accumulation on the roofs.

Figure 155: Water pooling on top of the brick offshoot on the west side of Building 2.

Figure 156: Water pooling within the dropped-level area on Building 2.

Other Roofs

Convex Roof

The convex roof at the Theater Building (Bldg. 2) over the auditorium was in fair to good condition.

The membrane had a low level of soiling or algal growth discoloration and there was a low level of accumulation of plant detritus in the deep gutter (Figure 157).

Figure 157: Plant detritus accumulation within the gutter on the theater auditorium (Bldg. 2).

Covered Walkways

The covered walkways in the Theater and Music complex are in fair to good condition.

The east-west walkway running along the north of the complex does not appear to have integrated drainage any longer although scuppers are still present, and pooling was observed in patches on the roof along the length of the walkway. In areas of observed water pooling there was an accumulation of soiling and algal growth.

The north-south walkway and small east-west offshoots are generally in fair condition. There is a small amount of water pooling occurring in patches along the edges of the roof close to the gutters. There is also a small amount of water pooling occurring along the south edge of the southern east-west offshoot where no drainage is present. In areas of observed water pooling there was an accumulation of soiling and algal growth. There was a low level of plant detritus accumulation in the gutters.

The stuccoed sides of the east-west walkway have a low level of soiling.

The ceiling of the north-south walkway which is stuccoed has a hairline crack running down its center running along a significant proportion of the center of the walkway (Figure 158).

The concrete paving slab that runs in sections below the covered walkway is fairly consistently cracked in each slab with a dominant crack through the center of the slab (parallel to the walkway). In addition there tend to be a few secondary cracks running in both directions through the slab. These currently were not observed to pose a hazard (Figure 159).

Figure 158: Cracking in the ceiling of the north-south walkway neighboring Building 4.

Figure 159: Cracking in the paving of the east-west walkway to the north of Building 2.

Interior Condition Assessment

The interiors of the Theater Building (Bldg.2) are in fair condition. The auditorium has recently been refurbished and is in good condition. The Music Building (Bldg. 2) has had a recent refurbishment and is in good condition.

Room 101 at the north end of the Music Building (Bldg.4) is the one room in the building to retain some of its original features. The large wood-paneled back wall that curves to become a wood-paneled ceiling is in fair condition but has some surface wear (Figure 160).

Figure 160: Original wood-paneled back wall and ceiling showing signs of wear in Room 101, Music Building (Bldg. 4).

Plumbing Assessment

The following are notes from the MEP Evaluation report produced by Design West Engineering (see Appendix 4 for full report).

- The restrooms were in good condition, fixtures appear to be replaced within the last 5 years.

- The standing water next to the Multizone unit should be fixed. It appears the roofing material is not slopped correctly to the roof drain which is causing the water to pond up. The standing water could potentially cause damage to the building.

Mechanical (heating, ventilating, and air conditioning) Assessment

The following are notes from the MEP Evaluation report produced by Design West Engineering (see Appendix 4 for full report).

Building 2 – Theater

Building 2 has a mixture of HVAC equipment that serves the building. There is equipment located within a mezzanine that is accessed from the back of the stage and equipment on the roof. The equipment within the mezzanine appears to serve the main Auditorium and is a hydronic heating and cooling system. The mezzanine contains a boiler, hydronic heating pumps and two custom air handlers. The roof has a single multizone AHU, three Carrier DX heat pump units.

- The hydronic hot water boiler is a Lochinvar Copper Fin II, 1,440,000 BTU/H input with a 1 HP Bell & Grossest base mounted pump system circulation pump and two ½ hp boiler circulation pumps. During the time of the inspection, this equipment was not in operation, but the equipment appears to be in fair condition based on visual inspection.
- The custom 4*Pipe air handlers are Temptrol DH35PL 15 HP supply fan and a Temptrol DH17PL 7.5 HP supply fan. Chilled water is feed from a Trane chiller that is located within Building 3 (Music Building). During the time of the inspection, this equipment was not in operation, but the equipment appears to be in fair condition based on visual inspection.
- The multizone unit is a 4*Pipe Carrier 39TH39KA****QH7*B unit that receives its hot water from the boiler within the mezzanine and chilled water from the chiller within Building 3 (Music Building). This unit serves the area behind the stage, most likely the drama room and associated offices. To the south of the unit, the roof is not sloped correctly to the roof drain and there is standing water. Based on visual inspection, this unit has served beyond its useful life. The pipe insulation serving the unit is falling off is some areas, control valves appear to be old and show signs of rust, the ductwork on the roof appears to be in decent shape.
- The workshop room is served via a DX rooftop packaged unit, Carrier 50HJQ009***601. The unit is in fair condition, the coils are beginning to show signs of corrosion. The unit is approximately half way thru its useful life and should have another 5*10 years of service life.
- The costume workshop room is served via a DX rooftop packaged unit, Carrier 50HJQ007***521. The unit is in fair condition, the coils are beginning to show signs of corrosion. The unit is approximately half way thru its useful life and should have another 5*10 years of service life. The ductwork on the roof is in good condition
- The low roof next to the workshop room is served via a DX rooftop packaged unit, Carrier Unit, could not read label, and appears to be a 3 ton unit. The unit is in fair condition.

Building 4 – Music Wing

Building 4 has a new HVAC system that was installed within the past year and is in good condition. The chiller is an air cooled Trane CGAM 080F with two 7.5 HP Taco base mounted end suction pumps. The boiler is a Lochinvar CHN401 with a Taco 1/3 hp circulation pump and 1.5 hp base mounted end suction system pump.

Fire and Life Safety Assessment

The following is a summary of the visual examination undertaken by Jensen Hughes of the fire protection systems and life safety features of the facilities at Buildings 2 and 4 (see Appendix 5: 'Fire and Life Safety Evaluation' for full report). No system testing or intrusive inspections were conducted by Jensen Hughes personnel.

Table 21: Theater and Music complex fire protection/life safety systems- the following table shows the surveyed buildings in the complex (Bldgs. 2 & 4) identifying the systems currently provided.

Bldg No.	Building Name	Sprinklered	Fire Alarm	Fire Extinguisher	Fire Hose Reel	Adequate Egress	Comments
2	Theater	Y	Y	Y	Y	Y	-
4	Music	N	Y	Y	Y	Y	-

Note: N means the system is not provided for the building. Y means the system is provided for the building.

Table 22: Observations on the fire protection/life safety systems at the Theater and Music complex (Bldgs. 2 & 4) made during the 2015 survey.

Item No.	Bldg. No.	Building Name	System	Observation
1	2	Auditorium	Fire Sprinkler	No seismic bracing is provided on the fire sprinkler riser.
2	2	Auditorium	Fire Sprinkler	It appeared that the seismic bracing for the sprinkler system is not adequate for the system.
3	2	Auditorium	Fire Sprinkler	The spare fire sprinkler cabinet could not be located in the building.
4	2	Auditorium	Fire Sprinkler	The power/storage room (102G) on the right side of the stage does not have adequate fire sprinkler coverage.
5	2	Auditorium	Fire Sprinkler	The status (open/closed) of the Post Indicating Valve (PIV) located near Building 2 is hard to read.
6	2	Auditorium	Fire Sprinkler	The Fire Department Connection (FDC) is not labeled for what buildings it serves.
7	2	Auditorium	Fire Sprinkler	The FDC looks like it is bolted shut and wrench of the appropriate size would have to be used to unbolt the covers for fire department hookup.

8	2	Auditorium	Fire Sprinkler	Storage in the fire sprinkler riser room is too close to the ceiling. The items being stored are closer to the sprinklers than the minimum clearance of 18 inches required by NFPA 13. This will have an effect on the spray pattern of the sprinklers in that room.
9	2	Auditorium	Fire Sprinkler	Fire sprinklers are missing escutcheons on the side exits.
10	2	Auditorium	Egress	Exit signs in the Drama Rooms are not illuminated.
11	2	Auditorium	Fire Hose Reels	The fire hose reels can be removed from the building, except for the stage area, with the permission of the AHJ.
12	4	Music	Fire Hose Reels	The fire hose reels are not required for this building, and should be removed with permission of the AHJ.

Electrical Assessment

The following are notes from the MEP Evaluation report produced by Design West Engineering (see Appendix 4 for full report).

The electrical system for building 2, 3 and 4 are derived from a 4160V feed with the switchgear and 4160V transformers located in an electrical yard and electrical equipment room between buildings 2 and 4. The switchgear and transformers for building 4 were recently installed and are in good working condition. The switchgear MS1 and MS2 feeding building 2 are older but appear to be in good working condition. The lighting in building 2 is working condition, however, the older incandescent lighting could be replaced with more efficient fluorescent or LED lighting. There are some older subpanels in building 2 that should be replaced. Equipment of this age is subject to reliability issues and may also present obsolescence issues for obtaining replacement parts. Continued use of this equipment is likely to result in issues with reliability resulting from age related failures. Building 4 was recently remodeled in 2012 and all electrical equipment and lighting was found to be in good condition.

Building 2 – Theater

The electrical system is fed from two 4160 volt transformers, T24 and T24A, located in an electrical yard east of the auditorium. The first transformer T24 is a 500 KVA transformer that delivers 800 amps of 277/480 volt, 3 phase 4 wire power to switchboard ‘MS1’. The second transformer T24A is a 300 KVA transformer that provides 1200 amps of 120/208 volt, 3*phase, 4* wire power to switchboard ‘MS2’. The transformers and switchboards appear to be in good working condition. There are several subpanels throughout the building which appear to be original to the building and are recommended to be replaced. There are multiple subpanels that are not labeled. Cabling has been abandoned in place and left in some of the older boxes. Several boxes have had covers removed and have not been replaced.

General lighting consists of primarily T*8 strip fluorescents in support rooms and incandescent downlights in the dressing rooms. The theater lighting system consists of incandescent lighting controlled by a theatrical dimming system consisting of 600 amp, 240 volt Power Control Systems dimmer racks. The building is equipped with a central battery emergency lighting system that provides emergency egress lighting and also serves illuminated exit signs. Low and high level exit signs are installed throughout and are in good working condition.

Building 4 – Music Wing

Building 4 was recently remodeled in 2012. The electrical system feed starts at a newly installed 4160 volt transformer TVHM, located in an exterior electrical yard between building 2 and 4. The transformer TVHM is a 1000 KVA and delivers 1200 amps of 277/480 volt, 3 phase 4 wire power to switchboard 'STH'. From there, an 800A 480V feed is routed to distribution switchboard 'DSMH' located in Building 3 electrical room, which feeds an 800A 20/208 volt, 3*phase, 4*wire switchboard 'DSML' through a 225kVA transformer. These switchboards feed panels H1, L1A, L1B and L1C all located in the Building 4 electrical room. The transformers, switchboards and panelboards have been recently installed and are in good working condition.

General lighting primarily consists of T*8 recessed fluorescent 2x4 and 4' linear. Select fixtures are provided with battery packs to supply emergency egress lighting. Exit signs with integral backup battery packs are installed throughout and are in good working condition. All rooms have occupancy sensor lighting controls.

It should be noted that any demolition should consider the interconnection of the electrical distribution systems between buildings 2, 3 and 4. At a minimum, both electrical yards between buildings 2 and 4 would need to be protected in place as they are the central power supply for all 3 buildings.

Hazardous Materials (HazMat) Assessment

A visual survey was carried out in the Theater and Music complex by Omega Environmental Services Inc. to identify the potential presence of hazardous materials (full report in Appendix). Based on the visual observations made during the limited assessment it is Omega's professional opinion that the following potentially hazardous materials may be present in the subject buildings:

Building 2 – Robert B. Moore Theater

Table 23: Table identifying potentially hazardous materials at Building 2.

Asbestos-containing material (ACM)	▫ Painted ceiling materials ▫ Drywall and joint compound ▫ Vinyl base cove and mastic ▫ Carpet mastic ▫ Exterior and interior stucco materials ▫ Exterior paint/skim coat ▫ Concrete ▫ Plaster ▫ Stage curtains

	▫ Exterior concrete expansion joints ▫ Exterior sub-surface transite pipes ▫ Expansion joint ▫ Roofing material ▫ Roof mastic ▫ Insulation ▫ HVAC system components ▫ Pipe insulation ▫ Transite pipe
Lead based paints (LBP)	▫ Painted door and window systems ▫ Painted wall surfaces ▫ Painted structural columns and beams ▫ Roof systems (fascia, eves, gutters, etc.) ▫ Exterior painted walls
Mercury	▫ Fluorescent light bulbs
Hydrochlorofluorocarbon (HCFC)	▫ HVAC system
Tritium gas	▫ Exit sign
Polychlorinated biphenyls (PCB)	▫ Ballast (fluorescent fixtures) ▫ Concrete expansion joint caulking ▫ Transformers ▫ Expansion joint

Building 4 – Music Wing

Table 24: Table identifying potentially hazardous materials at Building 4.

Asbestos-containing material (ACM)	▫ 2'x4' acoustic ceiling tile ▫ 2'x2' acoustic ceiling tile ▫ Drywall and joint compound ▫ Carpet glue ▫ Vinyl base cove and mastic ▫ Sheet vinyl flooring ▫ Vinyl floor covering (12" x12" tiles) and assoc. mastic ▫ Exterior stucco ▫ Concrete ▫ Exterior concrete expansion joints ▫ Exterior sub-surface transite pipes ▫ Roofing material ▫ Roof mastic ▫ HVAC system components
Lead based paints (LBP)	▫ Painted door and window systems ▫ Painted wall surfaces ▫ Painted structural columns and beams ▫ Roof systems (fascia, eves, gutters, etc.) ▫ Exterior painted walls ▫ Ceramic tiles
Mercury	▫ Fluorescent light bulbs
Hydrochlorofluorocarbon (HCFC)	▫ HVAC system

Tritium gas	▫ Exit sign
Polychlorinated biphenyls (PCB)	▫ Ballast (fluorescent fixtures) ▫ Concrete expansion joint caulking

Mechanical Room

Table 25: Table identifying potentially hazardous materials at the mechanical room in Building 4.

Asbestos-containing material (ACM)	▫ Plaster materials ▫ Pipe insulation ▫ Mastic
Lead based paints (LBP)	▫ Painted door and window systems ▫ Painted wall surfaces
Mercury	▫ Fluorescent light bulbs
Hydrochlorofluorocarbon (HCFC)	▫ None noted
Tritium gas	▫ None noted
Polychlorinated biphenyls (PCB)	▫ Ballast (fluorescent fixtures)

Buildings 35, 36, 37, 38, 39 | Math and Planetarium Complex

Figure 161: East façades of Building 35, *left*, and 37, *left background*, looking west.

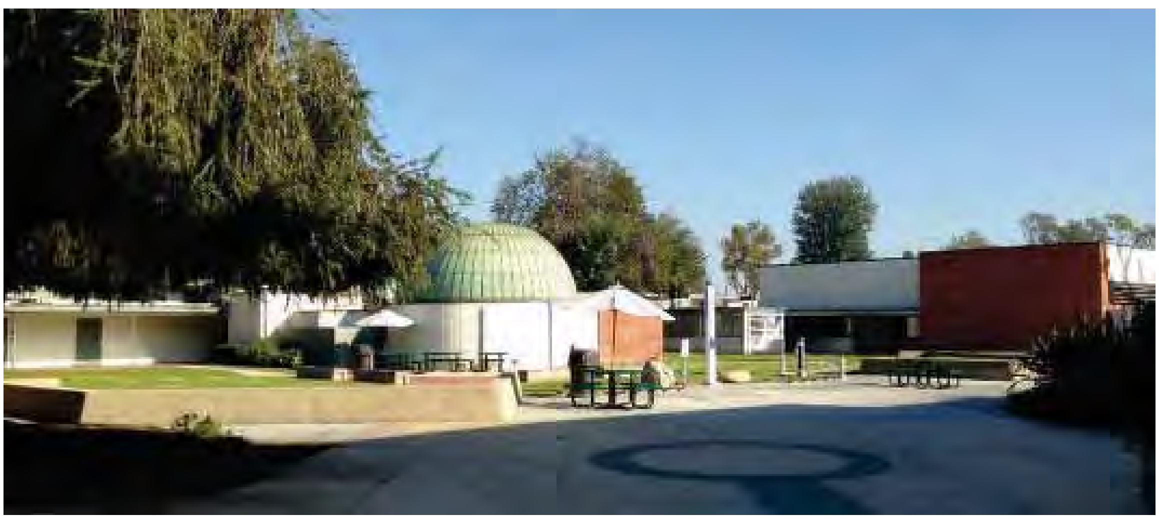

Figure 162: South façades of Buildings 36, *left*, 39, *center*, 38, *right of center*, and 37, *right*, looking north.

Brief Physical Description

The Math and Planetarium complex is a collection of five buildings connected by covered walkways, with Buildings 35 and 36 on the north side and Building 37, 38, and 39 on the south side. A covered breezeway separates Building 35 to the east and Building 36 the west; the covered walkway extends into the breezeway and out south toward Building 37. The complex is on the diagonal orientation intended for the classroom buildings.[ix] All buildings in the complex are single-story.

Buildings 35 and 36 have predominantly stucco covered wood-framed walls with low brick walls on the north façade below aluminum-framed window walls. On the south façade of these buildings, above the canopy, are aluminum-framed clerestory windows and jalousie windows. The entrances are all wood doors on the south façade below the walkway canopy. Painted plywood detailing is present between closely neighboring doors. A low offshoot at the east of Building 35 has vinyl windows and is largely clad in plywood with a stucco panel below the windows. There is one entrance door. These two buildings have a continuous low-slope membrane-covered gabled roof forming a breezeway between the two buildings.

Building 37 is a tall one-story, reinforced masonry and wood-framed building on caissons. It is roughly square in plan structure and clad primarily in brick, stucco and painted plywood. The building has a flat roof with parapet wall, accessible as an observation deck from exterior stairs on the east façade. Windows on the east and west façades are wood-frames and surrounded by plywood clad walls. On the south façade is a high aluminum framed clerestory window with aluminum louvers. On the north façade is an aluminum ventilation louver for the mechanical room. There are wood entrance doors on the north, east and west façades and a roll up metal door on the south façade. The roof and inner parapet walls have a membrane coating. Short covered walkways run north-south connecting to the east-west walkway to the north.

Building 38 is a small one-story, rectangular plan building with a flat roof. It is across covered walkways from the south façade of Building 36 and the west façade of Building 37. The building has stucco finished walls with three wood doors on the east façade leading into individual offices. The west façade has six aluminum-framed sliding windows above a stucco wall. Its north and south facades are stucco with no openings.

The Planetarium building (Bldg. 39) is irregular in plan and composed of two main wings: a round concrete section that is a planetarium/classroom, and a series of one-story rectangular volumes that surround the domed section on the north and east with a courtyard at the center. The Planetarium circular wing has board-formed poured concrete walls with a ribbed texture. The roof is a concrete dome clad in copper panels set back from the surrounding walls, surrounded by a low-slope membrane covered roof. There are no external entrances or fenestration on this part of the building.

The one-story section of Building 39 is comprised of several additions with flat membrane-covered roofs. Only two sections are attached to the domed planetarium. To the north is a narrow, rectangular wing that is part of the original construction. It is brick clad on the west and north (at the covered walkway) and stucco at the east façade facing an interior courtyard. The only opening is on the painted brick north façade with a projecting door that is the main entrance into the planetarium classroom from the covered walkway.

[ix] As per the original plans for the diagonally oriented buildings, this report considers the northeast-facing façade as plan north or north.

Attached to the east of the planetarium is a mostly square wing clad in red brick on its east and south façades. Its west façade in the interior courtyard is stucco. The only opening is a door on the east façade as a secondary entry for the planetarium/ classroom. Connecting the attached north and east wings is an L-shaped wing that creates a small internal courtyard. This wing has a low-slope roof with membrane cover. The walls are mainly stucco finished wood-frame walls with a brick bearing wall on the east façade. There are two entrance doors on the north façade below the covered walkway. Within the courtyard there are two doors, a wood door on the north side and a metal roll-up door on the east side.

A full architectural description can be found in Part 1C: 'Physical Description.'

Complex Condition Summary

The Math and Planetarium complex is generally in a fair condition with minor areas of deterioration. The key area of concern is the sagging walkway canopy roofs which are causing significant levels of water pooling. The tables below summarize the exterior architectural condition (Table 26) and the condition of the building systems (Table 27).

Table 26. Table summarizing the exterior architectural conditions at the Math and Planetarium complex.[x]

Exterior Architectural Conditions														
	Walls			Windows			Doors			Roofs				
Material	Brick	Concrete	Wood-Framed	Aluminum-Framed	Wood-Framed	Other	Wood	Steel	Other	Low Slope	Copper Dome	Convex	Exterior Walkway	Miscellaneous
Condition — Bldg.														
35	G[1]		F	F		F[4/5]	F			F			F	G[8]
36	G		F	F		F[5]	F			F			F	
37	F		F	F	G	F[6/7]	F			F			F	G[9]
38			G	F			F			F				
39	F	G	F[2]	G[3]			F			F	G			

1. Includes brick wing walls.
2. Wood framed 1990s additions.
3. Anodized aluminum windows (1990s).
4. Vinyl replacement windows.
5. Jalousie windows between clerestory windows on south façade above walkway canopy.
6. Louvers over clerestory window on south façade.
7. Louvers for ventilation on mechanical room, north façade.
8. Sculpture at east end of complex.
9. Concrete stair to roof.

[x] G = good condition, F = fair condition, P = poor condition (see Table 1 for details).

Table 27. Table summarizing the building systems conditions at the Math and Planetarium complex.

Building Systems																	
		Structural			MEP			Fire / Life Safety[11]		Environmental[12]					Disabled Access		
		Vertical	Lateral	Non-Structural	Mech.	Elec.	Plumb.	Fire	Life Safety	ACM	Lead Paint	Mercury	HCFC	PCB	Site	Entry Doors	Other
Condition	Bldg.																
	35	G	F[1]	F[6]	F	F	F	G	G	✓	✓	✓	✓	✓	G	G	-
	36	G	F[2]	F[7]	F	F	F	G	F	✓	✓	✓	✓	✓	G	G	-
	37	G	F[3]	F[8]	P	F	F	G	G	✓	✓	✓	✓	✓	G	G	-
	38	G	G[4]	F[9]	F	F	F	G	G	✓	✓	✓	✓	✓	G	G	-
	39	G	F[5]	F[10]	P	P	F	G	G	✓	✓	✓	✓	✓	G	G	-

Notes:

1. Unacceptable steel moment frames, unacceptable drift at moment frames, there are no cross ties between diaphragm chords, the maximum unblocked plywood diaphragm horizontal span is greater than the limit for Life Safety, the south longitudinal direction does not contain any plywood shear walls, no wood structural panel shear walls are present for bracing at the south longitudinal wall, wood shear walls have an aspect ratio and shear stress over the maximum limits for Life Safety.
2. Unacceptable steel moment frames, unacceptable drift at moment frames, there are no cross ties between diaphragm chords, and the maximum unblocked plywood diaphragm horizontal span is greater than the limit for Life Safety.
3. Collectors at the roof level to at least 1 reinforced masonry shear wall do not appear to be detailed on the available structural drawings and could not be viewed, wood typically in good condition apart from 1 exterior location of wood damage was viewed at a low roof door jamb and 1 joist at the NW corner was viewed to be torqued with slight splitting observed, it is unlikely that existing wall ties or straps have adequate strength or stiffness to resist the out-of-plane connection force calculated in the standard (not viewed), and the low roof unblocked plywood diaphragms appears to have a horizontal span of greater than the Life Safety maximum.
4. The longitudinal direction only contains 1 line of plywood shear walls and the north exterior wall has no lateral system from the roof diaphragm to the foundation, and the north wall has windows along entire length, and no wood structural panel shear walls are present for bracing.
5. Wall anchorages of masonry walls to diaphragm do not have the adequate strength or stiffness to resist the out-of-plane connection force calculated in the standard, and continuous cross-ties between diaphragm chords are inadequate at areas of reinforced masonry walls.
6. Bookshelves in the staff office are unanchored, screen projectors in some classrooms are not adequately braced, and light fixtures in Rooms 152 and 153 are not supported independent of the suspended ceiling.
7. Screen projectors in some classrooms are not adequately braced.
8. 2-3 filing cabinets are not anchored to the floor slab or wall, mechanical equipment on the roof is not anchored to the roof structure, and in the equipment room located at the low roof, and at least 1 boiler is not anchored.
9. At least 1 bookshelf over 4 feet in height is not anchored to the floor or wall and mechanical equipment on the roof is not anchored to the roof structure.
10. Unanchored row of tall lockers in a storage area.
11. Building does not currently have sprinkler system.
12. Hazardous Materials assessment consists of visual survey only. Sampling required to confirm presence.

Structural Condition Assessment

The following is a summary of the findings from the structural evaluation of Buildings 35 through 39 by Risha Engineering (see Appendix 3: Structural Evaluation for full report).

Buildings 35 & 36 – East and West Math Wings

Buildings 35 and 36 are one story mostly wood framed structures connected by walkway canopies. The wood roof rafters with plywood sheathing are supported by a central steel beam and exterior wood walls or headers, or beams with steel posts. The lateral system is plywood shear walls and steel moment frames. There is no evident lateral system along the south exterior wall of Building 35.

The buildings are generally in good condition. The roof diaphragm span, steel moment frames, lack of roof diaphragm cross ties and locations of narrow wood shear walls are all noncompliant. The south exterior wall in Building 35 has no lateral force resisting system, which is noncompliant. The anchorage of some screen projectors is noncompliant. Several tall bookshelves are unanchored, which is also noncompliant. Some light fixtures are not supported independently of the suspended ceiling, which is noncompliant.

Building 37 – Reprographics

Building 37 is a one story structure consisting of wood rafters with plywood sheathing supported by wood framed and reinforced masonry walls, which are also used as the lateral force resisting system.

The building is generally in good condition, with a few areas of minor to moderate deterioration. No collectors at shear walls are present, which is noncompliant. Reinforced masonry wall anchors are not compliant. Mechanical equipment on the roof is not anchored, and vibration isolators on the roof are not equipped with restraints or snubbers, both of which are noncompliant. Filing cabinets are unanchored, which is also noncompliant.

Building 38 - Small Office Addition

The Office Addition is a 1 story wood framed building, approximately 10 feet high, and 13 feet wide by 32 feet long, with roof rafters and plywood sheathing supported by wood framed walls and shear walls.

The building is generally in good condition. The north wall has no lateral force resisting system, which is noncompliant. Mechanical equipment on the roof is not anchored, which is noncompliant. One tall bookshelf is unanchored, which is also noncompliant.

Building 39 – Planetarium

The Planetarium Building is one story structure consisting of 5 areas: 1) a 24 foot diameter reinforced concrete dome with reinforced concrete shear walls; 2) a 12 feet wide by 48 feet long reinforced masonry room adjoining the dome to the north; 3) two new additions consisting of wood frame construction, and; 4) third new addition consisting of reinforced masonry construction.

The building is generally in good condition. The reinforced masonry building directly abuts the concrete dome structure, which is noncompliant. The reinforced masonry wall anchorage to the roof diaphragm is noncompliant, as is the lack of cross ties in the roof diaphragm located at the reinforced masonry walls. A row of tall lockers is unanchored, which is noncompliant.

Exterior Closure Condition Assessment

Exterior Walls

<u>Brick</u>

The brick walls at the Math and Planetarium complex are generally in fair to good condition, with no major signs of distress.

Hairline cracks are present in a handful of individual bricks between the original construction and later addition at the north wall of Building 36. In addition there are a couple of locations where vertical hairline cracks run the full height of the wall below the window walls, cutting through the bricks, and in some places run along the vertical brick-mortar interface (Figure 163). Cracks running through the brick rather than the mortar joints indicate that the mortar is too ‘hard’ for the bricks. Mortar joints are in fair condition, with isolated areas of soft and deteriorated mortar (less than 5% of total mortar joints).

There are small areas of brick masonry at the east wall and southeast corner of Building 37 that have minor surface spalls and associated efflorescence (Figure 164). These bricks are less than 5% of the wall surface.

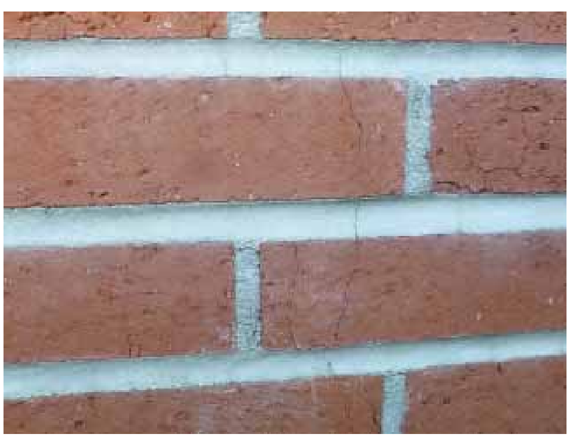

Figure 163: Hairline cracks on north façade of Building 36 on individual brick and running vertically up the wall through the bricks and mortar.

Figure 164: Spalling brickwork and efflorescence on east façade of Building 37.

Brick Wing-Wall Canopy Supports

The brick wing walls supporting the walkway canopy at Building 35 are in fair condition. In one location a fastener connecting the brick wing wall to the canopy has corroded causing rust jacking and the loss of a section of the brickwork on the wall (Figure 165). On the brick wing walls approximately 5% of the brick is spalling, resulting in loss of portions of its outer surface (Figure 166). A low level of efflorescence is also present in these locations.

Figure 165: Oxide jacking causing the loss of brickwork on a brick wing wall at Building 35.

Figure 166: Spalling brickwork on a wing wall at Building 35.

Concrete

Poured-in-Place

The poured-in-place concrete wall at the Planetarium is in good condition with no visible signs of distress. The concrete has a paint finish that is in fair condition with some minor staining at the intersection with the metal drip edge.

Stucco-Clad Wood-Frame

The stucco-clad wood frame walls are generally in fair condition. The stucco is coated with multiple layers of paint, the paint coating is generally in fair condition. There are isolated spots of peeling paint at the base of walls, especially at stucco walls not protected by the exterior canopy (Figure 167).

Stucco walls above the canopy roofs at the south walls of Buildings 35 and 36 are heavily soiled. A new flashing is required between the canopy roof and stucco walls for the entire length of the canopy.

Alterations to Building 36 doorways on the south façade have resulted in visible stucco patching around their perimeters (Figure 168).

Figure 167: West façade of Building 36 with a low level of soiling and paint deterioration at base.

Figure 168: Stucco patching around doorway on Building 36.

Wood-clad Walls

Plywood-Clad Walls

Plywood accent panels at Buildings 35, 36 and 37 have been painted, obscuring their original natural finish. Bottom edges of the plywood are delaminated from exposure to moisture at the east end of Building 35 (Figure 169) and exposed edges at Reprographics (Bldg. 37) (Figure 170). The base of the walls on the west façade of Building 38 are heavily soiled.

Figure 169: Water damage at base of plywood wall on east façade of Building 35.

Figure 170: Water damage at edge of plywood paneling on Building 37 west façade.

Windows

Aluminum Windows

Window walls

The original aluminum window walls at the north elevation of Buildings 35 and 36 are in fair condition with routine maintenance and repair required for the entire window system. The aluminum window frames are soiled and show minor “pitting”. The glazing putty is severely cracked in all locations. Rust staining appears at isolated locations where the window walls meet the concrete sill (Figure 171). The possible source of corrosion is either exposure of the interior steel columns or steel screws to moisture.

The concrete sill at the base of the window walls is in good to fair condition, with minor hairline cracks at approximately 20% of the concrete sills. These cracks do not appear recent and are possibly from shrinkage during the manufacturing process. A corner of the concrete has been lost from the sill at the northwest corner of Building 36.

Figure 171: Rust staining at the window sill on the north façade of Building 36.

Clerestory Windows

Clerestory windows on the south façades of Buildings 35 and 36 are in fair condition. Some window bays, approximately two per classroom space, have been modified to incorporate mechanical ductwork and air grilles. Typical modifications include removal of the individual glass panels at selected louvered window panels to incorporate the addition of ducts and grilles (Figure 172). All remaining glazing has been painted. Exterior horizontal light control louvers that originally covered the entire south elevation above the lower roof canopy have been removed. The aluminum window frames are soiled and show minor "pitting" (Figure 173).

Figure 172: Mechanical equipment on the walkway canopy roof connected to the interior through modified clerestory windows on Building 36.

Figure 173: Blocked clerestory window on Building 36.

Wood Windows

The wood windows at Building 37 are generally in fair condition with no obvious signs of deterioration or decay. The clerestory windows at the south wall, west corner, have been boarded up from the inside.

Windows (Other)

Vinyl replacement windows on the east wall of Building 35 appear to be in good condition.

Exterior Doors

Wood Doors

The wooden doors are in fair to good condition. Minor issues are present such as the paint blistering and a small amount of paint chipped from the base of individual doors. The door on the east façade of Building 35 and the doors on the east façade of Building 37 have water damage at their bases with the wood splitting and swelling and minor paint loss (Figure 174).

The door on the east façade of the Planetarium (Bldg. 39) has ink/paint graffiti and the paint on the transom above is peeling (Figure 175).

Evidence of wood-boring insect (probably termite) damage was present in a door to the mechanical room at the north of Building 37.

Figure 174: Water damage at the base of the door on the east façade of Building 35.

Figure 175: Graffiti and peeling paint from the transom on the east façade of Building 39.

Roofing

Low-Slope Roof

The low-slope roofs at the Math and Planetarium complex are in fair condition.

There is an accumulation of plant detritus on the parapet roof of Building 37 (Figure 176).

Several areas of water pooling were present during the survey on the roofs of buildings 37, 38 and 39 (Figure 177). One notable area of water pooling was on the northeast side of the domed Planetarium Building (Bldg. 39) where significant water was seen to pool on the flat roof between the dome and the neighboring slightly raised offshoots (Figure 178).

All roof surfaces have a low level of soiling and algal growth, plus heavy algal growth on the parapet walls (Figure 176).

Pipes running across the low roofs have surface corrosion (Figure 177).

Figure 176: Soiling and heavy algal growth on the parapet walls of Building 37 plus accumulation of plant detritus.

Figure 177: Water pooling and corroded pipes running across the roofs of Building 37 (right), 38 (center), and the walkway canopy neighboring Building 36 (left).

Other Roofs

Copper Dome

The copper dome on the Planetarium (Bldg. 39) is in fair to good condition. Rust staining is visible below the copper flashing around the perimeter of the copper dome indicating that there is a corroded material below, possibly rebar within the concrete dome below the copper (Figure 179). The rust staining is more visible in the area where water was seen to pool.

Figure 178: Water accumulation on the east side of the Planetarium (Bldg. 39) flat roof surrounding the copper dome.

Figure 179: Corrosion visible below the copper flashing on the Planetarium (Bldg.39).

Covered Walkways

The covered walkways are in fair to poor condition at the Math and Planetarium complex.

A significant amount of plant detritus has built up on the roof of the principal walkway along the south façades of Buildings 35 and 36. There is also deep water pooling on this walkway up to 2" deep in some locations (Figure 180).

On the west side of Building 37 a small area of the ceiling has had a small area of paint peeled or scraped off (Figure 181).

The concrete paving slab that runs in sections below the covered walkway has multiple meandering cracks running along its length and across the slabs. These cracks are not observed to pose a hazard. On the west side of Building 37 there are patches of iron rust staining on the concrete slab (Figure 182).

Figure 180: Accumulation of plant detritus and deep water pooling on the canopy roof of the walkway neighboring Building 36.

Figure 181: Scratched or peeled paintwork on the canopy roof at the west side of Building 37.

Figure 182: Cracking and oxide staining on the concrete paving slabs on the west side of Building 37.

Miscellaneous Features

External stairs

The external stairs on the east façade of Building 37 are in good condition. An accumulation of plant detritus is present on the stairs above the gate potentially increasing water residence times (Figure 183).

Figure 183: Plant detritus on the external stairs of Building 37 above the gate.

Interior Condition Assessment

The interiors of the buildings at the Math and Planetarium complex are in fair general condition with certain areas in poor condition.

The most significant issue in this complex is water staining of ceiling tile which was identified in all buildings. This was commonly in multiple small isolated areas affecting up to four tiles in each area (Figure 184). The water staining was associated with warping of the tile in one of the Building 36 classrooms. In another location the tile was observed to be warping or detaching but there was no associated visible water damage (Figure 185).

In the mechanical room of Building 37 there were large holes broken into the south wall (Figure 186).

A piece of equipment has been removed from the Planetarium leaving a patch of missing carpet and exposing the previous paint scheme behind. The exposed pegboard has multiple large holes from previous conduits and impact damage (Figure 187).

The carpet in the Reprographics Building (Bldg. 37) and Planetarium (Bldg. 39) are in poor condition being old, worn, stained and poorly attached with tape patching certain areas.

The exposed brickwork in the hallway to the north of the planetarium has significant efflorescence in multiple locations associated with apparent water ingress from the roof (Figure 188).

The painted concrete window sills in Buildings 35 and 36 have several cracks, the majority of which were located at the position of the steel mullion above (Figure 189). A vertical narrow crack runs through the tile above the sinks in the men's restroom at Building 37 through seven tiles.

The clerestory windows in all rooms of Buildings 35 and 36 have been painted or blocked.

The paintwork in the hallway to the east of the planetarium is scratched and marked.

Original plywood paneling, cabinetry and wood doors were present in Buildings 35, 37, and 39. These were all in fair condition with some surface marks and soiling (Figure 190 and Figure 191).

Figure 184: Water damage classroom 1, Building 37.

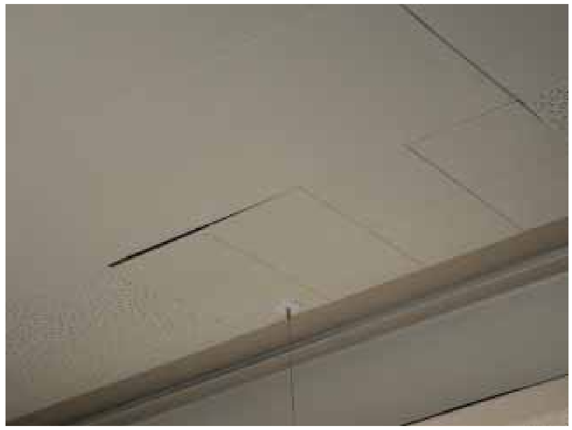

Figure 185: Detaching ceiling tile with no visible water damage at Building 36.

Figure 186: Large holes broken into the south wall of the mechanical room at Building 37.

Figure 187: Removal of equipment has left areas of the flooring and pegboard wall finish lacking current paint finish and carpet.

Figure 188: Efflorescence on internal unpainted brickwork in plan north hallway at Building 39.

Figure 189: Cracking at steel mullions on internal painted concrete sill, Building 35.

Figure 190: Original plywood paneling and cabinetry in room 150, Building 35.

Figure 191: Wear and tear to original wood door in classroom, Building 35.

Plumbing Assessment

The following are notes from the MEP Evaluation report produced by Design West Engineering (see Appendix 4 for full report).

- There is standing water above the foyer next to the HVAC equipment. Additional roof drains should be added to mitigate the standing water. The standing water creates a hazard for the maintenance staff as well as damages the building.

Mechanical (heating, ventilating, and air conditioning) Assessment

The following are notes from the MEP Evaluation report produced by Design West Engineering (see Appendix 4 for full report).

Buildings 35 & 36

Buildings 35 and 36 are classroom buildings that are served by a roof top package unit, one per classroom.

- The RTU units for the classrooms are Carrier Gas Electric units located above the walkway foyer and are side discharge ductwork within the classroom. The RTUs range from 2 – 6 ton units and are in Fair condition. The unit is approximately half way thru its useful life and should have another 5*10 years of service life. The units were manufactured in late 2007.
- Exterior Ductwork is damaged on some of the units due to people walking on the ductwork.
- The units are tied to an Alerton EMS DDC control system.

Building 37 – Reprographics

Building 37 has roof top package units located in various locations for the building. There are units located on the foyer of the building along with units that are located on the high roof within a parapet.

- Above the foyer near building 37 around the HVAC units, there is standing water due to very poor roof drainage.
- Building 37 has roof mounted exhaust fans for the classrooms labs. The fans appear to be in fair condition.
- The units on the low roof are Carrier Gas Electric units with side discharge ductwork within the classroom. The RTUs range from 2 – 6 ton units and are in Fair condition. The unit is approximately half way thru its useful life and should have another 5*10 years of service life. The units were manufactured in late 2007.
- The units located on the high roof Gas Electric units that range from 2*5 ton units and are in old condition. The units have exceeded the useful life expectancy for this equipment and should be changed out.

Building 38 – Science Office Annex

Building 38 has three ductless split systems consist of a wall mounted fan coil located within each office and a condensing unit located on the roof. The systems appear to be in fair condition and are about half way thru the life expectancy of the equipment.

Building 39 – Planetarium

Building 39 has a single rooftop gas unit (RTU) that is old and exceeded its useful life. This unit should be replaced or removed with the building.

Fire and Life Safety Assessment

The following is a summary of the visual examination undertaken by Jensen Hughes of the fire protection systems and life safety features of the facilities at Buildings 35, 36, 37, and 39 (see Appendix 5: ‘Fire and Life Safety Evaluation’ for full report). No system testing or intrusive inspections were conducted by Jensen Hughes personnel.

Table 28: Math and Planetarium complex fire protection/life safety systems- the following table shows the surveyed buildings in the complex (Bldgs. 35, 36, 37, and 39) identifying the systems currently provided.

Bldg. No.	Building Name	Sprinklered	Fire Alarm	Fire Extinguisher	Fire Hose Reel	Adequate Egress	Comments
35	Math	N	Y	Y	Y	N	Room 149 does not have adequate egress. See Fire and Life Safety Report for more details.
36	Math	N	Y	Y	Y	N	Rooms 141, 142, 143, 145, 146, and 148 do not have adequate egress. Only Room 142A is provided with fire sprinklers, which are fed from the domestic water supply.
37	Reprogra-phics	N	Y	Y	Y	Y	-
39	Science	N	Y	Y	Y	Y	-

Note: N means the system is not provided for the building. Y means the system is provided for the building.

Table 29: Observations on the fire protection/life safety systems at the Math and Planetarium complex (Bldgs. 35, 36, 37 & 39) made during the 2015 survey.

Item No.	Bldg. No.	Building Name	System	Observation
1	35	Math Wing	Fire Alarm	Only one manual fire alarm box is installed in the building. The fire alarm box is installed on the outside of the building.

2	35	Math Wing	Egress	Room 149 is 997 sq. ft. in size. Using an occupant factor of 20 sq. ft. Room 149 is 997 sq. ft. in size and is provided with one exit. Using an occupant factor of 20 sq. ft. per person for classrooms, the occupant load for the room will exceed 49, thereby requiring a second exit.
3	35	Math Wing	Fire Hose Reel	The fire hose reels are not required for this building, and should be removed with permission of the AHJ.
4	36	Math Wing	Fire Alarm	Only one manual fire alarm box is installed in the building. The fire alarm box is installed on the outside of the building.
5	36	Math Wing	Egress	A brick wall keeps the 2nd exit door from opening all the way.
6	36	Math Wing	Egress	Rooms 141, 142, 143, 145, 146, and 148 all are over 980 sq. ft. Using an occupant load factor of 20 sq. ft. (CBC Table 1004.1.2) all of the rooms exceed the 49 persons for a single exit and a second exit will have to be added to each room.
7	36	Math Wing	Fire Sprinkler	Fire sprinklers are not required in Building 36. The fire sprinklers in Room 142A should be removed, or full fire sprinkler protection should be installed throughout Building 36.
8	36	Math Wing	Fire Hose Reel	The fire hose reels are not required for this building, and should be removed with permission of the AHJ.
9	37	Reprographics	Fire Alarm	Only one manual fire alarm box is installed in the building. The fire alarm box is installed on the outside of the building.
10	37	Reprographics	Fire Hose Reel	The fire hose reels are not required for this building, and should be removed with permission of the AHJ.
11	39	Science (Planetarium)	Fire Alarm	Only one manual fire alarm box is installed in the building. The fire alarm box is installed on the outside of the building.

Electrical Assessment

The following are notes from the MEP Evaluation report produced by Design West Engineering (see Appendix 4 for full report).

The electrical system for buildings 35*39 are all powered from Building 37. The main transformer and distribution appear to be in good working condition, however, a majority of the electrical distribution equipment downstream is aged and beyond its useful life expectancy. Lighting is primarily T*8 fluorescent.

Building 35 and 36 – Math Wing Classrooms

The electrical systems for both buildings 35 and 36 are fed from Building 37 providing 120/208 volt, 3*phase, 4*wire power to mostly original distribution panelboards. The panelboards are working but are beyond their rated useful life expectancy.

The lighting was recently upgraded to a combination of recessed and pendant direct/indirect linear T*8 fluorescent fixtures using occupancy sensors. Receptacle outlets are mounted very low and do not meet current ADA requirements. The buildings are not equipped with emergency lighting or illuminated exit signs. This building does not have an emergency generator.

Building 37 – Reprographics

The electrical system at building 37 is fed from a 5 KV unit substation providing 4160 volt distribution to a 300 KVA transformer that provides 1200 amps of 120/208 volt, 3*phase, 4*wire power to buildings 35*39. The unit substation that consists of the 300kVA transformer and 208V distribution are in good working condition. The remainder of the distribution switchboards and panelboards are original to the building and are beyond their rated useful life expectancy. There are conduits that have been cut and have abandoned cabling that should be removed.

The lighting was recently upgraded to a combination of recessed and pendant direct/indirect linear T*8 fluorescent fixtures using occupancy sensors. Receptacle outlets are mounted very low and do not meet current ADA requirements. There are various light switches that are mounted at peculiar heights. The buildings are not equipped with emergency lighting or illuminated exit signs. This building does not have an emergency generator.

Building 38 – Science Office Annex

The offices are fed from Building 37, unidentified panelboard providing 120/208 volt, 3*phase, 4*wire power. There were no panels found within the offices and the exact source panelboard could not be found.
Lighting is primarily T*8 fluorescent surface wraps with typical switches and outlets. The building is not equipped with emergency lighting or any type of lighting controls.

Building 39 – Planetarium and Science Building

The electrical system is fed from Building 37 providing 120/208 volt, 3*phase, 4*wire power.
The existing panelboards are aged and are beyond there rated useful life expectancy. There is a device at the exterior patio area that has come unattached from the ceiling. The exterior fused disconnect at the existing HVAC unit is deteriorating.

Lighting is a combination of T*8 fluorescents, incandescent and compact fluorescents, using typical switches and outlets. The building has wall mounted battery powered emergency lighting units which appear to be operational. Exit signs are present, however, they appear to be self-illuminated type that are not operating properly and are beyond there rated useful life expectancy. Receptacle outlets are mounted very low and do not meet current ADA requirements.

Hazardous Materials (HazMat) Assessment

A visual survey was carried out in the Math and Planetarium complex by Omega Environmental Services Inc. to identify the potential presence of hazardous materials (full report in Appendix). Based on the visual observations made during the limited assessment it is Omega's professional opinion that the following potentially hazardous materials may be present in the subject buildings:

Building 35 – Math Wing

Table 30: Table identifying potentially hazardous materials at Building 35.

Asbestos-containing material (ACM)	▫ 1'x1' acoustic ceiling tile with associated mastic ▫ Drywall and joint compound with rough texture ▫ Vinyl base cove and mastic ▫ Carpet mastic ▫ Vinyl floor covering (12" x12" tiles) and assoc. mastic ▫ Exterior Window putty ▫ Exterior stucco ▫ Exterior paint/skim coat ▫ Concrete ▫ Exterior concrete expansion joints ▫ Exterior sub-surface transite pipes ▫ Roofing material ▫ Roof mastic ▫ HVAC system components ▫ Pipe insulation in Mechanical rooms
Lead based paints (LBP)	▫ Painted door and window systems ▫ Painted wall surfaces ▫ Painted structural columns and beams ▫ Roof systems (fascia, eves, gutters, etc.) ▫ Exterior painted walls
Mercury	▫ Fluorescent light bulbs
Hydrochlorofluorocarbon (HCFC)	▫ HVAC system
Tritium gas	▫ None noted
Polychlorinated biphenyls (PCB)	▫ Ballast (fluorescent fixtures) ▫ Concrete expansion joint caulking ▫ Window caulking

Building 36 – Math Wing

Table 31: Table identifying potentially hazardous materials at Building 36.

Asbestos-containing material (ACM)	▫ 1’x1’ acoustic ceiling tile with associated mastic ▫ Drywall and joint compound with rough texture ▫ Vinyl base cove and mastic ▫ Carpet mastic ▫ Vinyl floor covering (12” x12” tiles) and assoc. mastic ▫ Exterior Window putty ▫ Exterior stucco ▫ Exterior paint/skim coat ▫ Concrete ▫ Exterior concrete expansion joints ▫ Exterior sub-surface transite pipes ▫ Roofing material ▫ Roof mastic ▫ HVAC system components
Lead based paints (LBP)	▫ Painted door and window systems ▫ Painted wall surfaces ▫ Painted structural columns and beams ▫ Roof systems (fascia, eves, gutters, etc.) ▫ Exterior painted walls
Mercury	▫ Fluorescent light bulbs
Hydrochlorofluorocarbon (HCFC)	▫ HVAC system
Tritium gas	▫ None noted
Polychlorinated biphenyls (PCB)	▫ Ballast (fluorescent fixtures) ▫ Concrete expansion joint caulking ▫ Window caulking

Building 37 – Reprographics Center

Table 32: Table identifying potentially hazardous materials at Building 37.

Asbestos-containing material (ACM)	▫ 2’x4’ ceiling tile ▫ 1’x1’ ceiling tile with associated mastic ▫ Drywall and joint compound ▫ Vinyl base cove and mastic ▫ Carpet mastic ▫ Vinyl floor covering and assoc. mastic ▫ Exterior Window putty ▫ Exterior stucco ▫ Exterior paint/skim coat ▫ Concrete ▫ Exterior concrete expansion joints ▫ Exterior sub-surface transite pipes ▫ Pipe insulation ▫ Roofing material ▫ Roof mastic ▫ HVAC system components

Lead based paints (LBP)	▫ Painted door and window systems ▫ Painted wall surfaces ▫ Wall and floor ceramic tiles ▫ Urinals, toilet bowls and sinks ▫ Painted structural columns and beams ▫ Roof systems (fascia, eves, gutters, etc.) ▫ Exterior painted walls
Mercury	▫ Fluorescent light bulbs
Hydrochlorofluorocarbon (HCFC)	▫ HVAC system
Tritium gas	▫ None noted
Polychlorinated biphenyls (PCB)	▫ Ballast (fluorescent fixtures) ▫ Concrete expansion joint caulking ▫ Window caulking

Building 38 – Science

Table 33: Table identifying potentially hazardous materials at Building 38.

Asbestos-containing material (ACM)	▫ 1'x1' ceiling tile with associated mastic ▫ Drywall and joint compound with rough texture ▫ Vinyl base cove and mastic ▫ Carpet mastic ▫ Vinyl floor covering (12" x12" tiles) and assoc. mastic ▫ Exterior Window putty ▫ Exterior stucco ▫ Exterior paint/skim coat ▫ Concrete ▫ Exterior concrete expansion joints ▫ Exterior sub-surface transite pipes ▫ Roofing material ▫ Roof mastic ▫ HVAC system components
Lead based paints (LBP)	▫ Painted door and window systems ▫ Painted wall surfaces ▫ Wall and floor ceramic tiles ▫ Urinals, toilet bowls and sinks ▫ Painted structural columns and beams ▫ Roof systems (fascia, eves, gutters, etc.) ▫ Exterior painted walls
Mercury	▫ Fluorescent light bulbs
Hydrochlorofluorocarbon (HCFC)	▫ HVAC system
Tritium gas	▫ None noted
Polychlorinated biphenyls (PCB)	▫ Ballast (fluorescent fixtures) ▫ Concrete expansion joint caulking ▫ Window caulking

Building 39 – Planetarium

Table 34: Table identifying potentially hazardous materials at Building 39.

Asbestos-containing material (ACM)	▫ 1'x1' ceiling tile with associated mastic ▫ Spray-on acoustic ceiling materials ▫ Drywall and joint compound with rough texture ▫ Vinyl base cove and mastic ▫ Carpet mastic ▫ Vinyl floor covering (12" x12" tiles) and assoc. mastic ▫ Exterior Window putty ▫ Exterior stucco ▫ Exterior paint/skim coat ▫ Concrete ▫ Exterior concrete expansion joints ▫ Exterior sub-surface transite pipes ▫ Roofing material ▫ Roof mastic ▫ HVAC system components
Lead based paints (LBP)	▫ Painted door and window systems ▫ Painted wall surfaces ▫ Wall and floor ceramic tiles ▫ Urinals, toilet bowls and sinks ▫ Painted structural columns and beams ▫ Roof systems (fascia, eves, gutters, etc.) ▫ Exterior painted walls ▫ Floor drains
Mercury	▫ Fluorescent light bulbs
Hydrochlorofluorocarbon (HCFC)	▫ HVAC system
Tritium gas	▫ None noted
Polychlorinated biphenyls (PCB)	▫ Ballast (fluorescent fixtures) ▫ Concrete expansion joint caulking ▫ Window caulking

Mechanical Room

Table 35: Table identifying potentially hazardous materials at the mechanical room.

Asbestos-containing material (ACM)	▫ Plaster materials (wall/ceiling) ▫ Pipe insulation ▫ Mastic ▫ Debris
Lead based paints (LBP)	▫ Painted door and window systems ▫ Painted wall surfaces
Mercury	▫ Fluorescent light bulbs
Hydrochlorofluorocarbon (HCFC)	▫ None noted
Tritium gas	▫ None noted
Polychlorinated biphenyls (PCB)	▫ Ballast (fluorescent fixtures)

Building 93 | Swimming Pool complex

Figure 192: Swimming Pool complex (Bldg. 93), facing southwest.

Brief Physical Description

The Swimming Pool complex (Bldg. 93) is at the northeast corner of the campus in the athletics area. There are two swimming pools oriented north-south with concrete bleachers on the west side of the pool facing east. Below the bleachers is the mechanical room for the pool filters and equipment.

Swimming Pools

The pool to the east is slightly narrower and shallower than the one to the west which has two diving boards at its north end and starting platforms at the south end. The pools are poured concrete bottoms with a recent plaster finish. They have tiled edges as well as black tile lane lines at the bottom and targets at pool ends. Both pools have deep integrated gutters at all sides below the non-original concrete paving. The swimming pool area is bounded on its north and south sides by the Men's (Bldg. 96) and Women's (Bldg. 92) Locker Rooms. At its east side is a tall brick wall with an integrated concrete bench marking the campus boundary along Fairview. At the west end is a concrete masonry unit (CMU) low wall with an integrated concrete bench. At each end of the CMU wall is a tiled pony wall with a drinking fountain and black tile. Chain-link fencing and gates encloses the pool area at the west end.

Bleachers

The concrete bleachers are west of the larger pool behind the CMU wall. They are poured-in-place concrete with a smooth finish. The concrete seating rows are topped with plastic bench seats. There are three stair aisles, one each at the north and south ends and one in the middle. Wood board fencing with a metal top rail are at the north and south ends of the bleachers topped with chain link fencing, which also run along the top of the bleachers. Side stairs at the north and south ends with square metal railing provides access to the bleachers.

Three large sculptural concrete piers support the upper part of the bleachers and create space for mechanical and pool equipment below the bleachers. There are upper and lower level mechanical spaces separated by chain link fencing. The underside of the bleachers and the concrete piers have a board-form finish showing the wood grain of the forms. Large metal exhaust pipes rise to the north and south of the bleachers. A stucco-clad wall to the west of the bleachers encloses the mechanical spaces and creates a solid wall.

A full architectural description can be found in Part 1C: 'Physical Description.'

Complex Condition Summary

The Swimming Pool complex is generally in fair condition.

The concrete around the pools is showing a moderate level of cracking but it was not observed to pose a hazard. The concrete on the bleachers has some areas of deterioration to the edges of steps at the south end and on the underside there are a few spalls related to corroded reinforcement. The tables below summarize the exterior architectural condition (Table 36) and the condition of the building systems (Table 37).

Table 36: Table summarizing the exterior architectural conditions at the Swimming Pool complex.[xi]

Exterior Architectural Conditions													
		Walls			Doors	Bleachers		Pool			Append.		Misc.
Material/ detail		Brick	Wood	Concrete	Steel	Concrete	Railings	Paving	Lining	Fittings	Exterior Walkway	Other	Misc.
Condition	Bldg.												
	93	F	-	F	F	F/P	F/P	F/P	F	F	F	-	G[1]

Notes:
1. Plastic bench tops.

[xi] G = good condition, F = fair condition, P = poor condition (see Table 1 for details).

Table 37. Table summarizing the building systems conditions at the Swimming Pool complex

Building Systems																		
		Structural			MEP			Fire / Life Safety[6]		Environmental[7/8]					Disabled Access		
		Vertical	Lateral	Non-Structural	Mech.	Elec.	Plumb.	Fire	Life Safety	ACM	Lead Paint	Mercury	HCFC	PCB	Site	Entry Doors	Other
Condition	Bldg.																
	93	G	G[1]	F[2-5]	G	F	-	G	G	✓	✓	✓	-	✓	F	-	-

Notes:

1. Torsional irregularity: The estimated distance between the story center of mass and the story center of rigidity in the N-S direction is greater than 20 percent of the bleacher width.
2. Stair anchorage: Ship's ladder into the pit area is not anchored at the top or bottom. Support relies on bracket connection at top concrete curb and rests on concrete slab below with no positive connection.
3. Mechanical and electrical equipment anchorage: An electrical cabinet is not anchored to the concrete slab or wall. In the pit area, the concrete pad at 1 location of pump anchorage has failed.
4. No bracing at attached equipment: 1 large tank is hanging from the concrete bleachers with no bracing.
5. No flexible couplings at gas tank pipes: Piping to 1 large tank appearing to store gas does not have flexible couplings. It appears as if this tank is no longer in use.
6. Building does not currently have sprinkler system.
7. Hazardous Materials assessment consists of visual survey only. Sampling is required to confirm presence.
8. Evidence for hypochlorite identified.

Structural Condition Assessment

The following is a summary of the findings from the structural evaluation of Building 93 the Swimming Pool complex by Risha Engineering (see Appendix 3: Structural Evaluation for full report).

Building 93 – Swimming Pool complex

The Pool Stadium consists of 2 in-ground pools and a reinforced concrete bleacher structure with concrete shear wall and concrete moment frames within the pool complex.

The concrete pools appeared to be in good condition. The slab on grade surrounding the pools typically has minor to moderate cracking throughout.

The bleachers are generally in fair to good condition with minor spalling and efflorescence viewed at the underside of the concrete slab. The bleacher's close proximity to an adjacent canopy is noncompliant. The bleachers have no lateral force resisting system at the west end, which creates a torsional irregularity that is noncompliant. Non-structural items that are noncompliant are: 1 large hanging tank is not braced; failed pump anchorage in the pit area, and; an electrical cabinet is unanchored.

Exterior Condition Assessment – Swimming Pool complex (Building 93)

Swimming Pools

East Brick Wall

The brick wall at the east boundary of the Swimming Pool complex is in fair condition. The brickwork has some hairline cracks within individual bricks and the surfaces of approximately 50% of the bricks are spalling in thin layers roughly 1/8" thick.

Figure 193: Around 50% of the bricks show some surface spalls.

Figure 194: Surface spalls and hairline cracking on the brickwork on the east wall of the Swimming Pool complex.

West Concrete Masonry Unit Pony Wall

The concrete masonry unit (CMU) pony wall separating the pools from the bleachers is in fair to good condition. A couple of hairline cracks were observed in the concrete bench on the east side of the wall running perpendicular to the wall (Figure 195). The joint between the pony wall and the top of the concrete bench to the east and paving slab to the west is cracked along most of its length (Figure 196).

Figure 195: Hairline crack in the concrete bench on the east side of the pony wall.

Figure 196: The joint between the pony wall and the top of the concrete bench is cracked along most of its length.

Paving

The concrete paving slabs surrounding the pools are in fair to poor condition. There is cracking through each slab generally with a dominant crack crossing the center of the slab and commonly with a network of cracks in other areas of the slab (Figure 197). On the south side of the small pool a crack was observed on the side of the slab overhanging the integrated gutter (Figure 198). Oxide staining in patches was common across the paved area (Figure 199). An additional area of concentrated oxide staining was identified on the side of the slab by the entry hand rails at the south of the small pool (Figure 200).

Figure 197: Cracking at the east side of the small pool.

Figure 198: Crack on the side of the slab overhanging the integrated gutter at the southwest corner of the small pool.

Figure 199: Oxide staining on the concrete slab paving at the north east corner of the complex.

Figure 200: Concentrated oxide staining on the side of the slab by the entry hand rails at the south of the small pool.

Swimming Pool lining

The pool lining was generally in fair condition. At the south ends of both of the pools some shallow dents were noted at the base of the pool. Staining was present around the edges of the filters in the base of both pools- possibly corrosion but more likely algal growth.

Figure 201: Shallow dents at the base of the south end of the large pool.

Figure 202: Staining around the edges of the filters in the base of the large pool.

Fittings

The fittings around the pools including the diving boards and handrails were in fair condition. Corrosion and tarnishing was present on the starting platforms (Figure 203) and on areas of the handrails- mostly concentrated near the base (Figure 204).

Figure 203: Corrosion on the starting platforms of the large pool.

Figure 204: Tarnishing or corrosion on the entry handrail.

Bleachers

Concrete Bleacher seating structure

The concrete bleacher seating structure is in fair to poor condition, there is currently a chain link fence blocking the entries indicating that it is currently out of use. Network cracking was present on the treads of the steps and seats which may just be in the surface finish or may go through to the concrete below (Figure 205). The edges on two of the steps on the south end of the bleachers were damaged with one having lost an area of material (Figure 206) and the other with an incipient spall (Figure 207). One crack was identified related to a seat fixture running through the corner of a seat possibly related to oxide jacking of the fixture.

The white paint on the risers of the steps is blistering (Figure 208).

At the outer edges of the steps at each end of the bleachers there is heavy oxide staining which appears to be related to corroded fasteners in the railings above (Figure 210). Similarly there is oxide staining along the back of the top step.


Figure 205: Cracking in the bleacher treads.


Figure 206: Missing material on the left-hand steps that has been painted over.


Figure 207: Insipient spall on the left-hand steps.


Figure 208: Crack at the corner of a seat possibly related to the fixture above.


Figure 209: Peeling paint on the risers of the steps.


Figure 210: Oxide staining at the edge of the steps.

Underside of Bleachers

The underside of the bleachers is in fair to poor condition. Spalls related to oxide jacking of rebar (Figure 211) and cracked areas with the potential to spall (Figure 212) were observed in a handful of locations. There are several pockmarks where the reinforcement ties are present. Previous fasteners have left small holes in areas of the wall.

Figure 211: Spalled concrete related to oxide jacking of the rebar.

Figure 212: Cracked area with the potential for material loss.

West Wall

The stucco-finished west wall is in fair to good condition. There is a minimal amount of damage identified to the paintwork at the base of the west side of the wall, particularly at the outer corners (Figure 213). On the south end of the east side of the wall there is a long crack running horizontally and vertically (Figure 214).

Figure 213: Minimal damage to the paintwork at the base of the west side of the wall.

Figure 214: Crack on the south end of the east side of the wall.

Flooring below Bleachers

The flooring below the bleachers is in fair condition. There are patches of oxide staining and minimal cracking (Figure 215).

Figure 215: Oxide staining on the concrete paving below the bleachers.

Doors

The doors to the mechanical space below the bleachers from the west are in fair condition. There frame has a moderate level of corrosion (Figure 216).

Figure 216: Corroded door frame on the east side of the west wall.

Seats

The plastic seats on the bleachers are in good condition.

Railings & Fence

The railings and fence surrounding the bleachers are in fair to poor condition. The metal rail is in fair condition, however the paint is chipped and deteriorating (Figure 217). Ferrous fasteners are heavily corroded causing oxide staining to the concrete stairs below. The paint on the wood board fence is peeling and in poor condition and the wood below is showing signs of deterioration.

Figure 217: Outside of the railings and fence at the south side of the bleachers showing a loss of paint on the railings, peeling paint on the wood fence, and corrosion of ferrous fasteners.

Mechanical Equipment

The mechanical equipment below the bleachers is visibly in fair to poor condition. Several of the pieces of equipment appear outdated and abandoned and these tend to show significant levels of corrosion (Figure 218), as do some of the pipes.

Figure 218: Corroded casing to pool lights controls.

Plumbing Assessment

No comments made in the MEP Evaluation report produced by Design West Engineering (see Appendix 4 for full report).

Mechanical (heating, ventilating, and air conditioning) Assessment

The following are notes from the MEP Evaluation report produced by Design West Engineering (see Appendix 4 for full report).

- The pool has a new Lochinvar Copper Fin 2 CPN2072, 1,999,999 BTU/H with a ¾ hp Armstrong pump.

Fire and Life Safety Assessment

The following is a summary of the visual examination undertaken by Jensen Hughes of the fire protection systems and life safety features of the facilities at the Swimming Pool complex, Building 93 (see Appendix 5: 'Fire and Life Safety Evaluation' for full report). No system testing or intrusive inspections were conducted by Jensen Hughes personnel.

Table 38: Swimming Pool complex fire protection/life safety systems- the following table shows the surveyed buildings in the complex (Bldg. 93) identifying the systems currently provided.

Bldg. No.	Building Name	Sprinklered	Fire Alarm	Fire Extinguisher	Fire Hose Reel	Adequate Egress	Comments
93	Swimming Pool	N	Y	Y	Y	Y	-

Note: N means the system is not provided for the building. Y means the system is provided for the building.

Electrical Assessment

The following are notes from the MEP Evaluation report produced by Design West Engineering (see Appendix 4 for full report).

Building 93 – Swimming Pool complex

The existing switchgear including 4160V transformers and distribution that feed a majority of the gym complex are located below the pool stadium bleachers which consists of two 5.5 KV 200 amp switches providing 4160 volt power to two Transformers. A 225 KVA transformer 'T6A' provides 400 amps of 480/277 volt, 3*phase, 4*wire power. A 300 KVA transformer 'T6' provides 800 amps of 120/208 volt 3*phase 4*wire power to 1970s vintage local distribution panels. Both transformers appear to be in good working condition, however, the electrical panels and disconnects show signs of corrosion and should be replaced.

Hazardous Materials (HazMat) Assessment

A visual survey was carried out in the Swimming Pool complex by Omega Environmental Services Inc. to identify the potential presence of hazardous materials (full report in Appendix). Based on the visual observations made during the limited assessment it is Omega's professional opinion that the following potentially hazardous materials may be present in the subject buildings:

Building 93 – Swimming Pool complex

Table 39: Table identifying potentially hazardous materials at Building 93.

Asbestos-containing material (ACM)	▫ Pipe insulation ▫ Elbows ▫ Mastic ▫ Grout ▫ Exterior concrete expansion joints ▫ Exterior sub-surface transite pipes

Lead based paints (LBP)	▫ Painted floor ▫ Painted wall surfaces and handrails ▫ Ceramic tiles
Mercury	▫ Fluorescent light bulbs
Hydrochlorofluorocarbon (HCFC)	▫ None noted
Tritium gas	▫ None noted
Polychlorinated biphenyls (PCB)	▫ Ballast (fluorescent fixtures) ▫ Concrete expansion joint caulking
Miscellaneous	▫ Hypochlorite

Buildings 105, 110 | Stadium and Field House

Figure 219: Stadium and Field House. The Field House (Bldg. 110) is at the center back of the image, looking south.

Brief Physical Description

The LeBard Stadium (Bldg. 105) and Field House (Bldg. 110) are in the northeast corner of the campus. The Field House serves the stadium and is located at its southern end.

LeBard Stadium (Bldg. 105)

Oriented north-south, the stadium consists of a below-grade football field with berms to the east and west in to which concrete bleachers are built; the east berm's east side also supports smaller bleachers for the track to the east. The bleachers curve slightly to give the stadium a bowl effect and improve sight lines. Low, board-formed concrete walls create planters and a wall to the southern end of the stadium that is broken for vehicular access. The north end has a low berm with two sets of concrete stairs. Disabled access ramps with concrete masonry unit walls extend to the field at the north and south ends.

The bleachers are poured-in-place concrete with a smooth finish and have aluminum metal bench seats. A press box is at the top of each bleacher. The east press box is spans across the center seating section, is rectangular in plan with a flat roof and roof deck with non-original metal railing and is accessed from a ladder on the press box's south façade and by a set of non-original stairs at the north end. There is a wood trellis extending at the south end. The west façade is partially glazed and partially open above a flexboard fascia. The press box centered at the top of the west bleachers is smaller and in the southern corner of the central seating section. It is also rectangular in plan with a flat roof and overhangs but is simpler than then east press box. It is partially glazed on the west façade facing the field and does not have a roof deck.

Field House (Bldg. 110)

The Field House is a one-story, rectangular building with a flat, wood-rafter roof that creates deep overhangs around most of the building. The overhangs have exposed rafters and a box eave. The foundation is concrete slab on grade while the building is wood-framed with alternating areas of stucco, plywood, and Flexboard and batten cladding. The Flexboard panels have an aluminum-framed hopper window at the top of each board. Concession areas at the east and west ends of the building have lift-up plywood boards to be opened when in operation. An L-shaped brick wall is present as a screen on the south side of the building. Original wood doors are found throughout the building. Non-original windows with dark glazing are in some of the stucco walls.

A full architectural description can be found in Part 1C: 'Physical Description.'

Complex Condition Summary

The Stadium and Field House is in a fair to poor condition. There are some significant areas of spalling related to corroding reinforcement on the bleachers and related rust staining. The roof at the field house is in a poor condition which is resulting in water ingress issues. The tables below summarize the exterior architectural condition (Table 40) and the condition of the building systems (Table 41).

Table 40: Table summarizing the exterior architectural conditions at the LeBard Stadium.[xii]

Exterior Architectural Conditions																
		Press Boxes												*Bleachers*		Misc.
		Walls			Windows				Doors			Roof				
Material		Brick	Wood	Concrete	Alum. Operable	Alum. Clerestory	Aluminum Fixed	Other	Wood	Steel	Other	Low Slope	Copper Dome	*Concrete*	*Railings*	Miscellaneous
Condition	Bld.															
	105	-	F	-	-	-	F/P	-	G	-	-	P	-	F/P	F	-

[xii] G = good condition, F = fair condition, P = poor condition (see Table 1 for details).

Table 41: Table summarizing the exterior architectural conditions at the Field House.

Exterior Architectural Conditions																
		Walls			Windows				Doors			Roof		Append.		Misc.
	Material	Brick	Wood	Concrete	Alum. Operable	Alum. Clerestory	Aluminum Fixed	Other	Wood	Steel	Other	Low Slope	Copper Dome	Exterior Walkway	Brick Screen Walls.	Miscellaneous
Condition	Bld.															
	110	-	G	-	-	-	F	G	G	-	-	P	-	-	F	F

Notes:
1. Lift-up plywood boards at concession areas.

Table 42: Table summarizing the building systems conditions at the Stadium and Field House.

Building Systems																	
		Structural			MEP			Fire / Life Safety[10]		Environmental[11]					Disabled Access		
		Vertical	Lateral	Non-Structural	Mech.	Elec.	Plumb.	Fire	Life Safety	ACM	Lead Paint	Mercury	HCFC	PCB	Site	Entry Doors	Other
Condition	Bldg.																
	105	G	F[2-6]	G	G	F	-	G	G	✓	✓	✓		✓	G	F	P[9]
	110	F[1]	G[7]	F[8]	P	F	F/P	G	G	✓	✓	✓	✓	✓	F	F	-

Notes:
1. Deterioration of wood: Signs of moderate decay and splitting is typically visible in the wood members, most notably in exterior locations.
2. East and west press boxes, redundancy: The longitudinal direction only contains 1 line of plywood shear walls in each press box. The transverse direction only contains 1 line of plywood shear walls in the west press box only.
3. East and west press boxes, openings: The west wall (East Press Box) and east wall (West Press Box) has windows along entire length, and no wood structural panel shear walls are present for bracing.
4. West press box, narrow wood shear walls and shear overstress: The 1 shear wall in the transverse direction has an aspect ratio greater than 2-to-1 and has a shear stress of over 1,000 plf, both maximum limits for Life Safety.
5. Concrete bleachers and concrete podium, deterioration of concrete: Minor to moderate spalling with exposed rebar was typically viewed at the bleacher risers and East Press Box concrete podium at the south stairs.
6. Concrete podium, openings at shear walls: Diaphragm openings in the concrete slab immediately adjacent to the east concrete wall account for approximately 50% of the wall length. Due to the low

seismic shear being transferred to this concrete wall, this deficiency appears to be minor.

7. Diaphragm span: Diagonally sheathed diaphragm has 1 horizontal span which is 60 feet, more than the 40 feet limit for Life Safety.
8. Tall narrow contents: 1 cabinet, 1 refrigerator and multiple storage racks are not anchored to the floor or wall.
9. No disabled access to press boxes.
10. Building does not currently have sprinkler system.
11. Hazardous Materials assessment consists of visual survey only. Sampling is required to confirm presence.

Structural Condition Assessment

The following is a summary of the findings from the structural evaluation of Buildings 105 and 110, Stadium and Field House, by Risha Engineering (see Appendix 3: Structural Evaluation for full report).

Building 105 – LeBard Stadium with Press Boxes

The Stadium site consists of reinforced concrete slab on grade bleachers constructed on earthen berms at either side of the playing field. A press box on the east bleachers is one story wood construction with wood rafter and plywood roof supported by wood framed shear walls. The wood structure is supported on a concrete podium structure. A press box on the west bleachers is supported from the concrete bleachers and is one story wood framed with 1 plywood shear wall in each direction. No structural drawings are available for this press box.

The bleachers are in fair condition with spalling and exposed rebar typically viewed throughout. The press boxes are in fair condition with deterioration typically evident.

The wood shear walls are typically noncompliant in both press boxes. The longitudinal direction only contains 1 line of plywood shear walls in each press box. The transverse direction only contains 1 line of plywood shear walls in the west press box only. Additionally, narrow wood shear walls are present which is not compliant. Openings in the concrete podium slab immediately adjacent to the east concrete shear wall are noncompliant.

Building 110 – Field House

Building 110 is a one story wood frame building located at the south end of the stadium playing field. The roof is diagonal sheathing spanning roof rafters supported at stud walls and on an interior steel beam. Steel columns and wood posts support the steel beam on spread footings. Diagonally sheathed wood shear walls provide the lateral force resisting system.

The building appears to be in fair condition, although there is general wood deterioration throughout the structure, primarily in exterior locations. Unblocked wood diaphragm spans exceed the maximum limits, which is noncompliant. Several tall narrow contents are unanchored, which is also noncompliant.

Exterior Condition Assessment– LeBard Stadium (Bldg. 105)

Bleachers

The bleachers at the LeBard Stadium are in fair to poor condition. The concrete is showing several forms of deterioration but the predominant issue is the corrosion of the embedded steel reinforcement in the risers resulting in oxide jacking and spalling of the concrete surface (Figure 220). There are a few isolated incidents of this, but one predominant area is along a riser at mid-height on the east bleachers where corroded vertical reinforcement is visible along the whole level of the section north of center (Figure 221). Concrete cover appears to have been deficient at this level.

The railings are also showing corrosion at their bases in some locations on both the east and west bleachers. In some locations this is just visible as cracks through the concrete (Figure 222), and in others the surrounding concrete has failed revealing heavily corroded bases of the railings (Figure 223). This corrosion has also resulted in significant oxide staining of the concrete in several locations (Figure 224).

A low level of cracking was identified in localized areas of the poured concrete slab around the stadium (Figure 225). Isolated hairline cracks were also noted on the bleacher steps.

The concrete was identified to have an inherent defect in certain areas where there was seen to be a high level of voids or air pockets within the concrete (Figure 226Figure 231).

Plant growth was present in cracks and crevices in various places on the bleachers (Figure 227).

Figure 220: Corroded rebar causing oxide jacking and concrete spalling on the east bleachers.

Figure 221: Vertical reinforcement visible and corroded along a whole level of the section north of center on the east bleachers.

Figure 222: Cracking at a corner of the west bleachers associated with the railings fixtures.

Figure 223: Heavy corrosion has resulted in oxide jacking and loss of a significant area of concrete on a corner at the east bleachers.

Figure 224: Corrosion of the base of a steel railing upright on the east bleachers has resulted in significant oxide staining on the steps below.

Figure 225: Localized area of cracking of the concrete slab at the top of the east bleachers.

Figure 226: Concrete displaying a high level of air voids on the east bleachers and a vertical crack.

Figure 227: Plant growth in a crevice at the side of the steps on the west bleachers.

Press Boxes

The press boxes appear to be in fair to good condition. The roof structure overhanging to the south showed some splits or checks in the wood beams but these did not appear to be significant (Figure 228). The glazing needs resealing as it appears the frames have either shifted or the sealant has been lost (Figure 229). The wooden sill below the window shows signs of deterioration and loss of paint.

At the south end of the roof of the east press box there is a gap in the railings posing a fall hazard.

Figure 228: Roof structure overhanging to the south of the east press box showing some splits or checks in the wood beams.

Figure 229: Gap between glazing and aluminum frame on east press box and deterioration of wooden sill.

Figure 230: Gap in the railings at the south end of the east press box roof posing fall hazard.

Landscaping- walls, planters, etc.

The hard landscaping around the stadium is in fair condition with localized issues. A crack running the full height of a wall on the east side of the stadium south of the bleachers was identified (Figure 231). The ramp access to the stadium from the northwest corner was showing significant levels of corrosion staining at the base of the railings (Figure 232).

Figure 231: Crack running through a low wall on the east side of the stadium south of the bleachers.

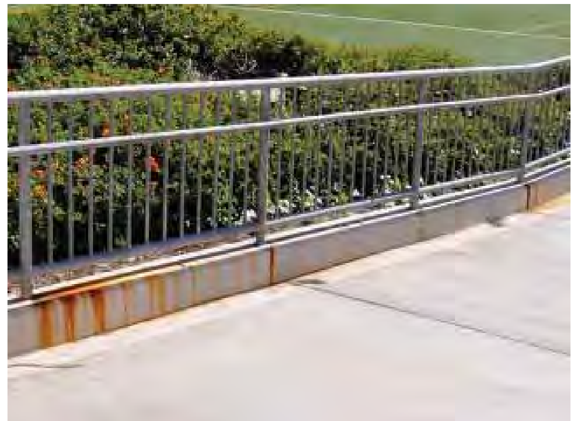

Figure 232: Significant levels of corrosion staining at the base of the railings on the ramp access to the stadium from the northwest corner.

Exterior Closure Condition Assessment– Field House (Bldg. 110)

Exterior Walls

<u>Brick</u>

The small brick wall on the south side of the Field House is in fair condition. A small area at the exposed end of the wall has lost its mortar (Figure 233) and the brick-mortar interface is cracked in a few locations.

Figure 233: Brick wall at the south of the Field House with area of mortar missing visible.

<u>Stucco- and Wood-Clad Wood-Frame Walls</u>

The wood-framed walls at the Field House with a variety of finishes- stucco, plywood, flexboard, and batten cladding- appear to be in good condition.

Windows

Aluminum Windows

The aluminum windows on the Field House appear to be in fair condition with a dull patina to the aluminum frames.

Figure 234: Dull patina on the aluminum window frames on north façade of Field House.

Exterior Doors

Wood Doors

The wooden doors on the Field House appeared to be in good condition.

Roofing

Low-Slope Roof

The low-slope roof on the Field House appeared to be in poor condition. The membrane roof covering has been laid directly over a previous roof cover and is in poor condition. A patch was observed close to the center of the north side which had buckled edges although the seal still appeared to be good. Beside this at the roof edge there appeared to be a gap or tear at the top of the flashing, possibly associated with movement or failure of the flashing and/or soffit (Figure 235).

The flashing was seen to be displaced on the north façade (Figure 236) and in several areas the paint was peeling on the flashing and wooden soffit below (Figure 237).

One of the conduits on the roof was corroded along its length (Figure 238). The sheathing around other conduits has failed with a small amount of the detached material remaining (Figure 239).

There is a small accumulation of plant detritus around the conduits attached to the roof (Figure 240).

The roof has no rainwater dispersal system and there was some evidence of water pooling near the south edge of the roof.


Figure 235: Buckling patch on roof and small hole in membrane at edge of roof at the center of the north side.


Figure 236: Displaced flashing on the north side of the building.


Figure 237: Paint peeling from the flashing and soffit at the east end of the Field House.


Figure 238: Corroded conduit (left) and remaining detached sheathing (center and right conduits) on the roof of the Field House facing east.


Figure 239: Remaining detached sheathing on the roof of the Field House.


Figure 240: Accumulation of plant detritus around the conduits on the roof of the Field House.

Miscellaneous Features

Concession Areas

The lift-up plywood boards at either end of the Field House appeared to be in fair condition. At the east end there was some soiling occurring below the grills (Figure 241), and at the west end a small area of damage was identified to the plywood where an area of the painted surface was lost (Figure 242).

Figure 241: Soiling below the grills at the east end of the Field House.

Figure 242: Small area of damage to plywood on west end of south façade.

Interior Condition Assessment– Field House (Bldg. 110)

The Field House interiors are in fair to poor condition.

The concrete slab floors in the Field House have thin meandering cracks and crazing. These have either been filled or do not appear to pose a visible hazard (Figure 243).

The wall and floor surfaces are generally in fair condition but showing signs of wear and tear (Figure 244).

A metallic door and frame are showing rust at the base (Figure 245).

A surface-mounted strip light in the restroom has a high level of water staining indicating moisture ingress from the roof at this location (Figure 246).

Partial repairs have been undertaken in the mechanical room with partial painting of the ceiling and patching of holes in the wall (Figure 247).

The sink and drain in the concessions room are showing high levels of corrosion (Figure 248).

Figure 243: Cracking and crazing on concrete slab floors, Field House, Building 110.

Figure 244: Signs of wear and tear on the wall and floor surfaces, Field House, Building 110.

Figure 245: Rusting at the base of door, Field House, Building 110.

Figure 246: Water staining on light fixture in restroom indicating water ingress from roof, Field House, Building 110.

Figure 247: Partial repairs undertaken in mechanical room, Field House, Building 110.

Figure 248: Rusted fixtures in the concessions room, Field House, Building 110.

Plumbing Assessment

The following are notes from the MEP Evaluation report produced by Design West Engineering (see Appendix 4 for full report).

- The field house restrooms are cold water only and are in fair condition. The fixtures are starting to shows signs of extended use. No major defects or leaks were visible from the fixtures.
- Hot water for the restrooms is from a 100 Gallon Gas fired water heater. American CG32100T774NOV, 75,000 BTU/H input rating. The water heater is in fair condition.

Mechanical (heating, ventilating, and air conditioning) Assessment

The following are notes from the MEP Evaluation report produced by Design West Engineering (see Appendix 4 for full report).

The Field House is served via a Trane WCC060F100BE 5 Ton heat pump unit. The unit is in poor condition, coil fins are flaking off. The boiler for the showers has been abandoned. The roof mounted exhaust fans for the restrooms are in fair condition.

Fire and Life Safety Assessment

The following is a summary of the visual examination undertaken by Jensen Hughes of the fire protection systems and life safety features of the facilities at the Stadium and Field House, Buildings 105 and 110 (see Appendix 5: 'Fire and Life Safety Evaluation' for full report). No system testing or intrusive inspections were conducted by Jensen Hughes personnel.

Table 43: Stadium and Field House fire protection/life safety systems- the following table shows the surveyed buildings (Bldgs. 105 & 110) identifying the systems currently provided.

Bldg. No.	Building Name	Sprinklered	Fire Alarm	Fire Extinguisher	Fire Hose Reel	Adequate Egress	Comments
105	Stadium	N	Y	Y	Y	Y	-
110	Field House	N	Y	Y	Y	Y	-

Note: N means the system is not provided for the building. Y means the system is provided for the building.

Electrical Assessment

The following are notes from the MEP Evaluation report produced by Design West Engineering (see Appendix 4 for full report).

Building 105 & 110 –Stadium and Field House

The Field House electrical system is fed from Powerhouse "C" with 120/240 volt, 1*phase, 3*wire power to original local distribution. The existing panelboards A, B and C have recently been replaced and are in good working condition.

Lighting in the field house is provided by T*8 fluorescent using typical switches and outlets. The building is not equipped with emergency lighting or illuminated exit signs. This building does not have a noted emergency generator.

The Stadium lights are powered from a recently installed 750kVA unit substation through 480V distribution, located in an exterior yard south east of the stadium. The unit substation and associated 480V distribution equipment is in good working condition.

The panelboards within the score booths are original to the buildings and are beyond their rated useful life expectancy.

Hazardous Materials (HazMat) Assessment

A visual survey was carried out in the Stadium and Field House by Omega Environmental Services Inc. to identify the potential presence of hazardous materials (full report in Appendix). Based on the visual observations made during the limited assessment it is Omega's professional opinion that the following potentially hazardous materials may be present in the subject buildings:

Building 105 – Stadium

Table 44: Table identifying potentially hazardous materials at Building 105.

Asbestos-containing material (ACM)	▫ Drywall and joint compound ▫ Transite panels ▫ Exterior Window putty ▫ Exterior stucco ▫ Exterior paint/skim coat ▫ Concrete ▫ Exterior concrete expansion joints ▫ Exterior sub-surface transite pipes ▫ Roofing material ▫ Roof mastic
Lead based paints (LBP)	▫ Painted wood members ▫ Painted wall surfaces ▫ Painted handrails and posts
Mercury	▫ Painted wood members ▫ Painted wall surfaces ▫ Painted handrails and posts
Hydrochlorofluorocarbon (HCFC)	▫ None noted
Tritium gas	▫ None noted
Polychlorinated biphenyls (PCB)	▫ Ballast (fluorescent fixtures) ▫ Concrete expansion joint caulking ▫ Window caulking

Building 110 – Field House

Table 45: Table identifying potentially hazardous materials at Building 110.

Asbestos-containing material (ACM)	▫ Acoustic ceiling tiles ▫ Drywall and joint compound ▫ Vinyl base cove and mastic ▫ Carpet mastic ▫ Transite panels ▫ Pipe insulation ▫ Tank insulation ▫ Exterior Window putty ▫ Exterior stucco ▫ Exterior paint/skim coat ▫ Concrete ▫ Exterior concrete expansion joints ▫ Exterior sub-surface transite pipes ▫ Roofing material ▫ Transite pipes ▫ Roof mastic ▫ HVAC system components
Lead based paints (LBP)	▫ Painted door and window systems ▫ Painted wall surfaces ▫ Floor drain ▫ Painted wood ceiling ▫ Roof systems (fascia, eves, gutters, etc.) ▫ Exterior painted walls ▫ Painted concrete floor ▫ Sinks, Toilet bowls and Urinals ▫ Ceramic tiles
Mercury	▫ Fluorescent light bulbs
Hydrochlorofluorocarbon (HCFC)	▫ HVAC system
Tritium gas	▫ None noted
Polychlorinated biphenyls (PCB)	▫ Ballast (fluorescent fixtures) ▫ Concrete expansion joint caulking ▫ Window caulking

PART 2 – TREATMENT AND WORK RECOMMENDATIONS

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HISTORIC PRESERVATION OBJECTIVES

This section discusses preservation objectives for the buildings and structures included in the Historic District at Orange Coast College.

The Secretary of the Interior's Standards for Rehabilitation & Guidelines for Rehabilitating Historic Buildings (Standards) provide guidance for reviewing proposed work on historic properties, with the stated goal of making possible "a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values."[1]

The Standards are used by Federal agencies in evaluating work on historic properties. The Standards have also been adopted by local government bodies across the country for reviewing proposed rehabilitation work on historic properties under local preservation ordinances. The Standards are a useful analytical tool for understanding and describing the potential impacts of substantial changes to historic resources. Projects that comply with the Standards benefit from a regulatory presumption that they would have a less-than-significant adverse impact on a historic resource.[2] Projects that *do not* comply with the Standards may cause either a substantial or less-than-substantial adverse change in the significance of a historic resource.

The Standards offers four sets of standards to guide the treatment of historic properties: Preservation, Rehabilitation, Restoration, and Reconstruction. The four distinct treatments are defined as follows:

> **Preservation:** The Standards for Preservation "require retention of the greatest amount of historic fabric, along with the building's historic form, features, and detailing as they have evolved over time."
>
> **Rehabilitation:** The Standards for Rehabilitation "acknowledge the need to alter or add to a historic building to meet continuing new uses while retaining the building's historic character."
>
> **Restoration:** The Standards for Restoration "allow for the depiction of a building at a particular time in its history by preserving materials from the period of significance and removing materials from other periods."
>
> **Reconstruction**: The Standards for Reconstruction "establish a limited framework for recreating a vanished or non-surviving building with new materials, primarily for interpretive purposes."

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[1]National Park Service, *The Secretary of the Interior's Standards for Treatment of Historic Properties,* accessed online at http://www.nps.gov/tps/standards.htm on April 1, 2015.
[2] CEQA Guidelines subsection 15064.5(b)(3).

Typically, one set of standards is chosen for a project based on the project scope. In this case, due to the variety of resource types being evaluated and the differing preservation objectives, two sets of standards have been chosen.

The Theater (Building 2) and Stadium (Bldg. 105) will continue with their current uses. The *Standards for Preservation* should guide the treatment at these locations.

For buildings where their current use is being relocated to new construction on campus, the *Standards for Rehabilitation* will be applied. Rehabilitation allows for compatible new use and associated upgrades to buildings.

Rehabilitation is the recommended treatment for the Student Success Center and Classroom & Labs complex (Bldgs. 7-9), Business Education complex (Bldgs. 12-14), and Math and Planetarium complex (Bldgs. 35-39). The Swimming Pool complex (Bldg. 93) and Field House (Bldg. 110) should also follow a rehabilitation treatment.

The following is a more detailed overview of the *Standards for Preservation* and the *Standards for Rehabilitation.*

Standards for Preservation

Preservation Standard 1: A property will be used as it was historically, or be given a new use that maximizes the retention of distinctive materials, features, spaces, and spatial relationships. Where a treatment and use have not been identified, a property will be protected and, if necessary, stabilized until additional work may be undertaken.

Preservation Standard 2: The historic character of a property will be retained and preserved. The replacement of intact or repairable historic materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.

Preservation Standard 3: Each property will be recognized as a physical record of its time, place, and use. Work needed to stabilize, consolidate, and conserve existing historic materials and features will be physically and visually compatible, identifiable upon close inspection, and properly documented for future research.

Preservation Standard 4: Changes to a property that have acquired historic significance in their own right will be retained and preserved.

Preservation Standard 5: Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.

Preservation Standard 6: The existing condition of historic features will be evaluated to determine the appropriate level of intervention needed. Where the severity of deterioration requires repair or limited replacement of a distinctive feature, the new material will match the old in composition, design, color, and texture.

Preservation Standard 7: Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.

Preservation Standard 8: Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.

Standards for Rehabilitation

Rehabilitation Standard 1: *A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.*

Rehabilitation Standard 2: *The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize the property will be avoided.*

Rehabilitation Standard 3: *Each property will be recognized as a physical record of its time, place and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historical properties, will not be undertaken.*

Rehabilitation Standard 4: *Changes to a property that have acquired significance in their own right will be retained and preserved.*

Rehabilitation Standard 5: *Distinctive materials, features, finishes and construction techniques or examples of craftsmanship that characterize a property will be preserved.*

Rehabilitation Standard 6: *Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.*

Rehabilitation Standard 7: *Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.*

Rehabilitation Standard 8: *Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measure will be undertaken.*

Rehabilitation Standard 9: *New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work shall be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and environment.*

Rehabilitation Standard 10: *New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.*

REQUIREMENTS FOR WORK

This section outlines applicable laws, regulations and functional requirements, which must be taken into account prior to any preservation and rehabilitation work.

Any preservation and rehabilitation should be evaluated with respect to conformance with applicable state and municipal codes and standards required by law. All work to the building must comply with the California Building Code (CBC) and Title 24 Part 8 of the California Code of Regulations.

Projects at community colleges are state-regulated and require Department of State Architect (DSA) review and approval of design and construction. Specifically, DSA reviews access compliance and structural safety of designs.

As the Orange Coast College Historic District has been identified as eligible for the National Register and California Register the contributing buildings qualify to take advantage of the California Historical Building Code (CHBC) with regard to code compliance. The CHBC is intended to be used by any agency with jurisdiction when reviewing code compliance for a qualified historic building in order to ensure its preservation. As stated in the CHBC Section 8-101.2:

The CHBC is intended to provide solutions for the preservation of qualified historical buildings or properties, to promote sustainability, to provide access for persons with disabilities, to provide a cost-effective approach to preservation, and to provide for reasonable safety of the occupants or users. The CHBC requires enforcing agencies to accept solutions that are reasonably equivalent to the regular code (as defined in Chapter 8-2) when dealing with qualified historical buildings or properties.

WORK RECOMMENDATIONS AND ALTERNATIVES

Buildings 7, 8, 9 | Student Success Center and Classroom & Labs Complex

There are four reuse options for the Student Success Center and Classroom & Labs complex (Bldgs. 7 -9), as follows:

Alternatives 1A and 1B:	Alternatives 1A and 1B adaptively reuse the complex for Administrative Services. Alternatives 1A and 1B remove later additions to the east and west of the Student Success Center (Bldg. 7).
Alternative 1C:	Alternative 1C adaptively reuses the complex for Administrative Services and Theater Pre-Function. Alternatives 1C and 2A keep the later additions at the east and west of the Student Success Center (Bldg. 7).
Alternatives 2A:	Alternative 2A adaptively reuses the complex for Administrative Services and Special Services. Alternative 2A keeps the later additions at the east and west of the Student Success Center (Bldg. 7).
Alternatives 2B:	Alternative 2B adaptively reuses the complex for the Dance Program. Alternative 2B includes a new addition and keeps the east addition at the Student Success Center (Bldg. 7).

Schematic drawings and diagrams illustrating treatment recommendations for the complex are included in Appendix 1.

Figure 1: Student Success Center and Classroom & Labs complex (Bldgs. 7 -9),[3]

[3] All photographs in this section of the Historic Resources Report were taken by Page & Turnbull, 2014-2015,

Selective Demolition

Selective demolition varies at the Student Success Center (Bldg. 7) based on the alternative. Selective demolition at the Classroom & Labs (Bldgs. 8 & 9) are nearly identical at all alternatives. Note that removal and replacement of individual items may be described later under the specific system.

Removal of Inappropriate Additions

See plans for location of additions to be removed. The original roof forms at the Student Success Center (Bldg. 7) have been obscured. Currently, a sloped metal roof covers the original clerestory windows at the south side of Building 7. The alternatives propose to restore the original volume of the building by removing the metal roof and boxed stucco parapet above the original low-slope roof. Removing the metal and parapet roofs will allow for the return of the south facing clerestory windows. See plan for locations.

All rooftop heating, ventilation and air-conditioning (HVAC) equipment located on the canopy of the Classroom & Labs (Bldgs. 8 & 9) will be removed.

Removal of Hazardous Materials

A limited survey and sampling of asbestos containing materials (ACMs) was completed in 2005. A visual survey was completed as part of the Historic Structures Report in January 2015. This recent survey identified additional potentially hazardous materials including ACMs, lead based paint (LBP), mercury, polychlorinated biphenyls (PCBs) and miscellaneous materials.

Asbestos: The 2005 survey identified window putty, leveling compound, linoleum flooring, vinyl floor tile, and transite pipe as ACMs. A visual survey and assessment completed as part of the Historic Structures Report in January 2015 determined that additional ACMs may be present. Amongst those materials suspected of being ACMs are acoustic ceiling tile, vinyl base and carpet mastic, insulation, grout, exterior expansion joints, counter top and sheet flooring. The complete list is contained in Appendix 6: Hazardous Materials Visual Assessment Report.

Lead: The January 2015 visual survey identified several items that potentially contain lead paint including, but not limited to, painted door and window systems, exterior painted walls, ceramic tile and roof systems. For more detail see Appendix 6: Hazardous Materials Visual Assessment Report.

PCB: The January 2015 visual survey identified potential polychlorinated biphenyls (PCBs) in the ballast at fluorescent fixtures, concrete expansion joint caulking and window putty.

Other: Mercury was identified in the fluorescent light bulbs.

Structural

Foundations

Foundations for Shear Walls

New Foundation

Alternatives 1A and 1B, Student Success Center (Bldg. 7): Removal of east and west additions will require new masonry shear walls at the east and west walls. Assume new foundation needed. See plan for extent.

Alternatives 1C and 2A, Student Success Center (Bldg. 7): No new foundation walls required.

Alternative 2B, Student Success Center (Bldg. 7): Removal of west addition will require new masonry shear wall between the existing building and new dance addition. Assume new foundation needed. See plan for extent. No new foundations at the Classroom & Labs (Bldgs. 8 & 9).

Gravity Load Systems

Bearing Walls

No new bearing walls are required.

Posts / Columns

No new posts or columns are required

Roof

Assume additional roof framing may be required following the removal of the metal roof and boxed parapet roof at the south side of the Student Success Center (Bldg. 7). Assume additional 2 x 8 framing sistered to existing wood rafters. Amount of roof area varies per alternative. See roofing section for square footage.

At the covered walkway adjacent to the service building south of the Classroom & Labs (Bldg. 9) there is severe deterioration of the beam at the covered walkway. This beam requires replacement.

Lateral Load Systems

Deficiencies in the lateral load system may be addressed with either new shear walls or steel moment or braced frames. The narrative explains both options. The cost estimate prices only moment frames; shear walls would have a comparable cost. Additional design development is required to determine which structural retrofit strategy is appropriate.

Shear Walls

New Shear Walls

New shear walls are required at the Student Success Center (Bldg. 7) to address changes in the configuration of the space and the removal of additions.

Alternatives 1A and 1B: Student Success Center (Bldg. 7): New concrete / brick shear walls to enclose the space after the additions are removed.

Alternatives 1C and 2A: Student Success Center (Bldg. 7): New plywood shear wall at the interior of the east wing of Building 7. Length of shear wall is 32 feet. New foundation required. Assume upgrades to existing shear walls at the east wing of Building 7. There are two shear walls, each measuring 32 foot in length that will require strengthening.

Alternative 2B: Student Success Center (Bldg. 7): New plywood shear wall at the east wing of Building 7. Length of shear wall is 32 feet. New foundation required. Assume upgrades to existing shear walls at the east wing of Building 7. There are two shear walls, each measuring 32 foot in length that will require strengthening.

All Alternatives: Classroom & Labs (Bldgs. 8 & 9): As an alternate to Steel Moment and Braced Frames (see below) at the north wall of Building 8 and 9, provide shear walls at the interior of the building. See appendix A within Appendix 3 Structural Evaluation.

For Building 8, assume two (2) locations. Both locations 8-foot in length. Saw cut existing slab, excavate and install new foundation, patch slab.

For Building 9, assume three (3) locations. One (1) location 16-foot in length and two (2) locations 8-foot in length. Saw cut existing slab, excavate and install new foundation, patch slab.

Moment or Braced Frames

New Moment or Braced Frames

Classroom & Labs (Bldgs. 8 & 9): Provide new steel moment or braced frames at entire length of north wall. Assume column spacing at 24 feet on center. Assume six (6) columns at Building 8 and seven (7) columns at Building 9. See appendix A within Appendix 3: Structural Evaluation, and appendix B for typical details.

Exterior Enclosure

Exterior Walls

Brick Bearing Walls

Brick bearing walls are located at the following locations:

- South wall of Student Success Center (Bldg. 7).
- North wall of the east wing of Building 7 below the windows.

- East wall of Classroom & Labs (Bldg. 8).
- North wall of all buildings in the Student Success Center and Classroom & Labs complex (Bldgs. 7 -9) below the window walls.
- Service Building to the south of Classroom & Labs (Bldg. 9).
- Site wall south of Building 9.
- Brick shear walls added to Building 7 during the structural retrofit.

Brick bearing walls are to be preserved and maintained with the following treatments.

Spalled and Cracked Brick Treatment

Remove and replace spalled and cracked bricks within bearing and clad walls. Replacement units are to match the size, color, texture, and material properties of the original bricks.

Allow for replacement of 75 brick units.

Cracked and Deteriorated Joint Treatment

Carefully remove cracked and deteriorated mortar from joints to a depth of ¾-inch. Take care not to damage brick units. Pre-wet joints and install new Type-N mortar in two layers; color and aggregate to match the original mortar. Tool the joint profile to match original.

Allow for repointing of 5-percent of brick mortar joints.

Efflorescence Treatment

Efflorescence is present at the base of the north walls of the Classroom & Labs (Bldgs. 8 & 9); the efflorescence can extend up to approximately 3-feet.

Prior to finalizing treatment to remove the efflorescence, perform chemical and petrographic analysis to determine the type and source of efflorescence.

Visual observations indicate that the efflorescence is caused by over-irrigation and/or lack of drainage at planters and planting areas at the base of the north walls. Change to a drip irrigation system and locate lines a minimum of 5-feet away from the base of brick masonry walls.

Perform trial/sample cleaning to determine the gentlest cleaning that effectively removes the salts. If necessary and if determined by analysis results, chemically treat wall surfaces to remove efflorescence.

Treatment of Soiling and Biological Growth

Soiling and biological growth is present at a limited wall area that is not protected by overhanging eaves or canopies. Clean the wall with a mild detergent and biocide. Perform trial/sample cleaning to determine the gentlest level of cleaning that effectively removes the soiling and biological growth.

Assume 250 square feet of wall area requires cleaning and biocide treatment.

Precast Concrete Window Sills

Precast concrete window sills are located below the window wall at the north elevation of the Student Success Center and Classroom & Labs (Bldgs. 7-9). Minor soiling and cracking of mortar joints between the units are present.

Clean precast concrete sills to remove soiling. Perform test samples of mild detergent cleaners and mild acidic cleaners to determine the gentlest means to effectively clean the sills.

Monitor cracked joints to determine if cracking is due to movement related to cyclic temperature changes. If joint is experiencing movement, remove mortar to a sufficient depth and replace with non-staining elastomeric sealant and backer rod. If joint is not experiencing movement, carefully remove cracked and deteriorated mortar from joints to a depth of ¾-inch. Take care not to damage precast concrete units. Pre-wet joints and install two lifts of new Type-N mortar, color and aggregate to match the original mortar. Tool the joint profile to match original.

Concrete, Precast, Tilt-up

Precast, tilt-up concrete walls are located at the following locations:

- East and west exterior walls of the Student Success Center (Bldg. 7). Note, these walls are proposed for removal at certain alternatives.
- West exterior wall of the Classroom & Labs (Bldg. 8).
- East and west exterior wall of the Classroom & Labs (Bldg. 9).
- One interior wall at both Buildings 8 and 9.

The precast concrete walls are in good condition with no significant issues.

Stucco-Clad Wood-Frame

Stucco-clad wood-frame walls are located at the following locations:

- Connector between Building 7 and Building 8.

The stucco is in good condition and currently does not require any work.

Windows

Aluminum Window Walls

The tilted aluminum-framed window walls at the north elevation of the Student Success Center and Classroom & Labs complex (Bldgs. 7 -9) are a main character-defining feature of the complex. The window walls contain both fixed glazing and approximately 20 to 25-percent operable awning and hopper-type sashes.

Glazing Repair

Glazing putty (sealant) is deteriorated and needs replacement. Window glass is generally in good condition, although some is back-painted to obscure the interior. In concert with other window work, the following is recommended:

- Test putty material to determine if asbestos or PCBs are present and if present, remove and dispose of material in accordance with local, state, and federal regulations.
- Completely remove and dispose of outer putty. Take care not to damage glass or window frame.
- Remove and salvage existing glass. Remove any paint coatings and putty residue. Clean glass and label pieces for reinstallation in original location.
- Completely remove and dispose of bedding putty.
- Treat window frames as described below.
- Reinstall glass, bed glass in non-staining silicone sealant and install outer fillet bead of non-staining silicone sealant. Follow recommendations in the latest edition of the "*Glazing Manual*" published by the Glass Association of North America (GANA).

Window Frames Repair

The unfinished aluminum frames are exhibiting surface corrosion. A number of fasteners that connect pieces of the frames are missing. In concert with sealing and glazing work, the following is recommended:

- Protect glazing, which is to remain.
- Clean the frames with a mild detergent and water.
- Remove surface corrosion by scrubbing with a pumice powder and pads.
- Replace, in kind, missing frame-to-frame fasteners.
- Seal surface with a clear coating to limit further corrosion.

Awning and Hopper Sashes Repair

The following treatment is recommended:

- Treat frames and glazing as described above.
- Survey sash to determine damaged or missing hardware, such as hinges, delimiters, and latches. For estimating purposes assume 35-percent of hardware is missing or damaged.
- Replace damaged or missing hardware.
- Clean and lubricate hardware.
- Install neoprene weather-stripping.
- Adjust sash to assure operation.

Perimeter Seal Replacement

The perimeter seals between the window frames and masonry and concrete (sides), precast concrete sill (bottom) and wood eave (top) have reached the ends of their service life and should be replaced. The following is recommended:

- Test sealant material to determine if asbestos or PCBs are present and if present, remove and dispose of material in accordance with local, state, and federal regulations.

- Completely remove and dispose of sealant and backing materials, taking care not to damage adjacent materials.
- Prepare substrate surfaces, prime as required by sealant manufacturer.
- Install new backing material and non-staining, elastomeric sealant. Protect adjacent materials from excess sealant.

Aluminum Clerestory Windows

Aluminum clerestory windows are present at the following locations:

- South wall of the Classroom & Labs (Bldgs. 8 & 9).
- Note that original clerestory windows at the Student Success Center (Bldg. 7) may be covered-up by later modifications. Additional investigation is required.

Originally, a mix of fixed glazing and awning sash were present at the clerestory. The windows have been modified to accommodate mechanical systems and ductwork. It is recommended that the mechanical equipment and ductwork be removed and that the windows be restored to their original type and operation.

Repair (All Alternatives)

We recommend that the in-place glass be removed and replaced with a laminated glass with heat gain resistive properties (double low-e glass). Frames, sash, and perimeter seals are to be treated the same as the aluminum window walls described above.

Aluminum Windows – Fixed and Operable

Aluminum windows are present at the following locations:

- South wall of the Student Success Center (Bldg. 7).
- East wall of the Classroom & Labs (Bldg. 8).

Repair (All Alternatives)

Remove and replace all glass; remove and replace sealant; restore/adjust operations and hardware; clean, prepare, and clear-coat frames; and install safety/UV films as required.

Louvers

Aluminum louvers are located at the clerestory windows at the Classroom & Labs (Bldgs. 8 & 9).

Repair (All Alternatives)

Clean and repair existing louvers.

Exterior Sun Control

Exterior sun control exists at the patio between Buildings 8 and 9. The system consists of steel framing, including tapered steel columns and wide flange steel beams. Redwood joists are spaced equally between the steel framing to create a trellis. The end of the trellis consists of a continuous stucco soffit approximately 4-foot wide and 18-inches high.

Repair (All Alternatives)

Remove wood members and salvage any members in good condition. Remove paint from steel. Clean rust, repair damage and install new rust-inhibiting coating. Install new 3-inch x 8-inch redwood members to match existing between existing steel framing. Assume 18 new redwood members, 16 feet in length. Soffit to receive new paint coating and roof.

Exterior Doors

Solid Wood Doors

Solid wood doors are located at the south walls of the Student Success Center and Classroom & Labs (Bldgs. 7-9) as well as the east wall of the Student Success Center (Bldg. 7). Some doors have glass lights or vision panels.

Repair

Existing wood doors are in good condition. Refinish existing wood doors. Remove wood doors from frame. Repair wood frame, clean paint from existing hinges and hardware.

Remove all door hardware. Remove paint and repair damaged wood. Prepare door for new hardware. Prime and paint door. Rehang door on new hinges. Provide new ADA compliant hardware. Provide new push bar hardware at spaces over 990 square feet.

All Alternatives, Student Success Center (Bldg. 7): Repair and refinish three (3) existing wood doors.

All Alternatives, Classroom & Labs (Bldg. 8): Repair and refinish five (5) existing wood doors.

All Alternatives, Classroom & Labs (Bldg. 9): Repair and refinish seven (7) existing wood doors.

Hollow Metal Doors

There are currently hollow metal doors at mechanical spaces and at the north elevation at the east wing of the Student Success Center (Bldg. 7). The additions containing the mechanical rooms at Building 7 are proposed for removal. The hollow metal doors at the east wing of Building 7 will be replaced with new aluminum storefront doors. See Aluminum Storefront Door section below for more detail.

New hollow metal doors are required at all mechanical, electrical, service and restroom locations. New hollow metal frames are required. New hollow metal frames to be installed in existing masonry walls.

All Alternatives, Student Success Center (Bldg. 7): Assume 14 new hollow metal doors and frames at each alternative.

Aluminum Storefront Doors

Existing aluminum doors are located at the north elevations of Buildings 7, 8, and 9.

Repair

Alternatives 1A and 1B, Student Success Center (Bldg. 7): One (1) pair of aluminum storefront doors with aluminum sidelights and transom is to remain. These doors are in good condition and require only minimal service and maintenance.

Alternatives 1C and 2A, Student Success Center (Bldg. 7): Three (3) pairs of aluminum storefront doors with aluminum sidelights and transom are to remain. These doors are in good condition and require only minimal service and maintenance.

Replace

All Alternatives, Classroom & Labs (Bldg. 8): Two (2) pairs of aluminum storefront doors and one single aluminum door with aluminum sidelights and transom windows. These doors are in fair condition. Assume new aluminum storefront doors, three pairs with aluminum frames and transom glazing. Overall size of each of these three openings is approximately 8-foot wide by 12-foot high.

Upgrade

New glazed single aluminum doors are proposed to replace existing solid single hollow metal doors at the north elevation of the east wing of Building 7. Glazed storefront doors will be more compatible with the building and meet egress requirements for these spaces.

Alternatives 1A and 1B, Student Success Center (Bldg. 7): Assume two (2) new glazed aluminum single storefront doors and transom windows in existing aluminum frames.

Alternatives 1C and 2A, Student Success Center (Bldg. 7): Assume three (3) new glazed aluminum single storefront doors and transom windows in existing aluminum frames.

Alternative 2B, Student Success Center (Bldg. 7): Assume three (3) new glazed aluminum single storefront doors and transom windows in existing aluminum frames. In addition, assume creation of one additional opening in the existing wall to create an additional glazed aluminum storefront opening. Remove existing brick base and aluminum window wall as required to install new aluminum storefront system. Size of new opening is approximately 3-foot, 6-inches wide and 9-foot high.

Roofing

The Student Success Center and Classroom & Labs complex (Bldgs. 7-9) currently consist of a combination of metal and single-ply membrane roofs. The removal of non-compatible additions at the Student Success Center (Bldg. 7) includes the removal of all metal roofs to return the overall massing and form to its earlier appearance.

Main Roof – Membrane without Parapet

Remove and Replace

All Alternatives, Classroom & Labs (Bldgs. 8 & 9): Remove existing membrane roof and all underlayment down to the exterior wood roof deck. Repair damaged decking with new plywood. Assume 10%. Install new single-ply membrane roof.

Student Success Center (Bldg. 7), Assume the following for the area south of the clerestory windows at Building 7: Remove existing metal roof, boxed parapet roof, including all layers of roofing and underlayment down to wood rafters. Assume new sistered wood joists to existing rafters and install new 3/4 inch plywood sheathing. Install new single-ply membrane roof. Assume the following at low slope roofs at Building 7 from the south exterior wall to the line of original clerestory windows at the east and west wings.

Alternatives 1A and 1B, Student Success Center (Bldg. 7): Assume 3,300 gross square feet (GSF) of new roof and supplemental framing south of the clerestory windows.

Alternatives 1C and 2A, Student Success Center (Bldg. 7): Assume 4,700 GSF of new roof and supplemental framing south of the clerestory windows.

Alternative 2B, Student Success Center (Bldg. 7): Assume 3,700 GSF of new roof and framing south of the clerestory windows.

Student Success Center (Bldg. 7), Assume the following for the area north of the clerestory windows at Building 7: Remove existing membrane roof and all underlayment down to the exterior roof sheathing. Repair damaged sheathing. Assume 5%. Install new single-ply membrane roof.

Alternatives 1A and 1B, Student Success Center (Bldg. 7): Assume 4,640 GSF of re-roofing north of the clerestory windows.

Alternatives 1C and 2A, Student Success Center (Bldg. 7): Assume 7,456 GSF of re-roofing north of the clerestory windows.

Alternative 2B, Student Success Center (Bldg. 7): Assume 5,408 GSF of re-roofing north of the clerestory windows.

Flashing and Trim

All three buildings at the Student Success Center and Classroom & Labs complex (Bldgs. 7-9) have metal drip edges at the termination of low-slope roofs. Replace existing metal drip edge with new painted galvanized meal drip edge.

Main Roof – Membrane with Parapet

The brick masonry service building to the south of the Classroom & Labs Building 9 (Bldg. 9b) includes a low slope roof surrounded by parapet walls. Assume removal of all existing rooftop mounted equipment, removal of existing roof membrane and all underlayment down to wood deck. Assume replacement of 10% of deck. Install new low slope membrane roof. Provide new reglet and counter-flashing at parapet walls to receive roof membrane. Remove paint from existing sheet metal parapet cap and provide new painted finish.

Roof at Covered Walkways

Remove existing equipment from exterior walkway roofs. Remove existing membrane roof and all underlayment down to the exterior roof decking. Repair damaged deck. Assume 25%. Provide new metal drip edge at edge of canopy roof.

New Gutters and Downspouts

Remove existing gutters and downspouts and install new galvanized sheet metal gutters and downspouts.

Repair and Refinish Eaves and Soffits

Remove paint from existing wood soffits. Repair damaged wood. Assume 10%. Prime and paint soffits.

Skylights

Modify existing framing to provide new skylights at exterior walkway canopy at the Classroom & Labs (Bldgs. 8 & 9). Assume 10 locations.

Interiors

Interiors will be fully modernized to meet the flexible needs of the campus community now and into the future. The interiors will be rehabilitated to provide comfortable spaces for a variety of functions.

The existing spaces are simply designed with clean lines and durable, low-maintenance materials. New finishes at administration, student and community spaces will be compatible with the original design. New finishes include carpet tiles, rubber base, paint, ceiling tiles and window treatments.

Original surface-mounted ceiling tiles will remain where feasible. Additional testing to determine if the tiles are an asbestos-containing material (ACM) is required. If replacement tiles are required, they should match the original tiles in size, color and texture. Selected ceilings may need to be lowered to accommodate new HVAC equipment. See HVAC section below for more information.

Manual window shades will be provided at the north window walls while motorized window shades will control daylight at the south-facing clerestory windows.

The original design of the classroom buildings incorporated many sustainable design principles including passive daylighting and natural ventilation. While the buildings will be retrofitted with new heating and ventilation systems, there are numerous opportunities to showcase the sustainable features of these buildings.

To improve their performance, additional study and energy modeling is recommended to fully understand the performance of the buildings over the course of a day and throughout the year. Clerestory glazing may be retrofitted with special performance glazing, like low-e, that reflects long-wave, or heat-generating, infrared waves while still allowing visible light to enter the building.

Mechanical, Electrical, and Plumbing (MEP)

Heating, Ventilation and Air-Conditioning (HVAC)

The current mechanical system relies on rooftop units placed on the covered walkways with supply air ducts compromising the clerestory windows. The current design is unattractive and has caused some structural damage to the covered walkways that were not designed to carry the weight of these units.

Rehabilitation will include a new heating and ventilation system integrated with the spatial character of the interior. Preliminary design concepts include two options:

Option 1

A four-pipe system that uses hot and cold water loops to provide heating and air-conditioning. The four-pipe system includes a central plant with a chiller and boiler sized to provide hot and cold water to the Student Success Center and Classroom & Labs complex (Bldgs. 7-9), Business Education complex (Bldgs. 12-14), and Math and Planetarium complex (Bldgs. 35-39). The central plant will be discretely located to blend in with the campus landscape with screen walls and a roof. At the interiors, the hot and cold water loops will terminate in either fan coils or chilled beam and ceiling panels. The fan coils may require dropping a portion of the ceiling to accommodate the unit. Chilled beams or ceiling panels provide a more efficient system that could be left exposed at the interior of the spaces. Four-pipe hydronic system require a greater up-front cost, but the systems operate more efficiently and have a greater life expectancy than the variable refrigerant system.

Option 2

The second option includes a variable refrigerant system (VRF) that moves refrigerant through a closed loop to provide heating and cooling. The VRF system includes ground-mounted heat pumps located outside the building. The outdoor units contain a compact footprint that can be integrated with screen walls located adjacent to the building. VRF systems allow for a single outdoor unit to serve multiple zones of a building, making them a good choice for multi-purpose buildings. A VRF system is a good choice for the classroom buildings because it requires only small-diameter pipes for moving refrigerant rather than large ducts that could be intrusive to the original spatial design. The refrigerant pipes connect with special compact fan coil units that could be located at ceilings or at the base of the window walls.

Electrical

The electrical system will be completely upgraded. Components beyond their useful service life, including transformers, main service panels and secondary distribution panels, will be replaced. Upgrade of the interior will include new lighting and power circuits.

Plumbing

Existing restroom spaces will be expanded and completely remodeled as part of the building rehabilitations. To make the reuse of existing water and waste lines possible, renovated restrooms will be located in current locations. Renovation of the restroom facilities will include removal and replacement of concrete floor slabs to provide easier tie-in of new fixtures with existing plumbing. Restrooms will be provided with new fixtures and accessories. Ceramic tile floor and wall tile is included.

Fire Sprinklers

Wet-pipe fire sprinkler system will be added to the classroom buildings to protect the buildings and occupants in the event of a fire. The sprinkler mains will be located in service rooms with the distribution piping and sprinkler heads left exposed in the spaces.

Communications and Security

Audio-visual equipment and wireless communications equipment will be installed to provide a 21st Century campus environment. New rooms with intermediate distribution frames (IDF) are provided at each complex.

A security system will be integrated with the overall campus security system to control access to the buildings and provide oversight of the campus environs. A security system could include closed-circuit cameras to monitor activity in and around the buildings. A comprehensive assessment of campus security was not part of this Historic Structures Report.

Site Work

Outdoor Spaces

Outdoor Patio between Classroom & Labs Buildings 8 and 9

There are a number of opportunities to revitalize and reimagine the outdoor spaces connecting the Student Success Center and Classroom & Labs complex (Bldgs. 7-9). The outdoor patio between Buildings 8 and 9 will be rehabilitated to provide flexible outdoor space. A small food service facility will be introduced adjacent to this space. New planting and furniture will be added to create a node for activity at the center of the campus.

Landscaped Plaza between the Student Success Center (Bldg. 7) and Classroom & Labs Building 8

The landscaped plaza between Buildings 7 and 8 will become the focal point for the complex, welcoming visitors to the campus' oldest remaining building. The plaza will be rehabilitated to provide more shade and seating areas. At various alternatives, hardscape may be extended to the south and west to create more generous location for outdoor activities and events.

Buildings 12, 13, 14 | Business Education Complex

Under all of the proposed preservation alternatives, the Business Education complex (Buildings 12, 13, and portions of 14) are recommended to be adaptively re-used in accordance with *the Rehabilitation Standards*. All of the preservation alternatives recommend removal of the ca. 1977 addition to Building 14. The three reuse options are as follows:

Alternatives 1A and 1B:	Alternatives 1A and 1B adaptively reuse the complex for the campus' Special Services and Honors Programs.
Alternative 1C:	Alternative 1C adaptively reuses the complex for Student and Community Functions.
Alternatives 2A and 2B:	Alternatives 2A and 2B adaptively reuse the complex as an Interdisciplinary Center.

Schematic drawings and diagrams illustrating treatment recommendations for the complex are included in Appendix 1.

Figure 2: Business Education complex (Bldgs. 12-14).

Selective Demolition

Selective demolition is essentially the same for the various preservation alternatives and is described as follows. Note that removal and replacement of individual items may be described later under the specific system.

Removal of Inappropriate Additions and Alterations

Building 14 Addition

Remove and disposed of the ca. 1977 addition, including the concrete slab on grade and footings. Fill and grade the site. Preserve and temporarily shore the remaining exterior brick walls from the original construction to the north, east, and west.

Heating, Ventilation and Air-Conditioning (HVAC)

Remove HVAC units and associated ductwork, piping, curbs, and supports from canopy roofs. Remove registers and non-glass panels from clerestory windows to south of Buildings 12 and 13.

Concrete

Remove and replace the concrete floor slab at restroom locations to allow for installation of new plumbing fixtures.

Interiors

Preserve and protect existing finished wood veneer plywood wainscot and cabinetry at northern walls. Preserve and protect finished wood veneer plywood clad closets.

Removal of Hazardous Materials

A limited survey and sampling of asbestos containing materials (ACM) was completed in 2005. A visual survey was completed as part of the Historic Structures Report in January 2015. This recent survey identified additional potential hazardous materials including ACMs, lead based paint (LBP), mercury, polychlorinated biphenyls (PCB) and miscellaneous materials.

Asbestos: The 2005 survey identified window putty, leveling compound, linoleum flooring, vinyl floor tile and transite pipe as being ACMs. A visual survey and assessment completed as part of the Historic Structures Report in January 2015 determined that additional ACMs may be present. Amongst those materials suspected of being ACMs are acoustic ceiling tile, vinyl base and carpet mastic, insulation, grout, exterior expansion joints, counter top and sheet flooring. The complete list is contained in Appendix 6: Hazardous Materials Visual Assessment Report.

Lead: The January 2015 visual survey identified several items that potentially contain lead paint including, but not limited to, painted door and window systems, exterior painted walls, ceramic tile and roof systems. For more detail see Appendix 6: Hazardous Materials Visual Assessment Report.

PCB: The January 2015 visual survey identified potential polychlorinated biphenyls (PCBs) in the ballast at fluorescent fixtures, concrete expansion joint caulking and window putty.

Other: Mercury was identified in the fluorescent light bulbs.

Structural

As described in Section 1B of this report (Chronology of Development and Use), the complex was seismically upgraded in the late 1990s. While the retrofits are generally not consistent with *the Standards*, reversing them is not cost effective and would likely cause more damage than simply keeping them in place.

Foundations

Buildings 12 and 13, as well as the original portions of Buildings 14, sit atop grade beams that are supported upon caissons. Floors are concrete slabs on grade.

Work to the foundations associated with the preservation alternatives includes removal and replacement of the slab on grade at restroom locations to facilitate new plumbing and fixture layouts. Additional work includes coring of grade beams and coring and/or cutting slabs to facilitate installation of cold and hot water piping associated with a new HVAC system.

Gravity Load Systems

Roof Framing

Building 14: Removal of the 1970s addition to Building 14 will require installation of new wood roof framing and structural plywood decking. The structural system should slope to through-wall scuppers along the west elevation.

Wall Framing

Building 14: An approximately 28-foot 6-inch long by 13-foot tall section of exterior wall to the west of the original Building 14 will need to be reconstructed following removal of the 1970s addition. The new section of wall may be framed of light-gage steel or wood framing and will require a header for an approximately 25-foot wide opening.

Lateral Load Systems

Shear Walls

No work required.

Supplemental Framing

Add new moment frame at the south wall of Building 14.

Diaphragms

Not required.

Enhanced Connections

Brick masonry walls to wood diaphragm roof anchorage is non-compliant at Building 14.

Wall-to-Roof

Provide wall anchors at 4-foot on-center max spacing. See Appendix B within Appendix 3 for typical anchorage details.

Exterior Enclosure

Exterior Walls

Brick Bearing Walls

Brick bearing walls are located at the following locations:

- North wall of Buildings 12 and 13. These walls were retrofitted with oversized steel tube columns in the 1990s. The tube columns are to remain.
- East and west walls of Buildings 12 and 13.
- East end of north wall of Building 13.
- Original construction to the north, east, and west of Building 14.

Brick Clad Wood-Framed Walls

Brick-clad, wood-framed walls are present below the window walls at the north elevations of Buildings 12 and 13.

Brick bearing and clad walls are to be preserved and maintained with the following treatments.

Spalled and Cracked Brick Treatment

Remove and replace spalled and cracked brick within bearing and clad walls. Replacement units are to match the size, color, texture, and material properties of the original bricks – note that the brick units are a special size ("utility" sized bricks, 2-7/8 inches square x 11-3/4 inches).

Allow for replacement of 100 brick units.

Cracked and Deteriorated Joint Treatment

Carefully remove cracked and deteriorated mortar from joints to a depth of ¾-inch. Take care not to damage brick units. Pre-wet joints and install new Type-N mortar in two layers; color and aggregate to match the original mortar. Tool the joint profile to match original.

Allow for repointing of 5-percent of brick mortar joints.

Efflorescence Treatment

Efflorescence is common at the base of the north walls of Buildings 12 and 13; the efflorescence can extend up to approximately 3-feet.

Prior to finalizing treatment to remove the efflorescence, perform chemical and petrographic analysis to determine the type and source of efflorescence.

Visual observations indicate that the efflorescence is caused by over-irrigation and/or lack of drainage at planters and planting areas at the base of the north walls. Change to a drip irrigation system and locate lines a minimum of 5-feet away from the base of brick masonry walls.

Perform trial/sample cleaning to determine the gentlest cleaning that effectively removes the salts. If necessary and if determined by analysis results, chemically treat wall surfaces to remove efflorescence.

Treatment of Soiling and Biological Growth

Soiling and biological growth is present at a limited wall area that is not protected by overhanging eaves or canopies. Clean the wall with a mild detergent and biocide. Perform trial/sample cleaning to determine the gentlest level of cleaning that effectively removes the soiling and biological growth.

Assume 200 square feet of wall area requires cleaning and biocide treatment.

Brick Wing-Walls

Brick wing-walls are located to the south of Building 12; the walls consist of two wythes of brick separated by a steel-reinforced grouted core. The walls support the southern edge of the canopy to the south of Building 12.

Spalled and Cracked Brick Treatment

An unusually large percent of the bricks within the wing-walls are experiencing spalling of the fired face of individual brick units. Visual inspection suggests that the deterioration is related to problems with the original manufacture of the brick. Spalling failure may be exacerbated by crypto-florescence, the formation of crystals within the body of the brick. Laboratory (petrographic) analysis is recommended to determine the cause of the deterioration prior to finalizing treatment. Additionally, we recommend testing of the in-place mortar, which may be too hard and also contributing to the deterioration of the brick.

Remove and replace face-spalled and cracked brick within bearing and clad walls. Replacement units are to match the size, color, texture, and materials properties of the original bricks. Again note that the brick units are a special size. Mortar used to set and point replaced brick units should be softer than the brick units (Type N or O) and match the color, aggregate, and tooling of the original mortar.

Assume 20-percent of brick units at the wing-walls require replacement.

Efflorescence Treatment

Efflorescence occurs sporadically across the full height of the wing-walls.

Prior to finalizing treatment to remove the efflorescence, perform chemical and petrographic analysis to determine the type and source of efflorescence.

Visual observations indicate that the efflorescence is caused by over-irrigation and/or lack of drainage at planters and planting areas at the base of the north walls. Change to a drip irrigation system and locate lines a minimum of 5-feet away from the base of brick masonry walls.

Perform trial/sample cleaning to determine the gentlest cleaning that effectively removes the salts. If necessary and if determined by analysis results, chemically treat all of the wing-wall brick surfaces to remove efflorescence.

Brick Clad, Wood-Frame Shear Walls

Brick clad concrete shear walls were installed in the 1990s. While the shear walls have affected the appearance of the building, most notably reducing the amount of window wall to the north elevations of Buildings 12 and 13, to remove them would be more disruptive than to leave them in place and maintain them.

At this time, no work is proposed at the clad shear walls.

Precast Concrete Window Sills

Precast concrete window sills are located below the window wall at the north elevation of Buildings 12 and 13. Minor soiling and cracking of mortar joints between the units are present.

Clean precast concrete sills to remove soiling. Perform test samples of mild detergent cleaners and mild acidic cleaners to determine the gentlest means to effectively clean the sills.

Monitor cracked joints to determine if cracking is due to movement related to cyclic temperature changes. If joint is experiencing movement, remove mortar to a sufficient depth and replace with non-staining elastomeric sealant and backer rod. If joint is not experiencing movement, carefully remove cracked and deteriorated mortar from joints to a depth of ¾-inch. Take care not to damage precast concrete units. Pre-wet joints and install two lifts of new Type-N mortar, color and aggregate to match the original mortar. Tool the joint profile to match original.

Stucco-Clad Wood-Frame

As described in the Structural section above, a portion of the exterior wall to the west of the original Building 14 will need to be reconstructed following removal of the 1970s addition. The lower section of the wall will hold bi-fold doors (described below) the upper section of the wall will be clad in new cement-plaster stucco to match the original. For cost estimating purposes, assume a 28 foot 6 inch long by 6 foot tall section of new 3-coat stucco with an integral finish coat.

Windows

Aluminum Window Walls

The tilted aluminum-framed window walls at the north elevation of Buildings 12 and 13 are a main character-defining feature of the complex. The window walls contain both fixed glazing and approximately 20 to 25-percent operable awning-type sash.

Glazing

Glazing putty (sealant) is deteriorated and needs replacement. Window glass is generally in good condition, although some is back-painted to obscure the interior. In concert with other window work, the following is recommended:

- Test putty material to determine if asbestos or PCBs are present and if present, remove and dispose of material in accordance with local, state, and federal regulations.
- Completely remove and dispose of outer putty. Take care not to damage glass or window frame.
- Remove and salvage existing glass. Remove any paint coatings and putty residue. Clean glass and label pieces for reinstallation in original location.
- Completely remove and dispose of bedding putty.
- Treat window frames as described below.
- Reinstall glass, bed glass in non-staining silicone sealant and install outer fillet bead of non-staining silicone sealant. Follow recommendations in the latest edition of the "*Glazing Manual*" published by the Glass Association of North America (GANA).

Window Frames

The unfinished aluminum frames are exhibiting surface corrosion. A number of fasteners that connect pieces of the frames are missing. In concert with sealing and glazing work, the following is recommended:

- Protect glazing, which is to remain.
- Clean the frames with a mild detergent and water.
- Remove surface corrosion by scrubbing with a pumice powder and pads.
- Replace, in kind, missing frame-to-frame fasteners.
- Seal surface with a clear coating to limit further corrosion.

Awning Sash

The following treatment is recommended:

- Treat frames and glazing as described above.
- Survey sash to determine damaged or missing hardware, such as hinges, delimiters, and latches. For estimating purposes assume 35-percent of hardware is missing or damaged.
- Replace damaged or missing hardware.
- Clean and lubricate hardware.
- Install neoprene compression-type weather stripping at sash perimeter.
- Adjust sash to assure operation.

Perimeter Seal

The perimeter seals between the window frames and brick (sides), precast concrete sill (bottom) and wood eave (top) have reached the ends of their service life and should be replaced. The following is recommended:

- Test sealant material to determine if asbestos or PCBs are present and if present, remove and dispose of material in accordance with local, state, and federal regulations.
- Completely remove and dispose of sealant and backing materials, taking care not to damage adjacent materials.
- Prepare substrate surfaces, prime as required by sealant manufacturer.
- Install new backing material and non-staining, elastomeric sealant. Protect adjacent materials from excess sealant.

Aluminum Clerestory Windows

Aluminum-framed clerestory windows are present above walkway canopies along the south elevations of Buildings 12 and 13. Originally, a mix of fixed glazing and awning sash were present at the clerestory. The windows have been modified to accommodate mechanical systems and ductwork. It is recommended that the mechanical equipment and ductwork be removed and that the windows be restored to their original type and operation.

We recommend that the in-place glass be removed and replaced with a laminated glass with heat-gain resistive properties (double low-e glass). Frames, sash, and perimeter seals are to be treated the same as the window walls described above.

Louvers

Aluminum louvers are located at the clerestory windows at Buildings 12 and 13.

Repair (All Alternatives)

Clean and repair existing louvers.

Store Front

Building 13: A wood-framed storefront is present at the east elevation of Building 13, within the breezeway between Buildings 12 and 13. Follow the *Rehabilitation Guidelines* for “Building Exterior, Storefronts, Protecting and Maintaining”.

Building 14: As part of the rehabilitation of Building 14, remove existing wood clad wall and glazed door and restore aluminum-framed display window and recessed storefront entry per historic records.

Exterior Doors

Two basic types of original exterior doors still exist within the complex.

Type 1 – Half-Glazed Wood Doors: Classrooms are typically entered through painted wood doors with a glazed upper panel set into a wood frame. Transoms with painted plywood are typically present between the head of the doors and the underside of the southern canopy.

Type 2 – Flush Wood Doors: Flush wood doors are currently present at restrooms, at the north elevation of Building 14 (into an electrical room) and within the storefront entry at the east end of Building 13. Originally, south elevation of Building 14 also had a flush wood door entry.

For both types of doors, original door knobs have been typically replaced with lever handles and the glass does not appear original. Doors are typically 3-feet wide, meeting disabled access requirements.

Existing Doors

Regardless of the door type, the doors should be retained and repaired/upgraded to achieve consistent appearance and function.

Treatment for Deteriorated Door Bottoms

Deterioration of the base of wood doors is consistent with long-term exposure to wet-dry cycles. Because the doors are protected by a canopy, the likely cause is pressure washing as a cleaning and maintenance item. We recommend limiting exposure of the doors to pressurized water streams.

To repair the base of the doors, we recommend
- Removing the existing paint coatings.
- Removing any severely decayed wood material.
- Consolidating the wood surfaces with penetrating epoxy consolidants.
- Filling-in missing material with epoxy wood patch materials.
- Sanding the surface smooth.
- Preparing, priming, and painting the doors (entire door).

Once the bottoms of the doors are repaired, we recommend installing an aluminum bottom “shoe” and sweep-type weather-strip to help reduce exposure of the door base to water.

All door bottoms require this repair.

Treatment for Hardware

Coordinate door hardware repairs with the Facilities and Operations Department and Campus Security.

Latches and Locksets: While the latches and locksets are not original, they appear to be in fair-to-good condition and in general conformance with disabled access standards. Replacement of the latches and locksets will likely be more disruptive that repairing the existing. We recommend tightening and adjusting the existing, non-original latches and locksets, replacing cylinder as required.

Hinges: The majority of doors retain their “bullet” style hinges. Where hinges remain, retain hinges; remove paint; restore original metallic finish; and lubricate. At other locations, remove non-original hinges, patch wood, and install new bullet-style hinges to match original. Assume 12 doors have original hinges and 6 doors need replacement hinges.

Door Closers: Retrofit all doors to receive new concealed door closers. Equip doors with floor mounted stop bumpers and hooks to hold open when desired.

Weather Stripping: Retrofit door frames to receive compression-type weather stripping.

Thresholds: Existing thresholds to remain.

New Doors at Building 14

In all of our preservation alternatives, Building 14 is being returned to its original footprint. This requires several new exterior doors as follows:

Flush Door at South Elevation

Cut new opening in existing brick wall and install a new wood flush door (3 feet wide by 7 feet tall) and wood frame at the south elevation. Door to match original and include hardware described above.

Entrance Door at East Elevation

As noted under the storefront section, remove existing wood clad wall and glazed door and restore original aluminum-framed display window and recessed storefront, including an aluminum-framed glazed door per historic photographs and original construction documents.

Bi-fold Door at West Elevation

The south end of the west elevation originally contained a ribbon of windows screened by vertical louvers. To make the proposed space more flexible, in lieu of restoration of the ribbon windows and screen, we recommend installing aluminum-framed, glazed, bi-fold doors (similar to NanaWall) within the same opening that originally held the windows (assume 24 feet wide by 7 feet tall).

Roofing

Main Roof

Replace Membrane

A single-ply membrane roof is currently present; it was reportedly installed in the late 1990s. It is unknown if other roof membranes are present below. The original drawings show 1 x 6 inch diagonal sheathing as a substrate, the diagonal sheathing was covered with plywood in a seismic retrofit in the late 1990s.

Given the age of the current roof and the amount of rehabilitation work proposed, we recommend replacement of the roofing membrane. Remove the existing roofing and any underlying materials down to the plywood sheathing. Install a new Type X gypsum substrate board. Install a new single-ply roofing membrane with a Solar Reflectance Index meeting the latest LEED requirements.

Replace and Repair Flashing and Trim

Remove existing and install new flashing and trim at Buildings 12 and 13. Gravel stops / drip edges at the eaves and rakes are to match the original profiles, color, and finish. Note that the sheet metal forms the fascia for the eave edges. Similarly, at Building 14, coping caps are to match the original profiles, color, and finish.

Replace and Repair Eaves and Soffits

Projecting eaves with soffits are present to the north and south of Buildings 12 and 13. The exposed eave fascia is sheet metal and the underside of the eaves is painted tongue and groove wood sheathing, which is original to the buildings. As part of the roof work, remove and replace the sheet metal fascia, match the original profile, color, and finish. Replace deteriorated wood at the underside of eaves in-kind (assume 5-percent). Prepare, prime, and paint to match original color and finish.

Preservation and Repair of Canopy Roofs

Walkway canopies are present to the south of Buildings 12 and 13. Additionally, a canopy is present to the east of Building 14 and extends north to connect to the breezeway between Buildings 12 and 13. The canopies are constructed differently. Scope of work assumes preservation and repair of canopy roof character-defining features.

Modify Skylights

Modify existing framing to provide new skylights at exterior walkway canopy at Buildings 12 and 13. Assume 9 locations.

Interiors

Interiors will be fully modernized to meet the flexible needs of the campus community now and into the future. The interiors will be rehabilitated to provide comfortable spaces for a variety of functions.

The existing spaces are simply designed with clean lines and durable, low-maintenance materials. New finishes at administration, student and community spaces will be compatible with the original design. New finishes include carpet tiles, rubber base, paint, ceiling tiles and window treatments.

Original surface-mounted ceiling tiles will remain where feasible. Additional testing to determine if the tiles are an asbestos-containing material (ACM) is required. If replacement tiles are required, they should match the original tiles in size, color and texture. Selected ceilings may need to be lowered to accommodate new HVAC equipment. See HVAC section below for more information.

Manual window shades will be provided at the north window walls while motorized window shades will control daylight at the south-facing clerestory windows.

The original design of the classroom buildings incorporated many sustainable design principles including passive daylighting and natural ventilation. While the buildings will be retrofitted with new heating and ventilation systems, there are numerous opportunities to showcase the sustainable features of these buildings.

To improve their performance, additional study and energy modeling is recommended to fully understand the performance of the buildings over the course of a day and throughout the year. Clerestory glazing may be retrofitted with special performance glazing, like low-e, that reflects long-wave, or heat-generating, infrared waves while still allowing visible light to enter the building.

Mechanical, Electrical, and Plumbing (MEP)

Heating, Ventilation and Air-Conditioning

The current mechanical system relies on rooftop units placed on the covered walkways with supply air ducts compromising the clerestory windows. The current design is both unattractive and has caused some structural damage to the covered walkways that were not designed to carry the weight of these units.

Rehabilitation will include a new heating and ventilation system integrated with the spatial character of the interior. Preliminary design concepts include two primary options:

Option 1

A four-pipe system that uses hot and cold water loops to provide heating and air-conditioning. The four-pipe system includes a central plant with a chiller and boiler sized to provide hot and cold water to the Student Success Center and Classroom & Labs complex (Bldgs. 7-9), Business Education complex (Bldgs. 12-14), and Math and Planetarium complex (Bldgs. 35-39). The central plant will be discretely located to blend in with the campus landscape with screen walls and a roof. At the interiors, the hot and cold water loops will terminate in either fan coils or chilled beam and ceiling panels. The fan coils may require dropping a portion of the ceiling to accommodate the unit. Chilled beams or ceiling panels provide a more efficient system that could be left exposed at the interior of the spaces. Four-pipe hydronic systems require a greater up-front cost, but the systems operate more efficiently and have a greater life expectancy than the variable refrigerant system.

Option 2

The second option includes a variable refrigerant system (VRF) that moves refrigerant through a closed loop to provide heating and cooling. The VRF system includes ground-mounted heat pumps located outside the building. The outdoor units contain a compact footprint that can be integrated with screen walls located adjacent to the building. VRF systems allow for a single outdoor unit to serve multiple zones of a building, making them a good choice for multi-purpose buildings. A VRF system is a good choice for the classroom buildings because it requires only small-diameter pipes for moving refrigerant rather than large ducts that could be intrusive to the original spatial design. The refrigerant pipes connect with special compact fan coil units that could be located at ceilings or at the base of the window walls.

Electrical

The electrical system will be completely upgraded. Components beyond their useful service life, including transformers, main service panels and secondary distribution panels, will be replaced. Upgrade of the interior will include new lighting and power circuits.

Plumbing

Existing restroom spaces will be expanded and completely remodeled as part of the building rehabilitations. To make the reuse of existing water and waste lines possible, renovated restrooms will be located in current locations. Renovation of the restroom facilities will include removal and replacement of concrete floor slabs to provide easier tie-in of new fixtures with existing plumbing. Restrooms will be provided with new fixtures and accessories. Ceramic tile floor and wall tile is included.

Fire Sprinklers

Wet-pipe fire sprinkler system will be added to the classroom buildings to protect the buildings and occupants in the event of a fire. The sprinkler mains will be located in service rooms with the distribution piping and sprinkler heads left exposed in the spaces.

Communications and Security

Audio-visual equipment and wireless communications equipment will be installed to provide a 21st Century campus environment. New rooms with intermediate distribution frames (IDF) are provided at each complex.

A security system will be integrated with the overall campus security system to control access to the buildings and provide oversight of the campus environs. A security system could include closed-circuit cameras to monitor activity in and around the buildings. A comprehensive assessment of campus security was not part of this Historic Structures Report.

Site Work

Outdoor Spaces

Outdoor Plaza West of Building 14

A significant opportunity for a signature outdoor campus space is possible with the removal of the 1970s addition to Building 14. The plaza is conceived as both a central campus node and connective tissue between the Business Education complex (Bldgs. 12-14) and Math and Planetarium complex (Bldgs. 35-39). Programming at Building 14 will be able to take advantage of this outdoor space for receptions and special campus events. The plaza will provide multi-functional space that can be set-up with chairs for performances or tables and chairs for receptions. Landscape will include new shade trees and plantings.

Buildings 2, 4 | Theater and Music Complex

The Theater and Music complex is comprised of a number of different buildings constructed from the mid-1950s to the 2000s. The Historic Structures Report focuses on the earliest buildings in the complex, the Robert B. Moore Theater (Bldg. 2) and Music Building (Bldg. 4). The Theater and Music complex is proposed for continued use as part of the Arts Programs on campus. Both the Theater and Music Buildings have undergone a number of additions and renovations over time. The preservation treatments outlined below include only important character-defining features and historic interior elements.

Both Buildings 2 and 4 are in good overall condition and there are very few items requiring immediate attention. There are a number of structural items that require mitigation. Items that should be addressed within 3-5 years include upgrades to HVAC and electrical systems as well as preservation of architectural elements.

Figure 3: Theater and Music complex (Bldgs. 2 and 4).

Selective Demolition

Removal of Inappropriate Additions

No removal of inappropriate additions is proposed.

Removal of Hazardous Materials

The Theater and Music Buildings (Bldgs. 2 & 4) were excluded from a limited survey of asbestos containing materials (ACMs) completed in 2005. However, they were included in a visual survey completed as part of this Historic Structures Report in January 2015. This recent survey identified potentially hazardous materials including ACMs, lead based paint (LBP), mercury, polychlorinated biphenyls (PCB) and miscellaneous materials. The preservation treatment approach for Buildings

2 and 4 will have minimal impact on hazardous materials. Impacts to specific materials and systems are noted in the narrative below.

Structural

Foundations

Remove and replace concrete slab at covered walkway at north end of Theater (Bldg. 2). The slab has numerous large cracks that appear to be due to settling and movement. Area is approximately 3,000 square feet. Score pattern and finish to match historic layout. Assume new 4” reinforced slab and turn-down edge at north.

Gravity Load Systems

Bearing Walls

No work is required.

Posts / Columns

No work is required.

Roof

No work is required.

Lateral Load Systems

New Shear Walls

No work is required.

Supplemental Framing

No work is required.

Diaphragms

Cross Ties

Wood diaphragm cross ties are not present at Buildings 2 and 4.

Provide new wood diaphragm cross ties at 24 feet on-center max spacing per appendices A and B within the Structural Evaluation Appendix of this report (Appendix 3).

Assume 13 locations at Building 2.

Assume 15 locations at Building 4.

Collectors / Drags

Collectors not present at Building 4.

Assume 2 locations per appendix A within the Structural Evaluation Appendix of this report (Appendix 3).

Enhanced Connections

Pile Cap

No top reinforcing steel in pile cap. Retrofit of condition will be required based on engineering analysis.

Assume two locations at the southeast and southwest corners of the curved concrete walls at the Theater.

Wall-to-Roof

Cast-in-place concrete and masonry to wood diaphragm roof anchorage is non-compliant.

Provide wall anchors at 4-foot on-center max spacing per locations shown in appendix A within Appendix 3 of this report and appendix B for typical anchorage details.

Length of wall requiring new anchors is approximately 700 linear feet (LF) at the Theater Building (Bldg. 2).

Length of wall requiring new anchors is approximately 500 LF at the Music Building (Bldg. 4).

Wall-to-Wall

No work is required.

Exterior Enclosure

Exterior Walls

Brick Bearing Walls

Brick bearing walls are located at the following locations:

- Ticket Office at the northeast corner of the Theater (referred to as Building 2b). Note there is a later stucco-clad addition to the north of the original box office.
- One story brick wing at west side of the Theater.
- Portions of the east and west elevation of the Music Building (Bldg. 4). Other areas of masonry wall are stucco-clad.

Note that brick site and retaining walls are covered under Site Work.

Brick bearing walls are to be preserved and maintained with the following treatments.

Spalled and Cracked Brick Treatment

A number of the bricks at the west elevation of the Music Building (Bldg. 4) are experiencing spalling of the fired face of individual brick units. Visual inspection suggests that the deterioration is related to problems with the original manufacture of the brick. Spalling failure may be exacerbated by crypto-florescence, the formation of crystals within the body of the brick. Laboratory (petrographic) analysis is recommended to determine the cause of the deterioration prior to finalizing treatment. Additionally, we recommend testing of the in-place mortar, which may be too hard and also contributing to the deterioration of the brick.

Remove and replace face-spalled and cracked bricks within bearing and clad walls. Replacement units are to match the size, color, texture, and material properties of the original bricks. Note that the brick units are a special size. Mortar used to set and point replaced brick units should be softer than the brick units (Type N or O) and match the color, aggregate, and tooling of the original mortar.

Assume 10 percent of approximately 450 square feet of wall area that requires replacement at the west elevation of Building 4.

Cracked and Deteriorated Joint Treatment

The bond at the brick-mortar interface is poor in a few isolated locations on the east façade of the Ticket Office (Bldg. 2b) and west façade of the Music Building (Bldg. 4).

Carefully remove cracked and deteriorated mortar from joints to a depth of ¾-inch. Take care not to damage brick units. Pre-wet joints and install new Type-N mortar in two layers; color and aggregate to match the original mortar. Tool the joint profile to match original.

Assume 10 percent of 800 square feet of brick wall at the east façade of the Ticket Office and west facade of Building 4.

Efflorescence Treatment

Efflorescence is common at the base of the Ticket Office and its one-story addition to the west of Building 2 (Bldg. 2b). Prior to finalizing treatment to remove the efflorescence, perform chemical and petrographic analysis to determine the type and source of efflorescence.

Visual observations indicate that the efflorescence may be caused by over-irrigation and/or lack of drainage at planters and planting areas. Change to a drip irrigation system and locate lines a minimum of 5-feet away from the base of brick masonry walls.

Perform trial/sample cleaning to determine the gentlest cleaning that effectively removes the salts. If necessary and if determined by analysis results, chemically treat wall surfaces to remove efflorescence.

Assume 400 square feet of efflorescence treatment at Buildings 2 and 4.

Treatment of Soiling and Biological Growth

Soiling and biological growth is present at a limited wall area that is not protected by overhanging eaves or canopies. There is also soiling at some walls from water running off walls and overhangs. Clean the wall with a mild detergent and biocide. Perform trial/sample cleaning to determine the gentlest level of cleaning that effectively removes the soiling and biological growth.

Assume 500 square feet of wall area requires cleaning and biocide treatment.

Poured-in-Place Concrete

Poured-in-place concrete walls are prevalent at the Theater (Bldg. 2), including the plectrum-shaped Auditorium, Stage House and Drama Workshop. The walls appear to be in good condition with no significant deterioration.

Crack Repair

There are a few small hairline cracks that require repair. Small cracks are to receive epoxy injection. Prior to epoxy injection, remove paint surrounding the crack and clean and prepare the crack. Reinstate texture of wall surrounding crack to match existing and paint to match.

Assume 20 linear feet of concrete crack repair.

The concrete walls at the Theater (Bldg. 2) do not currently require new paint. Future investigation of the paint finish through paint adhesion tests and additional investigation should be completed to determine if the original finish was textured. Include additional paint investigation, mock-up and new paint finish in the short term cost.

Stucco-Clad Wood-Frame Walls

Stucco-clad wood-frame walls are located at the Music Building (Bldg. 4). The walls are in good condition, having recently been a part of the renovation of the Music Building. No work is required at this time.

Wood-Clad Wood-Frame Walls

The north elevation of the Theater features a curved wood clad wall with flush doors. The wall is in good condition and does not currently require any repair or maintenance.

In the future, an investigation of the finish should be undertaken to determine the original finish of this wall. Paint analysis may reveal underlying colors or finishes that could inform the long-term preservation of the Theater.

Windows

There are a limited number of windows at the Theater Building (Bldg. 2) and no windows at the Music Building (Bldg. 4).

Aluminum Clerestory Fixed Windows

There are approximately 20 aluminum clerestory fixed windows at the one-story extension at the west side of the Theater Building (Bldg. 2). These windows measure approximately 3 feet wide and 18 inches high.

Window Frames

The unfinished aluminum frames are exhibiting surface corrosion. In concert with any sealing or glazing work, the following is recommended:

- Protect glazing, which is to remain.
- Cleaning the frames with a mild detergent and water.
- Removing surface corrosion by scrubbing with a pumice powder and pads.
- Replacing, in kind, missing and corroded frame-to-frame fasteners.
- Sealing surface with a clear coating to limit further corrosion.

Perimeter Seal

The perimeter seals between the window frames and brick (sides), precast concrete sill (bottom) and wood eave (top) have reached the ends of their service life and should be replaced. The following is recommended:

- Test sealant material to determine if asbestos or PCBs are present and if present, remove and dispose of material in accordance with local, state, and federal regulations.
- Completely remove and dispose of sealant and backing materials, taking care not to damage adjacent materials.
- Prepare substrate surfaces, prime as required by sealant manufacturer.
- Install new backing material and non-staining, elastomeric sealant. Protect adjacent materials from excess sealant.

Store Front

Aluminum storefront exists at the southwest corner of the Stage House where it meets the one-story brick extension. The storefront features floor-to-ceiling glass and appears to be in good condition. The storefront is approximately 200 square feet. No work is required at this time.

Exterior Doors

Two types of original exterior doors still exist at the Theater Building (Bldg. 2). There are no original exterior doors at the Music Building (Bldg. 4).

Type 1 – Custom curved wood doors: The north elevation of the Theater features four pairs of double wood doors set flush with the curving wood wall. The doors appear to be in good condition and require only regular maintenance.

In the future, an investigation of the finish should be undertaken to determine the original finish of custom curved wood doors. Paint analysis may reveal underlying colors or finishes that could inform the long-term preservation of the Theater.

Type 2 – Flush wood doors: A handful of flush wood doors still exist at Building 2, including the Ticket Office and one-story extension at the west side of the Theater. These doors are in good condition and require only regular maintenance.

Regardless of the door type, the original doors should be retained and repaired/upgraded to achieve consistent appearance and function.

Roofing

Main Roof

The Theater (Bldg. 2) and Music (Bldg. 4) Buildings feature single-ply membrane roofs. The upper roofs above the Theater including the lower roofs of the connecting wings are in fair condition with approximately half of their service life remaining. There are isolated areas of standing water and collection of debris. Some of this standing water is in contact with rooftop HVAC equipment and electrical conduits. Damage to rooftop equipment may occur if the standing water issues are not corrected. In the interim, an allowance is included to investigate and repair roof drainage issues that require immediate attention.

The roof at Building 4 appears to have been completed with the 2012 renovation. It is in good condition and does not require any repairs beyond periodic inspection and maintenance.

Include cost of new roof membrane with completion of upgrades to the rooftop HVAC system.

Parapets

The outside edge of the curved parapet at the poured-in-place concrete walls exhibits some deteriorated paint finish. These areas are not consistent and may be a result of a lack of a cap at the top of the concrete walls. The peeling paint is a visual issue only and additional investigation should be completed to determine the cause of the paint delamination.

Gutters and Downspouts

Internal gutters exist behind the curving parapet at the upper Theater roof. These gutters are an important feature of the building and should be maintained and preserved at any future roofing projects. Original construction documents indicate downspouts internal to the walls that discharge at grade. The gutters appear to be in good condition and it is recommended that periodic inspection occur to ensure the gutters function as designed. The downspouts should also be inspected periodically to ensure they are functioning as designed.

Covered Walkway Roof

Membrane

The roofs at the covered walkways feature single-ply membranes. These roofs are in fair condition and are approximately half-way through their service life.

Flashing and Trim

The covered walkway roof flashing and trim appears altered from the original details. See the gutter and downspout section below for more information.

Scuppers

The covered walkways appear to have originally featured integrated scuppers that projected from the steel pipe columns. The scuppers no longer appear to be in operation. Consideration should be given to restoring this feature and the flashing and trim during a future re-roofing project.

Eaves and Soffits

Eaves and soffits at the covered walkways are clad in stucco. These finishes appear to be in good condition and should be periodically inspected and maintained.

Linear recessed lighting is featured in the soffit at the covered walkway projecting west from the north elevation of the Theater. These fixtures should be replaced with LED-type lighting and a new lens. The length of the lighting is approximately 200 feet.

Interiors

Partition Walls

No work required.

Interior Doors

Existing Doors

The Theater (Bldg. 2) features four pairs of original plywood veneer doors at the entry vestibules at the north side of the theater. These original doors are in good condition and should be retained and repaired/upgraded to achieve consistent appearance and function. Other original doors with similar qualities should be identified and preserved in the same manner.

Finishes

Include an allowance for the preservation of interior finishes, including carpet and paint and acoustical treatment at the Theater. Preservation of the ceiling and proscenium are important priorities at the interior of the Theater.

Conveying Systems

No work required.

Plumbing

No work required.

Heating, Ventilating, and Air Conditioning (HVAC)

There is a mixture of HVAC equipment at the Theater Building (Bldg. 2), including hydronic heating and cooling system with individual and multi-zone air handlers. The HVAC equipment is located on the roof and at a mezzanine accessed from the stage. A chiller at Building 3 provides cold water to the air handlers. Assessment of Building 3 was not a part of the scope of work.

Additional HVAC is provided to other spaces in Building 2 by DX rooftop package units. These units are in fair condition and will need to be replaced in the next 5-10 years. Include cost to remove and replace in the short-term estimate

The HVAC system at the Music Building (Bldg. 4) was recently installed and is in good working condition. No work is required at Building 4.

Replace Existing Equipment at the Theater Building (Bldg. 2)

It is anticipated that the existing HVAC equipment at Building 2 will need to be replaced in the next 5 to 10 years. For the purpose of pricing assume the new system will be configured similar to the existing system.

Fire Protection

A number of minor fire and life safety deficiencies were identified at Building 2 during the conditions assessment. See Appendix 5 (Fire & Life Safety Evaluation) for more information. These include lack of seismic bracing on the fire riser, missing components to the sprinkler system and a damaged exit sign. Provide an allowance to address these deficiencies.

Fire protection at Building 4 exhibits no deficiencies. No work is required.

Electrical

The electrical system at the Theater Building (Bldg. 2) is of varied age and condition and some components should be replaced to improve reliability and efficiency.

Replace subpanels at Building 2 that may be original to the Building. Assume four subpanels for replacement at Building 2.

Replace all incandescent lighting at Building 2. Incandescent lighting currently exists at the theater and dressing rooms.

The Music Building (Bldg. 4) was recently upgraded. No electrical work is required.

Equipment

Evaluation of existing equipment at the Theater and Music complex was beyond the scope of work of this report.

Furnishings

The seating is an important character-defining feature of the Theater. The seats appear to date to the original construction. The layout and configuration of aisles should be maintained along with the original seats. The seat have previously been reupholstered, for future upgrades the cushions on the seats can be reupholstered rather than being replaced. The wood arms and painted metal sides can be refinished.

Site Work

Waterproofing and Repair of Brick Retaining Walls

The north end of the Theater is placed on a podium several feet above the natural grade of the campus. The podium consists of brick retaining walls and concrete stairs and slabs. Many of the retaining walls act as planting beds for shrubs and small patio trees. The brick walls exhibit deterioration and spalls similar to other brick walls on campus and should be repaired as follows:

Spalled and Cracked Brick Treatment

Evaluate plant material to determine if it is historically significant. Evaluate plant material for feasibility of salvaging and reinstallation. If feasible, remove and relocate plants. Excavate soil from behind retaining walls.

Remove and replace face-spalled and cracked brick. Replacement units are to match the size, color, texture, and material properties of the original bricks. Note that the brick units are a special size. Mortar used to set and point replaced brick units should be softer than the brick units (Type N or O) and match the color, aggregate, and tooling of the original mortar.

Waterproofing includes new damp-proofing at inside face of bricks that will be in contact with soil. Consider installing through wall drains at areas where the retention of moisture is more pronounced.

Assume excavation and damp proofing of 1,000 square feet of brick retaining wall. Assume 25 percent replacement of brick.

Buildings 35, 36, 37, 38, 39 | Math and Planetarium Complex

There are two reuse options for Buildings 35-39 as follows:

Alternatives 1A, 1B and 1C:	Alternatives 1A, 1B and 1C reuse the entire complex as an interdisciplinary center.
Alternatives 2A and 2B:	Alternatives 2A and 2B, require the demolition of the majority of the complex to provide space for a new planetarium. The East Math Wing (Bldg. 35) and its exterior canopy will remain and be for community use, including support of the new planetarium.

Schematic drawings and diagrams illustrating treatment recommendations for the complex are included in Appendix 1.


Figure 4: Math and Planetarium complex (Bldgs. 35-39).

Selective Demolition

For Alternatives 1A, 1B and 1C, selective demolition consists of the removal of additions added after the original construction.

For Alternatives 2A and 2B, West Math Wing (Bldg. 36), Reprographics (Bldg. 37) and Building 38 are demolished in their entirety. Building 39, the existing Planetarium, is moved in part or in its entirety.

See individual categories for demolition impacted by programmatic changes.

Alternatives 1A, 1B and 1C

Removal of additions added after the original construction:

- West Math Wing (Bldg. 36): 2,932 GSF is removed.
- Building 38: 435 GSF (Remove in its entirety).
- Planetarium (Bldg. 39): 1,159 GSF is removed.

Alternatives 2A and 2B

Demolitions:

- West Math Wing (Bldg. 36): 8,287 GSF (demolished in its entirety)
- Reprographics (Bldg. 37): 6,361 GSF (demolished in its entirety)
- Building 38: 435 GSF (demolished in its entirety)

Heating, Ventilation and Air-Conditioning (HVAC)

Remove HVAC units and associated ductwork, piping, curbs, and supports from canopy roofs. Remove registers and non-glass panels from clerestory windows to south of Math Wings (Bldgs. 35 and 36).

Removal of Hazardous Materials

A limited survey and sampling of asbestos containing materials (ACMs) was completed in 2005. A visual survey was completed as part of the Historic Structures Report in January 2015. This recent survey identified additional potential hazardous materials including ACMs, lead based paint (LBP), mercury, polychlorinated biphenyls (PCBs) and miscellaneous materials.

Asbestos: The 2005 survey identified window putty, leveling compound, linoleum flooring, vinyl floor tile, and transite pipe as being ACMs. A visual survey and assessment completed as part of the Historic Structures Report in January 2015 determined that additional ACMs may be present. Amongst those materials suspected as ACMs are acoustic ceiling tile, vinyl base and carpet mastic, insulation, grout, exterior expansion joints, counter top and sheet flooring. The complete list is contained in Appendix 6: Hazardous Materials Visual Assessment Report.

Lead: The January 2015 visual survey identified several items that potentially contain lead paint including, but not limited to, painted door and window systems, exterior painted walls, ceramic tile and roof systems. For more detail see Appendix 6: Hazardous Materials Visual Assessment Report.

PCB: The January 2015 visual survey identified potential polychlorinated biphenyls (PCB) in the ballast at fluorescent fixtures, concrete expansion joint caulking and window putty.

Other: Mercury was identified in the fluorescent light bulbs.

Structural

Foundations

Foundations: Programmatic Changes

Alternatives 1A, 1B and 1C:
- East Math Wing (Bldg. 35): Saw cut concrete and patch at new Food Prep.
- Reprographics (Bldg. 37): Demo slab and provide new 4-inch reinforced concrete slab at renovated and expanded restrooms.

Alternatives 2A and 2B:
- East Math Wing (Bldg. 35): Saw cut concrete and patch at new Food Prep.

Foundations: Structural Mitigation

Alternatives 1A, 1B and 1C, Math Wings (Bldgs. 35 and 36): New steel moment / braced frames at entire north wall of Buildings 35 and 36: saw cut existing slab, excavate and install new concrete grade beam at locations of new steel columns. Columns to be located 16 feet to 24 feet on-center. Patch concrete slab.

Alternatives 1A, 1B and 1C, Reprographics (Bldg. 37): Saw cut existing slab and install new foundation for new shear wall at mechanical space at north portion of Building 37. Length of new shear wall is approximately 12 feet.

Alternatives 2A and 2B, East Math Wing (Bldg. 35): New steel moment / braced frames at entire north wall of Building 35. Saw cut existing slab, excavate and install new concrete grade beam at locations of new steel columns. Columns to be located 16 feet to 24 feet on-center. Patch concrete slab.

Gravity Load Systems

Bearing Walls

Alternatives 1A, 1B and 1C, Reprographics (Bldg. 37): Provide new interior openings between the three large spaces at the south side of the proposed Maker Space. Assume two openings to be 5 feet wide. Provide new wood headers and associated framing at existing bearing walls.

Posts / Columns

Alternatives 1A, 1B and 1C, West Math Wing (Bldg. 36): A new opening at Building 36 is proposed to allow pedestrian access from the south parking lot to the new planetarium to be located north of Building 36 in these alternatives. This will require removing load bearing columns and walls and providing new columns as follows:

- Shore upper roof and clerestory framing at south wall.
- Remove existing exterior walls and window walls to create a 16-foot wide opening at the north and south walls.

- Assume four new steel columns and foundations as required to support roof and clerestory windows. Include lateral load mitigation strategies listed below.

Roof

No alterations required.

Lateral Load Systems

Shear Walls

New Shear Walls

Alternatives 1A, 1B and IC, East Math Wing (Bldg. 35), south wall: Provide new plywood shear walls. Shear walls will require relocating existing doors to create continuous walls from roof to foundation.

Alternatives 1A, 1B and IC, Reprographics (Bldg. 37): Provide new plywood shear wall with new foundation at mechanical space at north portion of Building 37. Length of new shear wall is approximately 12 feet.

Alternatives 2A and 2B, East Math Wing (Bldg. 35), south wall: Provide new plywood shear walls. Shear walls will require relocating existing doors to create continuous walls from roof to foundation. Assume two (2) 8-foot shear walls and two (2) four-foot shear walls. Assume that existing grade beams are adequate for attaching new shear walls.

New Shear Walls – Alternate to Supplemental Framing (Moment / Braced Frames)

Alternatives 1A, 1B and IC, Math Wings (Bldg. 35 and 36): As an alternate to Steel Moment and Braced Frames (see below) at the north wall of Building 35 and 36, provide shear walls at the interior of the building. See appendix A within Appendix 3 Structural Evaluation. For both buildings, assume three (3) locations, 8-foot in length and two (2) locations 4-foot in length. Saw cut existing slab, excavate and install new foundation, patch slab.

Alternatives 2A and 2B, East Math Wing (Bldg. 35): As an alternate to steel moment and braced frames (see below) at the north wall of Building 35 provide shear walls at the interior of the building. See appendix A within Appendix 3 Structural Evaluation. Assume three (3) locations, 8-foot in length and two (2) locations 4-foot in length. Saw cut existing slab, excavate and install new foundation, patch slab.

Supplemental Framing

New Steel Moment / Braced Frames

Alternatives 1A, 1B and IC, Math Wings (Bldgs. 35 and 36): Provide new steel moment or braced frames at entire length of north wall. Assume column spacing at 24 feet on center. Assume 7 columns at East Math Wing (Bldg. 35) and 8 columns at West Math Wing (Bldg. 36). See typical details in appendix B within Appendix 3 Structural Evaluation.

Alternatives 2A and 2B, East Math Wing (Bldg. 35): Provide new steel moment or braced frames at entire length of north wall. Assume column spacing at 24 feet on center. Assume 7 columns. See typical details in appendix B within Appendix 3 Structural Evaluation.

Diaphragms

New Diaphragms

Alternatives 1A, 1B and 1C, Math Wings (Bldgs. 35 and 36), Reprographics (Bldg. 37) and Planetarium (Bldg. 39): Provide new wood diaphragm cross ties per appendix B within Appendix 3 Structural Evaluation.

Alternatives 1A, 1B and 1C, Reprographics (Bldg. 37): Provide new wood diaphragm collectors / drags. See appendix B within Appendix 3 Structural Evaluation for locations.

Alternative 2A and 2B, East Math Wing (Bldg. 35): Provide new wood diaphragm cross ties per appendix B within Appendix 3 Structural Evaluation.

Enhanced Connections

Wall-to-Roof

Work Required

Alternatives 1A, 1B and IC, Reprographics (Bldg. 37) and Planetarium (Bldg. 39): Attachment of brick masonry walls to wood roof diaphragms is required at Building 37 and the orthogonal portion of Building 39. Provide new wall anchors at 4 feet on center per typical details in appendix B within Appendix 3 Structural Evaluation. See appendix A within Appendix 3 Structural Evaluation for locations.

Alternatives 2A and 2B: No work required.

Wall-to-Wall

No alterations required.

Wall-to-Foundation

No alterations required.

Exterior Enclosure

Exterior Walls

Brick Bearing Walls

Brick bearing walls are located at the following locations:

- North wall of Math Wings (Bldgs. 35 and 36) below the window walls.
- Portions of the east, west and south elevations of Reprographics (Bldg. 37).
- Planetarium (Bldg. 39), orthogonal portion of the building.

Brick bearing walls are to be preserved and maintained with the following treatments.

Spalled and Cracked Brick Treatment

Alternatives 1A, 1B and IC, Math Wings (Bldgs. 35 and 36), Reprographics (Bldg. 37) and Planetarium (Bldg. 39): Remove and replace spalled and cracked brick within bearing and clad walls. Replacement units are to match the size, color, texture, and material properties of the original bricks – note that the brick units are a special size ("utility" sized bricks, 2-7/8 inch square x 11-3/4 inches). Allow for replacement of 50 brick units.

Alternatives 2A and 2B includes brick treatment only at the north wall of the East Math Wing (Bldg. 35) and the brick wings walls. Assume no replacement of bricks at the north wall of Building 35.

Cracked and Deteriorated Joint Treatment

Carefully remove cracked and deteriorated mortar from joints to a depth of ¾-inch. Take care not to damage brick units. Pre-wet joints and install new Type-N mortar in two layers, color and aggregate to match the original mortar. Tool the joint profile to match original. Allow for repointing of 5 percent of brick mortar joints.

Efflorescence Treatment

Efflorescence is present at the base of the north walls of the Math Wings (Bldgs. 35 and 36); the efflorescence can extend up to approximately 3 feet.

Prior to finalizing treatment to remove the efflorescence, perform chemical and petrographic analysis to determine the type and source of efflorescence.

Visual observations indicate that the efflorescence is caused by over-irrigation and/or lack of drainage at planters and planting areas at the base of the north walls. Change to a drip irrigation system and locate lines a minimum of 5-feet away from the base of brick masonry walls.

Perform trial/sample cleaning to determine the gentlest cleaning that effectively removes the salts. If necessary and if determined by analysis results, chemically treat wall surfaces to remove efflorescence.

Treatment of Soiling and Biological Growth

Soiling and biological growth is present at a limited wall area that is not protected by overhanging eaves or canopies. Clean the wall with a mild detergent and biocide. Perform trial/sample cleaning to determine the gentlest level of cleaning that effectively removes the soiling and biological growth.

Assume 250 square feet of wall area requires cleaning and biocide treatment.

Brick Wing-Walls

Brick wing-walls are located to the south of the East Math Wing (Bldg. 35); the walls consist of two wythes of brick separated by a steel-reinforced grout core. The walls support the southern side of the canopy to the south of Building 12.

Spalled and Cracked Brick Treatment

An unusually large percent of the bricks within the wing-walls are experiencing spalling of the fired face of individual brick units. Visual inspection suggests that the deterioration is related to problems with the original manufacture of the brick. Spalling failure may be exacerbated by crypto-florescence, the formation of crystals within the body of the brick. Laboratory (petrographic) analysis is recommended to determine the cause of the deterioration prior to finalizing treatment. Additionally, we recommend testing of the in-place mortar, which may be too hard and also contributing to the deterioration of the brick.

Remove and replace face-spalled and cracked brick within bearing and clad walls. Replacement units are to match the size, color, texture, and material properties of the original bricks. Note that the brick units are a special size. Mortar used to set and point replaced brick units should be softer than the brick units (Type N or O) and match the color, aggregate, and tooling of the original mortar.

Assume 25-percent of brick units at the wing-walls require replacement.

Alternatives 2A and 2B includes brick treatment only at the north wall of the East Math Wing (Bldg. 35) and the brick wings walls. Assume no replacement of bricks at the north wall of Building 35.

Efflorescence Treatment

Efflorescence is occurs sporadically across the full height of the wing-walls.

Prior to finalizing treatment to remove the efflorescence, perform chemical and petrographic analysis to determine the type and source of efflorescence.

Visual observations indicate that the efflorescence is caused by over-irrigation and/or lack of drainage at planters and planting areas at the base of the wing walls.

Perform trial/sample cleaning to determine the gentlest cleaning that effectively removes the salts. If necessary and if determined by analysis results, chemically treat all of the wing-wall brick surfaces to remove efflorescence.

Poured-in-Place Concrete

Poured in place concrete is located at the circular walls of the existing Planetarium (Bldg. 39). The walls are in good condition and minimal work is required.

Surface Finish & Crack Repair

Alternatives 1A, 1B and 1C: Remove paint from entire surface of concrete on the Planetarium (Bldg. 39) using gentlest means possible; suggest abrasive treatment using walnut shells or similar as identified by small scale trials starting with the gentlest means possible. Assume 10 linear feet of crack repair. Prepare surface and paint.

Stucco-Clad Wood-Frame Walls

Stucco-clad wood-frame walls for Alternatives 1A, 1B and 1C are present at the following locations:

- South walls of the Math Wings (Bldgs. 35 and 36)
- Eastern most section of East Math Wing (Bldg. 35)
- West wall at West Math Wing (Bldg. 36) – may require repair following removal of west addition
- Walls at covered canopy between Buildings 35 and 36
- Portions of walls at Reprographics (Bldg. 37)

Stucco-clad wood-frame walls for Alternatives 2A and 2B are present at the following locations:

- South walls of East Math Wing (Bldg. 35)
- East end of Building 35
- West wall of Building 35

Stucco-clad wood-frame walls are to be preserved and maintained with the following treatments:

Stucco Repair

Alternatives 1A, 1B and 1C, Math Wings (Bldgs. 35 and 36) and Reprographics (Bldg. 37): There is minor weathering of the paint and stucco at the base of walls due to water damage. Stucco to be repaired by removing areas of damage and repairing surface to match adjacent surface. Assume 500 square feet.

Alternatives 2A and 2B, East Math Wing (Bldg. 35): There is minor weathering of the paint and stucco at the base of walls due to water damage. Stucco to be repaired by removing areas of damage and repairing surface to match adjacent surface. Assume 100 square feet.

Removal of Incompatible Repairs

Alternatives 1A, 1B and 1C, Math Wings (Bldgs. 35 and 36) and Reprographics (Bldg. 37): A number of incompatible stucco patches exist on the walls. Repair to include removal of cement plaster, repair to match adjacent texture. Assume 200 square feet.

Alternatives 2A and 2B, East Math Wing (Bldg. 35): A number of incompatible stucco patches exist on the walls. Repair to include removal of cement plaster, repair to match adjacent texture. Assume 50 square feet.

New Paint Finish

Alternatives 1A, 1B and 1C, Math Wings (Bldgs. 35 and 36) and Reprographics (Bldg. 37): Provide new paint finish at all stucco walls.

Alternatives 2A and 2B, East Math Wing (Bldg. 35): Provide new paint finish at all stucco walls.

Plywood-Clad Wood-Frame Walls

Plywood-clad wood-frame walls are present at the following locations:
- Panels at the south walls of the Math Wings (Bldgs. 35 and 36)
- East wall of East Math Wing (Bldg. 35)
- East and west walls of Reprographics (Bldg. 37)

Replacement of Plywood Panels

Plywood panels consisting of No. 1 clear natural birch are present at select locations. Originally a clear finish, these panels have been painted a dark grey color. A number of panels also have water damage at their base.

Existing plywood panels are to be removed and replaced in-kind with No. 1 clear natural birch plywood. Provide clear finish.

Alternatives 1A, 1B and 1C, Math Wings (Bldgs. 35 and 36) and Reprographics (Bldg. 37): Assume 800 square feet of new plywood with clear finish.

Alternatives 2A and 2B, East Math Wing (Bldg. 35): Assume 250 square feet of new plywood with clear finish.

Windows

Aluminum Window Walls

Replace and Repair

Alternatives 1A, 1B and 1C, Math Wings (Bldgs. 35 and 36):

Alternatives 2A and 2B, East Math Wing (Bldg. 35): Remove and replace all existing glass; remove and replace sealant; restore/adjust operations and hardware; clean, prepare, and clear-coat frames; and install safety/UV films as required.

Aluminum Clerestory Windows

Replace and Repair

Alternatives 1A, 1B and 1C, Math Wings (Bldgs. 35 and 36) and Reprographics (Bldg. 37): Alternatives 2A and 2B, East Math Wing (Bldg. 35): Remove and replace all glass; remove and replace sealant; restore/adjust operations and hardware; clean, prepare, and clear-coat frames; and install safety/UV films as required.

Wood Windows

Replace and Repair

Alternatives 1A, 1B and 1C, Reprographics (Bldg. 37): Remove and replace all glass with new laminated glass. Remove paint from frames, repair wood frames, prime and paint.

Louvers

Repair

Alternatives 1A, 1B and 1C, Reprographics (Bldg. 37): Clean, prepare and clear-coat existing aluminum louver at southwest corner of Building 37.

Exterior Sun Control

No repairs required at Buildings 35-39.

Exterior Doors

Type 1 – Solid Wood Doors

Relocate Doors

Alternatives 1A, 1B and IC, East Math Wing (Bldg. 35): Relocate five (5) exterior wood doors at the south wall of Building 35 to provide locations for new shear walls. See additional information at Lateral Load System. Relocation will require new openings in wood framed walls, including new wood framing and headers. Relocate doors into new wood frames to match existing. See repair of wood doors below.

Repair

Alternatives 1A, 1B and IC, Building Math Wings (Bldgs. 35 and 36), Reprographics (Bldg. 37) and Planetarium (Bldg. 39): Existing wood doors are in good condition. Refinish existing wood doors. Remove wood doors from frame. Repair wood frame and prep for new hinges and hardware. Remove all door hardware. Remove paint and repair damaged wood. Prepare door for new hardware. Prime and paint door. Rehang door on new hinges. Provide new ADA compliant hardware. Provide new push bar hardware at spaces over 990 square feet.

Alternatives 2A and 2B, East Math Wing (Bldg. 35): Existing wood doors are in good condition. Refinish existing wood doors. Remove wood doors from frame. Repair wood frame and prep for new hinges and hardware. Remove all door hardware. Remove paint and repair damaged wood. Prepare door for new hardware. Prime and paint door. Rehang door on new hinges. Provide new ADA compliant hardware. Provide new push bar hardware at spaces over 990 square feet.

Type 2- Hollow Metal Doors

Replace

Alternatives 1A, 1B and IC, Reprographics (Bldg. 37): Replace existing hollow metal door and frame at mechanical room.

New

Alternatives 1A, 1B and IC, Buildings Math Wings (Bldgs. 35 and 36), Reprographics (Bldg. 37) and Planetarium (Bldg. 39): Provide new rated hollow metal doors and frames at all mechanical and electrical rooms shown on plans.

Roofing

Main Roof – Low Slope, No Parapet

Remove and Replace Membrane and Repair Sheathing

At Alternatives 1A, 1B and IC, Buildings Math Wings (Bldgs. 35 and 36) and Planetarium (Bldg. 39) and Alternatives 2A and 2B, East Math Wing (Bldg. 35):

Remove existing membrane roof and all underlayment down to the exterior roof sheathing. Repair damaged sheathing. Assume 10 percent. Install new single-ply membrane roof.

Repair and Replace Flashing and Trim

Overhangs at the north and south walls of the Math Wings (Bldgs. 35 and 36) consist of metal drip edge over the original aluminum fascia panel.

At Alternatives 1A, 1B and IC, Buildings Math Wings (Bldgs. 35 and 36) and Planetarium (Bldg. 39) and Alternatives 2A and 2B, East Math Wing (Bldg. 35):

Provide new metal drip edge at all low slope roof edges. Remove paint from the aluminum drip edge, clean and protect.

New Gutters and Downspouts

Add Alternate: Add gutters to north and south roof eaves of the Math Wings (Bldgs. 35 and 36) for future water harvesting system.

Repair and Refinish Eaves and Soffits

Remove paint from existing wood soffits at the Math Wings (Bldgs. 35 and 36). Repair wood, prime and paint.

Main Roof – Low Slope, with Parapet

Remove Membrane and Repair Sheathing

Alternatives 1A, 1B and IC, Reprographics (Bldg. 37): Remove existing membrane roof and all underlayment down to the exterior roof sheathing. Repair damaged sheathing. Assume 10%. Install structural collectors and diaphragm cross ties at Building 37. Install new single-ply membrane roof. Provide new reglet and counter-flashing at parapet walls to receive roof membrane.

Canopy Roof

Remove Membrane and Repair Sheathing

At Alternatives 1A, 1B and IC, Math Wings (Bldgs. 35 and 36) and Reprographics (Bldg. 37) and Alternatives 2A and 2B, East Math Wing (Bldg. 35):

Remove existing membrane roof and all underlayment down to the exterior roof sheathing. Repair damaged sheathing. Assume 25 percent. Provide new metal drip edge at edge of canopy roof.

New Gutters and Downspouts

At Alternatives 1A, 1B and IC, Math Wings (Bldgs. 35 and 36) and Reprographics (Bldg. 37) and Alternatives 2A and 2B, East Math Wing (Bldg. 35):

Remove existing gutters and downspouts and install new galvanized sheet metal gutters and downspouts.

Repair and Refinish Eaves and Soffits

At Alternatives 1A, 1B and IC, Math Wings (Bldgs. 35 and 36) and Reprographics (Bldg. 37) and Alternatives 2A and 2B, East Math Wing (Bldg. 35):

Remove paint from existing wood soffits. Repair damaged wood. Assume 10 percent. Prime and paint soffits.

Other Roof(s) - Copper Dome

Investigation and Repair

Alternatives 1A, 1B and 1C, Planetarium (Bldg. 39): Provide allowance for copper investigation and repair, including repair of gutter system.

Skylights

Modify Framing

Alternatives 1A, 1B and 1C, Math Wings (Bldgs. 35 and 36) and Reprographics (Bldg. 37), at canopy roof: Modify existing framing to provide new skylights at exterior roof canopy at Buildings 35, 36 and 37. Assume 12 locations.

Alternatives 2A and 2B, East Math Wing (Bldg. 35), at canopy roof: Modify existing framing to provide new skylights at exterior roof canopy at Building 35. Assume 4 locations.

Interiors

Interiors will be fully modernized to meet the flexible needs of the campus community now and into the future. The interiors will be rehabilitated to provide comfortable spaces for a variety of functions.

The existing spaces are simply designed with clean lines and durable, low-maintenance materials. New finishes at administration, student and community spaces will be compatible with the original design. New finishes include carpet tiles, rubber base, paint, ceiling tiles and window treatments.

Original surface-mounted ceiling tiles will remain where feasible. Additional testing to determine if the tiles contain asbestos-containing materials is required. If replacement tiles are required, they should match the original tiles in size, color and texture. Selected ceilings may need to be lowered to accommodate new Heating, Ventilation and Air-Conditioning (HVAC) equipment. See HVAC section below for more information.

Manual window shades will be provided at the north window walls while motorized window shades will control daylight at the south-facing clerestory windows.

The original design of the classroom buildings incorporated many sustainable design principles including passive daylighting and natural ventilation. While the buildings will be retrofitted with new heating and ventilation systems, there are numerous opportunities to showcase the sustainable features of these buildings.

To improve their performance, additional study and energy modeling is recommended to fully understand the performance of the buildings over the course of a day and throughout the year. Clerestory glazing may be retrofitted with special performance glazing, like low-e, that reflects long-wave, or heat-generating, infrared waves while still allowing visible light to enter the building.

Mechanical, Electrical, and Plumbing (MEP)

Heating, Ventilation and Air-Conditioning (HVAC)

The current mechanical system relies on rooftop units placed on the covered walkways with supply air ducts compromising the clerestory windows. The current design is both unattractive and has caused some structural damage to the covered walkways that were not designed to carry the weight of these units.

Rehabilitation will include a new heating and ventilation system integrated with the spatial character of the interior. Preliminary design concepts include two primary options:

Option 1

A four-pipe system that uses hot and cold water loops to provide heating and air-conditioning. The four-pipe system includes a central plant with a chiller and boiler sized to provide hot and cold water to the Student Success Center and Classroom & Labs complex (Bldgs. 7-9), Business Education complex (Bldgs. 12-14), and Math and Planetarium complex (Bldgs. 35-39). The central plant will be discretely located to blend in with the campus landscape with screen walls and a roof. At the interiors, the hot and cold water loops will terminate in either fan coils or chilled beam and ceiling panels. The fan coils may require dropping a portion of the ceiling to accommodate the unit. Chilled beams or ceiling panels provide a more efficient system that could be left exposed at the interior of the spaces. Four-pipe hydronic systems require a greater up-front cost, but the systems operate more efficiently and have a greater life expectancy than the variable refrigerant system.

Option 2

The second option includes a variable refrigerant system (VRF) that moves refrigerant through a closed loop to provide heating and cooling. The VRF system includes ground-mounted heat pumps located outside the building. The outdoor units contain a compact footprint that can be integrated with screen walls located adjacent to the building. VRF systems allow for a single outdoor unit to serve multiple zones of a building, making them a good choice for multi-purpose buildings. A VRF system is a good choice for the classroom buildings because it requires only small-diameter pipes for moving refrigerant rather than large ducts that could be intrusive to the original spatial design. The refrigerant pipes connect with special compact fan coil units that could be located at ceilings or at the base of the window walls.

Electrical

The electrical system will be completely upgraded. Components beyond their useful service life, including transformers, main service panels and secondary distribution panels, will be replaced. Upgrade of the interior will include new lighting and power circuits.

Plumbing

Existing restroom spaces will be expanded and completely remodeled as part of the building rehabilitations. To make the reuse of existing water and waste lines possible, renovated restrooms will be located in current locations. Renovation of the restroom facilities will include removal and replacement of concrete floor slabs to provide easier tie-in of new fixtures with existing plumbing. Restrooms will be provided with new fixtures and accessories. Ceramic tile floor and wall tile is included.

Fire Sprinklers

Wet-pipe fire sprinkler system will be added to the classroom buildings to protect the buildings and occupants in the event of a fire. The sprinkler mains will be located in service rooms with the distribution piping and sprinkler heads left exposed in the spaces.

Communications and Security

Audio-visual equipment and wireless communications equipment will be installed to provide a 21st Century campus environment. New rooms with intermediate distribution frames (IDF) are provided at each complex.

A security system will be integrated with the overall campus security system to control access to the buildings and provide oversight of the campus environs. A security system could include closed-circuit cameras to monitor activity in and around the buildings. A comprehensive assessment of campus security was not part of this Historic Structures Report (HSR).

Site Work

Outdoor Spaces

New Plaza South of West Math Wing (Bldg. 36)

Alternatives 1A, 1B and 1C, relocate the new Planetarium to the north of West Math Wing (Bldg. 36). To provide direct access from the south, a portion of the north and south walls of Building 36, will be removed to provide a direct pedestrian path to the new Planetarium. To strengthen this axis, a new plaza is recommended for the space between Reprographics (Bldg. 37) and the existing Planetarium (Bldg. 39). This plaza will help funnel people through Building 36 to the new Planetarium. The plaza will also provide a meeting and gathering space for school and community groups arriving on campus. A small food service facility in the existing Planetarium will open directly onto this new entry plaza. The plaza will be landscaped to include benches and shade trees. The original reflecting pool at the southwest corner of the existing Planetarium may be restored to provide an additional amenity to this complex.

Building 93 | Swimming Pool complex

The Swimming Pool complex (Pools and Bleachers) is not viable for college swim events as it does not meet the required length for a competitive pool. Reuse options for the pools and bleachers include a community swim facility or pools for an adaptive therapy program. Both options will require a new pool building of approximately 5,000 GSF. The new facility will include reception, men's and women's changing rooms, food service, pool equipment and mechanical space.

Figure 5: Swimming Pool complex (Bldg. 93).

Selective demolition

Removal of Inappropriate Additions

Remove chain link fence from around bleachers.

Removal of Hazardous Materials

A limited survey and sampling of asbestos containing materials (ACMs) was completed in 2005. A visual survey was completed as part of the Historic Structures Report in January 2015. This recent survey identified additional potential hazardous materials including ACMs, lead based paint (LBP), mercury, polychlorinated biphenyls (PCBs) and miscellaneous materials.

Many potentially hazardous materials were identified in the pool equipment area that is currently located beneath the bleachers. The proposed plan calls for relocating pool equipment to a new location. Existing pool equipment beneath the bleachers will be removed.

Asbestos: The 2005 survey of asbestos containing materials (ACMs) identified pipe insulation and elbows as ACMs. A visual survey and assessment completed as part of the Historic Structures Report in January 2015 determined that additional ACMs may be present. The suspected ACMs include mastic, grout, exterior concrete expansion joints and exterior sub-surface transite pipes. With the exception of subsurface transite pipes which will remain encapsulated, the remainder of ACMs will be removed during the rehabilitation of the Swimming Pool complex.

Lead: The January 2015 visual survey identified several items that potentially contain lead paint including the paint around the edge of the pool and painted walls and handrails at the bleachers. Ceramic tiles at the base of the bleachers are also identified as potentially containing lead paint. These materials are to remain and no work is required at this time.

PCB: The January 2015 visual survey identified polychlorinated biphenyls (PCBs) in the ballast at fluorescent fixtures and in the concrete expansion joint caulking. These items will be removed and replaced during the rehabilitation of the pool and bleachers.

Other: Mercury was identified in the fluorescent light bulbs. The lighting will be removed and replaced with new lighting.

5-gallon buckets of hypochlorite being stored beneath the pool bleachers will be removed and stored in an area appropriate for the storage of pool chemicals and cleaners.

Structural

Foundations – Cast-in-Place Concrete Pool

The pool area consists of two separate gunite pools and surrounding concrete pool decks. The east pool is approximately 75-foot long by 24-foot wide. The west pool is approximately 75-foot long by 44-foot wide.

Surface Finish to Pools

Both pools require new plaster and new tile markings. For the purpose of pricing, assume new tile markings to match existing.

Gravity Load Systems

No alterations required.

Lateral Load Systems

Supplemental Framing

No alterations required.

Exterior Enclosure

Bleachers

Poured-in-Place Concrete Bleachers

The concrete bleachers are generally in fair condition with some deterioration, including cracks and spalls. The concrete surfaces are painted and much of the paint is peeling.

Cracked Concrete Treatment

Repair surface cracks by epoxy injection. Repair limited to 25 linear feet of crack repair. Repair areas of deteriorated concrete as required. Deterioration limited to 25 square feet.

Spalled Concrete Treatment

Repair spalls by removing loose concrete, cutting area square and clean, coating exposed rebar with anti-corrosion coating and patching concrete.

Assume 100 square feet of repair of concrete surfaces, including exposed concrete surfaces at existing pool equipment storage area.

Surface Finish Treatment

Nosing on stair treads and vertical surfaces at concrete bleachers are currently painted. Remove loose paint from these areas and provide new painted surface. Assume 1000 square feet of painted surfaces.

Interiors

Fittings

Signage

Include new site signage at Swimming Pool complex and interior and exterior signage at proposed pool building.

Mechanical, Electrical, and Plumbing (MEP)

Heating, Ventilating, and Air Conditioning (HVAC)

None at existing facilities. Include in cost for proposed pool building.

Electrical

The existing switch gear and transformers for the gym complex are located beneath the pool bleachers. This equipment is past its service life and will need to be replaced. A new mechanical space will be provided in the proposed pool building. Provide new electrical panels for the pool equipment, pool and site lighting and power and for the proposed pool building.

Plumbing

Include new ADA drinking fountains to replace existing at pool bleachers. Include new plumbing at proposed pool building.

Other

The pool equipment is to be relocated to a new location within the proposed pool building. The pool equipment varies in age. The existing pool heater (Lochinvar Copper Fin 2 CPN2072) is in good condition and can be relocated and reused at the new pool equipment room.

Fire Protection

None at existing facilities. Include new sprinklers in the cost for proposed pool building.

Equipment

None at existing facilities. Include food service and locker room equipment in cost for proposed pool building.

Furnishings

None at existing facilities. Include new furnishing for proposed pool building.

Site work

Selective Demolition

Remove existing concrete pool deck. Assume 5,000 square feet of new pool deck.

Site Development

Fences and gates

Provide new fencing and gates at the bleachers. Assume 100 linear feet of painted steel fencing with vertical pickets 4-inches on-center max, 8-foot high. Provide two (2) 5-foot gates.

Provide new fencing to separate the new pool building from the pool. Assume 100 linear feet of painted steel fencing with vertical pickets 4-inches on-center max, 8-foot high. Provide two (2) 4-foot gates.

Signs

Provide new site signage for the pool and bleachers.

Site Furnishings

Include new patio tables, chairs and umbrella for outdoor seating and lounging by the pool deck. Assume eight (8), 4-foot round tables with 4 chairs each. Assume 15 chaise lounges for around the pool.

Landscaping

Provide new landscape at entry to proposed pool building.

Site Utilities

Provide allowance for removal and relocation of utilities to new pool building.

Building 105 | Stadium

The LeBard Stadium is proposed for continued use as the campus' football facility. The Stadium underwent a significant disabled access project in the past ten years, incorporating new concrete ramps and accessible seating. The treatments for the Stadium address preservation and repair of the bleachers and original press box located at the top of the east bleachers.

The existing visitor's press box located above the bleachers at the west side of the stadium is in poor condition and is proposed for removal and replacement. The new press box at the west end of the Stadium is assumed to be approximately 200 GSF.

Figure 6: The LeBard Stadium (Bldg. 105).

Selective demolition

Removal of Inappropriate Additions

Remove existing wood framed press box at the west bleachers and replace with new wood-framed press box (200 square feet).

Removal of Hazardous Materials

A visual survey of potentially hazardous materials was completed as part of the Historic Structures Report in January 2015. This survey identified potential hazardous materials including ACMs, lead based paint (LBP), mercury, polychlorinated biphenyls (PCBs) and miscellaneous materials.

Asbestos: A 2005 survey of asbestos containing materials (ACMs) conducted in other parts of the campus did not include the Stadium. A visual survey and assessment completed as part of the Historic Structures Report in January 2015 identified potential ACMs. Based on work prosed for the Stadium, the following potential ACMs are assumed to be impacted:

- Exterior concrete expansion joints: remove and replace expansion joints where concrete is repaired and replaced.
- Concrete: to be impacted by concrete repair / replacement at bleachers.
- Roofing material: assume removal of existing roof and new roof at press box above bleachers at east end of the Stadium.

Lead: The January 2015 visual survey identified several items that potentially contain lead paint including painted wood members and wall surfaces at the east press box. Sampling of existing paint is required to confirm the presence of lead paint. Assume limited amount of lead paint requiring limited containment.

PCBs: The January 2015 visual survey identified polychlorinated biphenyls (PCB) in the ballast at fluorescent fixtures, concrete expansion joint caulking and window caulking. Fluorescent fixtures will be removed and replaced during the rehabilitation of press box. Remove and replace concrete expansion joints where concrete is repaired and replaced. Assume 100 linear feet. Window caulking will be removed and replaced in its entirety at the east press box.

Other: Mercury was identified in the fluorescent light bulbs. The lighting will be removed and replaced with new lighting.

Structural

Foundations – Cast-in-Place Concrete Bleachers and Aisles at Stadium

Original construction documents show that the stadium consists of a series of horizontal and vertical concrete pours separated by construction joints. The concrete is structural, stabilizing the earthen fill on which the stadium seating is constructed. The concrete also provide a base for the attachment of the aluminum benches. Concrete pours were tied together with continuous rebar, indicated as #3, on the original construction drawings. Horizontal pours are indicated as 3-1/2 inches. The drawings provide an option for the vertical pours: 3 inches for gunite or 3-1/2 inches for poured concrete. It appears that the vertical walls were constructed with poured concrete. See D/S-1 from the original construction documents for more details.

The primary deficiency identified at the Stadium is surface spalls and cracks at the poured-in-place concrete risers that form the structural base for the bleacher seating. Moisture has been able to enter the concrete and has caused significant rust-jacking of the steel reinforcing bars. As steel expands when it corrodes, the surface of the concrete has “popped” loose in many locations, exposing the vertical reinforcing bars. A lack of concrete cover at the face of concrete pours contributes to the failing concrete at the vertical surfaces. Many of the spalls have been patched, but the issue remains an on-going maintenance item.

Spalled concrete is not present at the concrete pours at the walking aisles.

Additional investigation should be completed prior to undertaking repair or replacement of the cast-in-place concrete at the bleachers. Investigation shall confirm location of rebar, amount of concrete cover and other construction details.

Two options are included for the concrete bleachers. The repair option is less expensive and intensive of the two options. The replacement option requires significant excavation and rebuilding of the bleachers at a much greater cost. The benefit of the replacement option is that it may be a more permanent fix and may minimize on-going maintenance and repair costs.

Mock-ups are recommended for the repair and replacement of concrete at the stadium bleachers and aisles.

Repair Option

Remove existing aluminum benches and mounting brackets and save for reinstallation. Cut the area to be patched square, at least 2 inches beyond the exposed rebar. Remove all loose concrete. Clean exposed vertical rebar to bare metal and treat with anti-corrosion coating. Patch concrete to match adjacent surfaces.

East Bleachers: 5,586 linear feet (LF) x 1.16 = 6,480 square feet (SF) of exposed concrete surface.
Assume 20% repair = 1,296 SF of surface repair.

West Bleachers: 3,906 LF x 1.16 = 4,531 SF of exposed concrete surface
Assume 20% repair = 781 SF of surface repair.

Total assumed patch repair is 2,077 SF for the east and west bleachers.

Note: The cost estimate includes the cost of concrete repair only.

Replacement Option

The replacement option includes the removal of damaged concrete and replacement with new cast-in-place concrete. Due to presumed original construction methods, it is necessary to remove both horizontal and vertical surfaces adjacent to the replacement area in order to dowel into adjacent construction.

Note: The unit cost for replacement has not been included in the cost estimate.

Cast-in-place concrete retaining and site walls

Original Cast-in-place concrete walls are located adjacent to original ramps and stairs. A number of these walls have cracks through their entire width. The walls do not appear to be overturning.

Crack Investigation and Repair

Provide Allowance to investigate and repair cracks at original site walls.

Gravity Load Systems

No alterations required.

Lateral Load Systems

Shear Walls

No alterations required.

Supplemental Framing

The original stadium press pox, located above the east bleachers, lacks a lateral force resisting system. Provide a new steel moment frame, including concrete foundations at the press box.

Metals

Steel Handrail and Railings

Staining from the corrosion of steel pipe rails and railings is prevalent around the Stadium complex. While the pipes appear to be galvanized, the areas embedded in concrete or welded to base plates and anchors are not galvanized leaving surface area exposed to moisture. Besides being an aesthetic issue, the oxidation has the potential to damage concrete: When steel corrodes it expands causing adjacent concrete surfaces to spall. This process is known as rust-jacking. There are several locations where the concrete has come loose due to rust-jacking.

Due to the extent of this issue and the fact that the areas needing treatment are often encased in concrete, it is recommended that additional testing be performed prior to determining a treatment strategy. Rust-inhibiting coatings and cathodic protection are potential treatments, but more research is necessary to evaluate their effectiveness and to understand the different conditions around the Stadium.

Provide allowance for additional investigation and mock-ups.

Exterior Enclosure (Press Box)

Wood-Frame Walls

The press box above the east bleachers is a wood framed structure with plaster and “flexboard’ cladding. The flexboard panels are assumed to be asbestos containing.

Surface Finish Repairs

The plaster needs minor repairs to approximately 10% of its surface area. The flexboard panels will remain and need a new coat of paint.

Windows

A piece of canted glazing has become displaced from the vertical mullion at the northwest corner of the press box.

Glazing Repairs

It is recommended that all glazing be removed and a new installation detail be provided to properly support the glazing within the frame.

Exterior Wood Features

Wood Trellis at Southwest Corner of the Press Box

The open trellis overhang at the southwest corner of the press box is an important character-defining feature that requires repair. The overhang consists of a two cantilevered wood beams running north-south with perpendicular joists spanning between the beams. The joists are attached to the cantilevered wood beams with approximately 4” steel angles. This feature has been heavily painted making it difficult to evaluate the condition of the wood. A sheet of plywood has been placed over five of the wood joists obscuring the original extent of the wood trellis.

Repair and Replacement

It assumed that the wood joist will need replacement and that wood repair is required for the cantilevered wood beams. Detach wood joists from steel angles. Remove paint from steel angles and cantilevered wood beams. Repair cantilevered wood beams as required.

Assume eight (8) new 3-inch by 8-inch wood joists connected to existing steel angles. Provide new paint finish.

Exterior Doors

There are exterior wood doors at the north and south elevation of the Press Box. These doors need new paint.

Roofing

The existing rolled roofing is in good condition and does not need to be replaced at this time.

A 4-foot section of steel pipe rail is required to close off the roof where there is currently no railing.

Interiors

The interior of the press box does not require any reconfiguration at this time.

Building 110 | Field House

The Field House currently provides office space for coaches, box offices for home and visitor ticket sales, and restrooms. It no longer provides locker rooms or concessions as originally designed. A major rehabilitation is proposed at Alternative 1A to make the Field House a fully-functional building. The rehabilitation proposes new restrooms, storage space and offices. Additionally, the weekend Swap Meet will continue to use the Field House for its operations.

The rehabilitation will include the replacement of all systems and new interiors. The exterior of the Field House will be cleaned-up including removal of exposed conduits and incorporation of more sympathetic lighting.

The Field House is proposed for demolition in Alternatives 1B, 1C, 2A and 2B.

In summary, the proposed options for the Field House (Bldg. 110) are as follows:

Alternative 1A:	Major rehabilitation to make the Field House a fully-functional building including new restrooms, storage space, offices and a base for the weekend Swap Meet operations.
Alternatives 1B, 1C, 2A and 2B:	Alternatives 1B, 1C, 2A and 2B, propose the demolition of the Field House.

Figure 7: The Field House (Bldg. 110).

Selective Demolition

Removal of Inappropriate Additions

Remove the recent wood-framed ticket offices at the southwest and southeast corners. These additions measure approximately 80 square feet each.

Removal of Hazardous Materials

A limited survey and sampling of asbestos containing materials (ACMs) was completed in 2005. A visual survey was completed as part of the Historic Structures Report in January 2015. This recent survey identified additional potential hazardous materials including additional ACMs, lead based paint (LBP), mercury, polychlorinated biphenyls (PCB) and miscellaneous materials.

Asbestos: The 2005 survey identified a number of ACMs in the Field House including exterior transite panels and a number of materials related to the boiler room. The January 2015 visual survey identified a number of additional potential ACMs including, but not limited to, ceilings, walls, window putty, exterior stucco, roofing, mastic and HVAC components. Sampling of potential ACMs should be undertaken to clarify the extent of ACMs in the Field House. Since the proposed plan includes significant remodeling, assume asbestos abatement in the scope of work.

Lead: The January 2015 visual survey identified several items that potentially contain LBP including painted interior and exterior painted surfaces, painted concrete floors. Sampling of existing paint and other materials is required to confirm the presence of LBP. Assume limited amount of lead paint requiring limited containment.

PCB: The January 2015 visual survey identified polychlorinated biphenyls (PCB) in the ballast at fluorescent fixtures, concrete expansion joint caulking and window caulking. Fluorescent fixtures will be removed and replaced during the rehabilitation of the Field House. Window caulking will be removed and replaced in its entirety at the Field House. Assume limited impact on the concrete expansion joint caulking.

Other: Mercury was identified in the fluorescent light bulbs. The lighting will be removed and replaced with new lighting. The HVAC system potentially contains hydrochlorofluorocarbons (HCFCs). The existing HVAC system will be removed in its entirety and replaced with new.

Structural

Foundations

No foundation work required.

Gravity Load Systems

Bearing Walls

Assume four (4) new wood-framed openings in exterior walls for new exterior doors to accommodate reuse plan.

Posts / Columns

No changes to posts and columns are required.

Roof

No changes to the roof framing system are required.

Lateral Load Systems

Shear Walls

No new shear walls are required.

Supplemental Framing

No supplemental framing is required.

Diaphragms

No work required.

Enhanced Connections

No enhanced connections are required.

Exterior Enclosure

Exterior Walls

Wood-Frame Walls

Wood-frame walls at the Field House (Bldg. 110) are clad in both stucco and transite panels. The transite panels are believed to contain asbestos. Samples are required to confirm. The panels appear to be in fair condition. Other surfaces are a stucco finish.

Repairs

For pricing assume minor repair of approximately 25 percent of surface at Field House. New paint for entire building.

Windows

Aluminum windows

Aluminum hopper windows are inset between wood posts at the north and south elevations. These windows are in fair condition and require routine maintenance.

Glazing

Glazing putty (sealant) is deteriorated and needs replacement. Window glass is generally in good condition, although some have had film applied to obscure the interior. In concert with other window work, the following is recommended:

- Test putty material to determine if asbestos or PCBs are present and if present, remove and dispose of material in accordance with local, state, and federal regulations.
- Completely remove and dispose of outer putty. Take care not to damage glass or window frame.
- Remove and salvage existing glass. Remove any paint coatings and putty residue. Clean glass and label pieces for reinstallation in original location.
- Completely remove and dispose of bedding putty.
- Treat window frames as described below.
- Reinstall glass, bed glass in non-staining silicone sealant and install outer fillet bead of non-staining silicone sealant. Follow recommendations in the latest edition of the "*Glazing Manual*" published by the Glass Association of North America (GANA).

Window Frames

The unfinished aluminum frames are exhibiting surface corrosion. A number of fasteners that connect pieces of the frames are missing. In concert with sealing and glazing work, the following is recommended:

- Protect glazing that is to remain.
- Clean the frames with a mild detergent and water.
- Remove surface corrosion by scrubbing with a pumice powder and pads.
- Replace, in kind, missing frame-to-frame fasteners.
- Seal surface with a clear coating to limit further corrosion.

Awning Sash

The following treatment is recommended:

- Treat frames and glazing as described above.
- Survey sash to determine damaged or missing hardware, such as hinges, delimiters, and latches.
- Replace damaged or missing hardware.
- Clean and lubricate hardware.
- Install neoprene weatherstripping.
- Adjust sash to assure operation.

Perimeter Seal

The perimeter seals between the window frames and brick (sides), precast concrete sill (bottom) and wood eave (top) have reached the ends of their service life and should be replaced. The following is recommended:

- Test sealant material to determine if asbestos or PCBs are present and if present, remove and dispose of material in accordance with local, state, and federal regulations.
- Completely remove and dispose of sealant and backing materials, taking care not to damage adjacent materials.
- Prepare substrate surfaces, prime as required by sealant manufacturer.

- Install new backing material and non-staining, elastomeric sealant. Protect adjacent materials from excess sealant.

Exterior Doors

Wood Doors

Exterior wood doors are in varying conditions. A number of doors are in fair condition and can be reused with minimal repairs. Other doors need to be replaced.

Assume repair of six (6) wood doors and frames. Provide new hardware.

Hollow Metal Doors

Provide six (6) new hollow metal doors in hollow-metal frames. Hollow metal doors to be provided at storage, service and restrooms, typically.

Roofing

Membrane

Remove existing membrane roof and all underlayment down to the exterior roof decking. Assume several layers of roof are present beneath the current membrane roof. Repair damaged decking. Assume 10 percent. Install new single-ply membrane roof.

Flashing and Trim

Provide new metal drip edge at all low slope roof edges.

Interiors

Partition Walls

New walls

Provide new wood-framed partition walls with gypsum board finish as required for new uses. Assume 80 linear feet of new wall.

Interior Doors

New Doors

Provide new solid wood doors in wood frames as required. Assume four (4) new doors and frames. Provide painted finish.

Provide four (4) new hollow metal doors and frames for service and storage rooms.

Finishes: Assume all new finishes, including carpet and ceiling tile.

Fittings

Signage

Provide new room and building identification signage.

Lockers

Provide new lockers at Swap Meet office space. Assume 20 new lockers.

Mechanical, Electrical and Plumbing (MEP)

Heating, Ventilating and Air-Conditioning

Assume new mechanical system for the building. Rooftop package unit with new ducts and registers. Size for 8 tons.

Electrical

Electrical panel boards are in good condition. Provide new distribution to the Offices.

Plumbing

Restrooms

Provide new restrooms at the east and west end of the Field House. New restrooms are approximately 800 square feet each. Assume new fixtures and finishes.

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ORANGE COAST COLLEGE
COSTA MESA, CALIFORNIA

HISTORIC STRUCTURES REPORT
APPENDIX 1: PRESERVATION ALTERNATIVES

PAGE & TURNBULL
MAY 2015
imagining change in historic environments through design, research, and technology

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OVERVIEW

SUMMARY

The Preservation Alternatives within this document have been prepared to supplement the Historic Structures Report. The purpose is to provide Coast Community College District (CCCD) and Orange Coast College (OCC or College) with examples of viable reuse strategies for their pre-1958 buildings designed by Master Architects Richard Neutra and Robert E. Alexander and recommendations for compatible treatment of the Garrett Eckbo designed landscape. The primary focus of the alternatives is the three classroom building complexes within the campus' central core, sometimes referred to as "bar" buildings. Singular options are also provided for the Swimming Pool (Bldg. 93) and Field House (Bldg. 110).

The alternatives examine the reuse of the following structures which originally functioned as follows:

- College Library (Student Success Center, Bldg. 7)
- Classrooms & Labs (Bldgs. 8 & 9)
- Business Education (Bldgs. 12-14)
- Science Department Classrooms & Labs (Math Wings & Reprographics, Bldgs. 35-37)
- Planetarium (Bldg. 39)
- Football Stadium and Field House (Bldgs. 105 & 110)
- Swimming Pool (Bldg. 93)

The impetus for the Preservation Alternatives stems from the research and analysis conducted by Page & Turnbull for the Orange Coast College Historic Structures Report (HSR). The findings of the report identify the remaining Neutra and Alexander buildings as eligible for listing on both the National and California Registers of Historic Places as a Historic District. The Eligible Historic District (Historic District) consists of the buildings noted above as well as the Theater and Music Building (Bldgs. 2 & 4). It is considered a discontiguous district because the Swimming Pool (Bldg. 93), Stadium and Field House (Bldgs. 105& 110) are separated geographically from the instructional buildings.

Figure 1: OCC campus aerial, ca. 1959. Source: Orange Coast College Library.

Figure 2: Classrooms & Library (Bldgs. 7-9), ca. 1951. Source: Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles. ID no.: gri_2004_r_10_b0078_f011_1110_26

Figure 3: View of Business Education (Bldgs.12-14), ca. 1957. Source: Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles. ID no.: gri_2004_r_10_b0080_f001_1745_37

Figure 4: Math and Planetarium complex (Bldgs. 35-37), ca. 1951. Source: Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles. ID no.: gri_2004_r_10_b0082_f012_13_2453_01

Current Building Projects

Coast Community College District has pursued two measures over the past 16 years to support growth at their three campuses. *Measure M* was voted into effect by the community in 2012 and *Measure C* kicked off the building phase at the OCCD in 2002. Both measures, along with state funding, have financed OCC's effort to design and construct 21st century instructional spaces for students, faculty and staff. Current projects in the queue include a Chemistry Building, Business/Math/Computing Center, Language Arts/Social Studies Building, and a Recycling Center. Projects on the horizon include a new Planetarium; Multidisciplinary Building; Administration Building; Adaptive PE, Gym, and Pool Facility; and Student Center. The result of all this construction leaves the pre-1958 Neutra / Alexander buildings vacant.

Neutra / Alexander Buildings

Although suffering from a lack of maintenance, claustrophobic infill, and make-shift solutions for mechanical systems, the historic buildings <u>are</u> capable of meeting the educational and comfort needs of the 21st century college campus. Renovations and systems upgrades can be done sensitively to return the buildings to their original glory.

While appropriately scaled, Buildings 10, 11, 38, and 72, and additions to Buildings 7 and 14 have crowded the quads that once separated the Neutra / Alexander buildings at the Central Core. The removal of these infill buildings will open the center of the campus, re-invigorate existing outdoor rooms, and return beautiful, human scaled quads to the campus, unhindered by the shadows of multi-story buildings.

PROPOSED PRESERVATION ALTERNATIVES

The alternatives proposed by Page & Turnbull fall within the acceptable limits of maintaining a Historic District. They are the result of program and planning research and analysis, and examine the feasibility of accommodating different, but complimentary uses to support both the College and the Community.

Criteria

The following criteria were used to guide the investigation of alternative uses:

Alignment with College Mission, Vision and Values: The designation of the Historic District and the renovation of the historic buildings within the District provide the College with an opportunity to teach through example by being responsible stewards of our built environment. The campus zones identified in the Vision 2020 Master Plan create silos of learning surrounding an oversized quad with very little cross pollination of departments. Creation of spaces which bring students together from different departments to work together mimics the work environment of many careers in the real world. The historic bar buildings physically connect the north and south sides of campus and are best positioned to house innovative interdisciplinary programs focused on technical education, basic skills, technical equipment training, and group projects.

Retention of the historic buildings will only enhance OCC's Vision "[t]o be the standard of excellence in transforming lives through education" and allow the College to provide a physical example of their Values known as CLASS: Community, Learning, Access, Stewardship, and Sustainability. The new uses proposed for the historic buildings within the Central Core of the campus shall foster "…a respectful, supportive and participatory campus climate of student engagement and academic inquiry" (OCC Mission Statement).

Alignment with the Vision 2020 Facilities Master Plan Key Planning Assumptions: The preservation and reuse of the Neutra / Alexander buildings meets many of the objectives identified within the Coast Community College District Vision 2020 Facilities Master Plan for Orange Coast College:

Make provisions for accommodating new career technology programs.
Proposed uses include an Interdisciplinary Center which would house a Makerspace where existing equipment from the Architecture Department could be housed along with new equipment to create a place where students from Architecture, Science, Art and other departments could learn how to work together. The need for new career technology programs may emerge.

Campus zoning will be a priority in the facility plan of the future.
As noted earlier, the proposed zoning from the Master Plan creates silos of learning. The Neutra / Alexander buildings located at the Central Core of the campus create connections between various zones, linking north and south.

Restoration of the original east-west pedestrian pathway provides another strong connection between the east and west edges of the campus.

Future site development will seek to UNIFY the campus.

Rehabilitation of the Neutra / Alexander buildings and the Eckbo landscape at the Central Core of the campus has the ability to help unify the campus. This would be achieved through the adaptive reuse of the buildings and recreation of Eckbo's east-west connection and expansion of his idea of creating outdoor rooms and nodes. This is a very different approach than the one proposed in the Master Plan which demolishes the Neutra / Alexander buildings, ignores the Eckbo landscape and creates a sea of green further separating the various zones from each other.

Aesthetics are viewed as important in defining/reflecting the College's identity.
It appears aesthetics have been important to OCC since its inception in 1948 when the College hired Neutra, Alexander, and Eckbo to master plan their new college and design its earliest buildings and the landscape that surrounds them. Neutra and Alexander are considered to be master architects and Eckbo, a frequent contributor of Neutra and Alexander, is well-known for his landscape designs.

The creation and maintenance of open space and planned landscaping is a priority for campus development.
Retention of the Neutra / Alexander buildings provide more intimate green spaces, appropriate for a college campus, once non-contributing infill buildings and additions are removed. The enormous quad proposed as part of the master plan can accommodate six (6) football fields – three across by two high between the Forum and the Arts Zone – and gives a feeling of disconnection between the north-south and especially between east-west.

An increase in grass areas at OCC will increase water usage and time spent mowing. This may negatively impact the Facilities Departments budget for landscape maintenance and they may not have the staff to adequately maintain the significant increase in lawn maintenance.

Sustainability is an important element in the future planning/development of the campus.
Renovation and reuse of an existing building is the most sustainable approach to accommodating change and growth. Smaller, campus sized green spaces allow for a variety of sustainable landscaping to be designed and could provide learning opportunities for both students and the community. California is currently in one of the worst droughts in our history. Creating smaller landscaped areas and using drought tolerant plantings which decrease the College's dependence on water for landscaping is a sustainable approach to future development of the campus. As noted earlier, the College has an opportunity to highlight their stewardship of both their natural and built environments and use the Neutra / Alexander buildings and the approach to the surrounding landscape to encourage change in their community.

Enhancement of the campus' physical image to the surrounding community including both physical and visual access to services and the academic core from community edges and campus periphery (Vision 2020 FMP, p.91).
Retention of the Neutra / Alexander buildings and removal of non-contributing

additions and infill buildings will enhance and improve the physical and visual access on campus.

The Master Plan reflects development of pedestrian nodes or plazas at naturally occurring and significant intersection along these spines. These nodes and plazas allow for placement of campus maps to assist in way finding and together with seating, opportunities for meeting friends and informal interaction…places to see and be seen. (Vision 2020 FMP, p.100).
Retention of the Neutra / Alexander buildings and removal of non-contributing additions and infill buildings will significantly improve way-finding. Pedestrians will again be able to see along the north-south 45-degree angle. Bringing back the original east-west connection and enhancing the "nodes" that already exist each Neutra / Alexander building complex in the Central Core also meets the intention of the Master Plan.

Functionality: The uses must be functional and meet a need on campus. The natural flexibility inherent in the 8' structural module of the buildings will allow for future modifications as necessary to accommodate the changing needs of a college campus.

Historical Appropriateness: Adherence with the Secretary of the Interior's Standards for Treatment of Historic Properties and retention of a historic district eligible for listing on the National and California Registers of Historic Properties is fundamental for all Preservation Alternatives. Removal of non-contributing additions and buildings within the Historic District will return the buildings to their period of significance. All renovations must be reversible per the Secretary of the Interior's Standards.

Vision and Goals

The vision for Preservation Alternatives at the Central Core of the campus is to restore the original exterior appearance to the Neutra / Alexander buildings, remove non-contributing additions and infill buildings, reestablish spatial relationships between the Neutra / Alexander buildings, and reestablish the east-west pedestrian axis connecting the Neutra / Alexander building complexes through Eckbo's landscape. Create a Historic Core for the campus that reflects the history of Orange Coast College but also embraces its future.

Additional goals include:

- Return usable open spaces to the Central Core of the campus.
- Create new outdoor rooms and enhance original outdoor rooms emphasizing Eckbo's indoor/outdoor relationships and the flexibility he wanted in his landscape designs.
- Include passive and active environments at open spaces and outdoor rooms.
- Provide a small food service element at the node within each building complex.
- Keep new development outside of the Historic District.
- Create connections between zones on campus.

Preservation Approach

Because change is necessary and expected on a college campus to keep up with changes in teaching styles, learning styles, and technology, the most appropriate approach for the eligible Historic District is to implement the Secretary of the Interior's Standards for Rehabilitation. It is expected that the Preservation Alternatives will meet the Secretary of the Interior's Standards for Treatment of Historic Properties and/or retain a historic district eligible for historic listing. Per the direction of the College, the uses recommended within the Alternatives shall:

- Relate to OCC's mission;
- Not introduce new classrooms;
- Meet the Key Planning Assumptions in the Vision 2020 Facilities Master Plan; and
- Limit the impact on new construction proposed in Vision 2020.

As part of the rehabilitation approach, the goal is to retain the greatest amount of historic fabric, fixtures and materials in place and remove non-contributing elements, including heating, ventilating and air conditioning (HVAC) systems, infill buildings and additions. The clerestory windows on the 'bar' buildings shall be restored to allow natural light to enter the rooms below. Where this is problematic for projection use it is recommended that black-out shades be used instead of black-out film on the glazing panels.

Reconstruction is recommended for the fireplace that originally sat within the lounge at the original Library (Bldg. 7). Reconstruction of Building 14 at the Business Education complex with new materials where insensitive additions have camouflaged the original building.

Sensitive additions to a historic building can be pursued but shall:

- Retain the historic character
- Respect the historic architecture and landscape
- Be compatible with the historic architecture
- Not destroy character defining features or materials
- Be reversible

The following Preservation Alternatives have been provided for consideration.

Preservation Alternative 1

Preservation Alternative 1 is the maximum reuse alternative. In order to preserve the Historic District and maximize the buildings saved the new Planetarium has been relocated to the north edge of the Historic District. Removal of non-contributing buildings and additions constructed after 1957 retains the most complete example of the Historic District. This maintains the integrity of the Historic District and unifies the campus with a signature central core.

Restoration of the original circulation pattern through the buildings is key to this alternative. Minor alterations to character-defining features have been proposed such as skylights at the covered walkways and upgrades to structural systems to increase seismic resistance.

It should be noted that Alternatives 1B and 1C do allow for the demolition of the Field House (Bldg. 110) and the Swimming Pool complex (Bldg. 93).

Alternative 1 includes three sub-options. A snapshot of the sub-options can be seen in the Preservation Alternatives Use Matrix on the following page.

Preservation Alternative 2

Preservation Alternative 2 is considered a strategic reuse alternative where the new Planetarium remains at its proposed location. The impact to the Historic District is greater in this alternative because of the loss of Buildings 36, 37, and 39 that spatially define the complex which originally housed the sciences at OCC. While not preferred, the removal of Buildings 36, 37, and 39 do not jeopardize the eligibility of the Historic District. However, removal of any additional historic fabric beyond what has been identified in Preservation Alternative 2 would eliminate any possibility of a Historic District.

Demolition proposed as part of Alternative 2 includes:

- Field House (Bldg. 110)
- Swimming Pool complex (Bldg. 93)
- Non-contributing structures along the north edge of the Historic District
- Non-contributing additions to Building 14
- Non-contributor Special Services (Bldg. 10)
- Non-contributor Faculty House (Bldg. 11)

Minor alterations to character defining features are the same as noted in Alternative 1: skylights at covered walkways and upgraded structural systems to supplement the existing system for seismic strengthening.

Preservation Alternative 2 includes two sub-options. In Alternative 2B an addition to Building 7 has been proposed to house the Dance Department. A snapshot of the sub-options can be seen in the Preservation Alternatives Use Matrix.

Future Flexibility

College campuses are continually evolving. Whether the impetus is technology or new programs, institutes of higher learning continually want to stay ahead of the curve. Therefore, it is helpful when buildings on college campuses have built in flexibility.

At some future date when OCC has the need for more classroom space or somewhere to test a new program, the Neutra / Alexander 'bar' buildings may be well suited for another renovation. The buildings were designed on an 8-foot module, including the window wall mullions. This provides ideal flexibility for re-sizing rooms without jeopardizing access to natural light or creating odd interior/exterior end-wall connections.

Cost Summaries

Cost summaries have been developed and are provided as part of each proposed Preservation Alternative. They can be found in the Preservation Alternatives sections. Caveat Emptor: Cost Summaries are based on Page & Turnbull's Scope of Work only and does not include related work as defined by CCCD.

PRESERVATION ALTERNATIVES USE MATRIX

Neutra / Alexander Complex	Alternative 1A	Alternative 1B	Alternative 1C	Alternative 2A	Alternative 2B
Music and Theater (Buildings 2 and 4)	No Change of Use Planned				
Library (Building 7)	Administrative Services (Remove Additions)	Administrative Services (Remove Additions)	Administrative Services & Theater Prefunction (Retain Additions)	Administrative & Special Services (Retain Additions)	Dance Department Complex (With New Addition)
Classrooms/Labs (Buildings 8 & 9)	Administrative Services	Administrative Services	Administrative Services	Administrative Services	Dance Department Complex
Business Education (Buildings 12-14)	Special Services and Honors (Remove Bldg. 14 Additions)	Special Services and Honors (Remove Bldg. 14 Additions)	Student and Community Functions (Remove Bldg. 14 Additions)	Interdisciplinary Center (Remove Bldg. 14 Additions)	Interdisciplinary Center (Remove Bldg. 14 Additions)
Math and Planetarium complex (Buildings 35-39)	Interdisciplinary Center	Interdisciplinary Center	Interdisciplinary Center	Science Support and Community Functions (Bldg. 35 Only)	Science Support and Community Functions (Bldg. 35 Only)
Swimming Pool complex (Building 93)	Community Pool	Removal	Removal	Removal	Removal
Stadium (Building 105)	No Change of Use Planned				
Field House (Building 110)	Athletics Support & Restrooms	Removal	Removal	Removal	Removal
Other Buildings					
Special Services (Building 10)	Removal	Removal	To Remain	Removal	Removal
Faculty House (Building 11)	Removal	Removal	Removal	Removal	Removal
New Planetarium	Relocate to North Edge of Historic District	Relocate to North Edge of Historic District	Relocate to North Edge of Historic District	Remain at Proposed Location	Remain at Proposed Location

BACKGROUND

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BACKGROUND

Page & Turnbull was hired in November 2014 by Coast Community College District to provide a Potential Historic Structures Report in response to public comments received on the Draft Environmental Impact Report for the Orange Coast College Vision 2020 Master Plan.

The College was founded in 1948 and the significant buildings were constructed between 1950 and 1957. The buildings within the Historic District were all designed by Master Architects Richard Neutra and Robert E. Alexander with Garrett Eckbo providing landscape design services. The buildings that remain-three classroom/lab complexes, a Planetarium, the Moore Theater, Music Building, Swimming Pool, Stadium and Field House- are exemplary of the design and planning approach of Neutra and Alexander during their decade-long partnership.

As noted above, the Preservation Alternatives presented here are provided to assist OCC in finding new uses for the historic fabric in order to avoid demolition as identified in the Vision 2020 Master Plan.

BUILDINGS AND SETTING

The original campus buildings remain recognizable and their surrounding landscape appropriate, although the later infill of Building 10 and additions to Building 14 do mar the open space between the complexes. Later development of the campus primarily took place outside of the Historic District boundaries keeping intact the pedestrian scale of the Neutra/Alexander structures at the center of the campus. Currently, multi-story complexes are in design or construction and these have all been sited further beyond the central core of the Historic District.

CHARACTER DEFINING FEATURES

The Neutra/Alexander classroom complexes have a number of shared character defining features which include:

- One story massing set at 45-degrees off north
- Two linear, rectangular classroom buildings separated by breezeway/patio
- Low pitched roofs
- Aluminum window walls canted outwards on low brick walls at north façades
- Solid walls with door openings and clerestory windows at south façades
- Solid east and west walls
- Mixed-use department-specific buildings south of the linear structures connected by covered walkways
- Covered walkway between the linear classroom and mixed-used department specific buildings
- Covered walkways and breezeways with overlapping planes
- Landscaped features include:
    - Brick screen and wing walls
    - Paved patio/courtyard spaces adjacent to buildings
    - Brick and concrete planters

For additional information on character defining features for individual buildings and the Historic District see 'Developmental History', Part 1 of the HSR.

ACCESSIBILITY

All proposed alternatives assume non-compliant accessibility issues will be addressed. These include but are not limited to new restroom facilities, door closure speeds, door force, and signage.

SUPPLEMENTAL INVESTIGATIONS

As part of the project, consultants were retained by Page & Turnbull to investigate the existing conditions of the historic buildings and to make recommendations for their continued use. These include:

- Structural Systems and Seismic Safety
- Mechanical, Electrical, Plumbing
- Fire, Life Safety and Code
- Hazardous Materials
- Cost Estimating

The reports can be found in the subsequent appendices.

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SECRETARY OF THE INTERIOR'S STANDARDS

The Secretary of the Interior's Standards for Rehabilitation & Guidelines for Rehabilitating Historic Buildings (Standards) provide guidance for reviewing proposed work on historic properties, with the stated goal of making possible "a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values."[3] The Standards are used by Federal agencies in evaluating work on historic properties. The Standards have also been adopted by local government bodies across the country for reviewing proposed rehabilitation work on historic properties under local preservation ordinances. The Standards are a useful analytical tool for understanding and describing the potential impacts of substantial changes to historic resources. Projects that comply with the Standards benefit from a regulatory presumption that they would have a less-than-significant adverse impact on a historic resource.[4] Projects that do not comply with the Standards may cause either a substantial or less-than-substantial adverse change in the significance of a historic resource.

The Standards offer four strategies to guide the treatment of historic properties: Preservation, Rehabilitation, Restoration, and Reconstruction. The four distinct treatments are defined as follows:

> **Preservation:** The Standards for Preservation "require retention of the greatest amount of historic fabric, along with the building's historic form, features, and detailing as they have evolved over time."
>
> **Rehabilitation:** The Standards for Rehabilitation "acknowledge the need to alter or add to a historic building to meet continuing new uses while retaining the building's historic character."
>
> **Restoration:** The Standards for Restoration "allow for the depiction of a building at a particular time in its history by preserving materials from the period of significance and removing materials from other periods."
>
> **Reconstruction:** The Standards for Reconstruction "establish a limited framework for recreating a vanished or non-surviving building with new materials, primarily for interpretive purposes."

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3 National Park Service, *The Secretary of the Interior's Standards for Treatment of Historic Properties*, accessed on-line at http://www.nps.gov/tps/standards.html on April 1, 2015.

4 California Environmental Quality Act (CEQA) Guidelines 15064.5(b)(3).

Typically, one set of standards is chosen for a project based on the project scope. In this case, the proposed project scope is seeking to alter and add to historic properties to continue their existing use and also to preserve the Stadium (Bldg. 105) and Theater (Bldg. 2). Therefore, the Standards for Rehabilitation and Standards for Preservation will be applied to the Historic District.

Standards for Rehabilitation

The following analysis applies the Standards for Rehabilitation to the proposed project at Orange Coast College. The analysis considers the entire site to be the historic resource, against which the impact of changes in the proposed project will be measured.

This analysis is based upon the proposed project as described above.

Rehabilitation Standard 1: A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.

Rehabilitation Standard 2: The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize the property will be avoided.

Rehabilitation Standard 3: Each property will be recognized as a physical record of its time, place and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historical properties, will not be undertaken.

Rehabilitation Standard 4: Changes to a property that have acquired significance in their own right will be retained and preserved.

Rehabilitation Standard 5: Distinctive materials, features, finishes and construction techniques or examples of craftsmanship that characterize a property will be preserved.

Rehabilitation Standard 6: Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.

Rehabilitation Standard 7: Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.

Rehabilitation Standard 8: Archaeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measure will be undertaken.

Rehabilitation Standard 9: New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work shall be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and environment.

Rehabilitation Standard 10: New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

Standards for Preservation

The Standards for Preservation shall be applied to the Stadium (Bldg. 105) and the Theater (Bldg. 2). The Standards for Preservation state that a property will be used as it was historically, or be given a new use that maximizes the retention of distinctive materials, features, spaces, and spatial relationships. Where a treatment and use have not been identified, a property will be protected and, if necessary, stabilized until additional work may be undertaken.

The historic character of a property will be retained and preserved. The replacement of intact or repairable historic materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.

Each property will be recognized as a physical record of its time, place, and use. Work needed to stabilize, consolidate, and conserve existing historic materials and features will be physically and visually compatible, identifiable upon close inspection, and properly documented for future research.

Changes to a property that have acquired historic significance in their own right will be retained and preserved.

Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.

The existing condition of historic features will be evaluated to determine the appropriate level of intervention needed. Where the severity of deterioration requires repair or limited replacement of a distinctive feature, the new material will match the old in composition, design, color, and texture.

Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.

Archaeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.

APPROACH

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APPROACH

RESOURCES

Potential programmatic elements were discussed during project meetings with OCC and CCCD. Additional program information for Dance was provided by HPI Architects, Inc.

Page & Turnbull reviewed the following documents in preparation of the Preservation Alternatives:

- Academic Master Plan
- Vision 2020 Facilities Master Plan
- Brailsford & Dunlavey Programming Presentations
- California Community Colleges FUSION Database including: Five-Year Capital Plan, Report 17, Initial Project Proposals, and Final Project Proposals

EXISTING USE AND PROGRAM

- Building 7: Student Success Center
- Buildings 8 & 9: Classrooms
- Buildings 12-14: Continues to function for the Business Department
- Buildings 35 & 36: Math instruction
- Building 37: College Reprographics Department
- Building 39: The Planetarium is unoccupied
- Building 93: Community Pool
- Building 110: Field House- continued use as offices for coaches and SWAP Meet, plus restroom facilities, information booth and Pirate Store to support events at the field

MASTER PLAN PROPOSAL AND ITS IMPACT

The Vision 2020 Facilities Master Plan, prepared by Cambridge West Partnership, LLC/HPI Architects, proposes all existing functions of the historic buildings will be relocated to newly constructed or renovated facilities. New uses for the historic buildings were not identified, instead the master plan calls for "…the vast majority of older 1950s campus facilities (row buildings) [to be] replaced with larger, more efficient structures."[3]

NEW USE CONSIDERATIONS

The College informed Page & Turnbull they could not accommodate any additional classroom use. Review of capacity/load ratios within the FUSION database confirmed this. At the same time Page & Turnbull discovered that according to the FUSION data, future construction at OCC would not impact the capacity to build:

- Laboratory
- Library/Study
- AV/TV

While considering the above constraints, Page & Turnbull endeavored to identify reuse options and select viable alternatives that would complement the Vision 2020 Facilities Master Plan and support OCC's mission. Program considerations were limited and not exhaustive:

Campus Related Uses

- Planetarium Support Spaces
- Study or Student Spaces
- Veterans' Center
- Vocational Rehab Center
- Student Success Center
- Community/Continuing Education
- Honors Program
- Adaptive PE (for Pool)
- Administration
- Faculty House
- Faculty in Residence
- Food Services
- Internship Academy
- Job Center
- Makerspace
- Dance Department
- Bike Sharing
- Special Services
- Joint Venture Uses
- Daycare Center
- L-SBE Incubator
- Small Conference Center
- Charter School
- ASU/Other Remote Campus
- Community Center
- Special Event Space
- Museum

CAMPUS ZONING

The new uses proposed for the historic buildings are compatible with the Campus Zoning defined in the Vision 2020 Facilities Master Plan for OCC. Retention of these buildings helps create a connection between some zones which have overlapping functions, for example, the Makerspace is an interdisciplinary space, and to foster interaction between Career Technology Education (CTE), Science, and Art to name a few.

SITE AND LANDSCAPE

The continued use of the historic buildings will enhance the "…hierarchy of outdoor rooms and spaces defined and connected by pedestrian spines, landscape and other pedestrian amenities." These buildings already present a "…human scale of space, and provide opportunities for intimate courts and plazas directly related to buildings".[4] The original landscape envisioned by Garrett Eckbo included an east-west pedestrian circulation path connecting all three academic complexes. The path was interrupted by outdoor rooms adjacent to each complex and supplemented with interval points between the complexes along with pathways on a diagonal to connect various parts of the campus. Although much of Eckbo's work was not installed, the intention of his

3 Cambridge Partnership LLC & HIll Partnership Inc., *Vision 2020 Facilities Master Plan*, May 2011: p. 92

4 Cambridge Partnership LLC & HIll Partnership Inc., *Vision 2020 Facilities Master Plan*, May 2011: p. 92

APPROACH

conceptual pan can still be seen today in the remnants of paths that remain. Reconstruction of the originally planned Eckbo path along the east-west shall be provided as part of all alternatives.

REHABILITATION REQUIREMENTS

In order to accommodate the proposed uses the buildings will need to be renovated and brought into compliance with the California Building Standards Code. Upgrades of mechanical, electrical, plumbing, low voltage, and fire protection services will be required. See MEP Evaluation (Appendix 4) for additional information. A seismic upgrade was completed on Buildings 12-13 in the late 1990s. The remaining buildings will require structural upgrades and strengthening, see Structural Evaluation (Appendix 3) for additional information.

It is expected that rehabilitation work would use the Secretary of the Interior's Standards for the Treatment of Historic Properties in determining appropriate measures in maintaining the historic integrity of the building and its character-defining features.

SUMMARY AND RECOMMENDATIONS

The following proposed alternatives have been provided as examples of how the existing buildings could continue to be useful to the College. These options were presented to CCCD Board of Trustees and OCC on March 18, 2015. It should be noted that the proposed functions could be interchangeable or replaced with other uses as determined necessary by the College and CCCD.

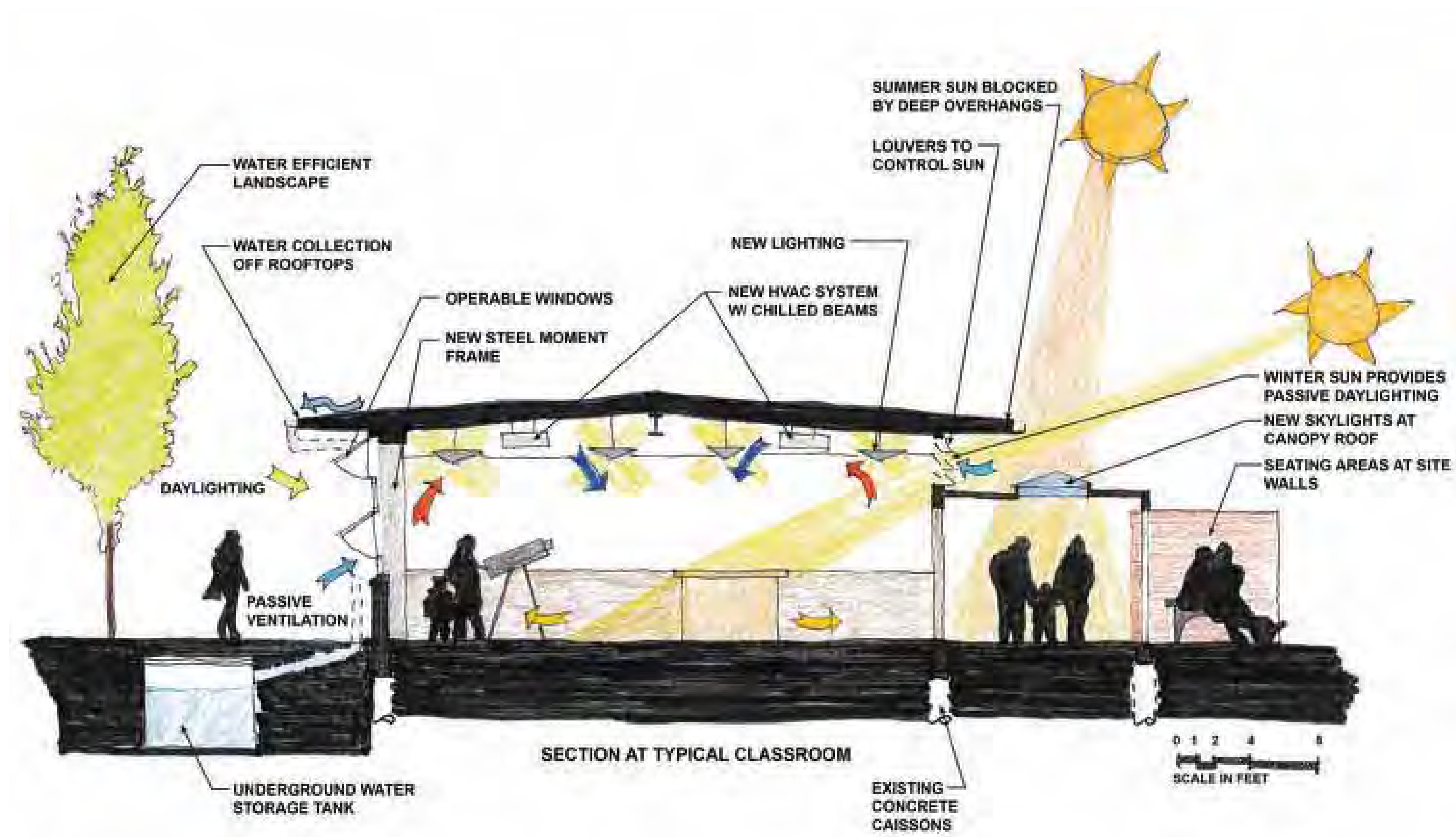
The Preservation Alternatives give a general breakdown of possible program spaces and provide a graphic representation of each option. In order to determine general program requirements various assumptions have been made based on Page & Turnbull's experience with similar issues on similar projects.

It is recommended that further development of the proposed alternatives be prepared through standard architectural programming services to include discussions with College users and stakeholders to determine the best use for these buildings and specific room criteria for each space. The proposed alternatives shall be interpreted as conceptual only.

The future design team shall ultimately be responsible for reviewing all information as well as providing a due-diligence effort to determine a program and design solution. The reviewing agencies and governing authorities will also make a determination on what will be required for the alterations on a case-by-case basis.

TYPICAL CLASSROOM SECTION

The section below through a typical classroom building shows how existing building features and new systems such as skylights at covered walkways and chilled beams as part of a new HVAC system can help the building meet OCC's sustainability objectives.



SECTION AT TYPICAL CLASSROOM

PRESERVATION ALTERNATIVE 1

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PRESERVATION ALTERNATIVE 1A

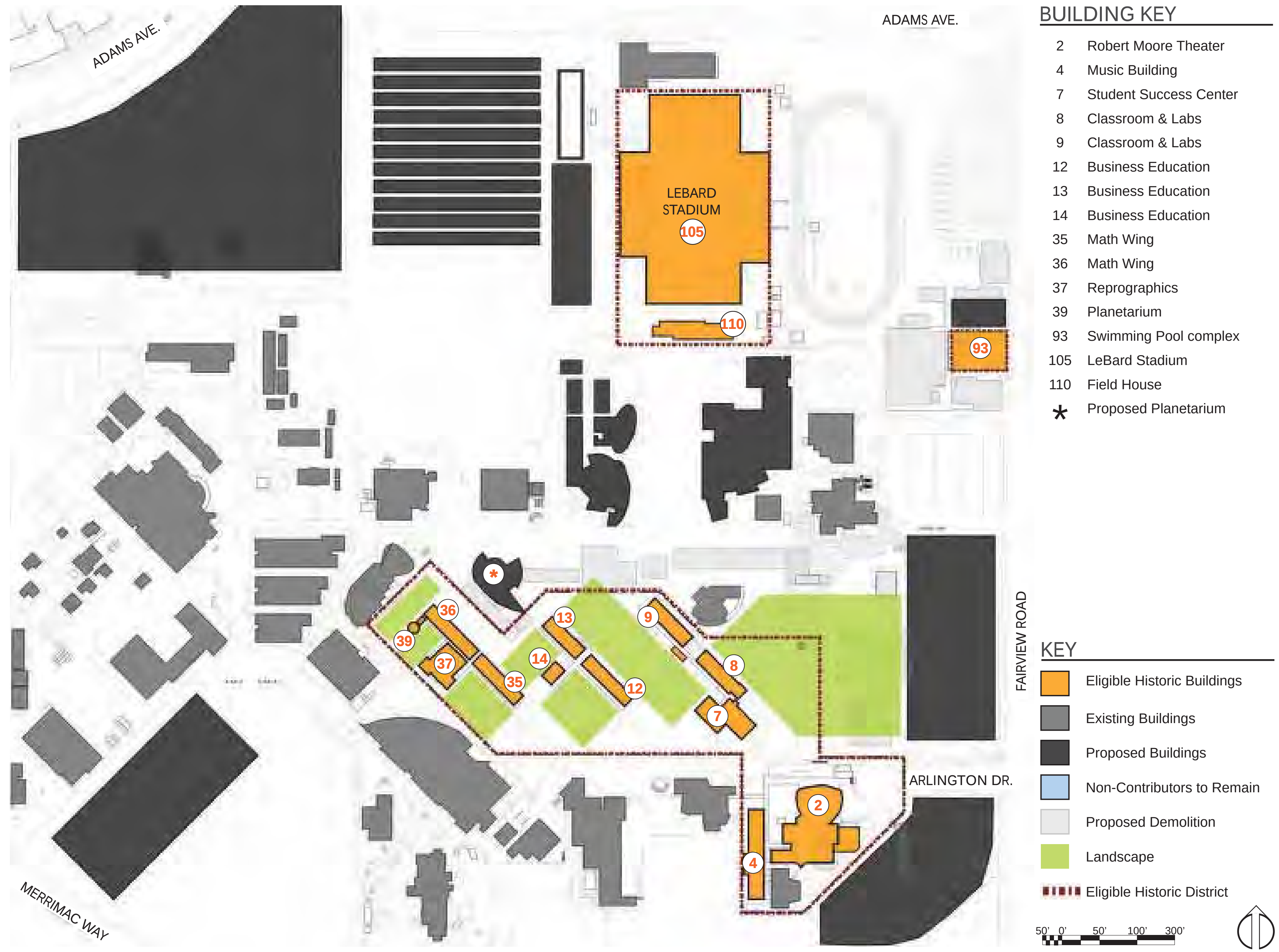
Preservation Alternative 1A is the maximum reuse alternative. The new Planetarium is relocated to outside the Historic District's north boundary to avoid demolishing contributing buildings. Buildings north of the Historic District constructed between 1958 and 1964 will be demolished to allow for the new Planetarium and to connect the Historic District to new classroom buildings under construction. Within the Historic District, non-contributing buildings and additions made after 1957 will be removed to restore the most complete example of the Historic District, including an east-west axis that has been disrupted by non-contributors. The historic buildings will be rehabilitated in conformance with the Secretary of the Interior's Standards for Rehabilitation (Standards). The original classroom buildings will be adaptively reused for administrative services, Special Services and the Honors Program, and as an interdisciplinary center shared by the Science, Architecture, and Art Departments as well as student and community facilities. The Theater and Music Buildings (Bldgs. 2 and 4) will retain their current use. Minor and sensitive alterations to character-defining features are proposed, such as skylights at the covered walkways and upgrades to structural systems to increase seismic resistance. The estimated cost for Alternative 1A is approximately $30 million.

ALTERNATIVE 1A COST SUMMARY

Building	Proposed Use	Total Project Cost at Each Complex
Buildings 2 and 4	Unchanged - Robert Moore Theater and Music Building	$1,846,750
Buildings 7-9	Administrative Services	$6,164,500
Buildings 12-14	Special Services and Honors	$9,994,000
Buildings 35-39	Interdisciplinary Center	$6,070,125
Building 93	Community or Adaptive PE Pool with New Support Building	$3,421,625
Building 105	Unchanged - LeBard Stadium	$313,875
Building 110	Athletic Support and Restrooms	$1,278,500
Building 10	Existing Special Services (**Demolition**)	$652,500
	Alternative 1A Total Project Cost	**$29,741,875**

Note: The cost for Buildings 12-14 includes an option for a central plant, estimated at approximately $2,000,000.

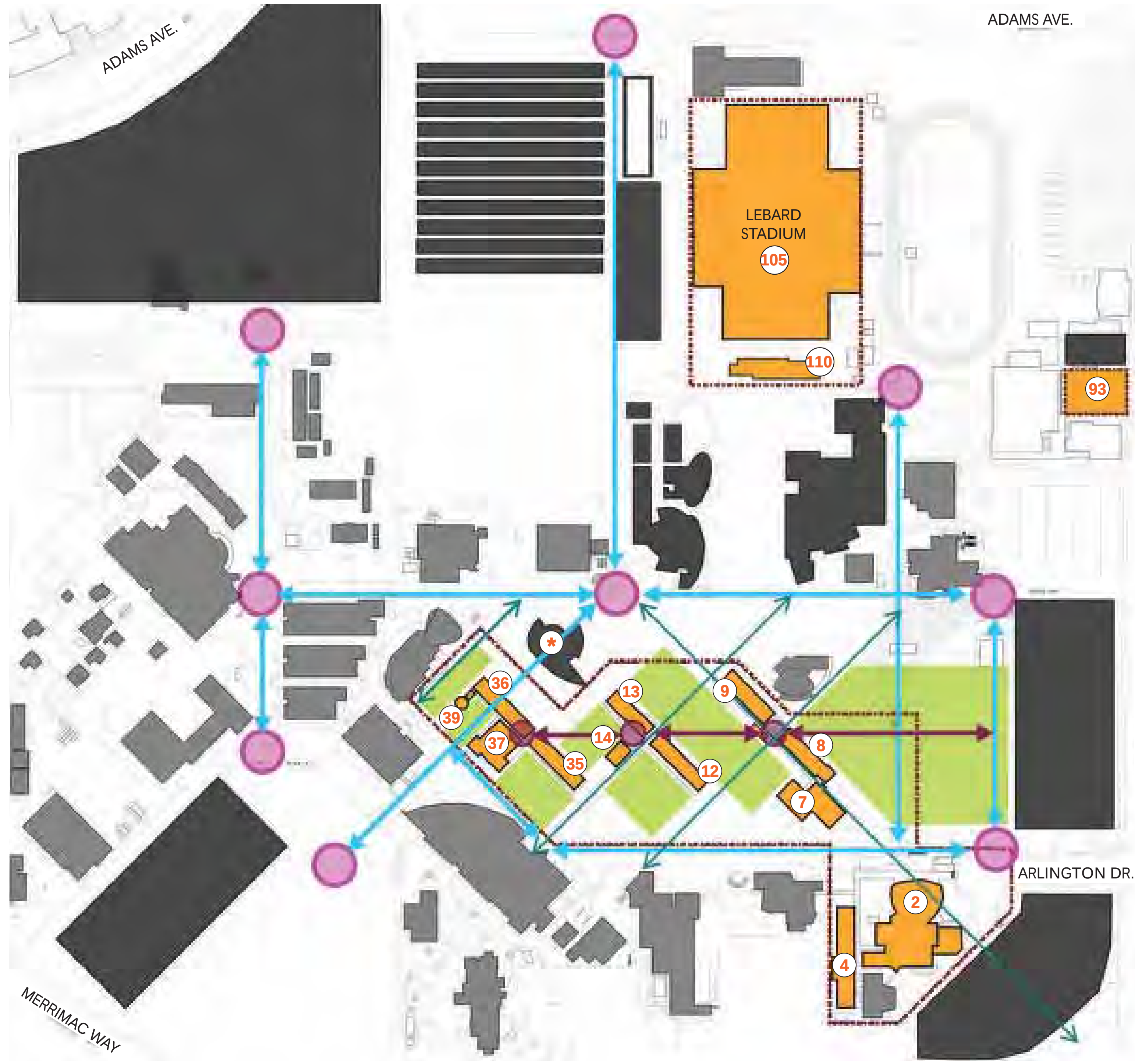
Caveat Emptor: Cost Summary is based on Page & Turnbull's Scope of Work only and does not include related work as defined by CCCD.



ALTERNATIVE 1

PRESERVATION ALTERNATIVE 1A: CIRCULATION

Figure 5: 1959 Aerial of Orange Coast College. Buildings highlighted shall be retained as part of Preservation Alternative 1A. Source: Orange Coast College Library.



BUILDING KEY

- 2 Robert Moore Theater
- 4 Music Building
- 7 Student Success Center
- 8 Classroom & Labs
- 9 Classroom & Labs
- 12 Business Education
- 13 Business Education
- 14 Business Education
- 35 Math Wing
- 36 Math Wing
- 37 Reprographics
- 39 Planetarium
- 93 Swimming Pool complex
- 105 LeBard Stadium
- 110 Field House
- * Proposed Planetarium

CIRCULATION KEY

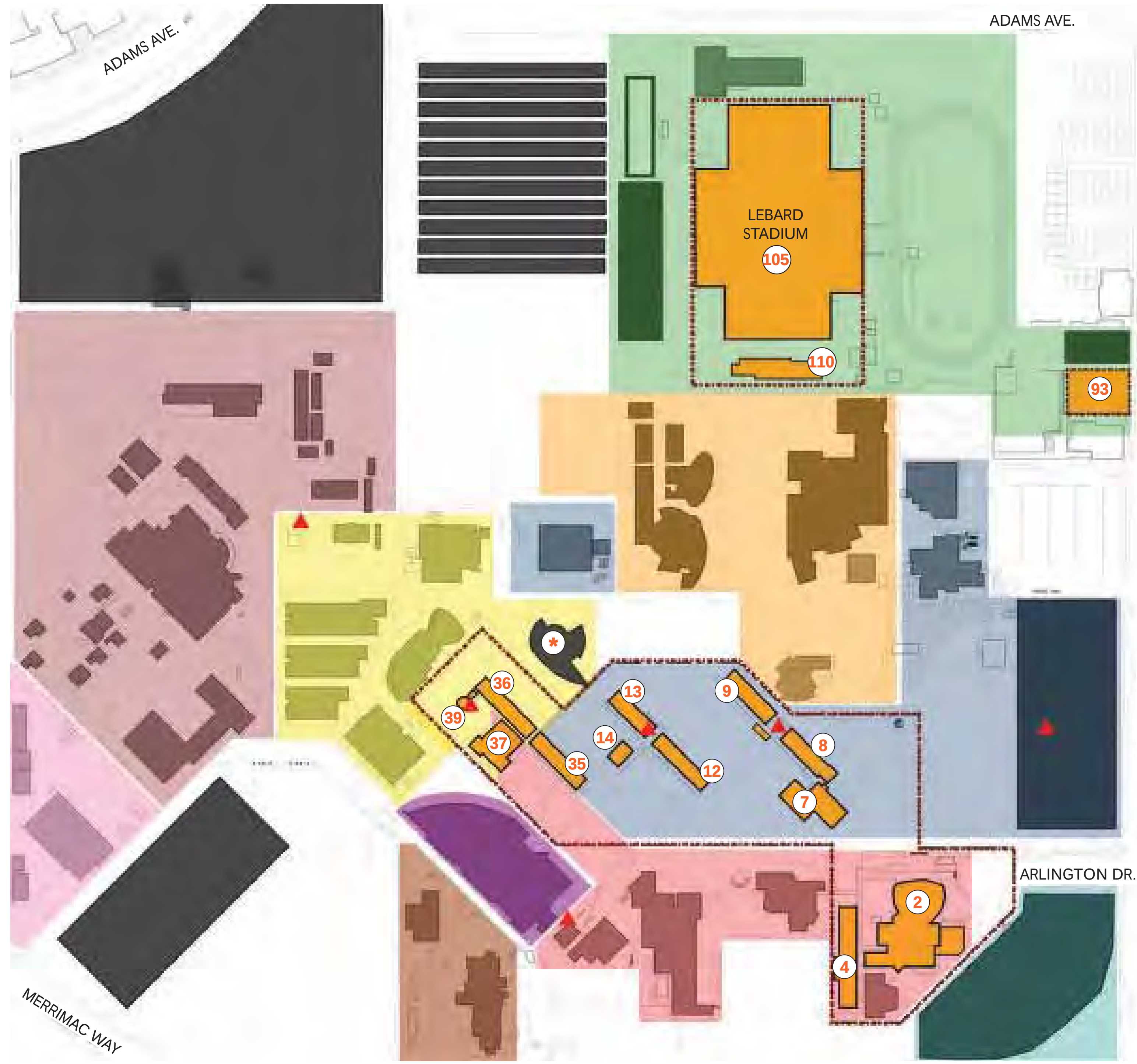
- Vision 2020 Plaza
- Vision 2020 Primary Circulation
- Historic Outdoor Room
- Historic Pedestrian Connection
- Secondary Circulation

KEY

- Eligible Historic Buildings
- Existing Buildings
- Proposed Buildings
- Non-Contributors to Remain
- Proposed Demolition
- Landscape
- Eligible Historic District

50' 0' 50' 100' 300'

PRESERVATION ALTERNATIVE 1A: ZONING



CAMPUS ZONES

- CTE
- Sports
- Sciences
- Academic/Interdisciplinary
- Student/Admin. Services
- Utility/Maintenance
- Library
- Child Studies / Care Facilities
- Arts
- Housing / Retail Opportunities
- Food Service

BUILDING KEY

2	Robert Moore Theater
4	Music Building
7	Student Success Center
8	Classroom & Labs
9	Classroom & Labs
12	Business Education
13	Business Education
14	Business Education
35	Math Wing
36	Math Wing
37	Reprographics
39	Planetarium
93	Swimming Pool complex
105	LeBard Stadium
110	Field House
*	Proposed Planetarium

KEY

- Eligible Historic Buildings
- Existing Buildings
- Proposed Buildings
- Non-Contributors to Remain
- Proposed Demolition
- Landscape
- Eligible Historic District

50' 0' 50' 100' 300'

ALTERNATIVE 1

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PRESERVATION ALTERNATIVE 1B

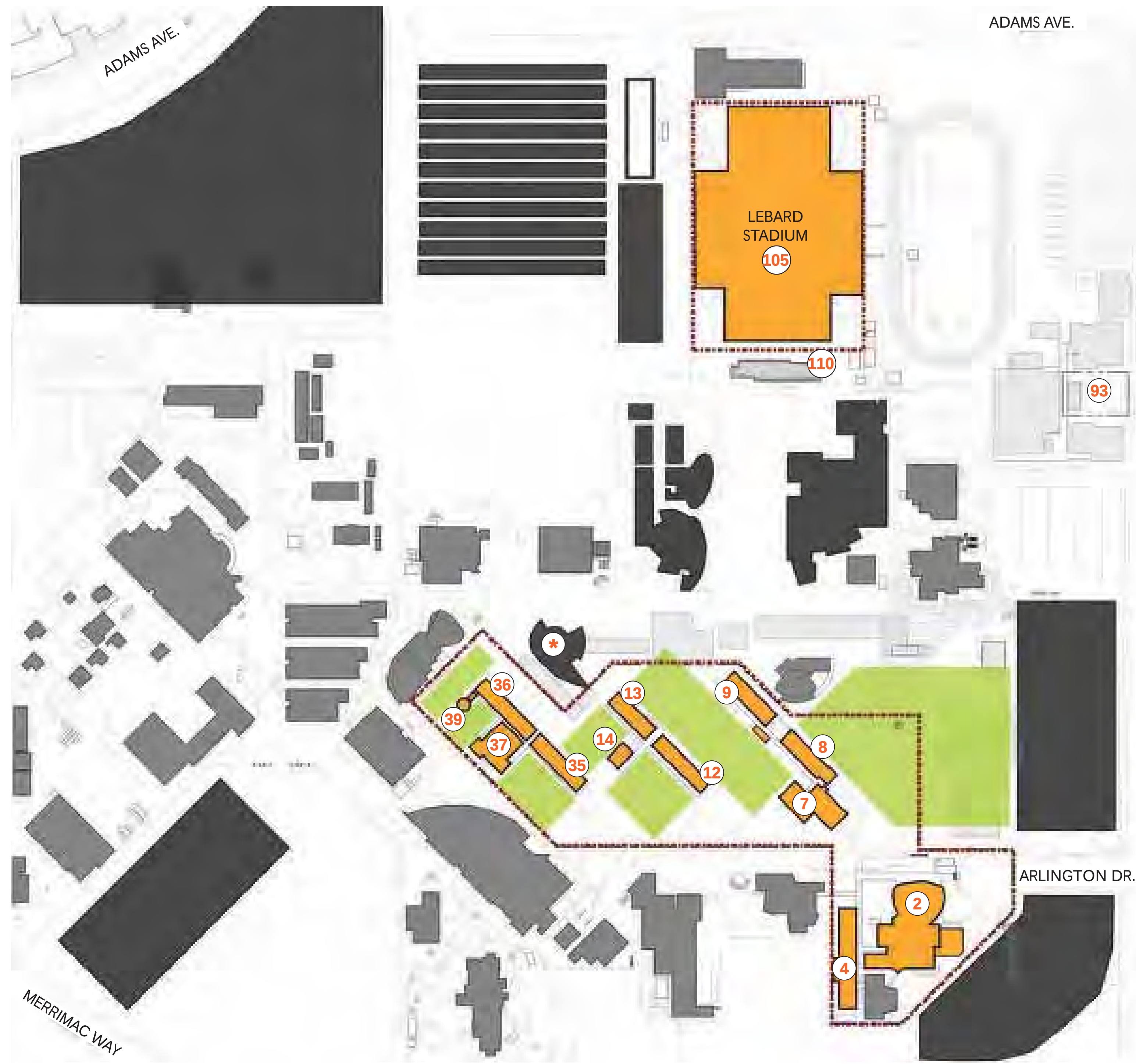
Alternative 1B is the same as Alternative 1A, except the Swimming Pool complex (Bldg. 93) and Field House (Bldg. 110) are removed to allow the College to focus its resources on preserving the core of the Historic District. Although this alternative does not fully comply with the Standards, the loss of the discontiguous Swimming Pool complex (Bldg. 93) does not affect the Historic District's ability to convey its significance to the extent that it is no longer eligible for historic listing. The Stadium remains as an athletic component of the Historic District, even without the Field House (Bldg. 110). The estimated cost for Alternative 1B is approximately $25 million. Alternative 1B is the recommended alternative.

ALTERNATIVE 1B COST SUMMARY

Building	Proposed Use	Total Project Cost at Each Complex
Buildings 2 and 4	Unchanged - Robert Moore Theater and Music Building	$1,846,750
Buildings 7-9	Administrative Services	$6,164,500
Buildings 12-14	Special Services and Honors	$9,994,000
Buildings 35-39	Interdisciplinary Center	$6,070,125
Building 93	Existing Swimming Pool Complex (**Demolition**)	$161,750
Building 105	Unchanged - LeBard Stadium	$313,875
Building 110	Existing Field House (**Demolition**)	$219,375
Building 10	Existing Special Services (**Demolition**)	$652,500
	Alternative 1B Total Project Cost	**$25,422,875**

Note: The cost for Buildings 12-14 includes an option for a central plant, estimated at approximately $2,000,000.

Caveat Emptor: Cost Summary is based on Page & Turnbull's Scope of Work only and does not include related work as defined by CCCD.



BUILDING KEY

- 2 Robert Moore Theater
- 4 Music Building
- 7 Student Success Center
- 8 Classroom & Labs
- 9 Classroom & Labs
- 12 Business Education
- 13 Business Education
- 14 Business Education
- 35 Math Wing
- 36 Math Wing
- 37 Reprographics
- 39 Planetarium
- 93 Swimming Pool complex
- 105 LeBard Stadium
- 110 Field House
- * Proposed Planetarium

KEY

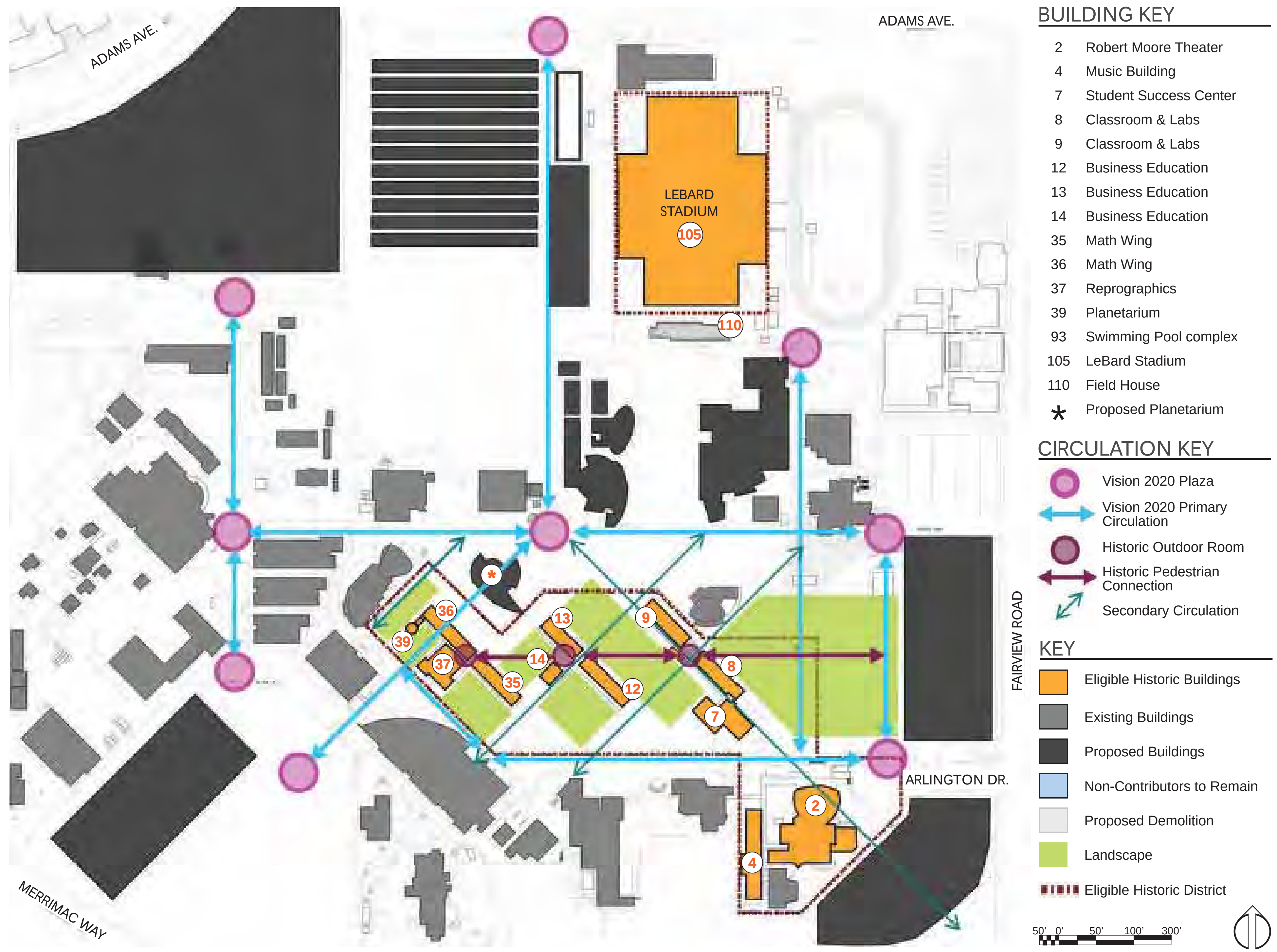
- Eligible Historic Buildings
- Existing Buildings
- Proposed Buildings
- Non-Contributors to Remain
- Proposed Demolition
- Landscape
- Eligible Historic District

50' 0' 50' 100' 300'

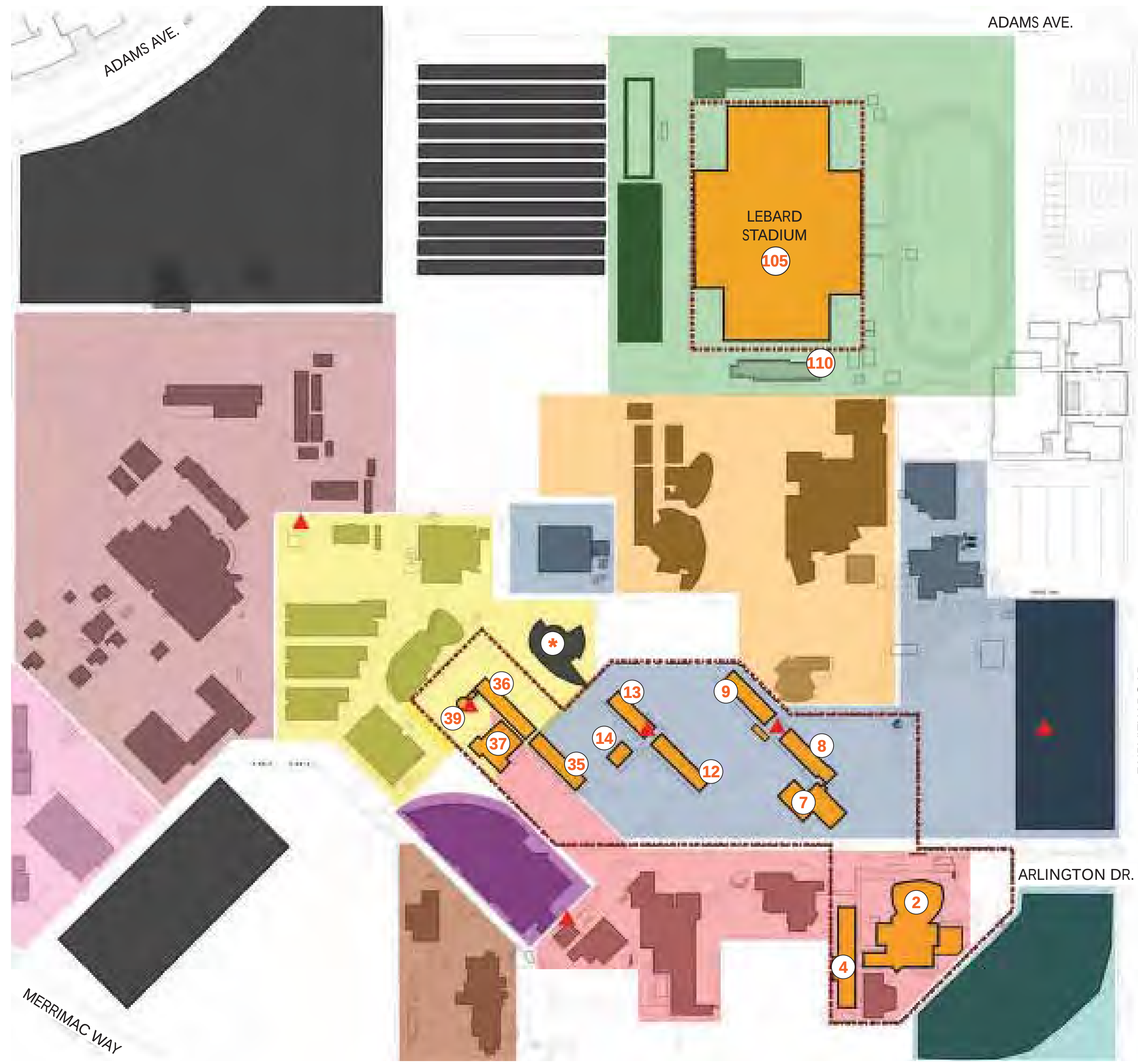
ALTERNATIVE 1

PRESERVATION ALTERNATIVE 1B: CIRCULATION

Figure 6: 1959 Aerial of Orange Coast College. Buildings highlighted shall be retained as part of Preservation Alternative 1B. Source: Orange Coast College Library.



PRESERVATION ALTERNATIVE 1B: ZONING



CAMPUS ZONES

- CTE
- Sports
- Sciences
- Academic/Interdisciplinary
- Student/Admin. Services
- Utility/Maintenance
- Library
- Child Studies / Care Facilities
- Arts
- Housing / Retail Opportunities
- Food Service

BUILDING KEY

2	Robert Moore Theater
4	Music Building
7	Student Success Center
8	Classroom & Labs
9	Classroom & Labs
12	Business Education
13	Business Education
14	Business Education
35	Math Wing
36	Math Wing
37	Reprographics
39	Planetarium
93	Swimming Pool complex
105	LeBard Stadium
110	Field House
*	Proposed Planetarium

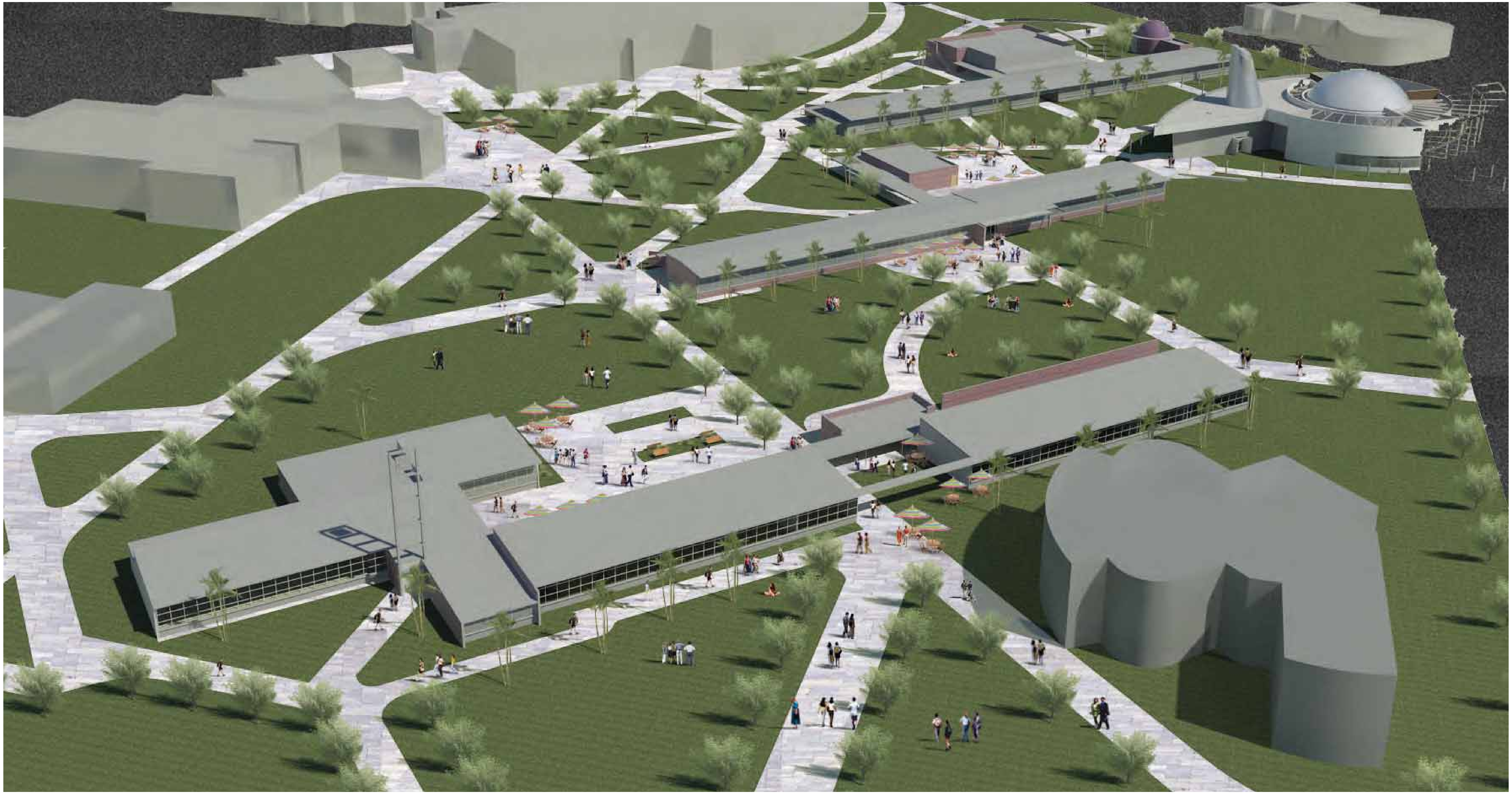
KEY

- Eligible Historic Buildings
- Existing Buildings
- Proposed Buildings
- Non-Contributors to Remain
- Proposed Demolition
- Landscape
- Eligible Historic District

50' 0' 50' 100' 300'

ALTERNATIVE 1

PRESERVATION ALTERNATIVES 1A & 1B: CENTRAL CORE BIRD'S EYE VIEW



PRESERVATION ALTERNATIVES 1A & 1B: CENTRAL CORE

ALTERNATIVE 1

PRESERVATION ALTERNATIVES 1A & 1B
BUILDINGS 7-9: ADMINISTRATIVE SERVICES

Additions to Building 7 shall be removed as part of the rehabilitation and restoration work planned for the original Library, returning Buildings 7-9 to their original condition. The primary occupant proposed for Alternative 1A & 1B at Buildings 7-9 is College Administration Services.

New, expanded restroom facilities which meet current California Building Standards Code requirements for fixture count and accessibility shall be located at existing plumbing locations.

A small Food Service room open to everyone on campus and a Breakroom for Administration are needed which will require additional plumbing. Special power requirements may be necessary for Food Service.

Reconstruction of the original Library Fireplace has been proposed for the programmed location for the President's Office Suite and restoration of historic finishes at the covered walkways and breezeways.

Small skylights at the existing covered walkways and additional exterior lighting are proposed as a minor, reversible alteration to address the College's concern that these pedestrian pathways are too dark.

Structural system upgrades are necessary to enhance the buildings' seismic performance. Buildings 8 and 9 require a new moment frame system to be constructed at the interior of the window walls and Building 7 needs revisions to its shear wall system. See Structural Evaluation (Appendix 3) for more information.

Mechanical, Electrical and Plumbing upgrades will be necessary and descriptions can be found in the MEP Evaluation (Appendix 4).

Alternative 1A/1B

Rm. Type	Room Name	Qty.	Unit Size	SF
Buildings 7-9: Administration Services				14,750
Office Suites				
310	President	1	1,940	1,940
310	Adminstrative Services	1	2,380	2,380
310	Bursar	1	2,200	2,200
310	Instruction/Academic Affairs	1	1,200	1,200
310	Student Services	1	2,380	2,380
310	College Foundation	1	1,200	1,200
Shared/Support				
315	Mail/Copy	1	1,000	1,000
315	Breakroom	1	400	400
350	Conference Room	1	700	700
Other				
660	Food Service	1	350	350
680	Meeting Room	1	1,000	1,000

Source: OCC Draft Admin Program by Brailsford & Dunlavey

KEY PLAN

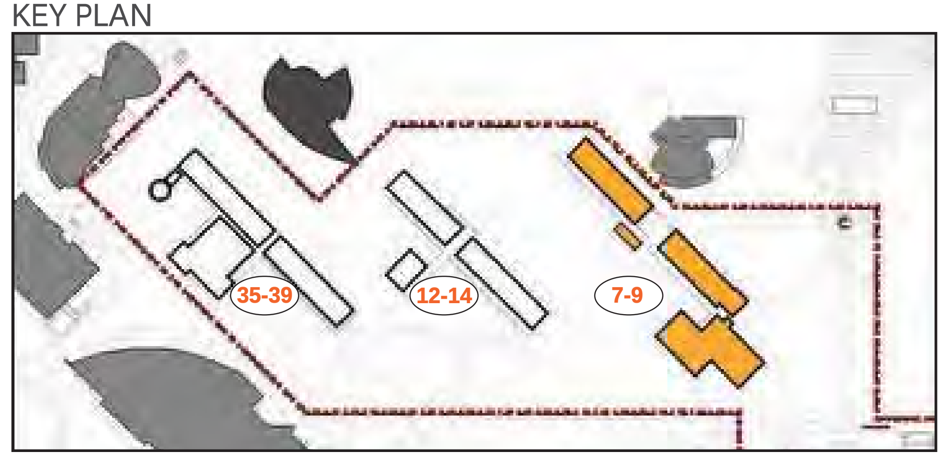
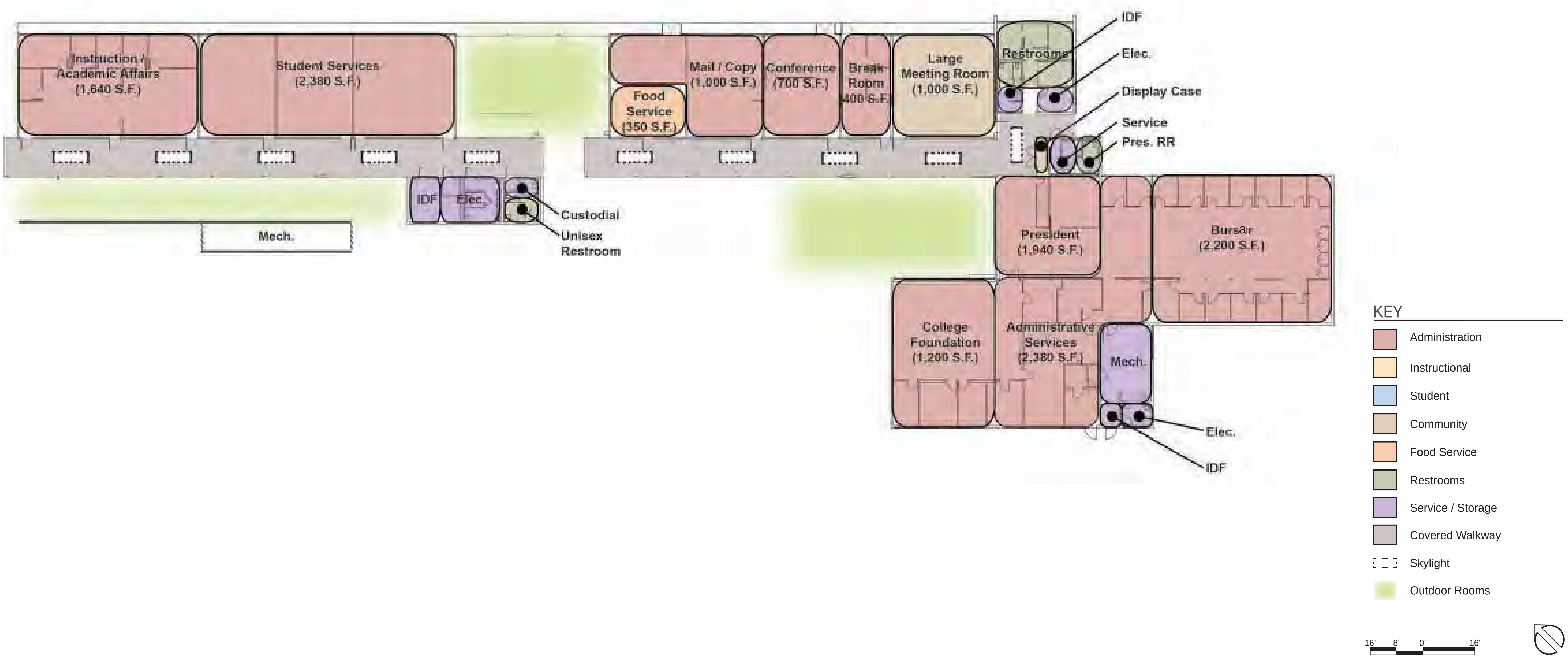


Figure 7: Building 7 Library Reading Room. Source: Robert Evans Alexander papers, #3087. Division of Rare and Manuscript Collections, Cornell University Library.

Figure 8: Building 7 Library Fireplace. Source: Robert Evans Alexander papers, #3087. Division of Rare and Manuscript Collections, Cornell University Library.

PRESERVATION ALTERNATIVES 1A & 1B
BUILDINGS 7-9: ADMINISTRATIVE SERVICES



ALTERNATIVE 1

Figure 9: View of Building 8 and additions to Building 7, 2015. Source: Page & Turnbull.

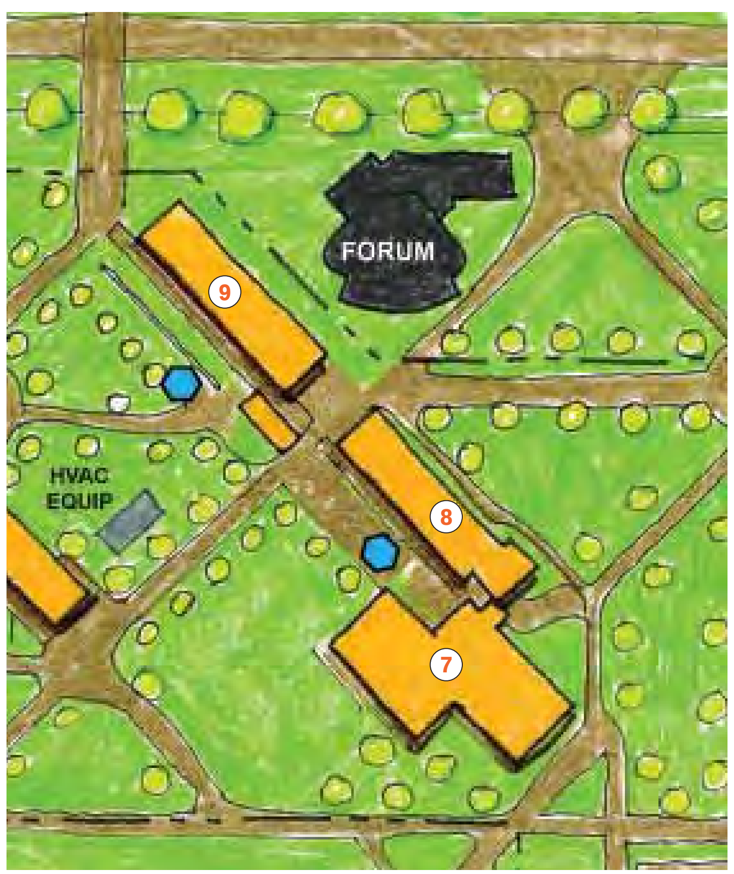
Figure 10: L to R Buildings 9, 8 & 7, ca.1955; Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles. ID no.: gri_2004_r_10_b0078_f011_1110_26.

Figure 11: View of courtyard between Buildings 7 & 8, 2015. Source: Page & Turnbull.

Figure 12: Buildings 7 & 8 - Outdoor Room, ca.1951; Robert Evans Alexander papers, #3087. Division of Rare and Manuscript Collections, Cornell University Library.

REHABILITATION AT BUILDINGS 7 & 8 PLAZA

The landscaped plaza between Buildings 7 and 8 will become the focal point for the complex, welcoming visitors to the campus' oldest remaining building. The plaza will be rehabilitated to provide more shade and seating areas. At some of the Alternatives, the hardscape may be extended to the south and west to create more generous location for outdoor activities and events.



PRESERVATION ALTERNATIVES 1A & 1B
BUILDINGS 12-14: STUDENT & SPECIAL SERVICES

Probably the most important work needed at the Business Education complex is to remove non-contributor additions to Building 14 and reconstruct the display window on the south wall.

With the removal of Special Services Building 10, new program functions for Buildings 12 and 13 will provide a new home for Special Services. Other program uses include a location for the Honors Program in Building 14 and shared student functions such as a Study Room and Lounge. Day use lockers have been requested by students in surveys conducted by others and therefore they have been proposed to be located within the Student Lounge.

New, expanded restroom facilities which meet current California Building Standards Code requirements for fixture count and accessibility shall be located at existing plumbing locations.

A small Food Service room open to everyone on campus will require additional plumbing. Special power requirements may also be necessary.

Historic finishes at the covered walkways and breezeways shall be restored and small skylights additional exterior lighting are proposed as a minor, reversible alteration to address the College's concern that these pedestrian pathways are too dark.

Structural system upgrades were constructed as part of earlier efforts to address seismic issues at Buildings 12 and 13. Because of the significant work necessary to recreate Building 14 further study may be necessary. Interior shear walls where new door openings are proposed will require shotcrete for strengthening. See Structural Evaluation (Appendix 3) for more information.

Mechanical, Electrical and Plumbing upgrades will be necessary and descriptions may be found in the MEP Evaluation (Appendix 4).

Alternatives 1A/1B

Rm. Type	Room Name	Qty.	Unit Size	SF
Buildings 12-14: Honors & Special Services				8,140
Special Services - Office				
310	Director	1	190	190
310	Office	3	100	300
310	Office	5	140	700
310	Shared Office	1	190	190
310	Open Office	1	470	470
Special Services - Office Support				
315	Lounge	1	180	180
350	Conference Room	1	270	270
315	Storage	2	100	200
Special Services - Other				
410	Study Room	1	850	850
410	Small Group Study	2	250	500
540	Group Study	1	400	400
Honors Program - Office				
310	Honors Program Director	1	140	140
Honors Support Spaces				
650	Lounge & Resources	1	600	600
680	Meeting Room	1	500	500
Student Space				
410	Study Room	1	1,000	1,000
650	Lounge + Day Use Lockers	1	1,250	1,250
Other				
660	Food Service	1	400	400

Source: FUSION OCC Report 17 Building 10 (http://fusion.deltacollege.edu/code/admin/default.htm)

KEY PLAN

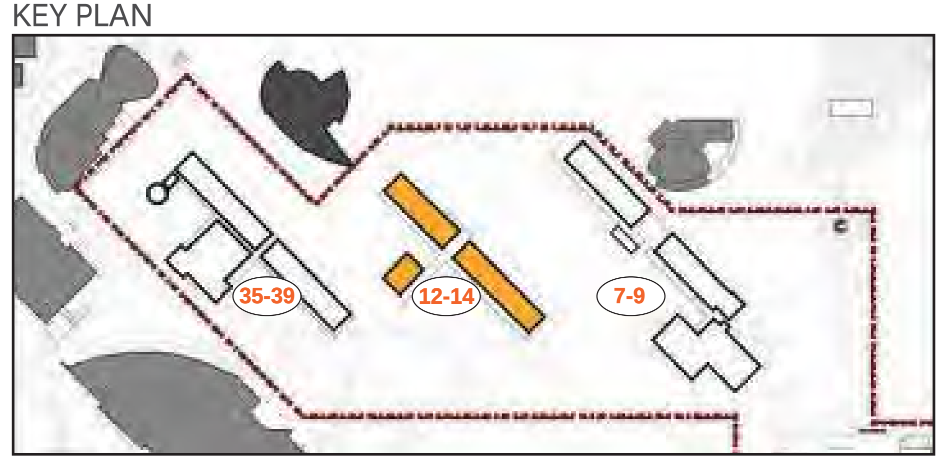


Figure 13: Building 14 Business Education, ca. 1957. OCC Archive Photos_BusEd 001_1957.

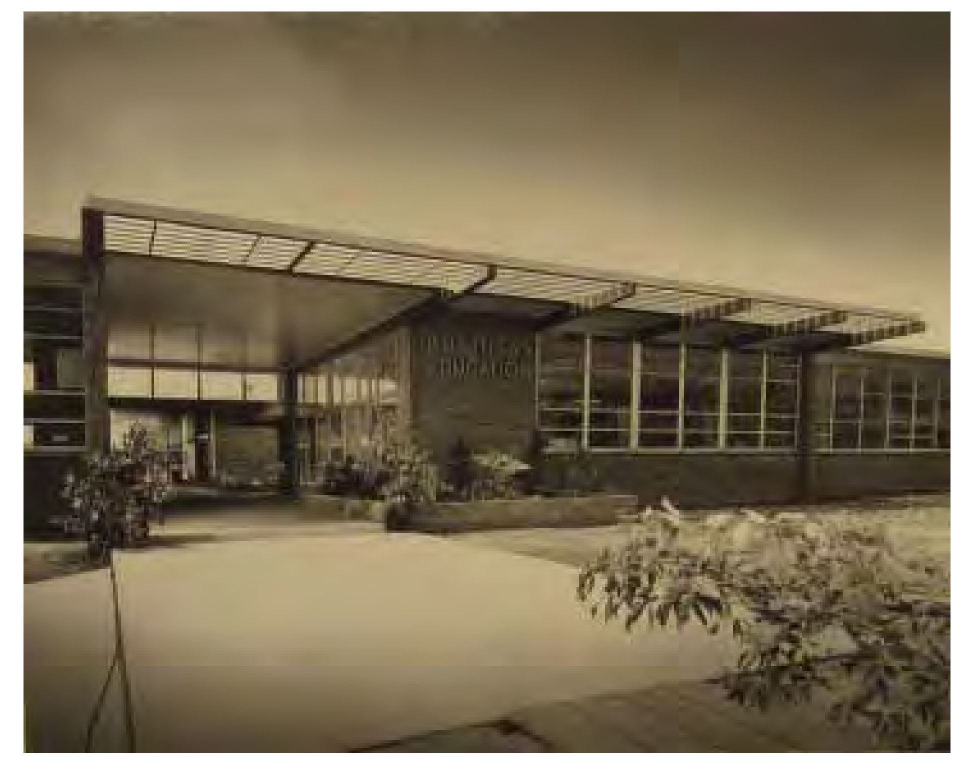
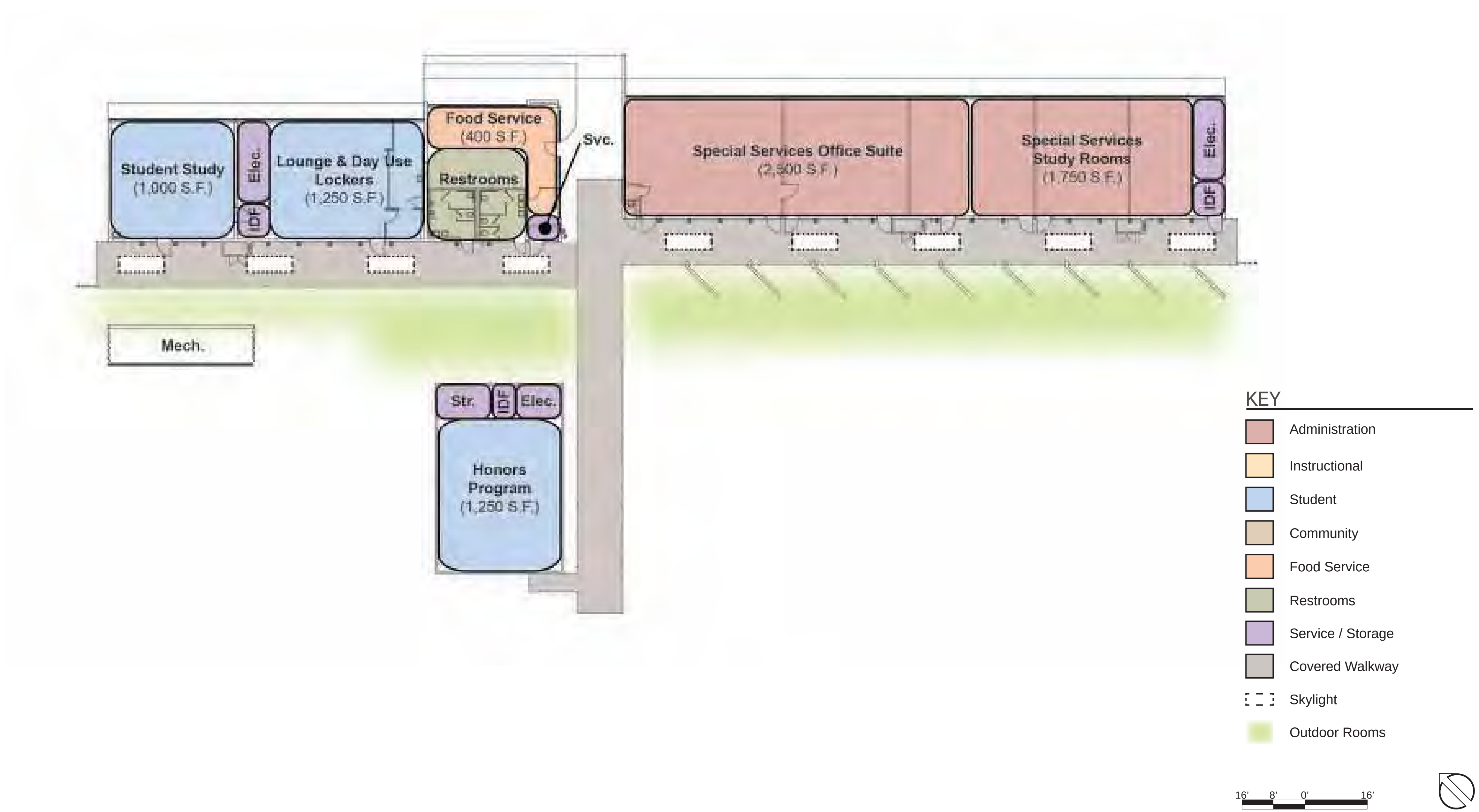


Figure 14: Building 12-13 Business Education, ca.1954. Source: Robert Evans Alexander papers, #3087. Division of Rare and Manuscript Collections, Cornell University Library.

PRESERVATION ALTERNATIVES 1A & 1B
BUILDINGS 12-14: STUDENT & SPECIAL SERVICES

Figure 15: Building 14 Business Education, ca. 1954. Source: Robert Evans Alexander papers, #3087. Division of Rare and Manuscript Collections, Cornell University Library.

Figure 16: Building 12 Business Education, ca. 1954. Source: Robert Evans Alexander papers, #3087. Division of Rare and Manuscript Collections, Cornell University Library.



ALTERNATIVE 1

Figure 17: Building 12-14 Business Education Outdoor Room, ca. 1954. Source: Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles. ID no.: gri_2004_r_10_b0080_f001_1745_15.

Figure 18: Building 14 Business Education Outdoor Room, 2015 — opposite view from historic photo. Source: Page & Turnbull.

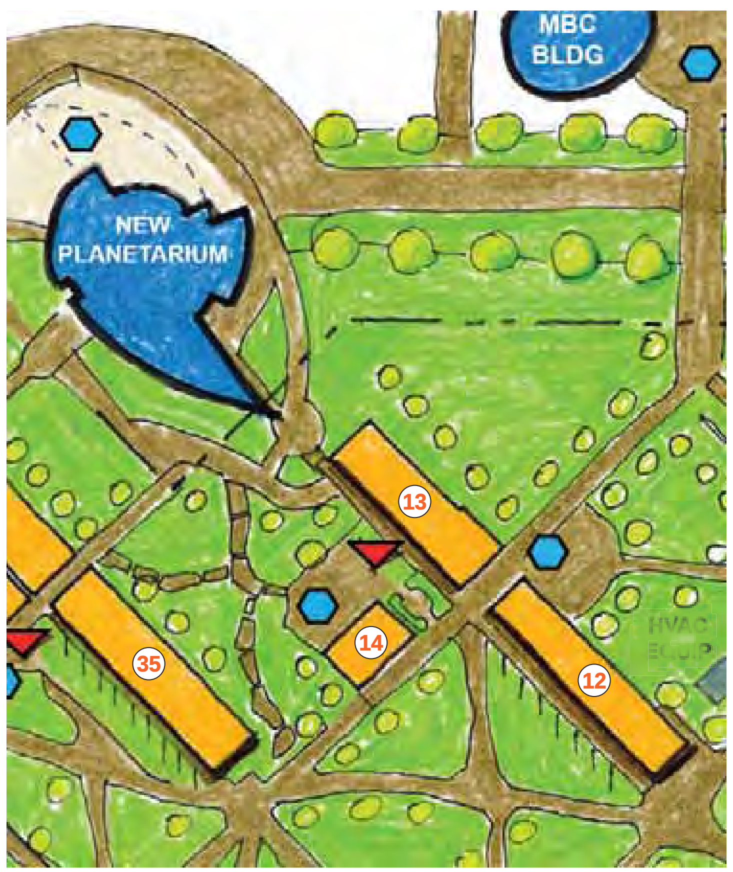
Figure 19: View of quad between Buildings 13 & 36; Building 14 is background center, 2015. Source: Page & Turnbull.

Figure 20: View of Building 14 addition from covered walkway, 2015. Source: Page & Turnbull.

REHABILITATION AT BUILDING 14 QUAD

A significant opportunity for a signature outdoor campus space is possible with the removal of the 1970s addition to Building 14. To the west of Building 14, a new hardscape plaza is conceived as both a central campus node and connective tissue between Buildings 12-14 and 35-39. Programming at Building 14 will be able to take advantage of this outdoor space for receptions and special campus events. The plaza will provide multi-functional space that can be set-up with chairs for performances or tables and chairs for receptions. Landscape will include new shade trees and plantings.

Activity generated in this new plaza space will benefit the new Planetarium in the Alternatives where it is relocated to the north of Building 36. The new Planetarium and plaza to the west of Building 14 will act in unison to energize the campus core.



PRESERVATION ALTERNATIVES 1A & 1B
BUILDINGS 35-39: INTERDISCIPLINARY CENTER

Non-contributor additions to Buildings 37 and 39 shall be removed as part of the rehabilitation and restoration work planned for the original Science complex. The key function of Buildings 35-39 is as an Interdisciplinary Center. To support this a large Makerspace is proposed for Building 37 and a large Multipurpose Room will support it and the campus as a whole. Science support spaces focused on the functions planned for the new Planetarium will provide storage for the Astronomy Department's telescopes and a classroom for K-12 visitors attending a demonstration/show at the Planetarium.

A number of shared student functions are proposed: Study Room, Lounge, Meditation Room and Bike Sharing. Together with the Makerspaces this complex has an opportunity to bring together many departments from around campus to engage in learning together.

New, expanded restroom facilities which meet current California Building Standards Code requirements for fixture count and accessibility shall be located at existing plumbing locations.

A small Food Prep room open to everyone on campus will require additional plumbing. Special power requirements may also be necessary. It is also proposed that a more significant Food Service operate in the old Planetarium (Bldg. 39)

Historic finishes at the covered walkways and breezeways shall be restored and small skylights and additional exterior lighting are proposed as a minor, reversible alteration to address the College's concern that these pedestrian pathways are too dark.

Structural system upgrades may be necessary for Building 36 and new openings at bearing walls of Building 37 will require structural interventions. See Structural Evaluation (Appendix 3) for more information.

Mechanical, Electrical and Plumbing upgrades will be necessary and descriptions may be found in the MEP Evaluation (Appendix 4).

Alternatives 1A/1B/1C

Rm. Type	Room Name	Qty.	Unit Size	SF
Buildings 35-39: Interdisciplinary Center				13,070
Instructional				
210	Makerspace/Tech. Equip. Training Lab	1	4,300	4,300
215	Science/Planetarium Support	1	750	750
Student Space				-
410	Study Room	1	1,000	1,000
650	Lounge	1	1,000	1,000
650	Meditation Room	1	640	640
660	Bike Sharing	1	250	250
Community				
610	Multipurpose Room	1	2,500	2,500
615	Storage	1	500	500
680	Visitor Classroom	1	1,000	1,000
Other				
660	Food Prep	1	500	500
660	Food Service	1	630	630

Source: Project Update PPT presentations 2/5/2015 & 3/5/2015

KEY PLAN

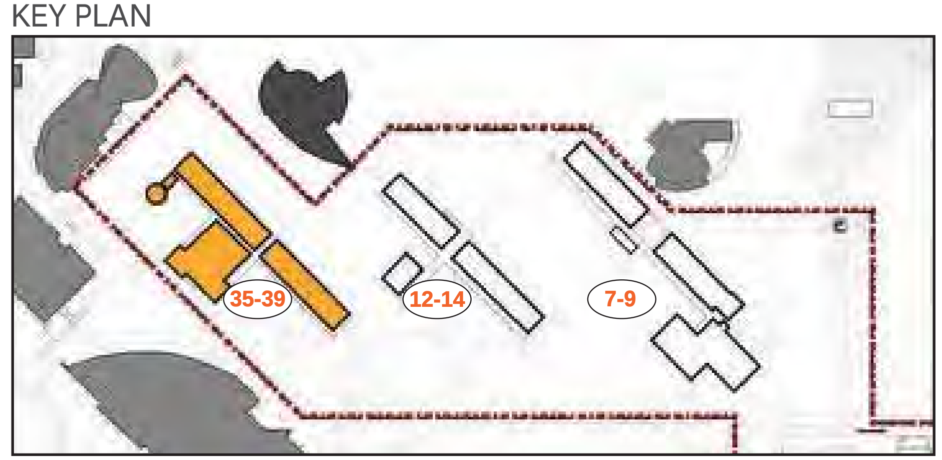


Figure 21: Buildings 35 & 37 Math & Reprographics, ca.1957. Source: Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles. ID no.: gri_2004_r_10_b0082_f012_13_2453_01.

Figure 22: Building 14 Business Education, ca. 1957 Source: Robert Evans Alexander papers, #3087. Division of Rare and Manuscript Collections, Cornell University Library.

Figure 23: Breezeway at Science Buildings, ca. 1957. Source: Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles. ID no.: gri_2004_r_10_b0082_f012_13_2453_15.

Figure 24: Building 39 Planetarium, ca. 1957. Source: Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles. ID no.: gri_2004_r_10_b0082_f012_13_2453_23.

PRESERVATION ALTERNATIVES 1A & 1B
BUILDINGS 35-39: INTERDISCIPLINARY CENTER

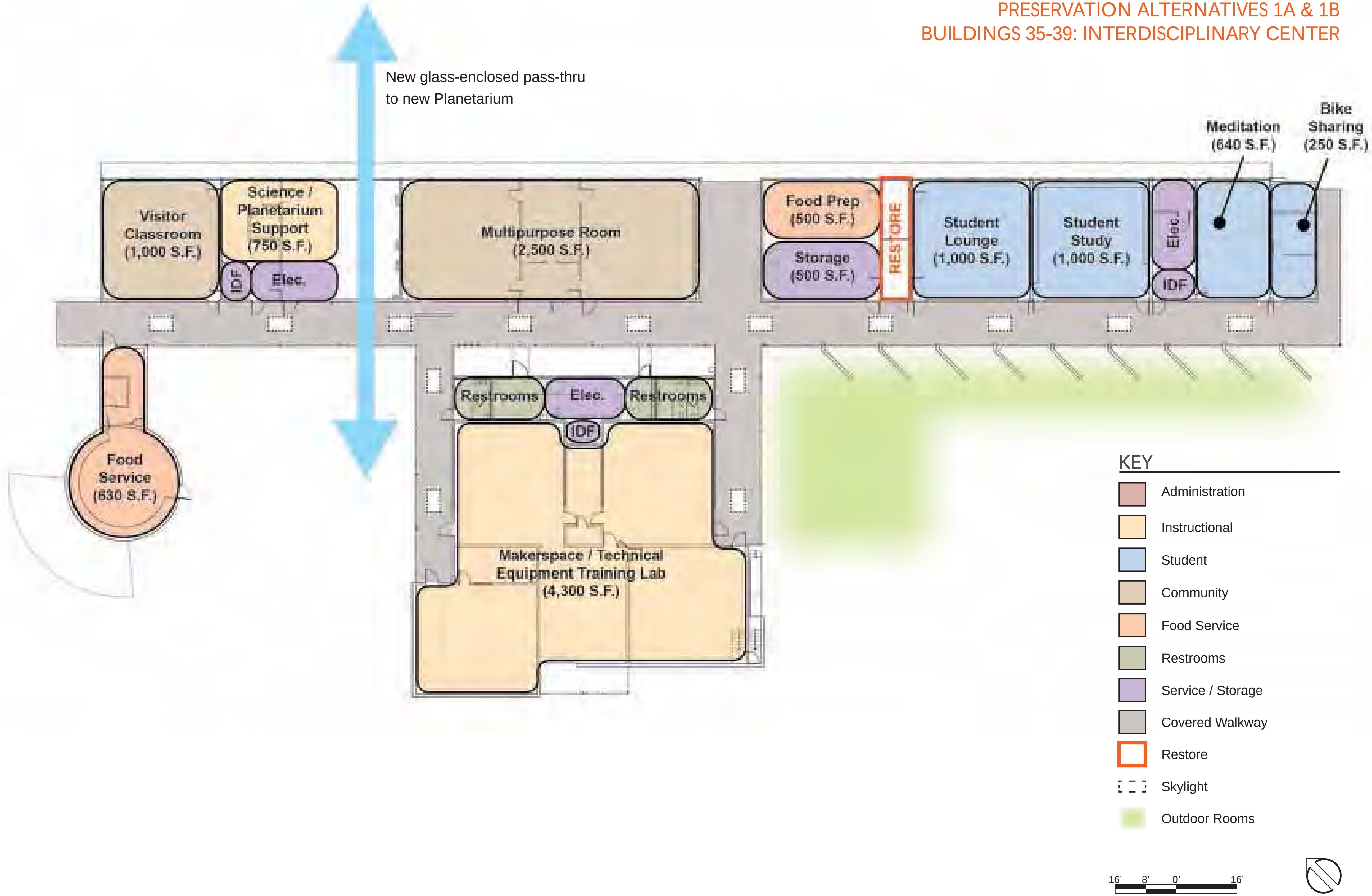


Figure 25: Building 39 Planetarium, ca. 1957. Source: Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles. ID no.: gri_2004_r_10_b0082_f012_13_2453_19.

Figure 26: View of Buildings 39 and 37 from south, 2015. Source: Page & Turnbull.

MATH AND PLANETARIUM COMPLEX REHABILITATION

(New Planetarium in background)

To provide direct access from the south part of campus and parking, a portion of the north and south walls of Building 36, will be removed to provide a direct pedestrian path to the new Planetarium. To strengthen this axis, a new plaza is recommended for the space between Buildings 37 and 39. This plaza will help funnel people through Building 36 to the new Planetarium. The plaza will also provide a meeting and gathering space for school and community groups arriving on campus. A small food service facility in Building 39 will open directly onto this new entry plaza. The plaza will be landscaped to include benches and shade trees. The original reflecting pool at the southwest corner of Building 39 may be restored to provide an additional amenity to this complex.

PRESERVATION ALTERNATIVE 1A
BUILDING 93: COMMUNITY POOL *(Alternative 1A only)*

Proposed new use for the Swimming Pool complex is to rehabilitate the Pools for the community. This will require locker rooms, lobby, food service or vending, and a new pool equipment room.

Bleachers require repairs and are in need of disabled access. The pools will need accessibility lifts.

See Structural and MEP Evaluations (Appendices 3 & 4) for additional information.

Figure 27: Building 93 Swimming Pool complex. ca. 1954. Source: Julius Shulman Photography Archive.Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles. ID no.: gri_2004_r_10_b0080_f001_1745_331.

Figure 28: Building 93 Swimming Pool complex, 1957. Source: Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles. ID no.: gri_2004_r_10_b0080_f001_1745_31.

KEY PLAN

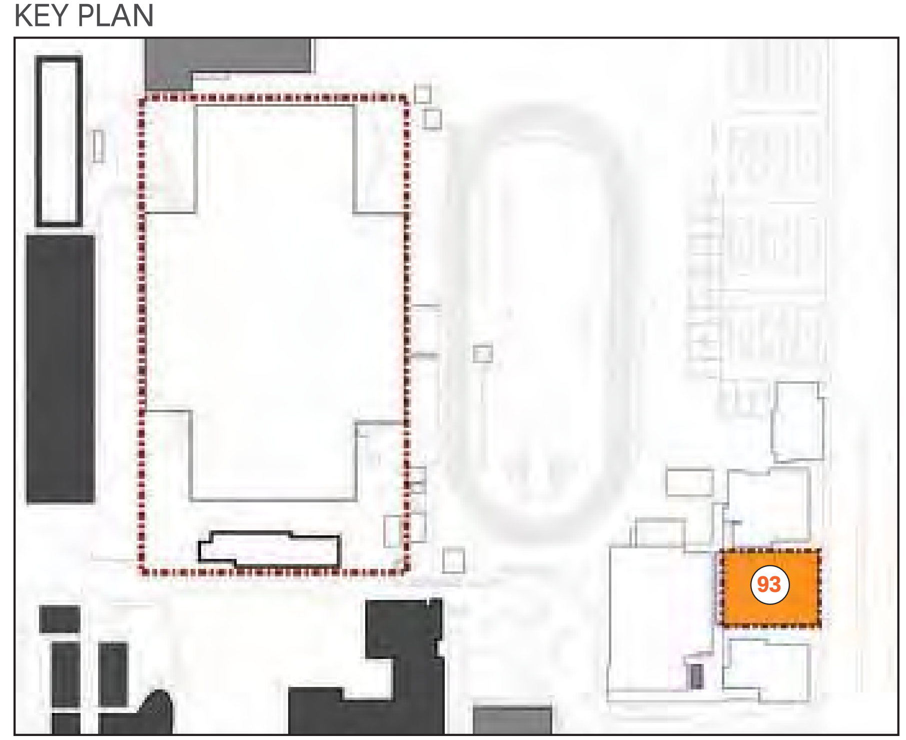
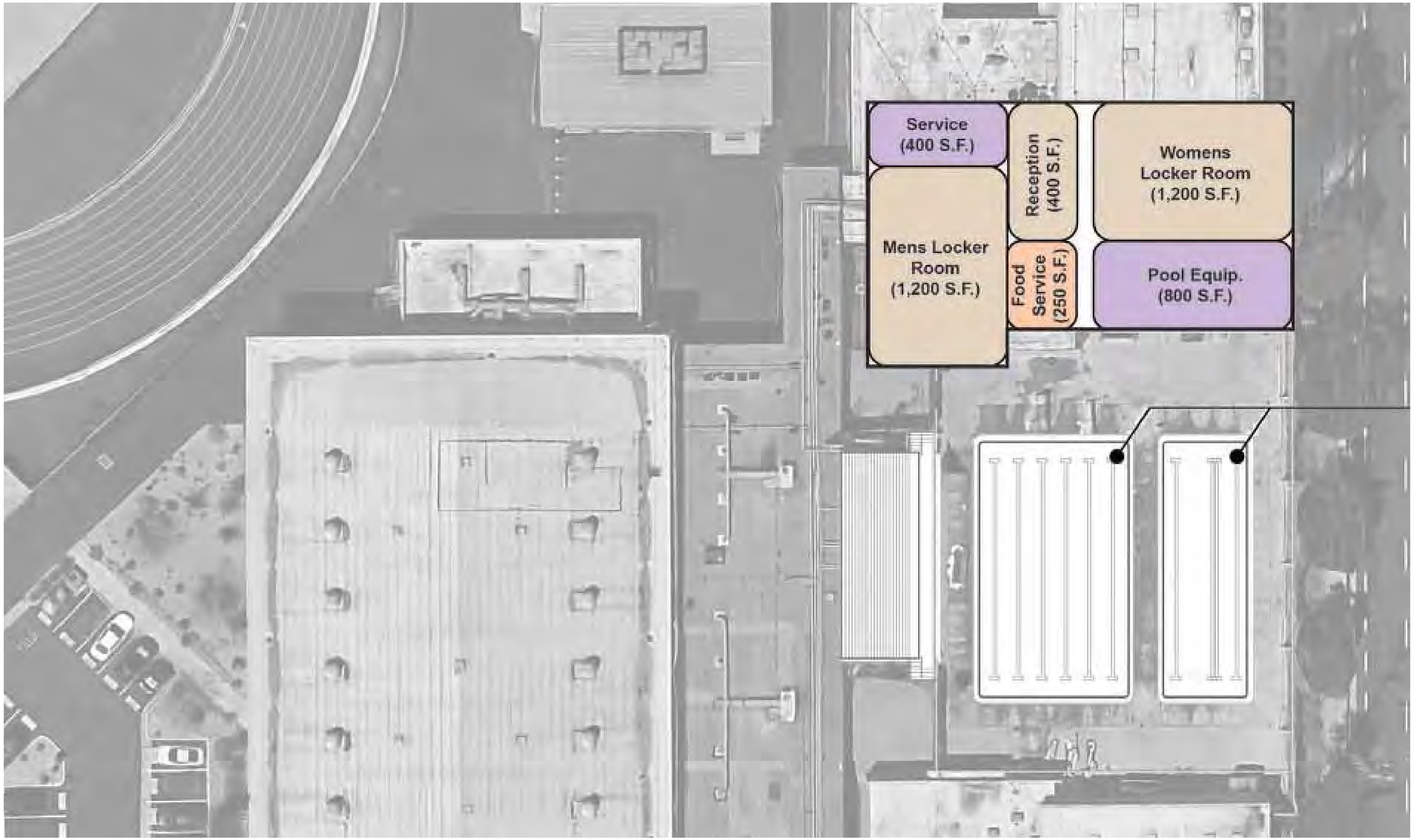


Figure 29: Building 93 Swimming Pool complex, 2015. Source: Page & Turnbull.



PRESERVATION ALTERNATIVE 1A
BUILDING 93: COMMUNITY POOL

ADA POOL
LIFT

KEY
- Administration
- Instructional
- Student
- Community
- Food Service
- Restrooms
- Service / Storage
- Covered Walkway
- Skylight
- Outdoor Rooms

16' 8' 0' 16'

ALTERNATIVE 1

PRESERVATION ALTERNATIVE 1A
BUILDING 110: ATHLETICS SUPPORT & RESTROOMS *(Alternative 1A only)*

The original Field House (Bldg. 110) has been proposed to continue supporting the Athletics Department and provide expanded restroom facilities to support various athletic events.

Remove and correct inappropriate and non-contributing repairs and additions to the Field House.

See Structural and MEP Evaluations (Appendices 3 & 4) for additional information.

Figure 30: Building 105 LeBard Stadium, 2015. Source: Page & Turnbull.

KEY PLAN

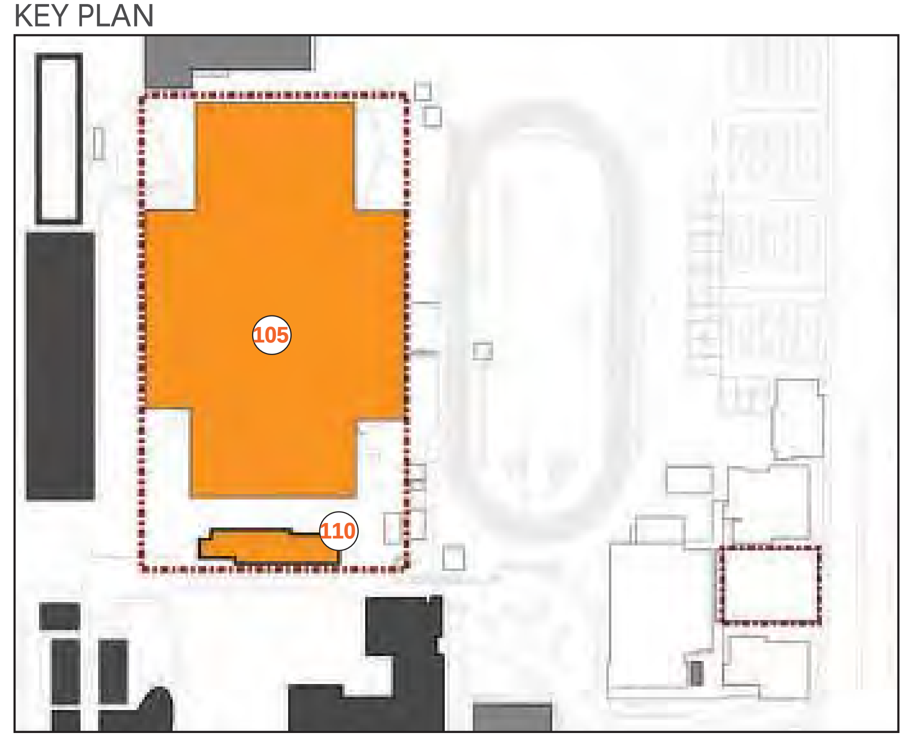
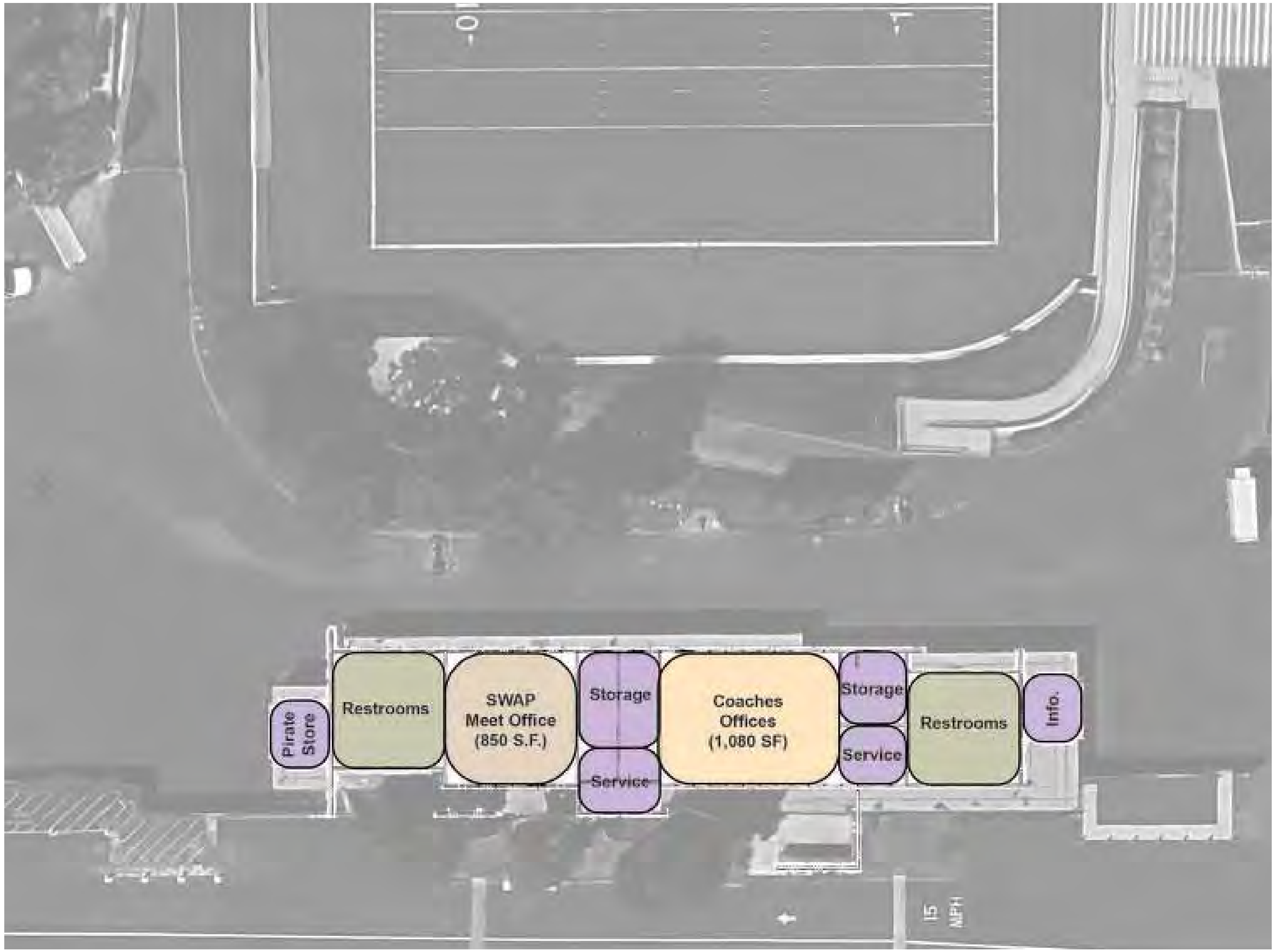


Figure 31: Stadium & Press Box, date unknown. Source: Robert Evans Alexander papers, #3087. Division of Rare and Manuscript Collections, Cornell University Library.

Figure 32: Building 110 Field House, 2015. Source: Page & Turnbull.

PRESERVATION ALTERNATIVE 1A
BUILDING 110: ATHLETICS COACHES & SWAP MEET



KEY

- Administration
- Instructional
- Student
- Community
- Food Service
- Restrooms
- Service / Storage
- Covered Walkway
- Skylight
- Outdoor Rooms

16' 8' 0' 16'

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PRESERVATION ALTERNATIVE 1C

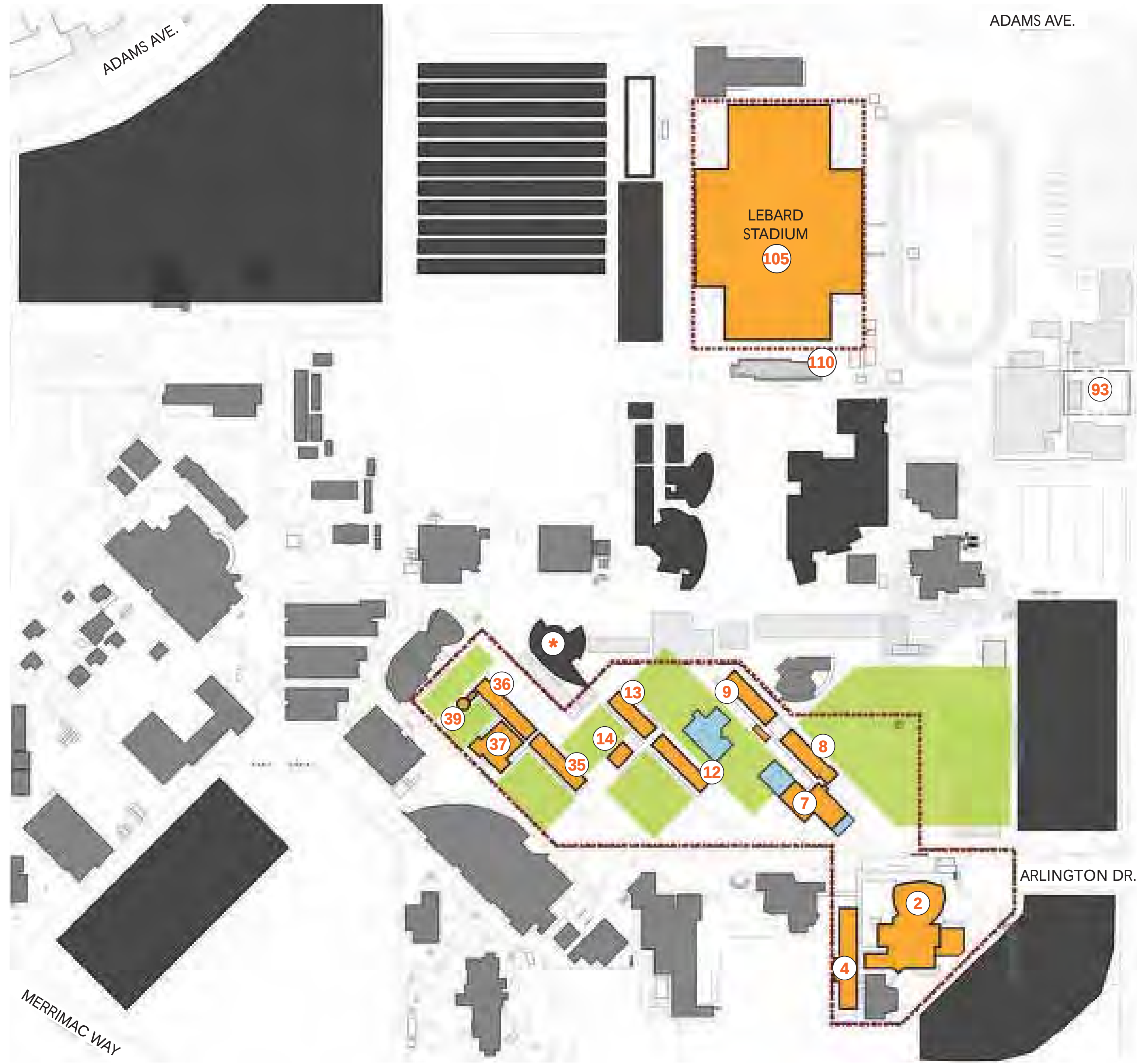
In response to comments from the College staff, Alternative 1C retains the Special Services Building (Bldg. 10) as well as non-contributing additions at Building 7. The rest of the alternative is similar to Alternative 1B. With Special Services remaining in Building 10, part of Building 7 is adaptively reused as a theater pre-function space. Alternative 1C will not restore the east-west axis that was a key part of the original circulation pattern in the Historic District, but the district will retain its eligibility for historic listing. The estimated cost for Alternative 1C is approximately $26 million.

ALTERNATIVE 1C COST SUMMARY

Building	Proposed Use	Total Project Cost at Each Complex
Buildings 2 and 4	Unchanged - Robert Moore Theater and Music Building	$1,846,750
Buildings 7-9	Administrative Services and Theater Prefunction	$7,292,000
Buildings 12-14	Student and Community Functions	$10,032,875
Buildings 35-39	Interdisciplinary Center	$6,070,125
Building 93	Existing Swimming Pool and Bleachers (**Demolition**)	$161,750
Building 105	Unchanged - LeBard Stadium	$313,875
Building 110	Existing Field House (**Demolition**)	$219,375
Building 10	To Remain. Not in Scope of Work for Planning or Cost Estimating	
	Alternative 1C Total Project Cost	**$25,936,750**

Note: The cost for Buildings 12-14 includes an option for a central plant, estimated at approximately $2,000,000.

Caveat Emptor: Cost Summary is based on Page & Turnbull's Scope of Work only and does not include related work as defined by CCCD.



BUILDING KEY

2	Robert Moore Theater
4	Music Building
7	Student Success Center
8	Classroom & Labs
9	Classroom & Labs
12	Business Education
13	Business Education
14	Business Education
35	Math Wing
36	Math Wing
37	Reprographics
39	Planetarium
93	Swimming Pool complex
105	LeBard Stadium
110	Field House
*	Proposed Planetarium

KEY

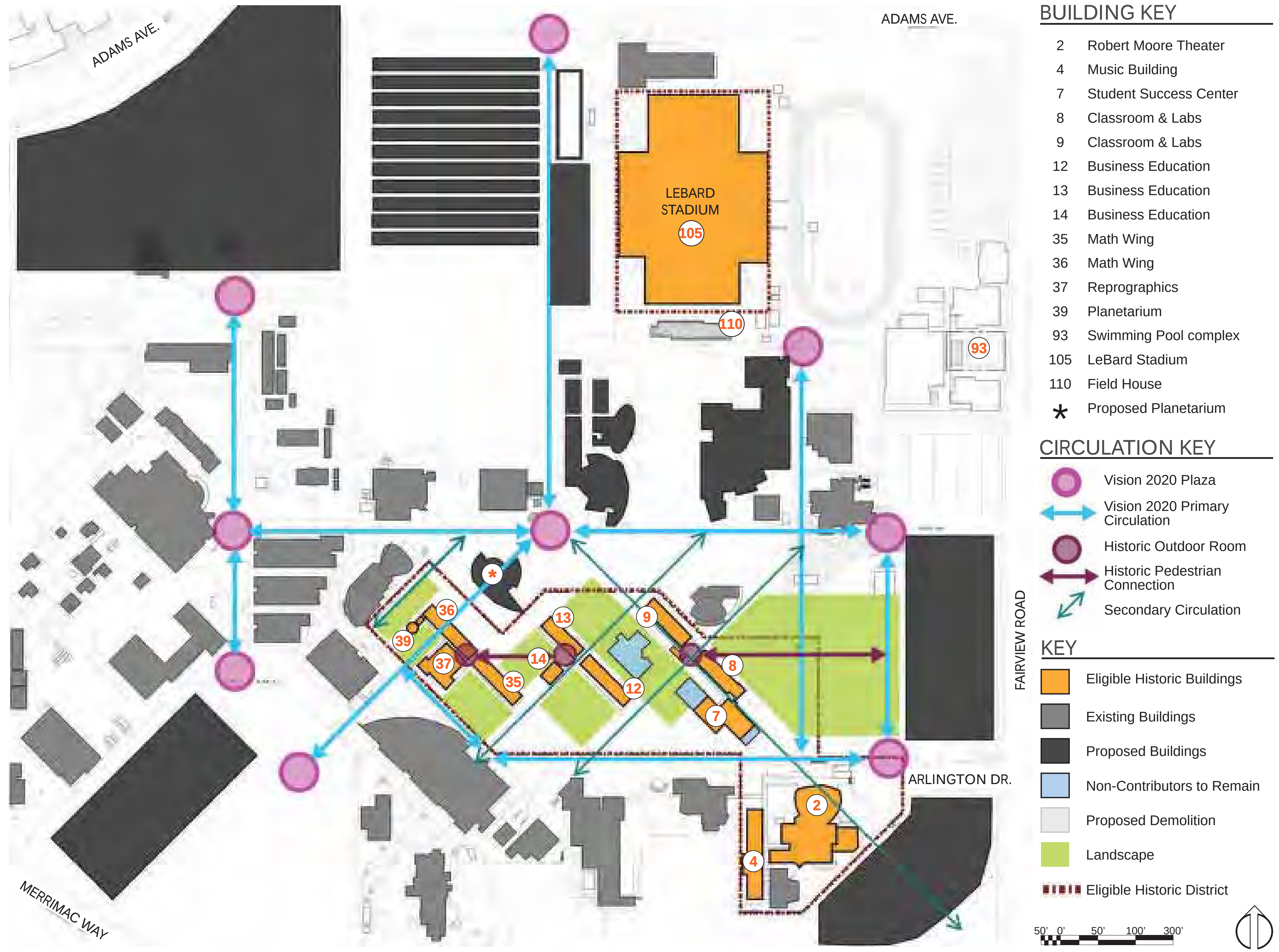
- Eligible Historic Buildings
- Existing Buildings
- Proposed Buildings
- Non-Contributors to Remain
- Proposed Demolition
- Landscape
- Eligible Historic District

50' 0' 50' 100' 300'

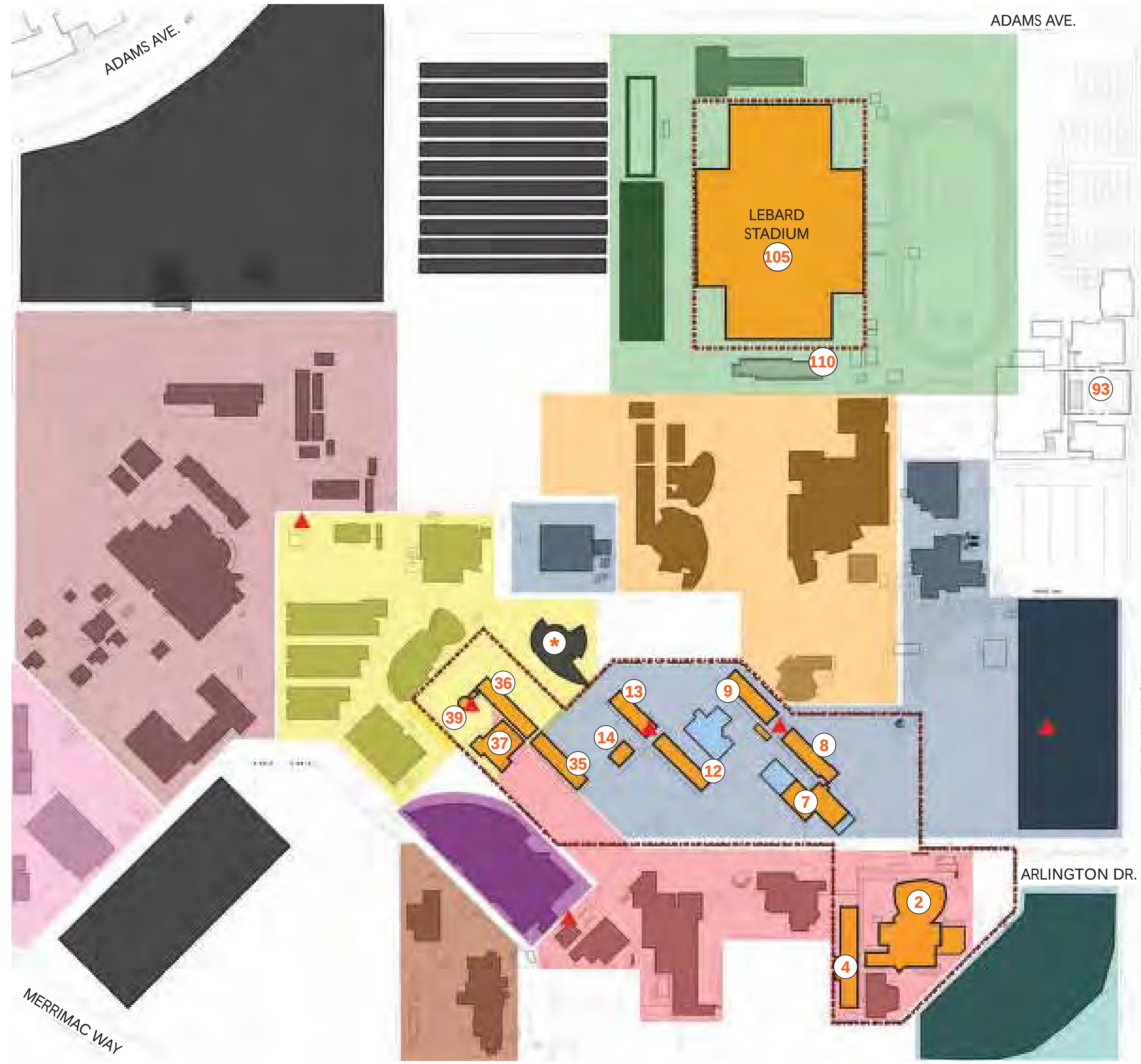
ALTERNATIVE 1

PRESERVATION ALTERNATIVE 1C: CIRCULATION

Figure 33: 1959 Aerial of Orange Coast College. Buildings highlighted shall be retained as part of Preservation Alternative 1C Source: Orange Coast College Library.



PRESERVATION ALTERNATIVE 1C: ZONING



CAMPUS ZONES

- CTE
- Sports
- Sciences
- Academic/Interdisciplinary
- Student/Admin. Services
- Utility/Maintenance
- Library
- Child Studies / Care Facilities
- Arts
- Housing / Retail Opportunities
- Food Service

BUILDING KEY

2	Robert Moore Theater
4	Music Building
7	Student Success Center
8	Classroom & Labs
9	Classroom & Labs
12	Business Education
13	Business Education
14	Business Education
35	Math Wing
36	Math Wing
37	Reprographics
39	Planetarium
93	Swimming Pool complex
105	LeBard Stadium
110	Field House
*	Proposed Planetarium

KEY

- Eligible Historic Buildings
- Existing Buildings
- Proposed Buildings
- Non-Contributors to Remain
- Proposed Demolition
- Landscape
- Eligible Historic District

ALTERNATIVE 1

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PRESERVATION ALTERNATIVE 1C: CENTRAL CORE

PRESERVATION ALTERNATIVE 1C
BUILDINGS 7-9: ADMINISTRATIVE SERVICES & THEATER PRE-FUNCTION ROOM

East and west additions to Building 7 shall be retained as part of the rehabilitation and restoration work planned for the original Library, therefore allowing for the building to accommodate both Administrative functions as in Alternative 1B and a new Pre-Function space to support the Theater Arts programs. The addition at the south side of Building 7 is to be razed.

New, expanded restroom facilities which meet current California Building Standards Code requirements for fixture count and accessibility shall be located at existing plumbing locations.

A small Food Service room open to everyone on campus and a Breakroom for Administration are needed which will require additional plumbing. Special power requirements may be necessary for Food Service.

Reconstruction of the original Library fireplace has been proposed for the programmed location for the President's Office Suite and restoration historic finishes at the covered walkways and breezeways shall be restored.

Small skylights at the existing covered walkways and additional exterior lighting are proposed as a minor, reversible alteration to address the College's concern that these pedestrian pathways are too dark.

Structural system upgrades are necessary to enhance the buildings' seismic performance. Buildings 8 and 9 require a new moment frame system to be constructed at the interior of the window walls and Building 7 needs revisions to its shear wall system. See Structural Evaluation (Appendix 3) for more information.

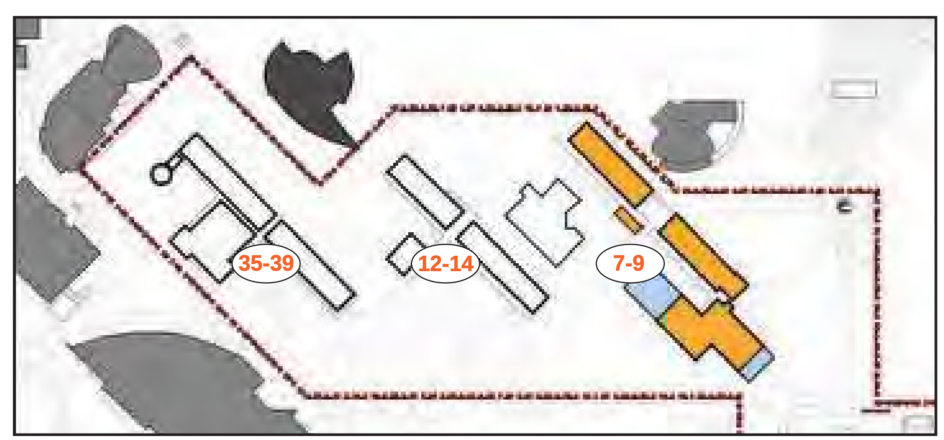
Mechanical, Electrical and Plumbing upgrades will be necessary and descriptions may be found in the MEP Evaluation (Appendix 4).

Alternative 1C

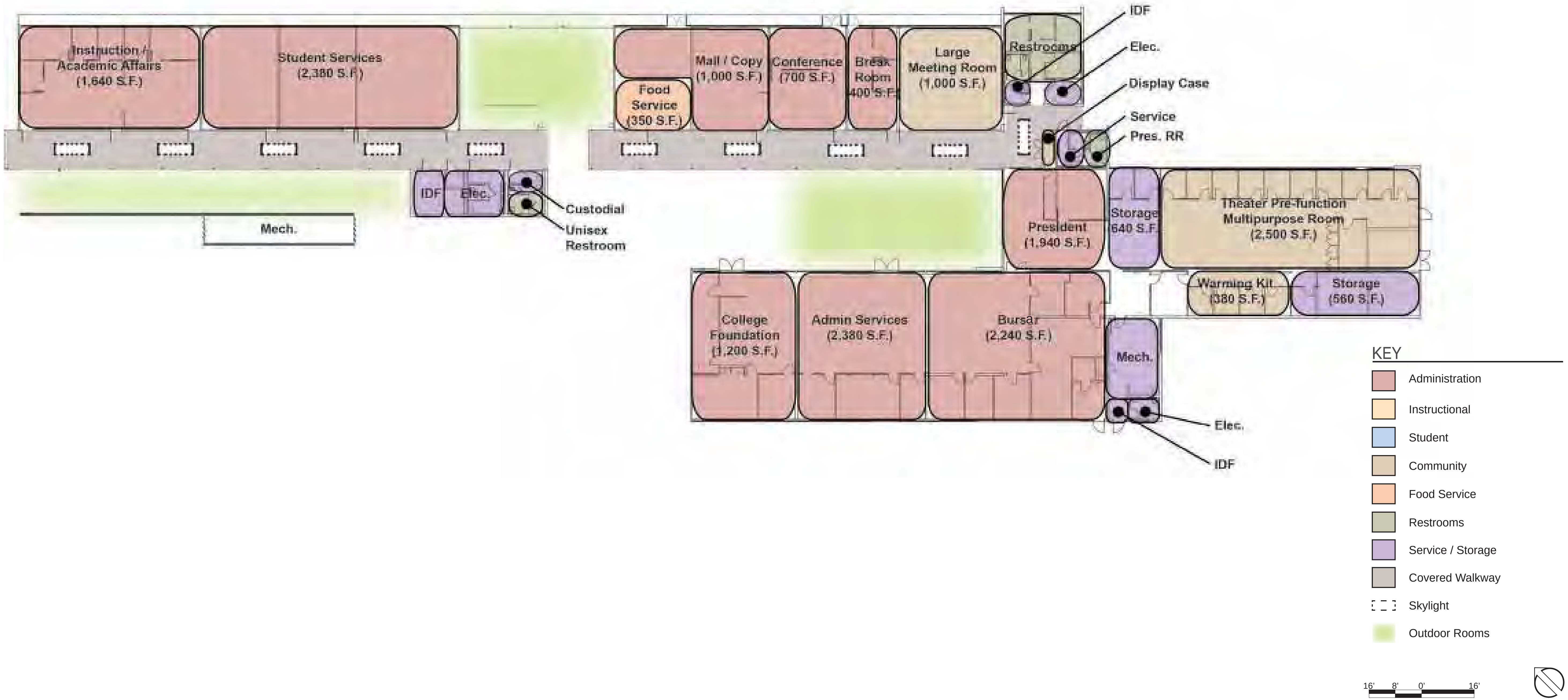
Rm. Type	Room Name	Qty.	Unit Size	SF
Buildings 7-9: Administration Services and Theater Prefunction				19,310
Office Suites				
310	President	1	1,940	1,940
310	Adminstrative Services	1	2,380	2,380
310	s	1	2,240	2,240
310	Instruction/Academic Affairs	1	1,640	1,640
310	Student Services	1	2,380	2,380
310	College Foundation	1	1,200	1,200
Shared/Support				
315	Mail/Copy	1	1,000	1,000
315	Breakroom	1	400	400
350	Conference Room	1	700	700
Community				
310	Theater Pre-Function/Multipurpose Room	1	2,500	2,500
310	Warming Kitchen	1	380	380
310	Storage	1	640	640
310	Storage	1	560	560
Other				
660	Food Service	1	350	350
680	Meeting Room	1	1,000	1,000

Source: OCC Draft Admin Program by Brailsford & Dunlavey

KEY PLAN



PRESERVATION ALTERNATIVE 1C
BUILDINGS 7-9: ADMINISTRATIVE SERVICES & THEATER PRE-FUNCTION ROOM



PRESERVATION ALTERNATIVE 1C
BUILDINGS 12-14: STUDENT & COMMUNITY USE

Probably the most important work needed at the Business Education complex is to remove non-contributor additions to Building 14 and reconstruct the display window on the south wall.

New program functions proposed for Buildings 12-14 in Alternative 1C are focused on community engagement: Community Lecture Space, Museum and Community Sustainability Lab will provide numerous opportunities for OCC to engage both campus and community.

Shared student functions are included as a Study Room and Lounge. Day use lockers have been requested by students in surveys conducted by others and therefore they have been proposed to be located within the Student Lounge.

New, expanded restroom facilities which meet current California Building Standards Code requirements for fixture count and accessibility shall be located at existing plumbing locations.

A small Food Service room open to everyone on campus will require additional plumbing. Special power requirements may also be necessary.

Historic finishes at the covered walkways and breezeways shall be restored and small skylights additional exterior lighting are proposed as a minor, reversible alteration to address the College's concern that these pedestrian pathways are too dark.

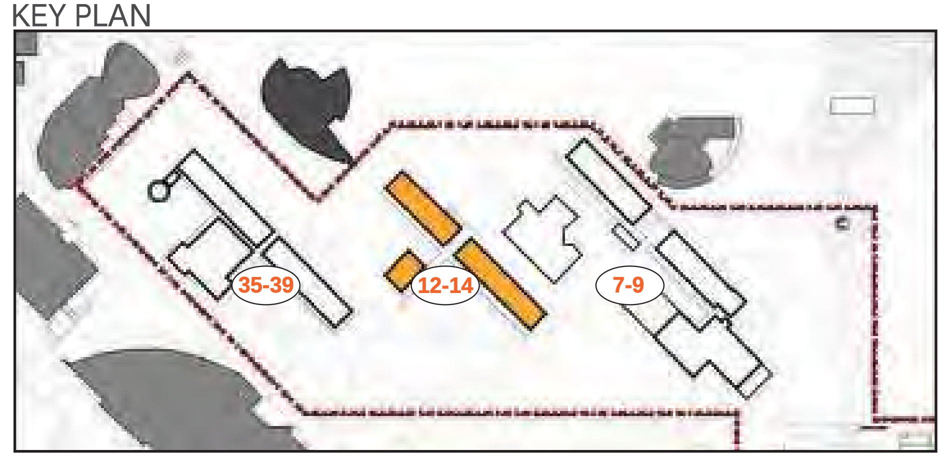
Structural system upgrades were constructed as part of earlier efforts to address seismic issues at Buildings 12 and 13. Because of the significant work necessary to restore Building 14 further study may be necessary. Interior shear walls where new door openings are proposed will require shotcrete for strengthening. See Structural Evaluation (Appendix 3) for more information.

Mechanical, Electrical and Plumbing upgrades will be necessary and descriptions may be found in the MEP Evaluation (Appendix 4).

Alternative 1C Rm. Type	Room Name	Qty.	Unit Size	SF
Buildings 12-14: Student & Community Function				8,160
Community Spaces				
610	Meeting Room	1	1250	1,250
680	Community Lecture Space	1	1280	1,280
610	Museum	1	2000	2,000
210	Community Sustainability Lab	1	1280	1,280
Student Space				
410	Study Room	1	1,000	1,000
650	Lounge + Day Use Lockers	1	1,200	1,200
Other				
660	Food Service	1	150	150

Source: N/A

KEY PLAN



PRESERVATION ALTERNATIVE 1C
BUILDINGS 12-14: STUDENT & COMMUNITY USE

KEY
- Administration
- Instructional
- Student
- Community
- Food Service
- Restrooms
- Service / Storage
- Covered Walkway
- Skylight
- Outdoor Rooms

ALTERNATIVE 1

PRESERVATION ALTERNATIVE 1C
BUILDINGS 35-39: INTERDISCIPLINARY CENTER

Non-contributor additions to Buildings 37 and 39 shall be removed as part of the rehabilitation and restoration work planned for the original Science complex. The key function of Buildings 35-39 is as an Interdisciplinary Center. To support this a large Makerspace is proposed for Building 37 and a large Multipurpose Room will support it and the campus as a whole. Science support spaces focused on the functions planned for the new Planetarium will provide storage for the Astronomy Department's telescopes and a classroom for K-12 visitors attending a demonstration/show at the Planetarium.

A number of shared student functions are proposed: Study Room, Lounge, Meditation Room and Bike Sharing. Together with the Makerspaces this complex has an opportunity to bring together many departments from around campus to engage in learning together.

New, expanded restroom facilities which meet current California Building Standards Code requirements for fixture count and accessibility shall be located at existing plumbing locations.

A small Food Prep room open to everyone on campus will require additional plumbing. Special power requirements may also be necessary. It is also proposed that a more significant Food Service operate in the old Planetarium (Bldg. 39).

Historic finishes at the covered walkways and breezeways shall be restored and small skylights and additional exterior lighting are proposed as a minor, reversible alteration to address the College's concern that these pedestrian pathways are too dark.

Structural system upgrades may be necessary for Building 36 and new openings at bearing walls of Building 37 will require structural interventions. See Structural Evaluation (Appendix 3) for more information.

Mechanical, Electrical and Plumbing upgrades will be necessary and descriptions may be found in the MEP Evaluation (Appendix 4).

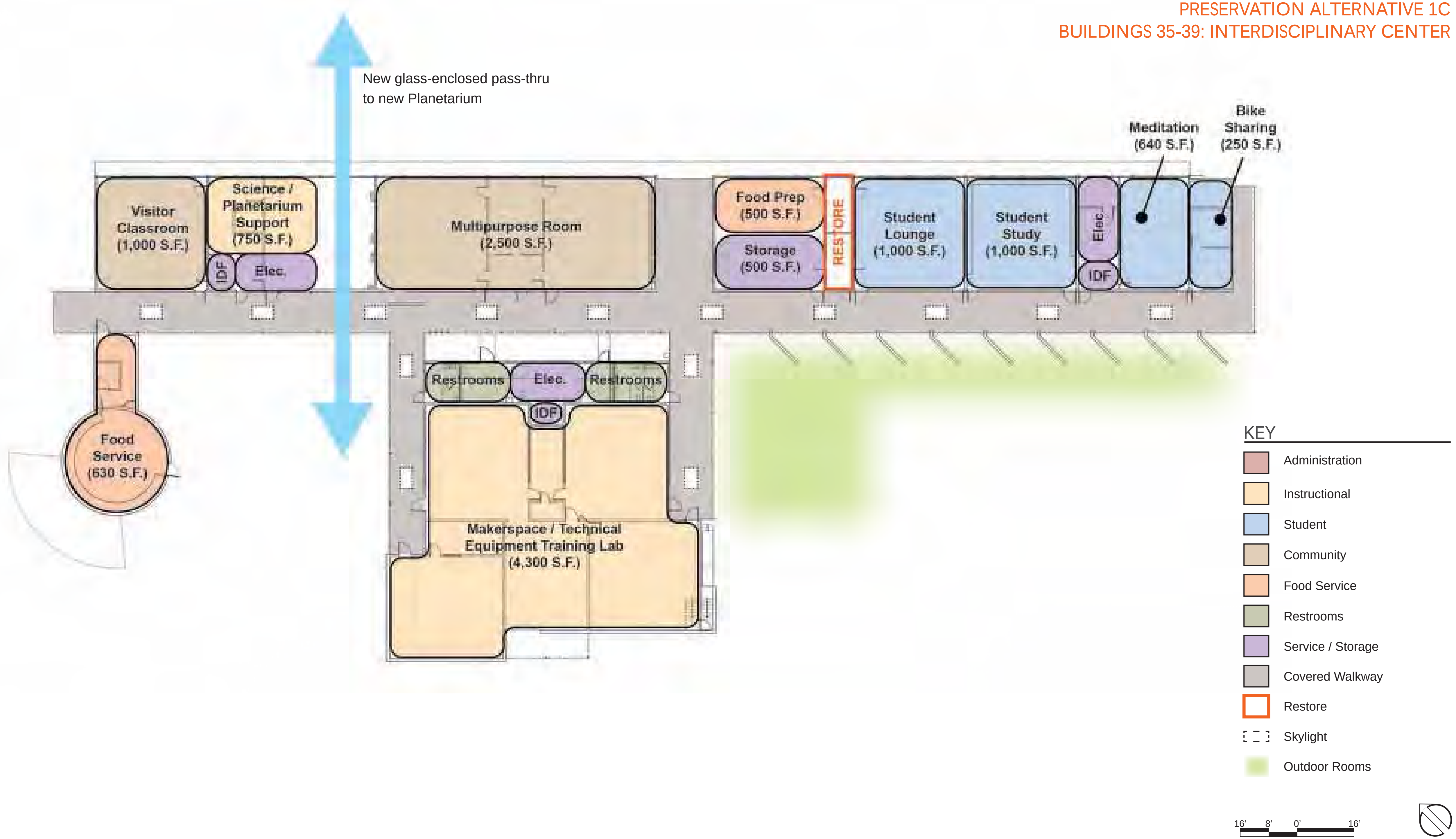
Alternatives 1A/1B/1C

Rm. Type	Room Name	Qty.	Unit Size	SF
Buildings 35-39: Interdisciplinary Center				13,070
Instructional				
210	Makerspace/Tech. Equip. Training Lab	1	4,300	4,300
215	Science/Planetarium Support	1	750	750
Student Space				-
410	Study Room	1	1,000	1,000
650	Lounge	1	1,000	1,000
650	Meditation Room	1	640	640
660	Bike Sharing	1	250	250
Community				
610	Multipurpose Room	1	2,500	2,500
615	Storage	1	500	500
680	Visitor Classroom	1	1,000	1,000
Other				
660	Food Prep	1	500	500
660	Food Service	1	630	630

Source: Project Update PPT presentations 2/5/2015 & 3/5/2015

KEY PLAN

PRESERVATION ALTERNATIVE 1C
BUILDINGS 35-39: INTERDISCIPLINARY CENTER



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PRESERVATION ALTERNATIVE 2

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PRESERVATION ALTERNATIVE 2A

Preservation Alternative 2A is considered a strategic reuse alternative where the new Planetarium remains at its proposed location and contributor Buildings 36, 37, and 39 are removed. While not preferred, it is in Page & Turnbull's opinion that an eligible historic district remains because sufficient buildings remain in the core of the Historic District to convey its significant spatial relationships. However, removal of any additional historic fabric beyond what has been identified in Preservation Alternative 2A would jeopardize the eligibility of the Historic District for historic listing.

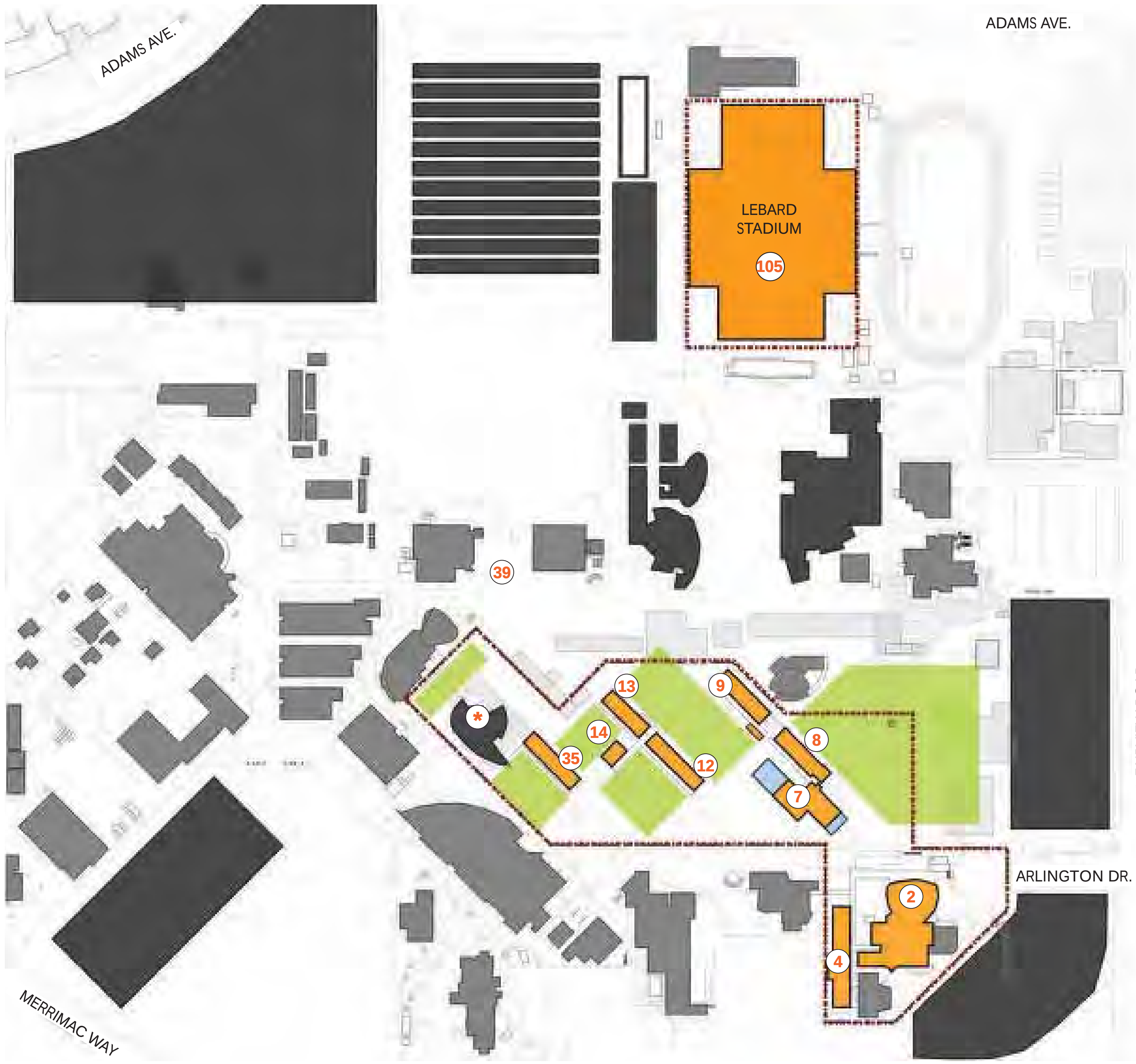
Under Alternative 2A, the remainder of the Historic District will be restored to express its significance. Non-contributing buildings and additions made after 1957 within the Historic District will be removed to restore the spatial relationship as well as an east-west axis that has been disrupted by non-contributors. The Swimming Pool complex (Bldg. 93) and Field House (Bldg. 110) will be demolished. The remaining historic buildings will be rehabilitated in conformance with the Secretary of the Interior's Standards for Rehabilitation (Standards). The old Planetarium (Bldg. 39) will be relocated to a site yet to be determined and reused. The Theater and Music Buildings (Bldgs. 2 and 4) will retain their current use. Minor and sensitive alterations to character-defining features are proposed, such as skylights at covered walkways and upgrades to structural systems to increase seismic resistance. The estimated cost for Alternative 2A is approximately $23 million.

ALTERNATIVE 2A COST SUMMARY

Building	Proposed Use	Total Project Cost at Each Complex
Buildings 2 and 4	Unchanged - Robert Moore Theater and Music Building	$1,846,750
Buildings 7-9	Administrative and Special Services	$6,892,375
Buildings 12-14	Interdisciplinary Center	$10,028,375
Building 35 Only	Science Support and Community Functions	$2,499,000
Building 93	Existing Swimming Pool Complex (**Demolition**)	$161,750
Building 105	Unchanged - LeBard Stadium	$313,875
Building 110	Existing Field House (**Demolition**)	$219,375
Building 10	Existing Special Services (**Demolition**)	$652,500
	Alternative 2A Total Project Cost	**$22,614,000**

Note: The cost for Buildings 12-14 includes an option for a central plant, estimated at approximately $2,000,000.

Caveat Emptor: Cost Summary is based on Page & Turnbull's Scope of Work only and does not include related work as defined by CCCD.



BUILDING KEY

2	Robert Moore Theater
4	Music Building
7	Student Success Center
8	Classroom & Labs
9	Classroom & Labs
12	Business Education
13	Business Education
14	Business Education
35	Math Wing
39	Planetarium
105	LeBard Stadium
*	Proposed Planetarium

KEY

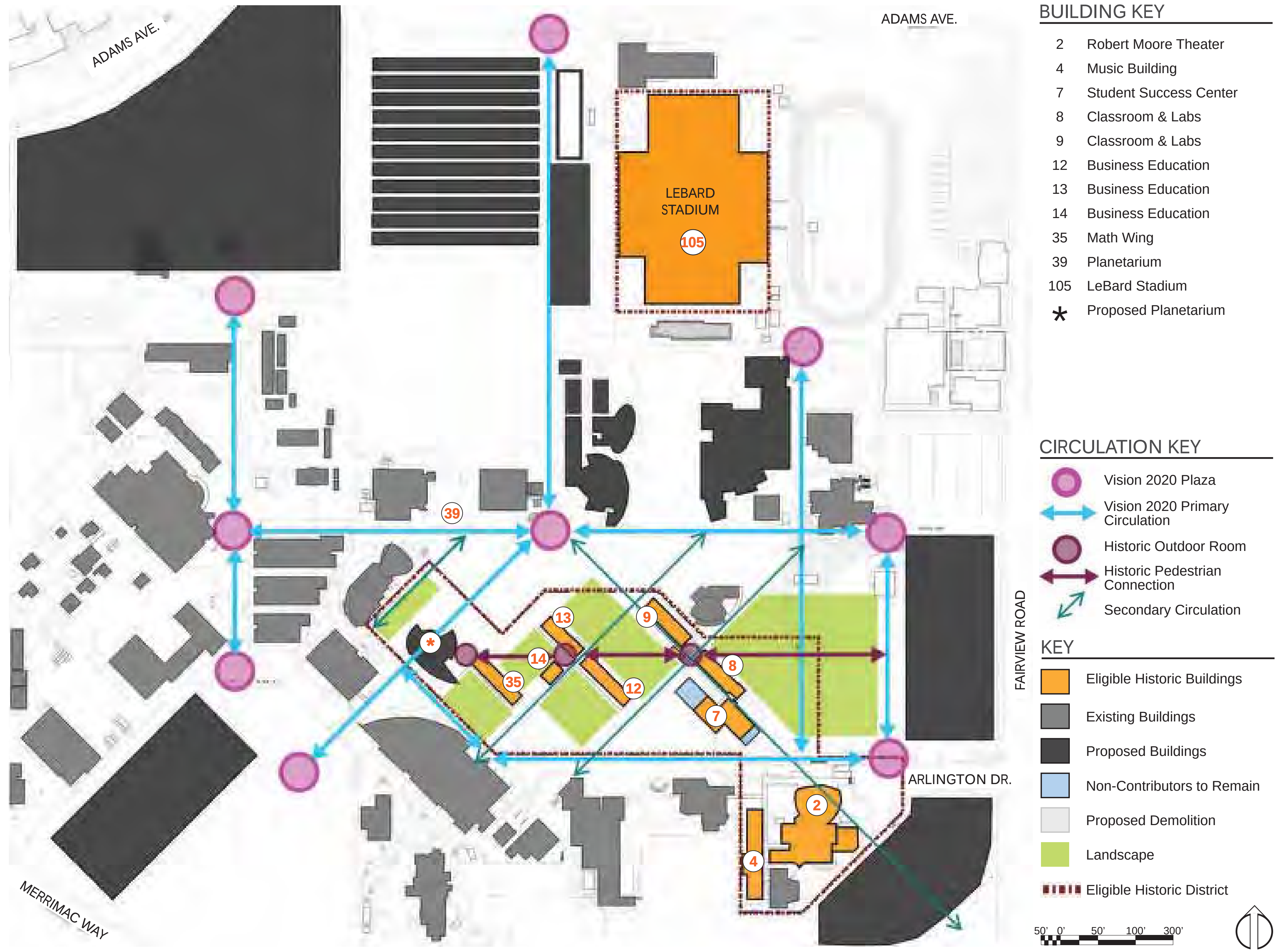
- Eligible Historic Buildings
- Existing Buildings
- Proposed Buildings
- Non-Contributors to Remain
- Proposed Demolition
- Landscape
- Eligible Historic District

50' 0' 50' 100' 300'

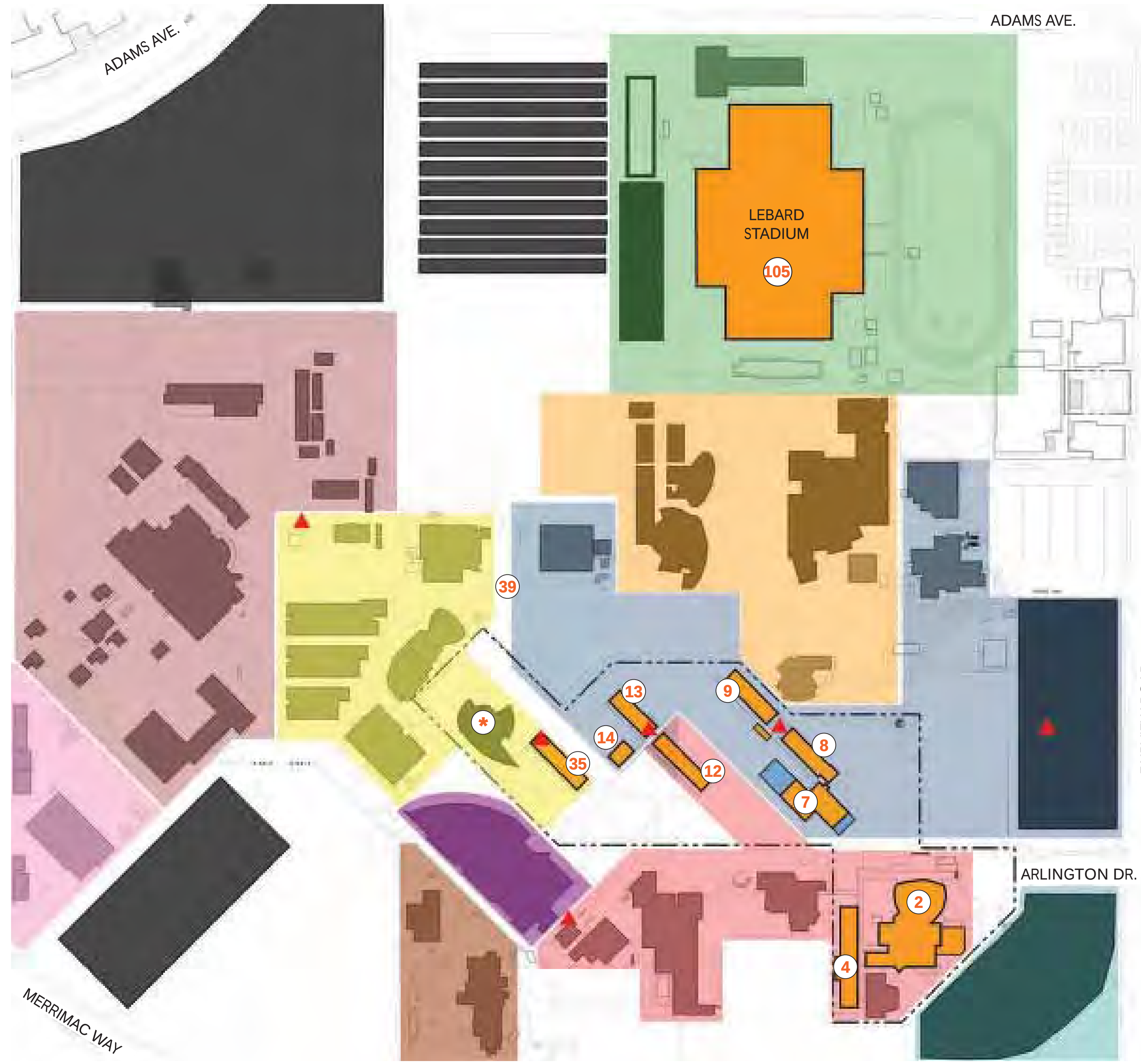
ALTERNATIVE 2

PRESERVATION ALTERNATIVE 2A: CIRCULATION

Figure AX: 1959 Aerial of Orange Coast College. Buildings highlighted shall be retained as part of Preservation Alternative 2A. Source: Orange Coast College Library.



PRESERVATION ALTERNATIVE 2A: ZONING



CAMPUS ZONES

- CTE
- Sports
- Sciences
- Academic/Interdisciplinary
- Student/Admin. Services
- Utility/Maintenance
- Library
- Child Studies / Care Facilities
- Arts
- Housing / Retail Opportunities
- Food Service

BUILDING KEY

2	Robert Moore Theater
4	Music Building
7	Student Success Center
8	Classroom & Labs
9	Classroom & Labs
12	Business Education
13	Business Education
14	Business Education
35	Math Wing
39	Planetarium
105	LeBard Stadium
*	Proposed Planetarium

KEY

- Eligible Historic Buildings
- Existing Buildings
- Proposed Buildings
- Non-Contributors to Remain
- Proposed Demolition
- Landscape
- Eligible Historic District

ALTERNATIVE 2

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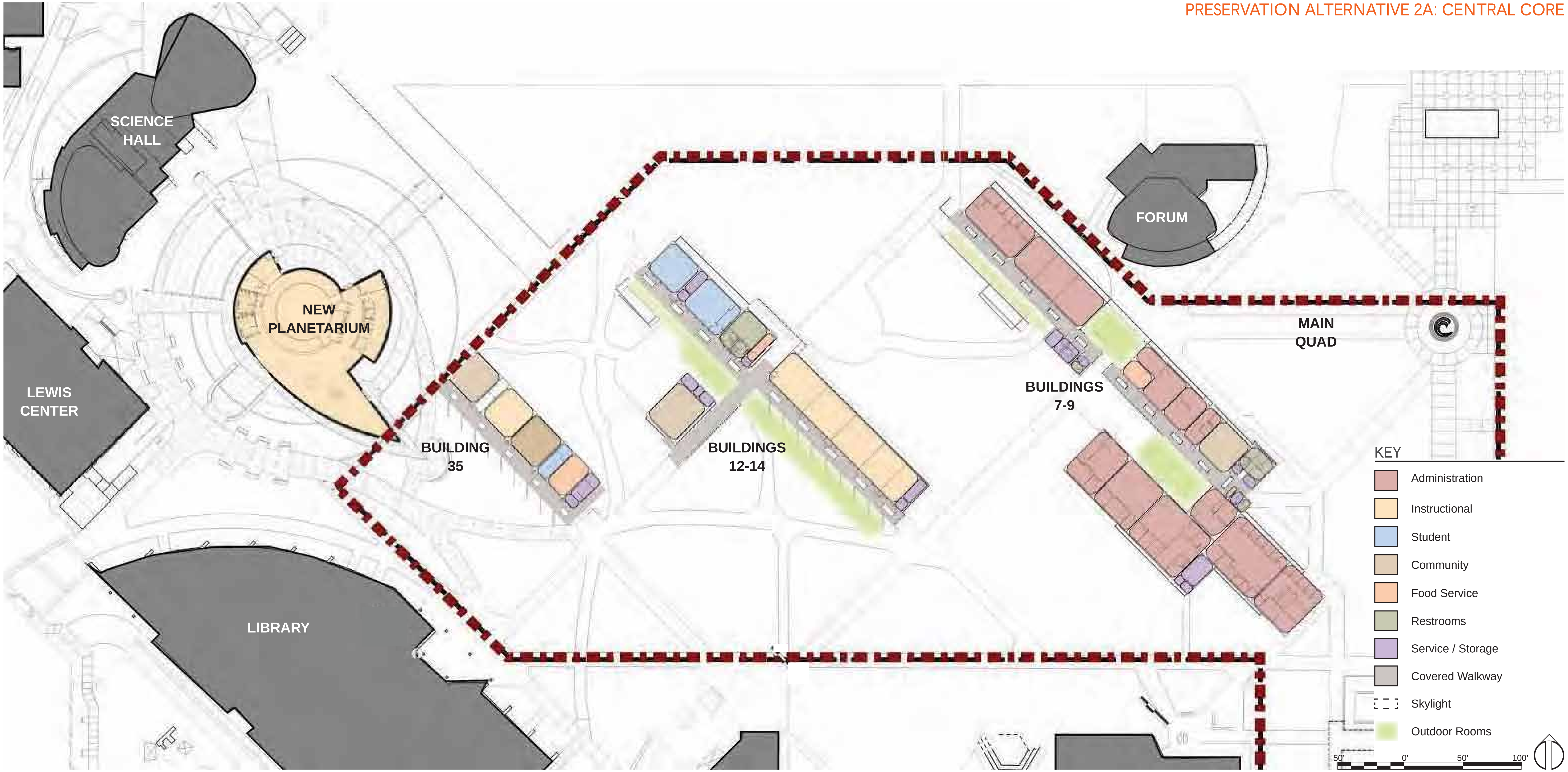
PRESERVATION ALTERNATIVE 2A: CENTRAL CORE



PRESERVATION ALTERNATIVE 2A
BUILDINGS 7-9: ADMINISTRATIVE & SPECIAL SERVICES

East and west additions to Building 7 shall be retained as part of the rehabilitation and restoration work planned for the original Library, therefore allowing for the building to accommodate both Administrative functions as in Preservation Alternative 1 and a new home for Special Services since Building 10 is proposed to be removed. The addition at the south side of Building 7 is to be razed.

New, expanded restroom facilities which meet current California Building Standards Code requirements for fixture count and accessibility shall be located at existing plumbing locations.

A small Food Service room open to everyone on campus and a Breakroom for Administration are needed which will require additional plumbing. Special power requirements may be necessary for Food Service.

Reconstruction of the original Library fireplace has been proposed for the programmed location for the President's Office Suite and restoration of historic finishes at the covered walkways and breezeways shall be restored.

Small skylights at the existing covered walkways and additional exterior lighting are proposed as a minor, reversible alteration to address the College's concern that these pedestrian pathways are too dark.

Structural system upgrades are necessary to enhance the buildings' seismic performance. Buildings 8 and 9 require a new moment frame system to be constructed at the interior of the window walls and Building 7 needs revisions to its shear wall system. See Structural Evaluation (Appendix 3) for more information.

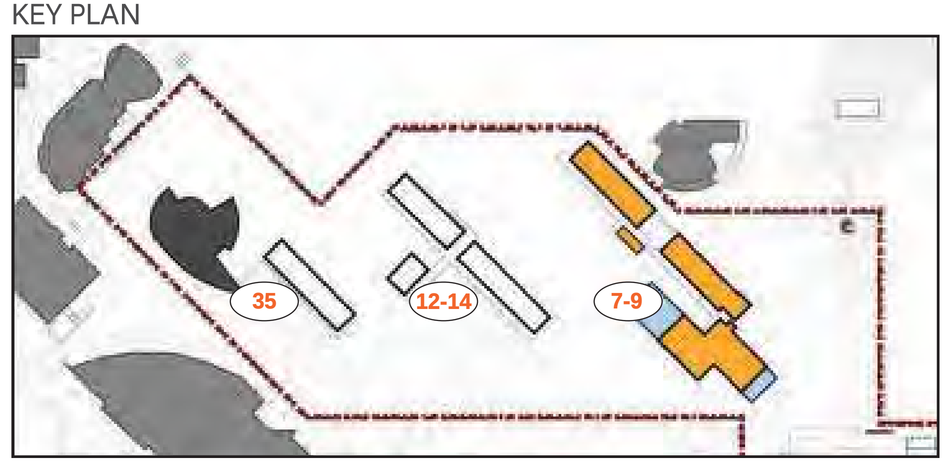
Mechanical, Electrical and Plumbing upgrades will be necessary and descriptions may be found in the MEP Evaluation (Appendix 4).

Alternative 2A

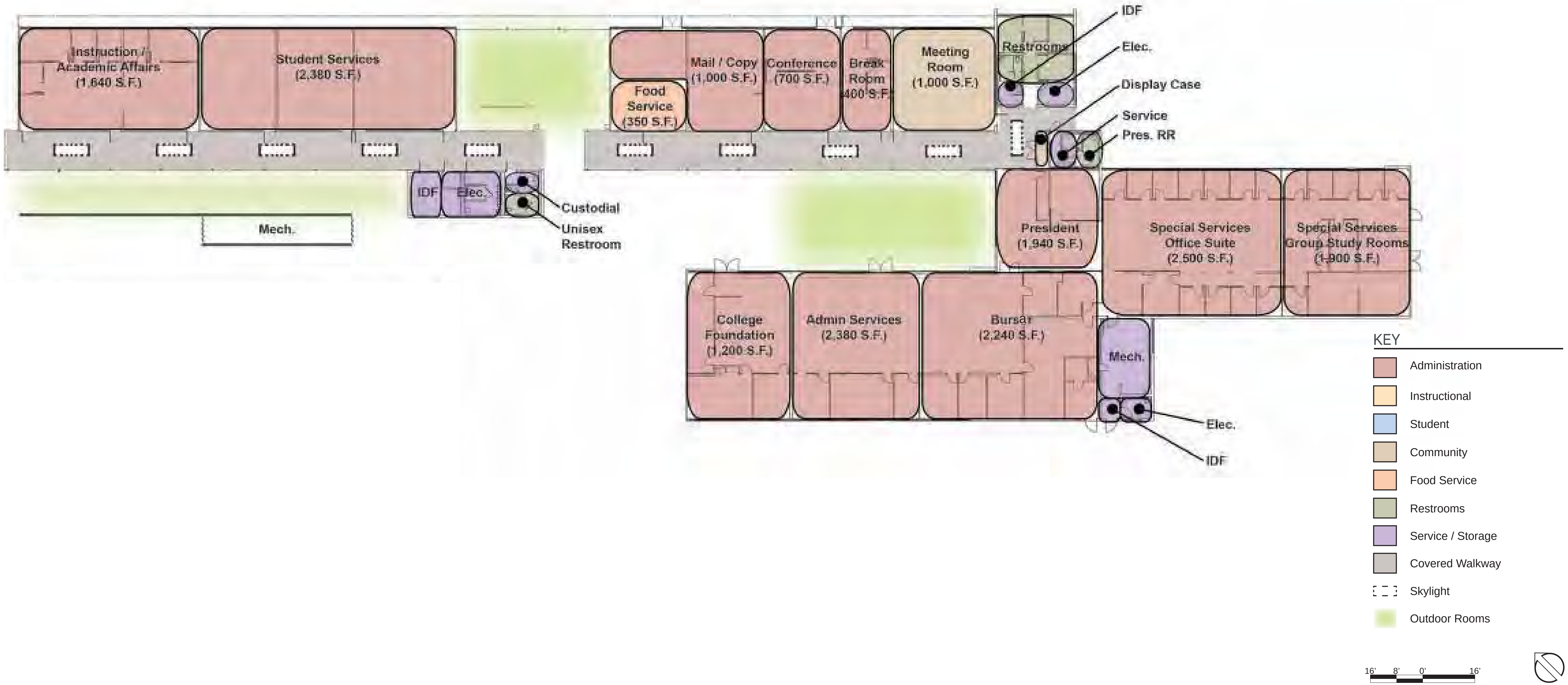
Rm. Type	Room Name	Qty.	Unit Size	SF
Buildings 7-9: Administration & Special Services				19,630
Office Suites				
310	President	1	1,940	1,940
310	Adminstrative Services	1	2,380	2,380
310	s	1	2,240	2,240
310	Instruction/Academic Affairs	1	1,640	1,640
310	Student Services	1	2,380	2,380
310	College Foundation	1	1,200	1,200
Shared/Support				
315	Mail/Copy	1	1,000	1,000
315	Breakroom	1	400	400
350	Conference Room	1	700	700
Special Services				
310	Office Suite	1	2,500	2,500
310	Group Study Rooms	1	1,900	1,900
Other				
660	Food Service	1	350	350
680	Meeting Room	1	1,000	1,000

Source: OCC Draft Admin Program by Brailsford & Dunlavey and FUSION OCC Report 17 Building 10

KEY PLAN



PRESERVATION ALTERNATIVE 2A
BUILDINGS 7-9: ADMINISTRATIVE & SPECIAL SERVICES



ALTERNATIVE 2

PRESERVATION ALTERNATIVE 2A
BUILDINGS 12-14: INTERDISCIPLINARY CENTER

Probably the most important work needed at the Business Education complex is to remove non-contributor additions to Building 14 and reconstruct the display window on the south wall.

The key function of Buildings 12-14 is as an Interdisciplinary Center. To support this a large Makerspace is proposed at Building 12 and a large Multipurpose Room located at Building 14. The Honors Program will share Building 13 with a Study Room for the general student body. Together with the Makerspaces this complex has an opportunity to bring together many departments from around campus to engage in learning together.

New, expanded restroom facilities which meet current California Building Standards Code requirements for fixture count and accessibility shall be located at existing plumbing locations.

A small Food Service room open to everyone on campus will require additional plumbing. Special power requirements may also be necessary.

Historic finishes at the covered walkways and breezeways shall be restored and small skylights and additional exterior lighting are proposed as a minor, reversible alteration to address the College's concern that these pedestrian pathways are too dark.

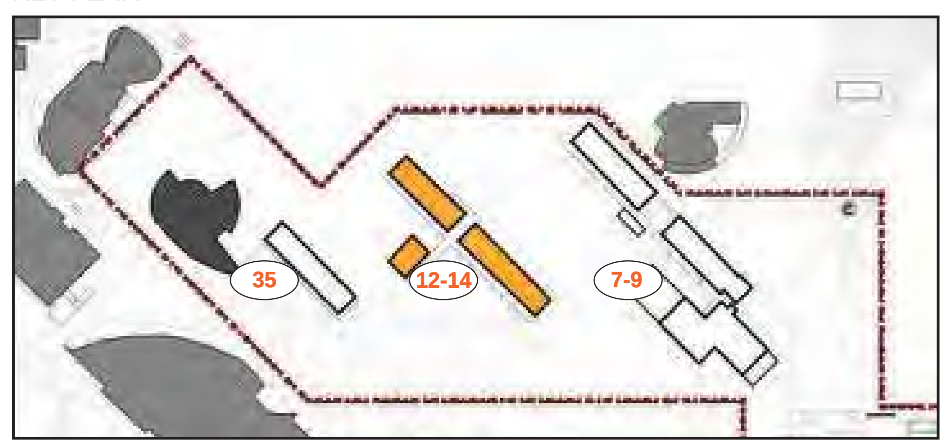
Structural system upgrades were constructed as part of earlier efforts to address seismic issues at Buildings 12 and 13. Because of the significant work necessary to recreate Building 14 further study may be necessary. Interior shear walls where new door openings are proposed will require shotcrete for strengthening. See Structural Evaluation (Appendix 3) for more information.

Mechanical, Electrical and Plumbing upgrades will be necessary and descriptions may be found in the MEP Evaluation (Appendix 4).

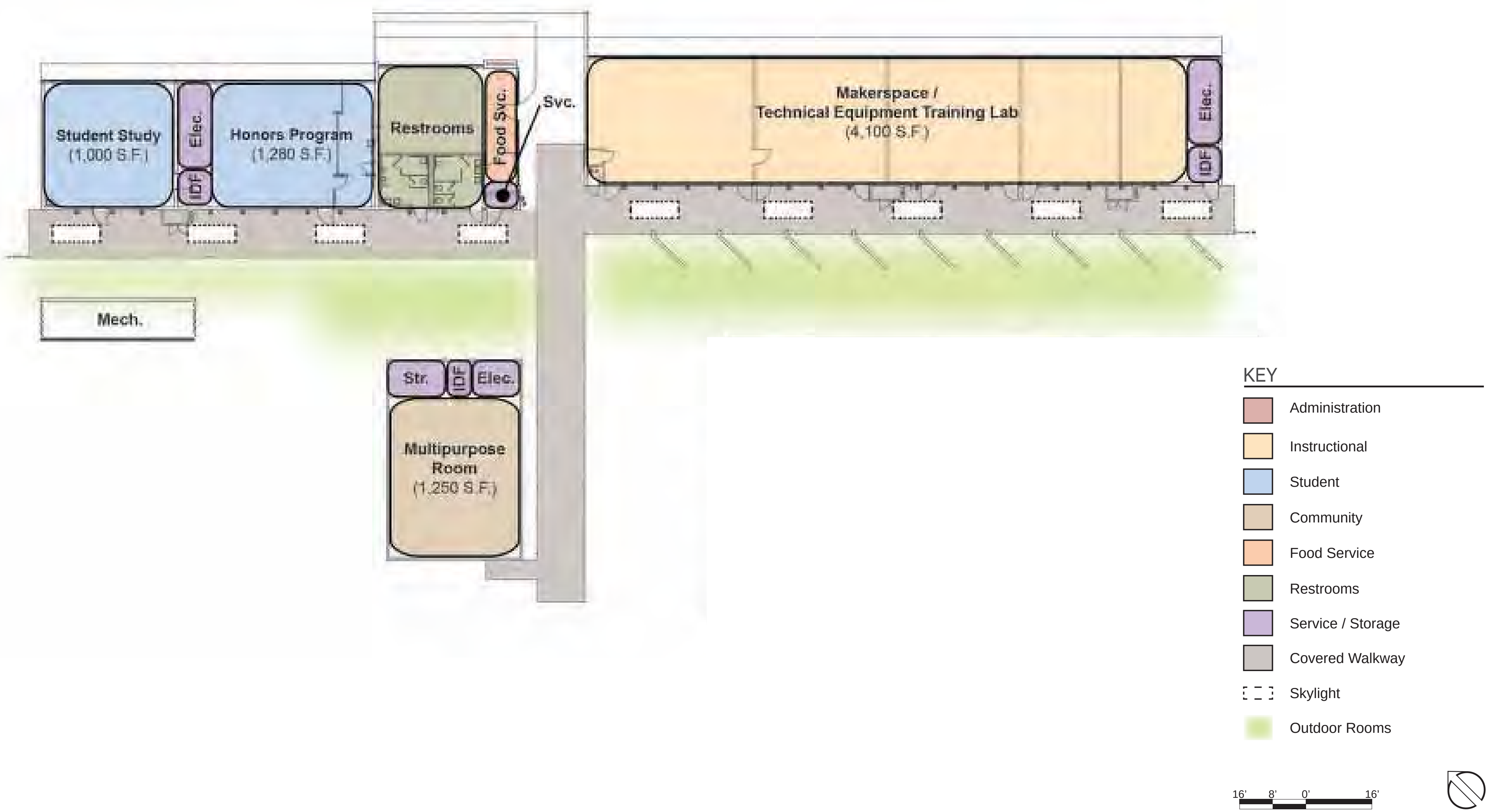
Alternative 2A/2B Rm. Type	Room Name	Qty.	Unit Size	SF
Buildings 12-14: Interdisciplinary Center				7,740
Instructional				
210	Makerspace/Tech. Equip. Training Lab	1	4100	4100
Honors Program - Office				
310	Honors Program Director	1	140	140
Honors Support Spaces				
650	Lounge & Resources	1	600	600
680	Meeting Room	1	500	500
Student Space				
410	Study Room	1	1000	1000
Community				
610	Multipurpose Room	1	1250	1250
Other				
660	Food Service	1	150	150

Source: N/A

KEY PLAN



PRESERVATION ALTERNATIVE 2A
BUILDINGS 12-14: INTERDISCIPLINARY CENTER



PRESERVATION ALTERNATIVE 2A
BUILDINGS 35-39: SCIENCE SUPPORT & COMMUNITY USE

In order to accommodate the new Planetarium Buildings 36, 37, 38, and 39 must be removed. This reduces the area available for new program functions therefore spaces are focused on supporting the New Planetarium and Sciences by providing a Visitor Classroom for K-12 Field Trips, storage for telescopes and a Multipurpose Room to be shared with the Community.

A small Food Service is proposed which may also be used by visitors to the New Planetarium and a Bike Sharing program would support OCC students. The Food Service area may require plumbing and have special electrical needs.

New, expanded restroom facilities which meet current California Building Standards Code requirements for fixture count and accessibility shall be located at existing plumbing locations.

Historic finishes at the covered walkways and breezeways shall be restored and small skylights and additional exterior lighting are proposed as a minor, reversible alteration to address the College's concern that these pedestrian pathways are too dark.

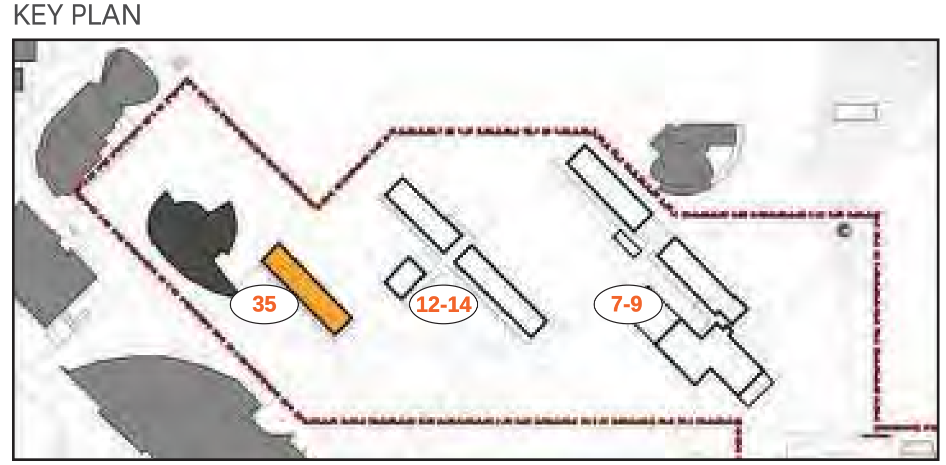
See Structural Evaluation (Appendix 3) for information about seismic upgrades.

Mechanical, Electrical and Plumbing upgrades will be necessary and descriptions may be found in the MEP Evaluation (Appendix 4).

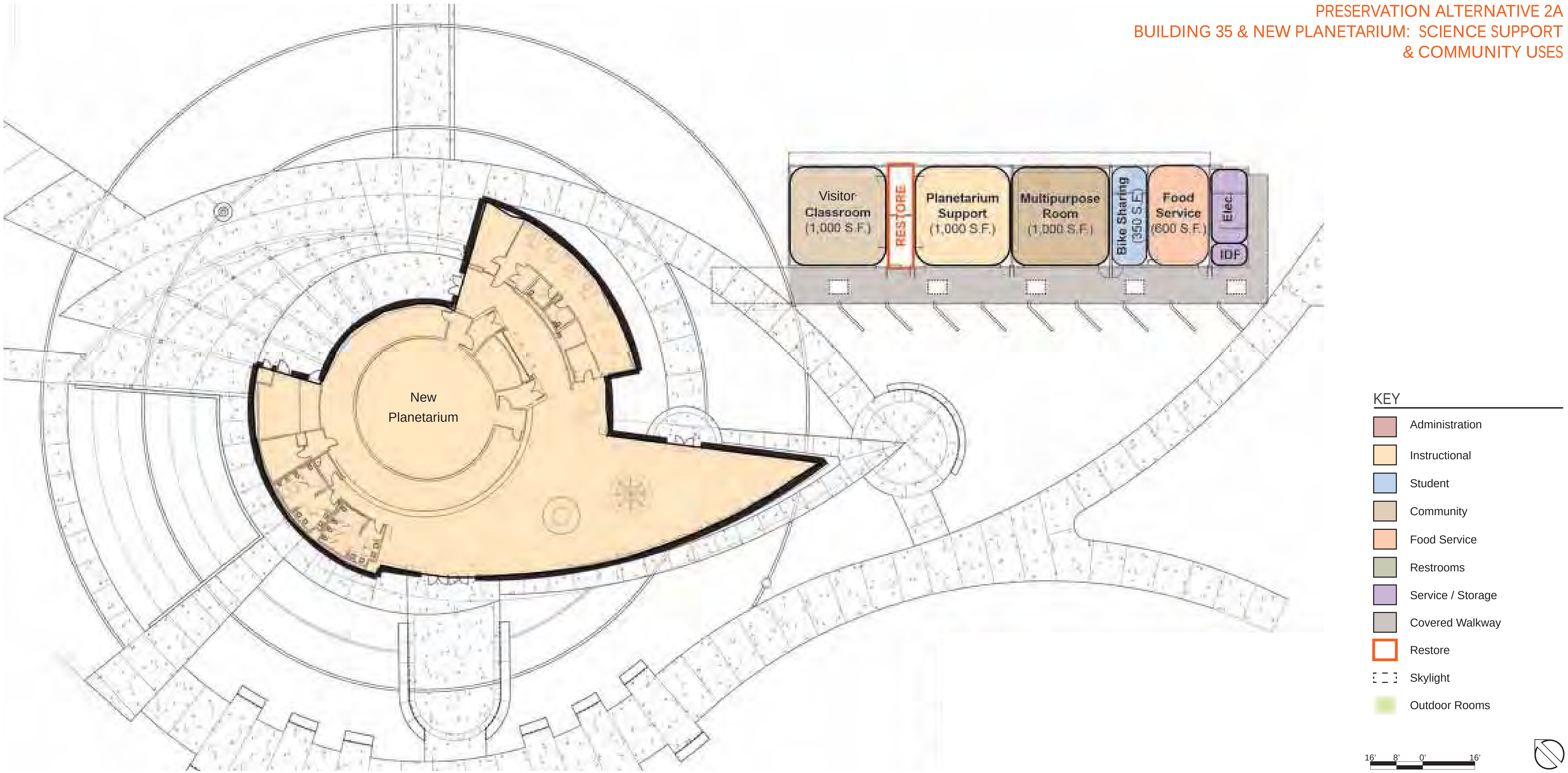
Alternative 2A/2B Rm. Type	Room Name	Qty.	Unit Size	SF
Buildings 35-39:Science Support & Community Functions				4,605
Instructional				
215	Science/Planetarium Support	1	500	500
Student Space				
660	Bike Sharing	1	125	125
Community				
680	Visitor Classroom	1	1,000	1,000
610	Multipurpose Room	1	2,500	2,500
Other				
660	Food Service	1	480	480

Source: Project Update PPT presentations 2/5/2015 & 3/5/2015

KEY PLAN



PRESERVATION ALTERNATIVE 2A
BUILDING 35 & NEW PLANETARIUM: SCIENCE SUPPORT & COMMUNITY USES



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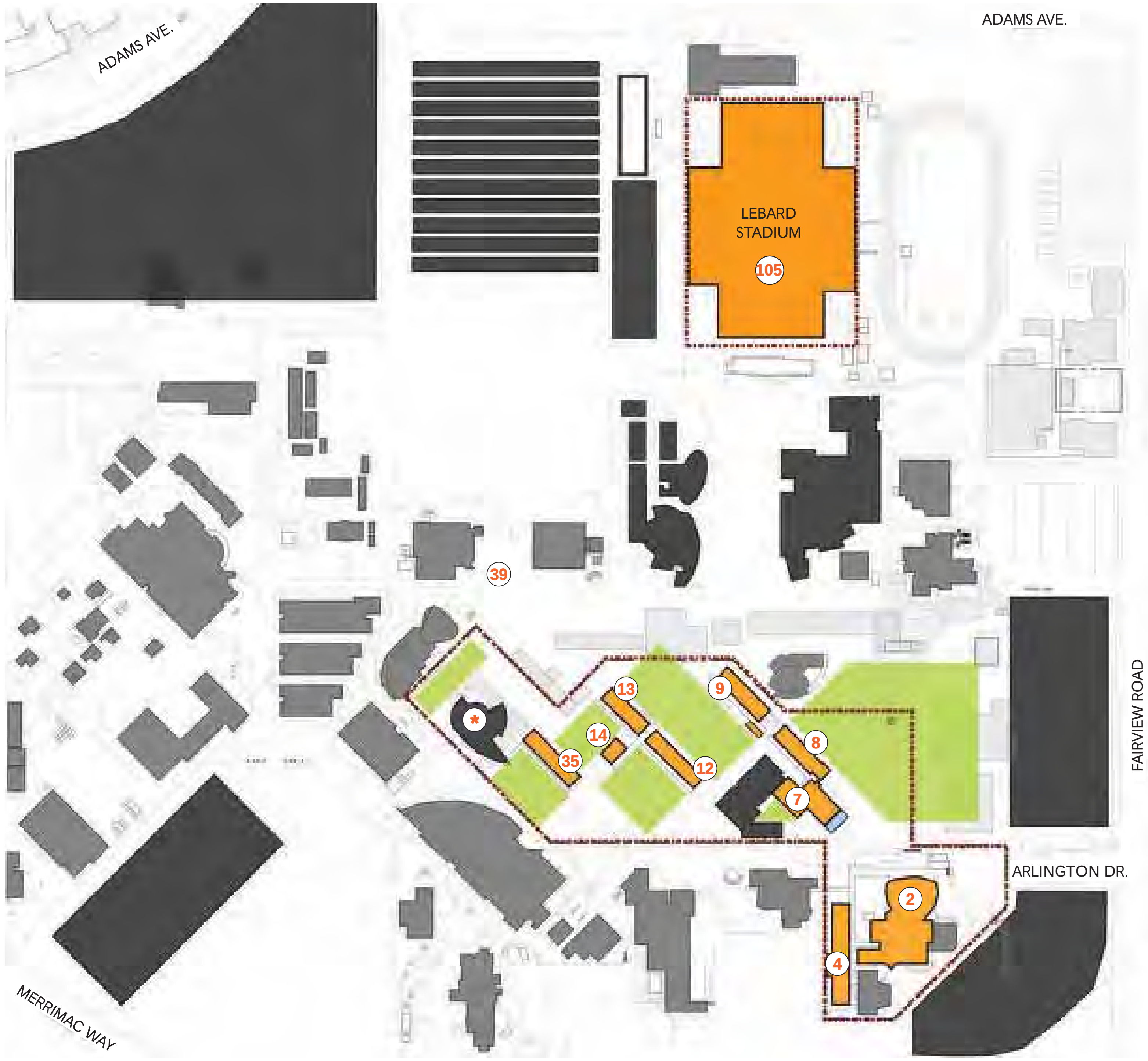
PRESERVATION ALTERNATIVE 2B

In response to College staff who indicated a desire for a new building for their Dance Department, Alternative 2B includes an addition to Building 7 to accommodate Dance instructional spaces. The addition shall be located and designed to be compatible with Building 7 and will not impact the integrity of the Historic District. The remainder of Alternative 2B is similar to Alternative 2A. The estimated cost for Alternative 2B is approximately $30 million.

ALTERNATIVE 2B COST SUMMARY

Building	Proposed Use	Total Project Cost at Each Complex
Buildings 2 and 4	Unchanged - Robert Moore Theater and Music Building	$1,846,750
Buildings 7-9	Dance Program with New Addition	$14,676,875
Buildings 12-14	Interdisciplinary Center	$10,028,375
Building 35 Only	Science Support and Community Functions	$2,499,000
Building 93	Existing Swimming Pool Complex (**Demolition**)	$161,750
Building 105	Unchanged - LeBard Stadium	$313,875
Building 110	Existing Field House (**Demolition**)	$219,375
Building 10	Existing Special Services (**Demolition**)	$652,500
	Alternative 2B Total Project Cost	**$30,398,500**
Note: The cost for Buildings 12-14 includes an option for a central plant, estimated at approximately $2,000,000.		

Caveat Emptor: Cost Summary is based on Page & Turnbull's Scope of Work only and does not include related work as defined by CCCD.



BUILDING KEY

2	Robert Moore Theater
4	Music Building
7	Student Success Center
8	Classroom & Labs
9	Classroom & Labs
12	Business Education
13	Business Education
14	Business Education
35	Math Wing
39	Planetarium
105	LeBard Stadium
*	Proposed Planetarium

KEY

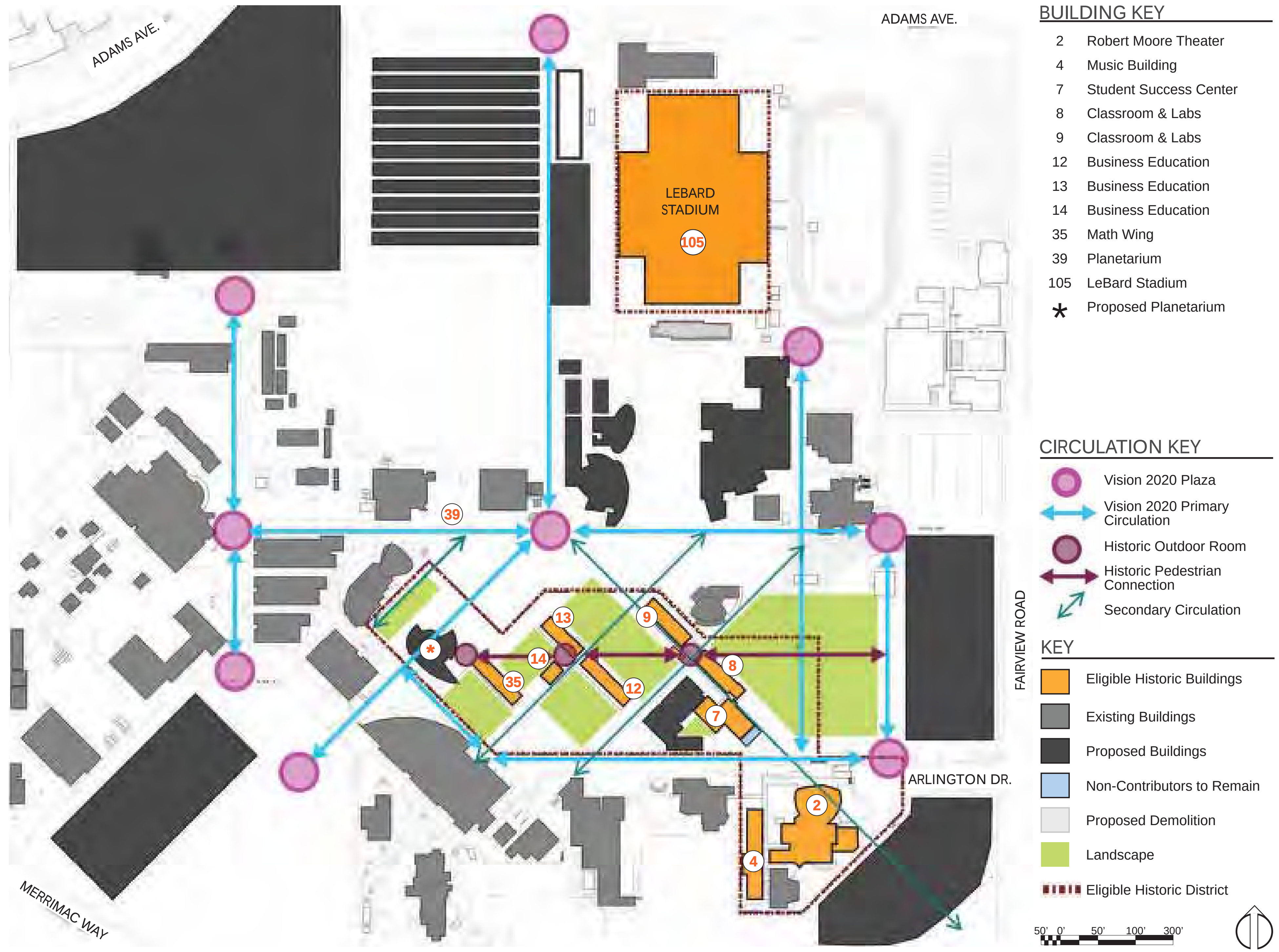
- Eligible Historic Buildings
- Existing Buildings
- Proposed Buildings
- Non-Contributors to Remain
- Proposed Demolition
- Landscape
- Eligible Historic District

50' 0' 50' 100' 300'

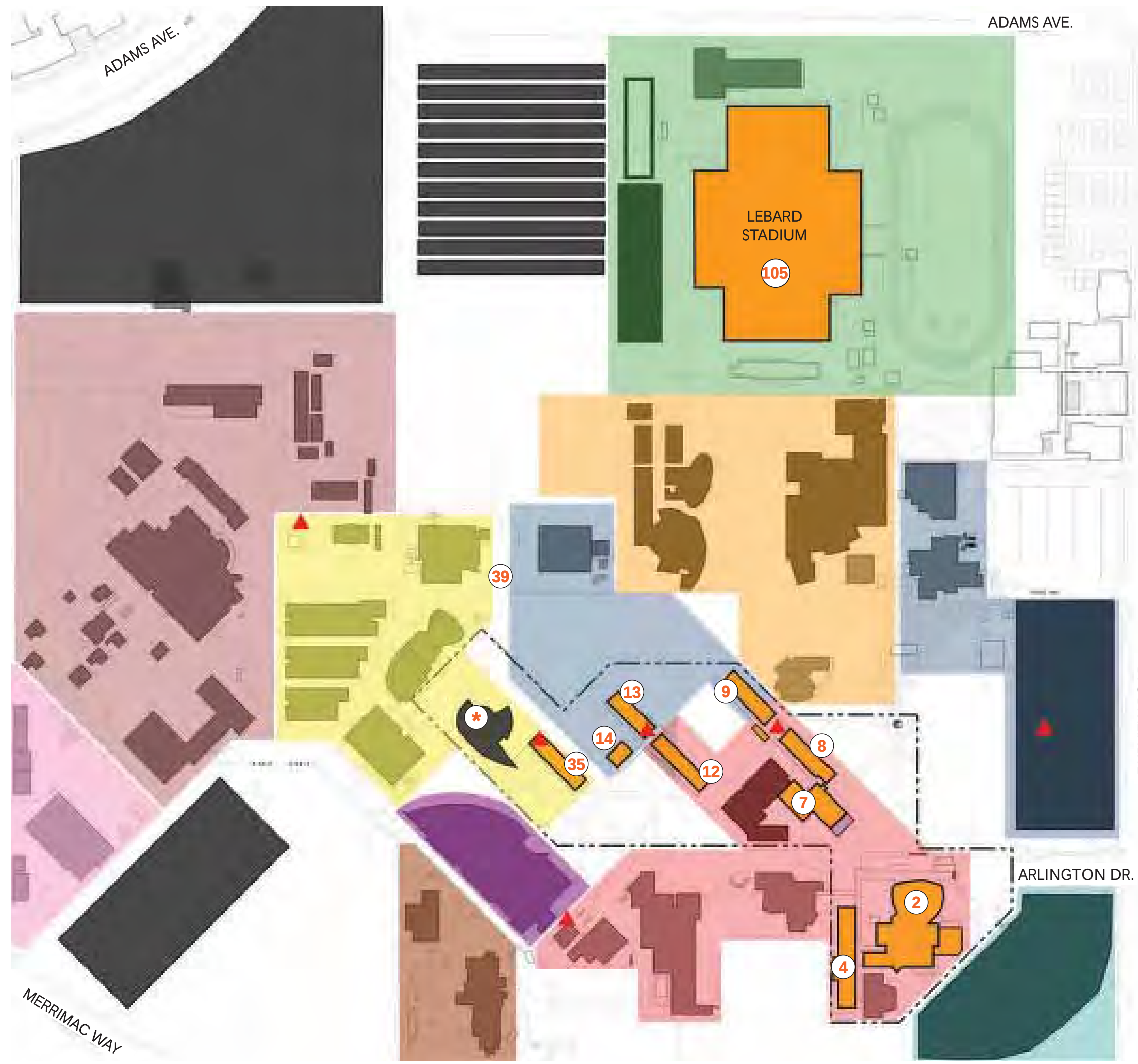
ALTERNATIVE 2

PRESERVATION ALTERNATIVE 2B: CIRCULATION

Figure AX: 1959 Aerial of Orange Coast College. Buildings highlighted shall be retained as part of Preservation Alternative 1. Source: Orange Coast College Library.



PRESERVATION ALTERNATIVE 2B: ZONING



CAMPUS ZONES

- CTE
- Sports
- Sciences
- Academic/Interdisciplinary
- Student/Admin. Services
- Utility/Maintenance
- Library
- Child Studies / Care Facilities
- Arts
- Housing / Retail Opportunities
- Food Service

BUILDING KEY

2	Robert Moore Theater
4	Music Building
7	Student Success Center
8	Classroom & Labs
9	Classroom & Labs
12	Business Education
13	Business Education
14	Business Education
35	Math Wing
39	Planetarium
105	LeBard Stadium
*	Proposed Planetarium

KEY

- Eligible Historic Buildings
- Existing Buildings
- Proposed Buildings
- Non-Contributors to Remain
- Proposed Demolition
- Landscape
- Eligible Historic District

50' 0' 50' 100' 300'

ALTERNATIVE 2

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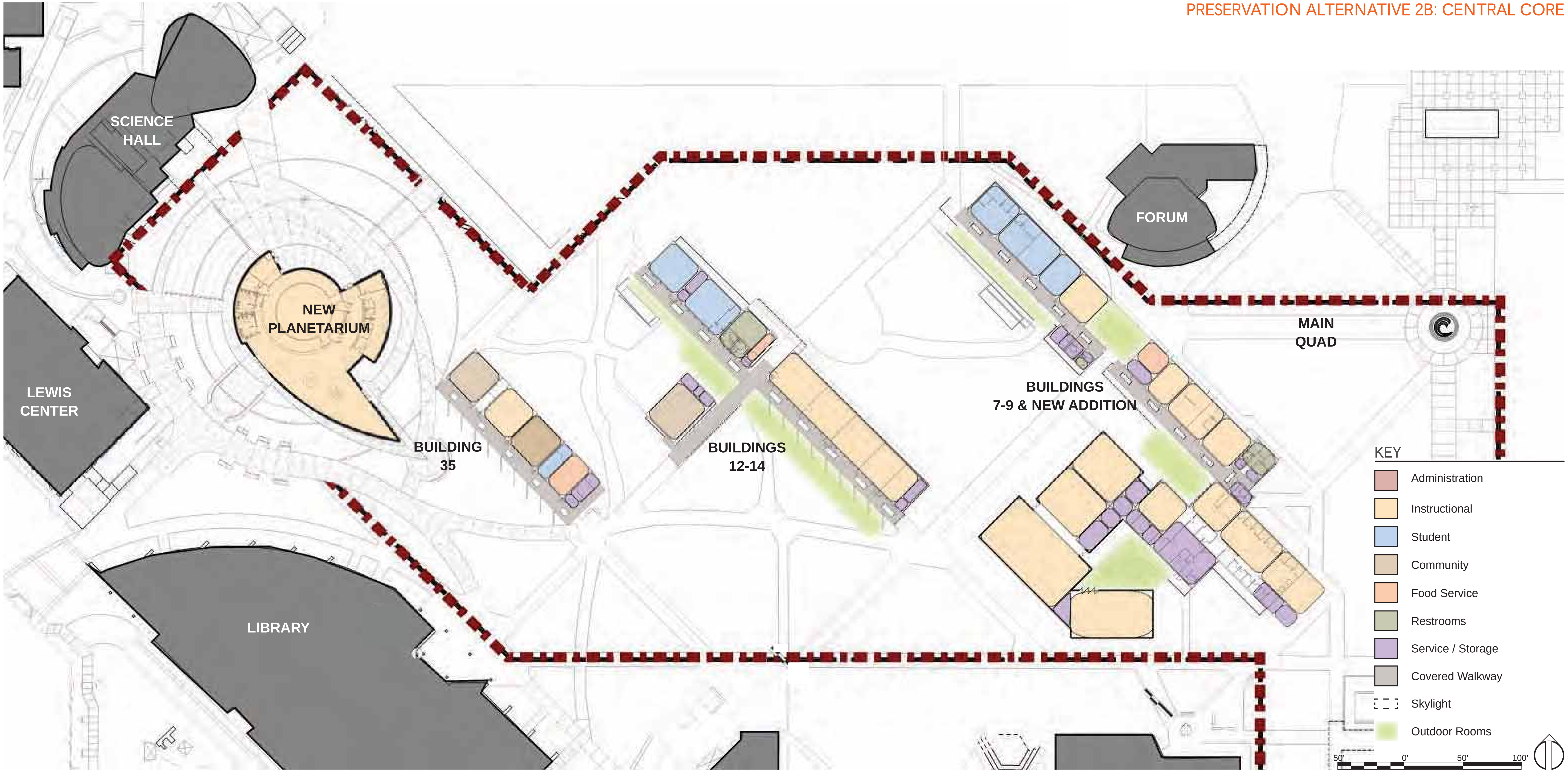
PRESERVATION ALTERNATIVE 2B: CENTRAL CORE



ALTERNATIVE 2

PRESERVATION ALTERNATIVE 2B
BUILDINGS 7-9: DANCE DEPARTMENT & STUDENT USE

Thenorthwest adn southwest additions to Building 7 shall be removed to make way for a new addition to house the Dance Department. The southeast addition to Building 7 will be retained as part of the rehabilitation and restoration work planned for the original Library, and to provide appropriate sizing for dance studios.

The new addition will house the larger dance studios requested by the department as provided to Page & Turnbull by HPI Architects, Inc.

Besides being a new home for the Dance Department with closer adjacency to the Theater and Music Departments, Buildings 7-9 will also provide Student Spaces: Study Room, Lounge, and Meditation Room.

New, expanded restroom facilities which meet current California Building Standards Code requirements for fixture count and accessibility shall be located at existing plumbing locations.

A small Food Service room may require additional plumbing and have special power requirements.

Reconstruction of the original Library fireplace has not been proposed because of the conflict with the Dance Studio function needed in that location.

Small skylights at the existing covered walkways and additional exterior lighting are proposed as a minor, reversible alteration to address the College's concern that these pedestrian pathways are too dark.

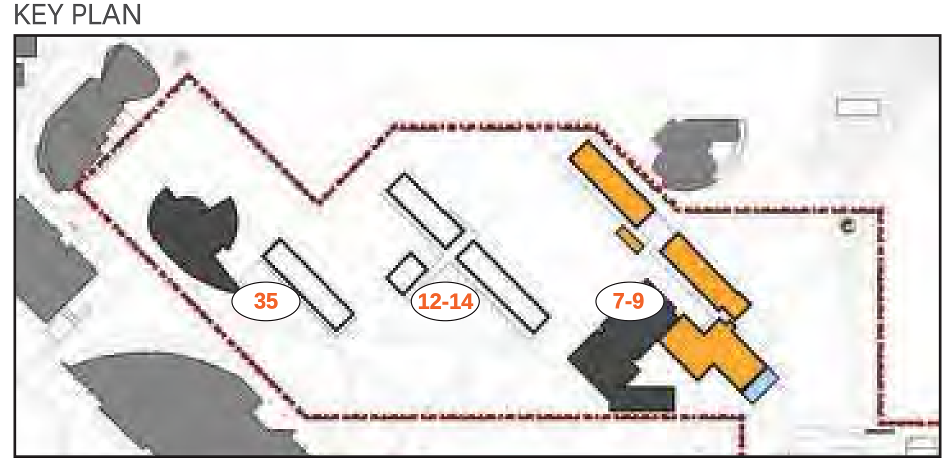
Structural system upgrades are necessary to enhance the buildings' seismic performance. Buildings 8 and 9 require a new moment frame system to be constructed at the interior of the window walls and Building 7 needs revisions to its shear wall system. See Structural Evaluation (Appendix 3) for more information.

Mechanical, Electrical and Plumbing upgrades will be necessary and descriptions may be found in the MEP Evaluation (Appendix 4).

Alternative 2B Rm. Type	Room Name	Qty.	Unit Size	SF
Buildings 7-9: Dance Department & Student Functions				27,080
Office Suite				
310	Dance/PAR/Music	1	1,000	1,000
Instructional				
210	Practice Studio	2	1,000	2,000
210	Dance Studio - Small	2	2,000	4,000
210	Dance Studio - Large	1	2,800	2,800
210	Dance Studio - Informal Performance Space	1	4,500	4,500
210	Pilates Apparatus Studio	1	1,500	1,500
210	Pilates/Dance Studio	1	1,500	1,500
Instructional Support				
690	Student Lockers	1	1,000	1,000
690	Faculty Lockers	1	700	700
650	Library & Lounge	1	1,200	1,200
215	Costume Storage	1	1,700	1,700
215	Sm. Storage	4	250	1,000
215	Large Storage	1	350	350
215	Pilates Storage	1	250	250
Student Space				
410	Study Room	1	1,400	1,400
650	Lounge	1	1,000	1,000
650	Meditation Room	1	700	700
Other				
660	Food Service	1	480	480

Source: Dance Program Request by HPI & OCC Existing Dance Spaces provided by College

KEY PLAN



PRESERVATION ALTERNATIVE 2B
BUILDINGS 7-9: STUDENT USE & DANCE DEPARTMENT ADDITION

ALTERNATIVE 2

PRESERVATION ALTERNATIVE 2B
BUILDINGS 12-14: INTERDISCIPLINARY CENTER

Probably the most important work needed at this complex is to remove non-contributor additions to Building 14 and reconstruct the display window on the south wall.

The key function of Buildings 12-14 is as an Interdisciplinary Center. To support this a large Makerspace is proposed at Building 12 and a large Multipurpose Room located at Building 14. The Honors Program will share Building 13 with a Study Room for the general student body. Together with the Makerspaces this complex has an opportunity to bring together many departments from around campus to engage in learning together.

New, expanded restroom facilities which meet current California Building Standards Code requirements for fixture count and accessibility shall be located at existing plumbing locations.

A small Food Service room open to everyone on campus will require additional plumbing. Special power requirements may also be necessary.

Historic finishes at the covered walkways and breezeways shall be restored and small skylights and additional exterior lighting are proposed as a minor, reversible alteration to address the College's concern that these pedestrian pathways are too dark.

Structural system upgrades were constructed as part of earlier efforts to address seismic issues at Buildings 12 and 13. Because of the significant work necessary to recreate Building 14 further study may be necessary. Interior shear walls where new door openings are proposed will require shotcrete for strengthening. See Structural Evaluation (Appendix 3) for more information.

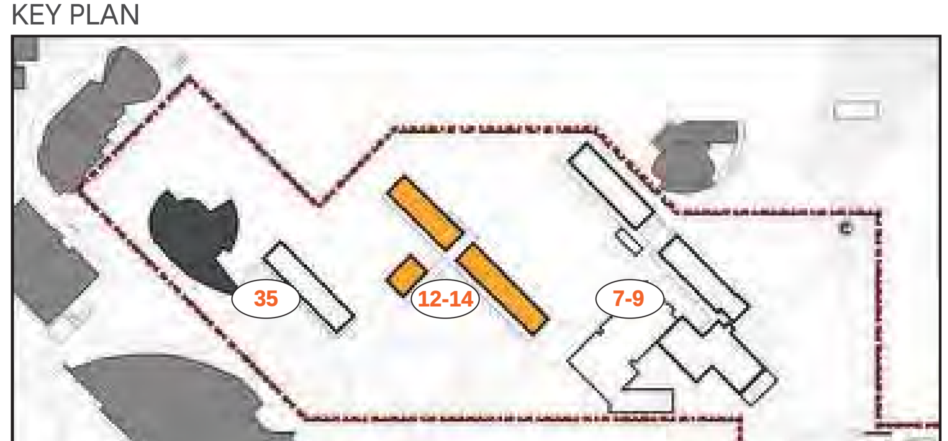
Mechanical, Electrical and Plumbing upgrades will be necessary and descriptions may be found in the MEP Evaluation (Appendix 4).

Alternative 2A/2B

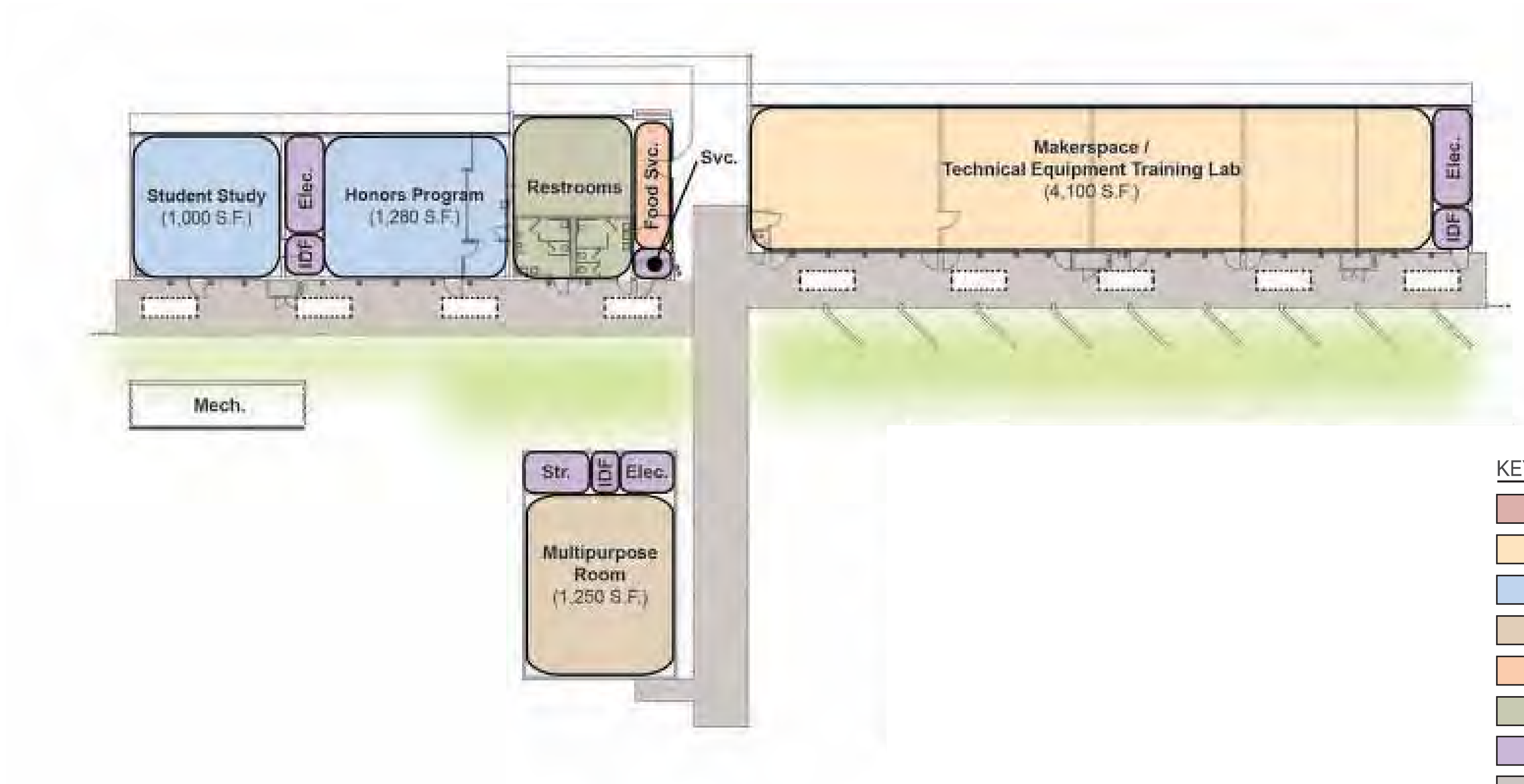
Rm. Type	Room Name	Qty.	Unit Size	SF
Buildings 12-14: Interdisciplinary Center				7,740
Instructional				
210	Makerspace/Tech. Equip. Training Lab	1	4100	4100
Honors Program - Office				
310	Honors Program Director	1	140	140
Honors Support Spaces				
650	Lounge & Resources	1	600	600
680	Meeting Room	1	500	500
Student Space				
410	Study Room	1	1000	1000
Community				
610	Multipurpose Room	1	1250	1250
Other				
660	Food Service	1	150	150

Source: N/A

KEY PLAN



PRESERVATION ALTERNATIVE 2B
BUILDINGS 12-14: INTERDISCIPLINARY CENTER



KEY

- Administration
- Instructional
- Student
- Community
- Food Service
- Restrooms
- Service / Storage
- Covered Walkway
- Skylight
- Outdoor Rooms

16' 8' 0' 16'

ALTERNATIVE 2

PRESERVATION ALTERNATIVE 2B
BUILDING 35: SCIENCE SUPPORT & COMMUNITY USE

In order to accommodate the new Planetarium Buildings 36, 37, 38, and 39 must be removed. This reduces the area available for new program functions therefore spaces are focused on supporting the Planetarium and Sciences by providing a Visitor Classroom for K-12 Field Trips, storage for telescopes and a Multipurpose Room to be shared with the Community.

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Historic finishes at the covered walkways and breezeways shall be restored and small skylights and additional exterior lighting are proposed as a minor, reversible alteration to address the College's concern that these pedestrian pathways are too dark.

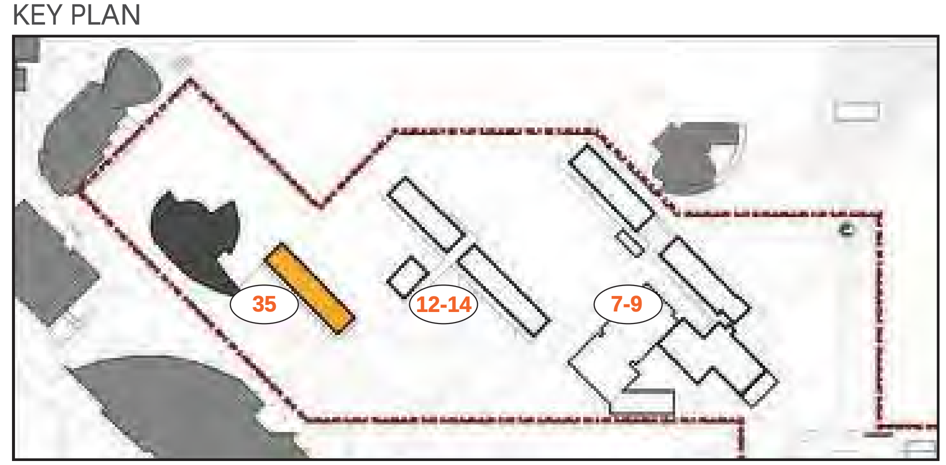
See Structural Evaluation (Appendix 3) for information about seismic upgrades.

Mechanical, Electrical and Plumbing upgrades will be necessary and descriptions may be found in the MEP Evaluation (Appendix 4).

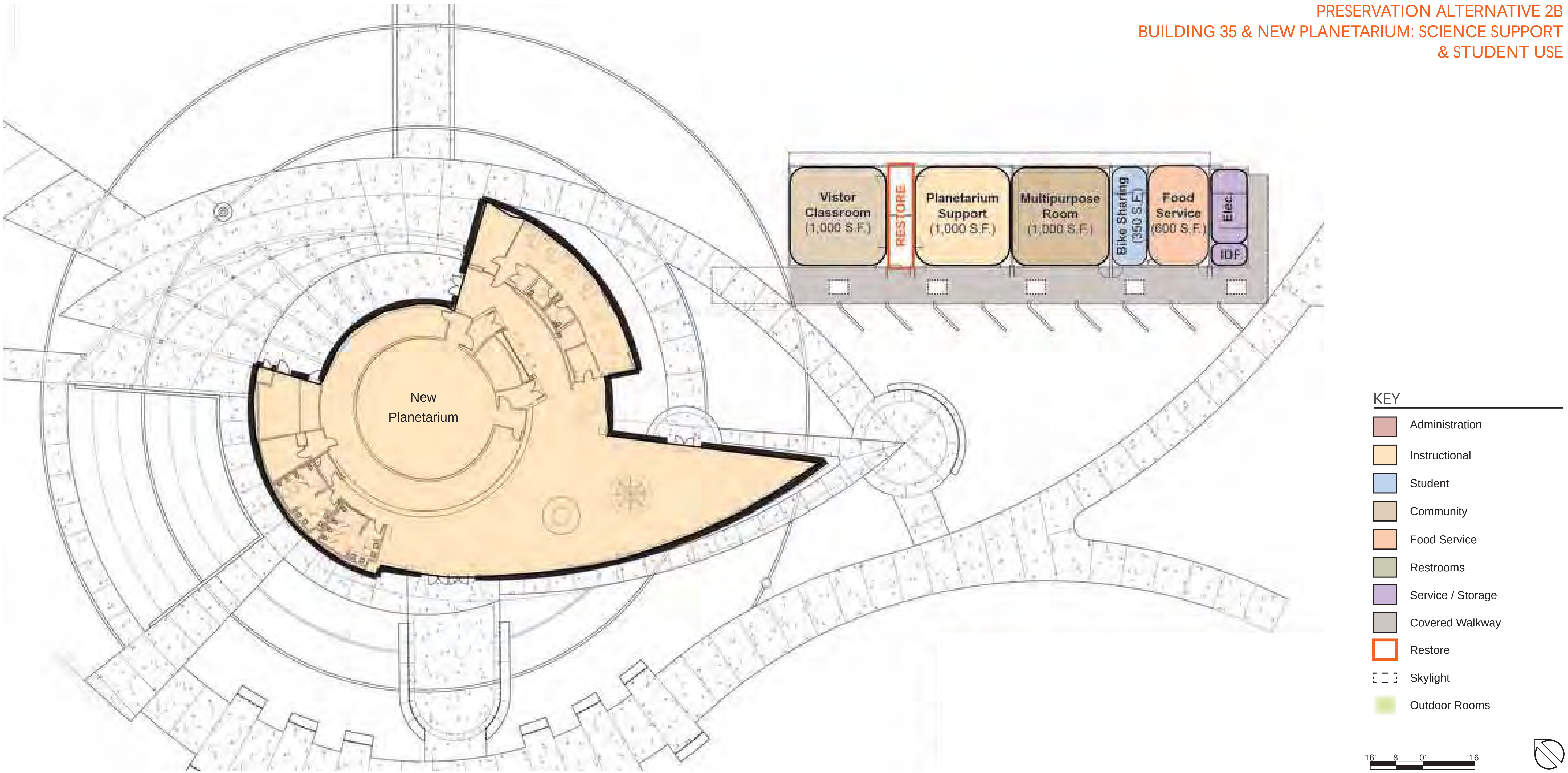
Alternative 2A/2B Rm. Type	Room Name	Qty.	Unit Size	SF
Buildings 35-39:Science Support & Community Functions				4,605
Instructional				
215	Science/Planetarium Support	1	500	500
Student Space				
660	Bike Sharing	1	125	125
Community				
680	Visitor Classroom	1	1,000	1,000
610	Multipurpose Room	1	2,500	2,500
Other				
660	Food Service	1	480	480

Source: Project Update PPT presentations 2/5/2015 & 3/5/2015

KEY PLAN



PRESERVATION ALTERNATIVE 2B
BUILDING 35 & NEW PLANETARIUM: SCIENCE SUPPORT & STUDENT USE



ALTERNATIVE 2

417 S. Hill Street, Suite 211
Los Angeles, California 90013
213.221.1200 / 213.221.1209 fax

417 Montgomery Street, 8th Floor
San Francisco, CA 94104
415.362.5154 / 415.362.5560 fax

2401 C Street, Suite B
Sacramento, California 95816
916.930.9903 / 916.930.9904 fax

ORANGE COAST COLLEGE
COSTA MESA, CALIFORNIA

APPENDIX 2
A SELECTION OF ARTICLES & HISTORIC PHOTOGRAPHS
RELATED TO ORANGE COAST COLLEGE

PAGE & TURNBULL
imagining change in historic environments through design, research, and technology

MAY 2015

ARCHITECTURAL ARTICLES

PLANNING ARTICLES

HISTORIC PHOTOGRAPHS

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ARCHITECTURAL ARTICLES

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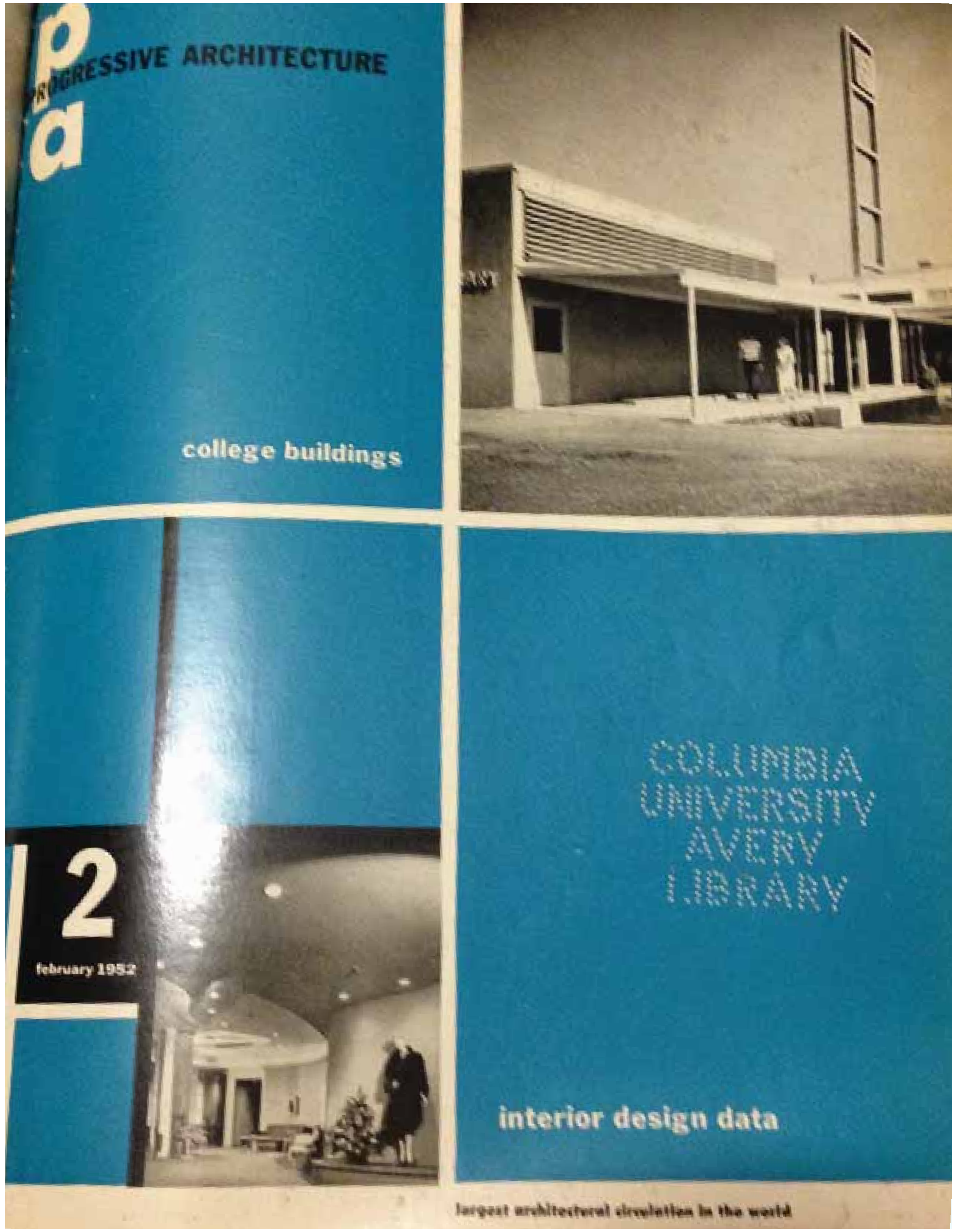

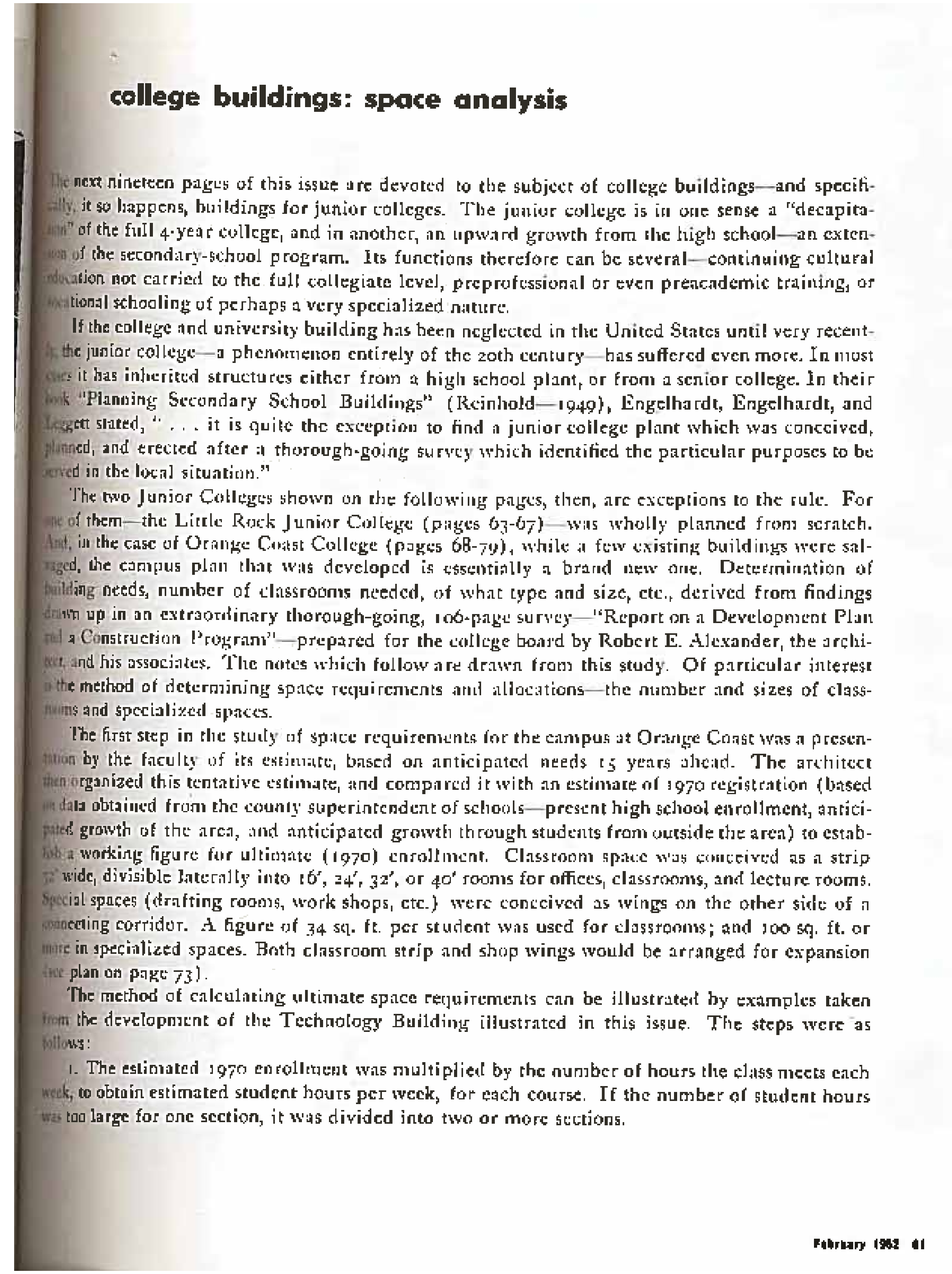

college buildings: space analysis

The next nineteen pages of this issue are devoted to the subject of college buildings—and specifically, it so happens, buildings for junior colleges. The junior college is in one sense a "decapitation" of the full 4-year college, and in another, an upward growth from the high school—an extension of the secondary-school program. Its functions therefore can be several—continuing cultural education not carried to the full collegiate level, preprofessional or even preacademic training, or vocational schooling of perhaps a very specialized nature.

If the college and university building has been neglected in the United States until very recently, the junior college—a phenomenon entirely of the 20th century—has suffered even more. In most cases it has inherited structures either from a high school plant, or from a senior college. In their book "Planning Secondary School Buildings" (Reinhold—1949), Engelhardt, Engelhardt, and Leggett stated, ". . . it is quite the exception to find a junior college plant which was conceived, planned, and erected after a thorough-going survey which identified the particular purposes to be served in the local situation."

The two Junior Colleges shown on the following pages, then, are exceptions to the rule. For one of them—the Little Rock Junior College (pages 63-67)—was wholly planned from scratch. And, in the case of Orange Coast College (pages 68-79), while a few existing buildings were salvaged, the campus plan that was developed is essentially a brand new one. Determination of building needs, number of classrooms needed, of what type and size, etc., derived from findings drawn up in an extraordinary thorough-going, 106-page survey—"Report on a Development Plan and a Construction Program"—prepared for the college board by Robert E. Alexander, the architect, and his associates. The notes which follow are drawn from this study. Of particular interest is the method of determining space requirements and allocations—the number and sizes of classrooms and specialized spaces.

The first step in the study of space requirements for the campus at Orange Coast was a presentation by the faculty of its estimate, based on anticipated needs 15 years ahead. The architect then organized this tentative estimate, and compared it with an estimate of 1970 registration (based on data obtained from the county superintendent of schools—present high school enrollment, anticipated growth of the area, and anticipated growth through students from outside the area) to establish a working figure for ultimate (1970) enrollment. Classroom space was conceived as a strip 32' wide, divisible laterally into 16', 24', 32', or 40' rooms for offices, classrooms, and lecture rooms. Special spaces (drafting rooms, work shops, etc.) were conceived as wings on the other side of a connecting corridor. A figure of 34 sq. ft. per student was used for classrooms; and 100 sq. ft. or more in specialized spaces. Both classroom strip and shop wings would be arranged for expansion (see plan on page 73).

The method of calculating ultimate space requirements can be illustrated by examples taken from the development of the Technology Building illustrated in this issue. The steps were as follows:

1. The estimated 1970 enrollment was multiplied by the number of hours the class meets each week, to obtain estimated student hours per week, for each course. If the number of student hours was too large for one section, it was divided into two or more sections.

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"College Buildings: A Space Analysis." *Progressive Architecture* v.33 (USA: February, 1952): cover page and page 61. Source: Helen Topping Architecture & Fine Arts Library, University of Southern California.

2. The number of sections per class was multiplied by the number of class hours per week, to obtain the number of hours a given class would *use a classroom* each week.

3. This number of classroom hours per week was then divided by 24.5 (hours of possible multiple-use occupancy) to obtain the number of classrooms needed for each subject.

Examples of this procedure are indicated by the mathematics courses meeting in the Technology Building. Notice that in each case the hours per week times the number of sections times the class size equals the estimated total of student hours.

	Student Hours	Class Room			
		Hours Week	Number Sections	Size	Hours Used
Math A	140	4	1	35	4
B	105	3	1	35	3
C	105	3	1	35	3
D	240	4	2	30	8
2	90	3	1	30	3
3A	105	3	1	35	3
4A	90	3	1	30	3
50	90	3	1	30	3
51	90	3	1	30	3
52	70	2	1	35	2
					35

Since 35, divided by 24.5, gives a figure of 1.43 classrooms, it is apparent that these mathemat[ics] classes, in 1970, will require the use of 1 1/2 medium-sized classrooms, capable of containing 30-[35] students.

The same sort of analysis was made for specialized spaces, as the following illustration ind[i]cates:

	Student Hours	Class			Hours Used	
		Hours Week	No. Sections	Size	A	B
Metal Trades 51	405	15	1	27	14	1
Metal Trades 52	330	15	1	22	14	1
Metal Trades 55	150	5	1	30	5	
				79	33	2

In this tabulation, A is a specialized shop (see the building presentation that follows for an indi[ca]tion of the way this Metal Trades Shop was finally designed) and **B** is an ordinary classroom sp[ace] that would be required. Thus the 15 hours per week during which "Metal Trades 51" meets w[ould] be 14 hours in Shop (A) and one hour in a classroom (**B**). Furthermore, Shop would be use[d a] total of 33 hours a week, by an estimated 53 students (66 2/3% of the total enrollment of 79). T[he] Metal Trades shop, then, would require 51 x 100 sq. ft. of space, and would be used 33 hour[s a] week.

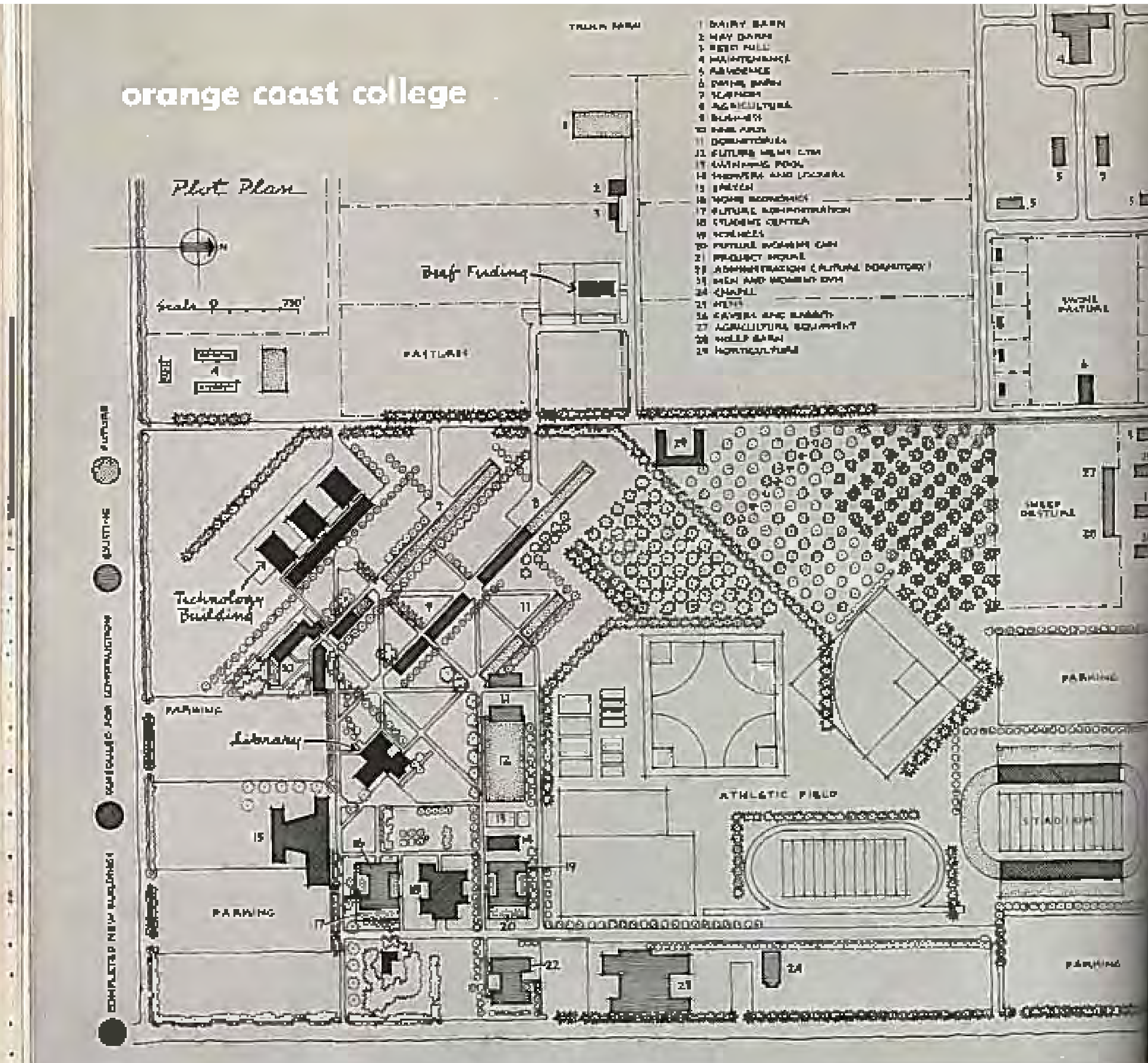
Too often, in an appraisal of architecture for education purposes, the final visual result [is] evaluated without an understanding of the preliminary planning and scheduling that goes into [the] design. P/A editors feel that this completely rational space analysis is interesting, as one met[hod] worked out by one architectural organization; the student of this problem might want to comp[are] it with a technique described by Dr. Charles Bursch and Rouel J. Taylor in *College and Univer[]sity Business* for November, 1950.

The buildings presented here are also notable for their technical excellence. Again us[ing] Orange Coast as an example, an analysis of structure, acoustical control, lighting and the us[e of] color is offered, following the building presentations.

Pages 63-67refer to the buildings by architects Ginocchio & Cromwell at Little Rock Junior College in Little Rock, Arkansas. They have been excluded from this document.

The article resumes on the following page with material relevant to Orange Coast College.

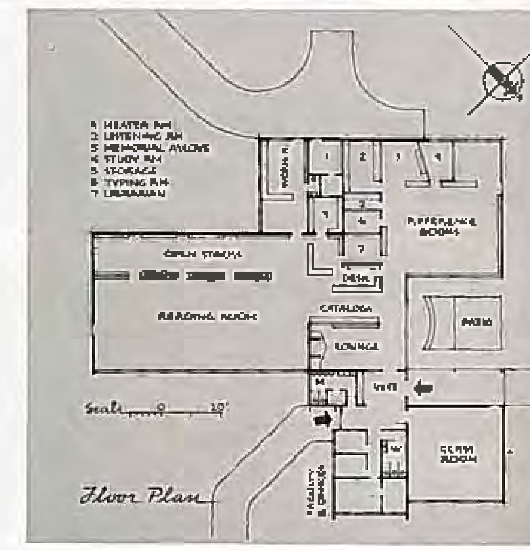
"College Buildings: A Space Analysis." *Progressive Architecture* v.33 (USA: February, 1952): page 62. Source: Helen Topping Architecture & Fine Arts Library, University of Southern California.



location	Costa Mesa, California
architect	Robert E. Alexander
associate architect	Richard H. Mager
civil engineers	Parker-Zehnder & Associates
landscape architects	Eckbo, Royston & Williams

Established in 1917, Orange Coast is a public junior college in the heart of a rich agricultural and oil-field district southeast of Los Angeles. Initial enrolment was 521; present construction is planned for an anticipated student body of 1500 in 1964.

The level, rectangular property, 243 acres in extent, was part of a former Army Air Base and included numerous typical Army buildings — barracks, classroom buildings, etc. To determine the physical needs, the architect undertook a most painstaking analysis of space requirements, the method for which is de... on pages 61-62. An equally detai... of existing structures to decid... could be economically salvaged o... cled was also part of the archi... liminary work. The campus pla... above is the end result, with the m... pus group occurring in the souther... rant. Traffic circulation is kept t... ter roads, parking areas, and ... service drives. Shown in the ... three of the new units — libra... feeding shed, and technology ...



library

Due to the fact that the drawings were issued for bids the day before the President made his announcement on Korea, resulting price increases made necessary a severe curtailment of the hoped-for program. A comparison of the rendering (top) and the finished building emphasizes this fact. However, by use of tilt-up concrete walls at the ends of wings (hence, readily movable), provision has been made for the eventual realization of the full program.

Among the facilities for which future expansion is planned are: the reading room for 100 (later to be enlarged to accommodate 200); stack space for 15,000 volumes (eventually 40,000); a reference room for 50 (expandable to 100), and the classrooms, to which two more will be added.

Located near the center of the group of classroom buildings, the library adjoins a large parking lot, the principal entrance for students. Throughout, the design wish was to provide an inviting, informal, and relaxing place, rather than a monument; it is not designed as a repository for books but as an educational tool for daily use by all departments.

Structurally, the building is similar to that of the classroom wing of the technology building (Pages 73-79), employing small structural steel columns that support steel beams 8 feet on center which, in turn, support a wood roof structure.

Collaborating in the design of the library were Sheldon W. Swickard, Electrical Engineer; Samuel L. Kaye, Mechanical Engineer, and Rex Brandt, Color Consultant.

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"College Buildings: A Space Analysis." *Progressive Architecture* v.33 (USA: February, 1952): pages 68-69. Source: Helen Topping Architecture & Fine Arts Library, University of Southern California.

orange coast college: library

General view from the north, with outsloping window wall of classroom at left; reference room wing beyond entrance patio, right. The classroom end wall is one of the tilt-up concrete walls that will be removed when additions are made.

Reading lounge with fireplace (right, above), with glimpse of main reading room and stacks. Note ventilating sash screened by fixed aluminum louvers in southwest clerestory.

View (right, below) looking across newspaper rack and reference room to entrance vestibule.

Two aspects of the main reading room and open stack area (acrosspage). Entire ceiling is of perforated acoustical tile.

Photos: Julius Shulman

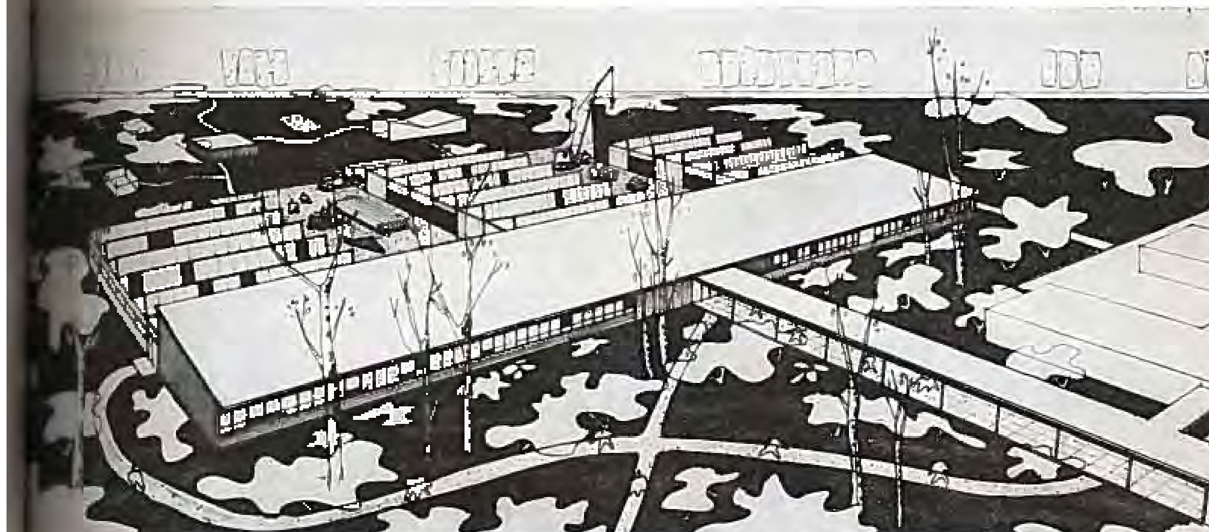
70 Progressive Architecture

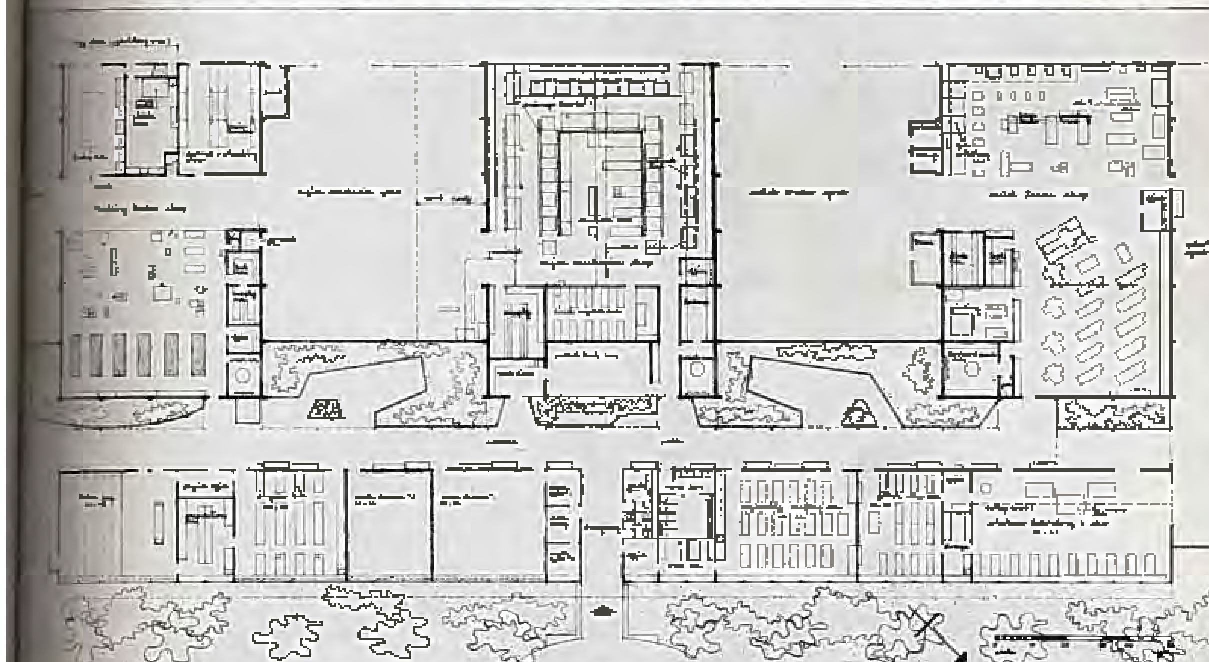
"College Buildings: A Space Analysis." *Progressive Architecture* v.33 (USA: February, 1952): pages 70-71. Source: Helen Topping Architecture & Fine Arts Library, University of Southern California.

beef-feeding unit

On this page is shown the cattle-feeding shed, with a pair of corrals along each long side. This handsome structure is framed with structural steel columns 12 feet on center that support a timber-framed roof surfaced with corrugated aluminum. The shed recently won a Special Citation for design excellence—"simplicity and clean construction"—in the Southern California and Pasadena Chapter A.I.A. Honor Awards Competition. Corral and cattle-lane fencing is of redwood posts and for horizontal members. "Heating and air conditioning are natural," the architect points out, "and quite successful . . . Only sufficient artificial lighting was provided to prevent rustling." Associated in the design were Sheldon F. Swickard, Electrical Engineer; and Samuel L. Kaye, Mechanical Engineer.

orange coast college: technology building





...is remarkable structure, which won ...orable Mention in Architecture in the ...thern California and Pasadena A.I.A. ...or Awards Competition, is one of those ...buildings wherein plan, structure, and ...eans of control are so inseparably integrated that it is almost impossible to consider one aspect without reference to them all. To point up this notable correlation of elements, we present a special technical discussion of the design on Pages 76-79.

Basically, the plan consists of a long pavilion of northeast-facing classrooms and labs, with three specialized training shops (building trades, engine mechanics, and metal trades) in wings to the rear, separated (physically and acoustically) from one another by outside work yards.

"College Buildings: A Space Analysis." *Progressive Architecture* v.33 (USA: February, 1952): pages 72-73. Source: Helen Topping Architecture & Fine Arts Library, University of Southern California.

technology building

Behind the mass of the classroom wing (above) may be glimpsed the sawtooth monitors of the three shops.

The metal trades shop (right, above) looking toward the northeast end; (below), the courtyard adjoining this shop.

Over-all end view (acrosspage, top), with classroom wing at left. Door in end-wall leads out from the petroleum laboratory. A covered walk (bottom) connects all units, with open courtyards between.

Associated in the design of the tech building were Foster K. Sampson, Electrical Engineer; Samuel L. Kaye, Mechanical Engineer, and L. F. Sepmeyer, Acoustical Engineer.

Because of the noise factor (see pages 76-77), the tech building is located at the edge of the instruction center.

The building trades shop has a central project area with 14-foot doors at either end opening out to adjoining project yards. The engine mechanics shop is equipped for study of truck and marine engines as well as diesel and gasoline types. Typical of the care in detailing is a viewing partition that also controls sound —two different thicknesses of glass set in a frame in such a way that the intervening space varies from top to bottom.

The metal trades shop includes arc and gas welding, foundry, forge, sheet and art metal work, and a machine shop.

The building is heated from a central circulating hot-water system that supplies heat to suspended units in shops and, in the classroom wing, to fan coils and a continuous fan-coil loop that extends the length of the window-wall. Manual control dampers determine whether air is pulled across coils or introduced directly into rooms.

"College Buildings: A Space Analysis." *Progressive Architecture* v.33 (USA: February, 1952): pages 74-75. Source: Helen Topping Architecture & Fine Arts Library, University of Southern California.

TABLE I

Condition	Lecture Room Flat	Lecture Room 40 db. Weighting	Classroom Flat	Classroom 40 db. Weighting
Blower Off (quiet ambient condition)	40	24	40	less 24 db.
Blower On	44	28	50	36
Planer in Operation	—	31	—	31

The planer was just audible above the background noise.

technology building: structure-acoustics

One can hardly discuss the technology building's structure or acoustics individually; they are so interrelated that an analysis of one becomes a compendium of the other. The primary acoustical problem was to keep the noise originating in the shop areas from interfering with lectures in the classrooms. The noise sources to be isolated are of a severe nature, and further, the confinement of sound, caused by the side walls of the shop buildings and the covered walk between the classroom and shop buildings, decreases the amount of attenuation considerably below the inverse square law usually applied to sound in the open.

The main locations of noise entering a classroom are: (1) along the southwest wall from courtyard activities and transmission through the northeast shop walls; (2) through the roof from noise transmitted through shop roof windows and also the courtyard noise; (3) the northeast window-wall from noise diffracted around the roof and also from foot traffic and conversation noise on this side of the building. Owing to the character of the noise and the increasing transmission loss with frequency of the various structures, all of the sounds would result in predominantly low-frequency noise in the classrooms. Low-frequency noise has the highest masking or interference effect on speech; therefore, in order to keep the masking within acceptable limits, all noise components had to be reduced at least to the 40 db. free field loudness level contour of the ear.

A brief statement of the framing follows: Light steel trusses, 16' on center and spanning the 64' width of the shop areas, are supported by reinforced concrete columns (*top section acrosspage*). The southwest and end walls of the classroom wing are of tilt-up concrete construction; wide-flange roof sections are supported by structural steel columns along the northeast wall and by welded, back-to-back channels along the southwest—all 8' on center (*details acrosspage*). The entire classroom building is given transverse lateral support by struts 64' on center which connect the roof of the building with the long masonry walls of the shop. The resulting structural design permits a completely flexible interior for the classroom wing which has no permanent interior cross-bracing partitions.

That one wing contains a structural steel frame and the others a combination of reinforced concrete columns and structural steel trusses, is more readily understood as one considers the problems involved. In the shop areas, noise is minimized by the provision of as much sound absorption as possible. This was accomplished at very little expense by using wood fiber-cement board of high sound absorptivity for roof-deck insulation and by utilizing a porous lightweight-aggregate concrete block between columns. As high strength and high acoustic absorptivity are incompatible requirements for this type of concrete block, the reinforced concrete columns were a compromise necessary to meet the strength requirements for bearing. Sawtooth monitors greatly reduce the reverberation within these areas.

To obtain the needed acoustic integrity for the classroom building required the elimination of operable windows in the northeast wall, a roof structure better than otherwise might be used, and very good doors, tightly closed. Although the window wall does not have as high an absolute sound transmission loss as the southwest wall or roof, its remoteness and shielding from the high noise fields make it relatively equal to them. By providing the classroom roofs with an auxiliary ceiling and by adding lined ducts or baffles to all openings needed for ventilation, a structure having approximately uniform sound transmissivity was obtained (*details acrosspage*).

In order to achieve effective sound isolation, it was also necessary to place sound absorption inside the isolated room. This presents somewhat conflicting requirements; if the room is made too dead acoustically, an undue effort would be req on the part of the instructor in ma himself heard. However, the acoustic t ment which was installed was design supply as much sound absorption a sible at low frequencies. This was a plished by using large tile, with air behind, to get maximum benefit fro diaphragmatic action and improved tic impedance. The unperforated til vides low-frequency absorption w adding much in the speech range. S strip of acoustical board along the east side of the room would have ... with the introduction of daylight, the wall was tilted outward to reduce a cal flutter between parallel walls.

To check the performance of the a cal design, some sound level measure were made on a Saturday morning other campus activities were at a mi The sawdust and chip-collector b proved to be the most powerful lo quency noise source, producing a ma level of 90 db. in the wood shop. W planer was louder, it did not prod much low-frequency noise. (*Table I marizes the noise condition as meas the large lecture room and the clas adjoining it.*)

As a measure of the effectiveness northeast wall and ventilating ba motor scooter was run in a load con about 30 feet from the wall. The level outside, next to the wall, was on the flat position and 65 db. wit weighting. Inside the classroom, th level was 55 db. and 40 db., respecti

The effectiveness of isolation b classrooms was measured by havin one speak loudly, at 70 db. maximu level, while the sound intensity wa ured in an adjacent classroom. case the measured level was 30 d the speech was not measurable ab ambient noise, although it was a However, under actual conditions, th ence of an audience would red level in the source room and incre background noise in the receiving

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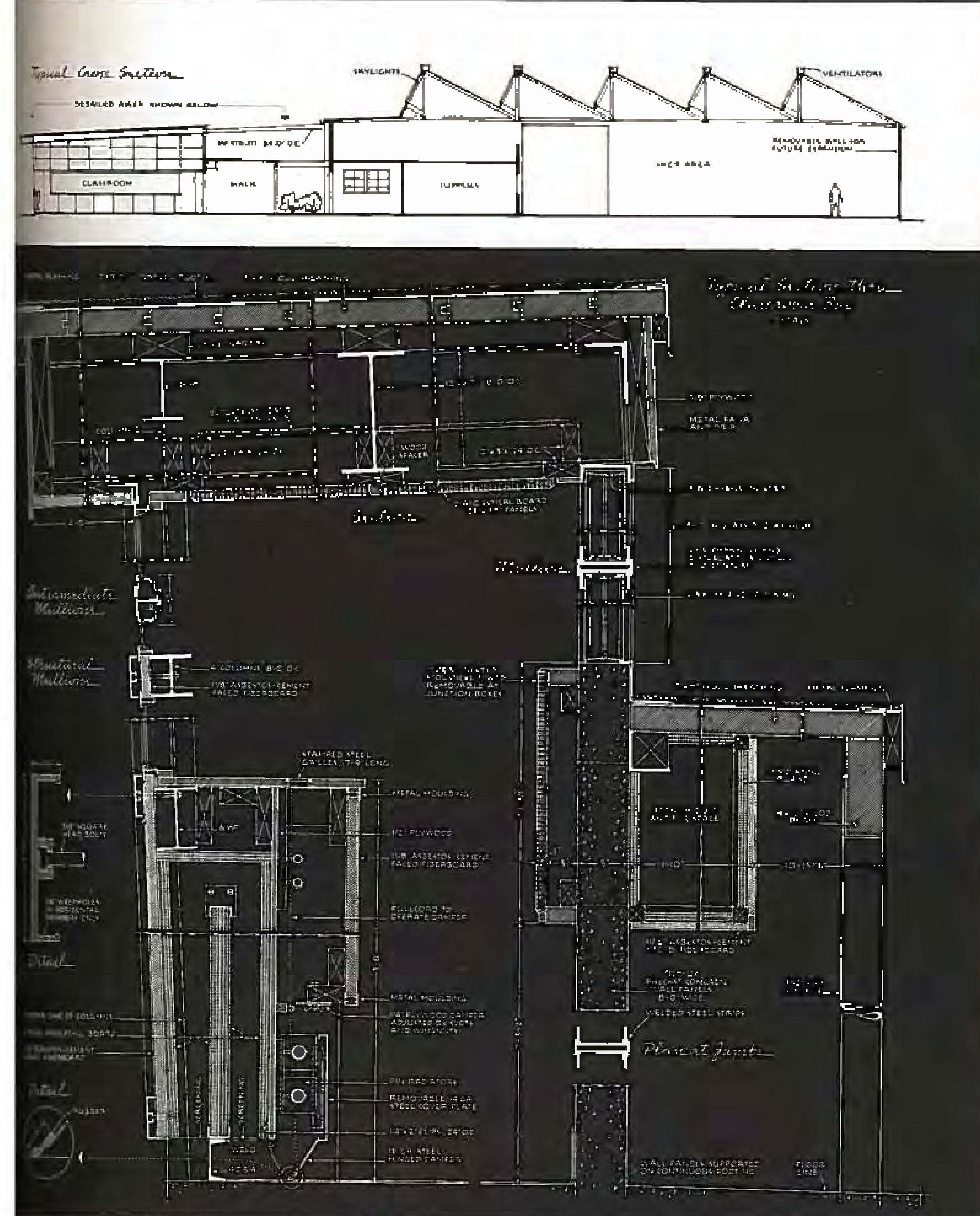
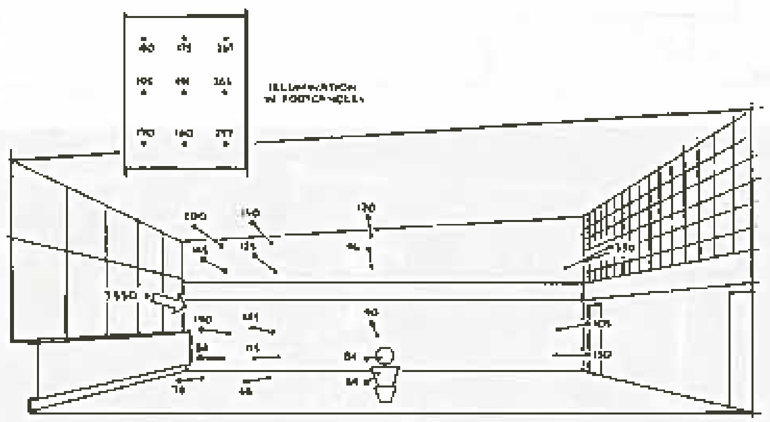
This analysis was based primarily on a report prepared for P/A by Ludwig William Schnayrt, Consulting Engineer.



“College Buildings: A Space Analysis.” *Progressive Architecture* v.33 (USA: February, 1952): pages 76-77. Source: Helen Topping Architecture & Fine Arts Library, University of Southern California.



Average sun and skylight brightness in foot lamberts:
Time: 12:05-1:20 P.M., P.S.T.
Sky: Clear
Exterior illumination of block panel:
4600 footcandles
Sun altitude: 60° to 65°
Sun azimuth: Minus 25° to normal-to-panel
Reflectances:
Floor: 30 percent, asphalt tile
Walls: 50 percent, blue-green
Ceiling and above dado: 75 percent, acoustic tile

technology building: lighting-color

lighting

A bilateral fenestration scheme was designed for the classroom wing. The window-wall admits a northeastern light while the prismatic, glass-block panel atop the opposite wall faces southwest. (*The above diagram provides illumination data for the daylighting of a typical classroom at about noon on a clear day.*) Although the concentric-ring type of ceiling fixture provided excellent artificial lighting, the heat load automatically increased the problems of ventilation and temperature control. Vertical operating louvers were placed inside the windows in order to control daylight for the operation of visual aids (*opposite page*). This method was selected principally because of its ease of operation, low maintenance, and long life. Although this control is satisfactory for the use of visual aids, the architect points out that it is impractical to expect to obtain satisfactory darkness for optical experiments by any means other than a completely enclosed blackout room.

The sawtooth monitors contain five-foot deep, continuous skylights; as each spans the entire width of a shop building, an abundance of northeast natural light is available. Artificial lighting is supplied by an industrial-type fluorescent installation (porcelain enamel reflectors) mounted at a height of 16' (*photo page 74*). Both quantity and quality of lighting has been considered excellent for the tasks to be performed in these working areas.

color

As an olive-drab color saturated most of the existing campus buildings at the commencement of the new building program, it was at once desirable to select a fresh, basic wall color. Eucalyptus green (gray-blue green) was chosen because it effectively removed the "Army hangover" and also because it was capable of doing so in one coat; an off-white trim was preferred for its sparkle.

During a preliminary discussion between architect, color consultant, and school administrators, agreement was reached that it was neither necessary nor desirable to attempt to assimilate old buildings and new buildings colorwise. Subsequently, the color consultant conferred with most of the teaching personnel before submitting a tentative series of swatch-abstracts for approval. Among those associated with the technology building, there was some difference of opinion concerning the most desirable colors for this structure; in general, however, it was agreed that the functional justifications of color would be the first criteria of acceptance.

The extensive use of aluminum a[nd] natural finish of the blue-gray a[sbestos] cement board seemed to call for a color of minimum contrast to main[tain the] dignity and weight of the building. [...] college officials were pleased with the basic wall color, it was also selec[ted for] the technology building. At pres[ent ...] contrasted with the burnt sienna [...] the corrugated metal-asbestos ends [...] shop wings and for future building[s ...] contrast with brick or other pre[...] warm materials—or it may be desir[able to] add a warm paint color for acc[ent ...] contrast.

Walkways are now a warm color [...] aids in emphasizing the gener[al] quality of the wall. This color [...] not only considered practical but [...] helps to keep the planting and la[...] fresh appearing by complimentary [...]

To diffuse light and to give a[...] sense of reflectance and sunlight, [...] bangs, where painted, were made [...] light yellow.

An extensive use of varied mater[ials ...] prefinished surfaces precluded [...] volved paint scheme; contrast of [...] was used to give interest. Howe[ver, it] was realized that this same contr[...] it difficult to match color from wal[l ...] it was considered most desirable [...]

[...] a neutral trim color to weld these prefinished materials together. Recognizing the effect of the textural differences in wall colors, each condition was handled with subtly contrasting tones of the proper value for light reflectance and attention. For example, as prefinished concrete walls will not match the color of a painted-concrete-block wall on the exterior, the concrete was painted a deeper value of the same color.

Recommendations of the National Council on Schoolhouse Construction were heeded as far as possible; however, some special conditions, peculiar to this building, may have modified this consideration. Some of these were:

1. The skylights of the shops which gave direction to the northeast light, made it possible to use some darker walls.
2. A workshop could have somewhat darker walls for two reasons: (a) maintenance; (b) to reduce reflectance so that the maximum brightness could be on the work. (The rule of 2 to 1 was observed.)
3. The more than average quantity of classroom light required maximum light [...] is adjacent to the natural light sources to reduce contrast; by the same token it was possible to suggest a slightly darker attention wall.

[Th]is color discussion has been prepared from data [sub]mitted to P/A by Rex Brandt, Color Consultant.

Two views of physics laboratory (below). Room dimensions are 40' x 32'; ceiling heights are 13'-4" next to the glass-block panel and 11'-9" at the window wall. In addition to providing excellent daylight distribution and high daylight utilization factors, the glass block panel also acts as an efficient sound barrier.

"College Buildings: A Space Analysis." *Progressive Architecture* v.33 (USA: February, 1952): pages 78-79. Source: Helen Topping Architecture & Fine Arts Library, University of Southern California.

Orange Coast College

location	Costa Mesa, California
architect	Robert E. Alexander
associate architect	Richard H. Pleger
landscape architects	Eckbo, Royston & Williams
color consultant	Rex Brandt

Fast emerging from a 243-acre section of a former Army Air Base is the striking new campus of Orange Coast College, a public junior college located in the busy agricultural and oil area southeast of Los Angeles. In February 1952 P/A, we presented the full campus plan and described three of the earliest completed structures—the Library, a cattle-feeding unit, and the Technology Building. Now, in this issue, we show three of the newer buildings—the Student Center, the Art Center, and the Business Education Building (first campus building completed since Richard J. Neutra formed a partnership with Alexander). Also, as a herald of good things to come, note the photograph (*across-page*) of the recently completed Speech Arts Building and Auditorium, which was designed by Neutra & Alexander, and will be presented in P/A later this year.

The curriculum of Orange Coast—which determined the required buildings—is based on impressively extensive surveys of the educational and occupational needs of the region. Essentially these are self-appraisals, since they were made by the College staff, including both trustees and administrative officers.

For development of the co-ordinated campus, Alexander gives very special credit to the Board of Trustees, all five of whom have served since inception of the project. These are: Louis Conrady, D. D. Lawhead, Harry R. LeBard, Walter M. Longmoor, and Horace Parker. The various administrative officers who have be[en] highly instrumental in seeing that [the] scheme has prospered include: Basil [H.] Peterson, Ph.D., President of Ora[nge] Coast and District Superintendent; Ja[mes] W. Thornton, Jr., Ph.D., Vice-Preside[nt]; William J. Priest, Ed.D., Assistant Sup[er]intendent in Charge of Vocational Ed[u]cation, Adult Education, and Sum[mer] Session; and William F. Kimes, M[.A.], Assistant Superintendent in Charge [of] Business. Members of the Neutra & Al[ex]ander staff who are accorded partic[ular] mention are: Dion Neutra, Robert Pi[...], Dike Nagano, Frank Kelly, Al Bo[...] and Andrew Balfour. Credit is also [ex]tended to the California State Divisi[on of] School Planning.

Photos: Julius Sh[ulman]

Wing of the Business Education Building 1

2 The canopied entrance to the Student Center

[illegible] on this page are keyed to aerial photograph [illegible]). The Technology Building (A) and [the] Library (B) were presented in February [illegible]

3 Speech Arts Building (to be shown in a later issue)

4 [illegible] of the Art Center

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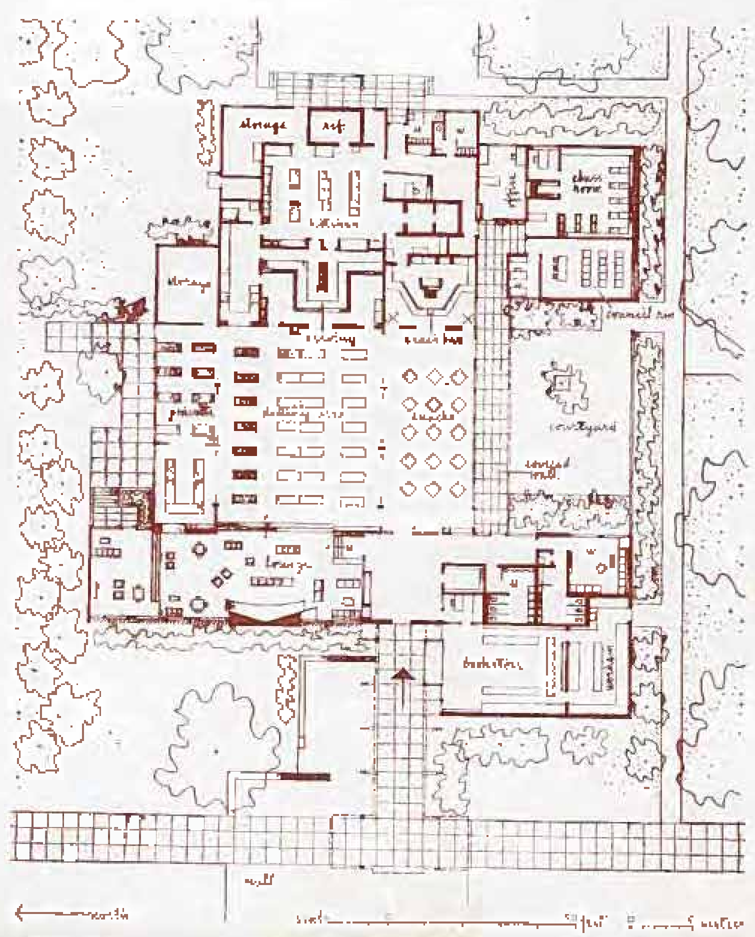
"Orange Coast College, Costa Mesa, California." *Progressive Architecture* v.36 (USA: July, 1955): pages 82-83. Source: Helen Topping Architecture & Fine Arts Library, University of Southern California.

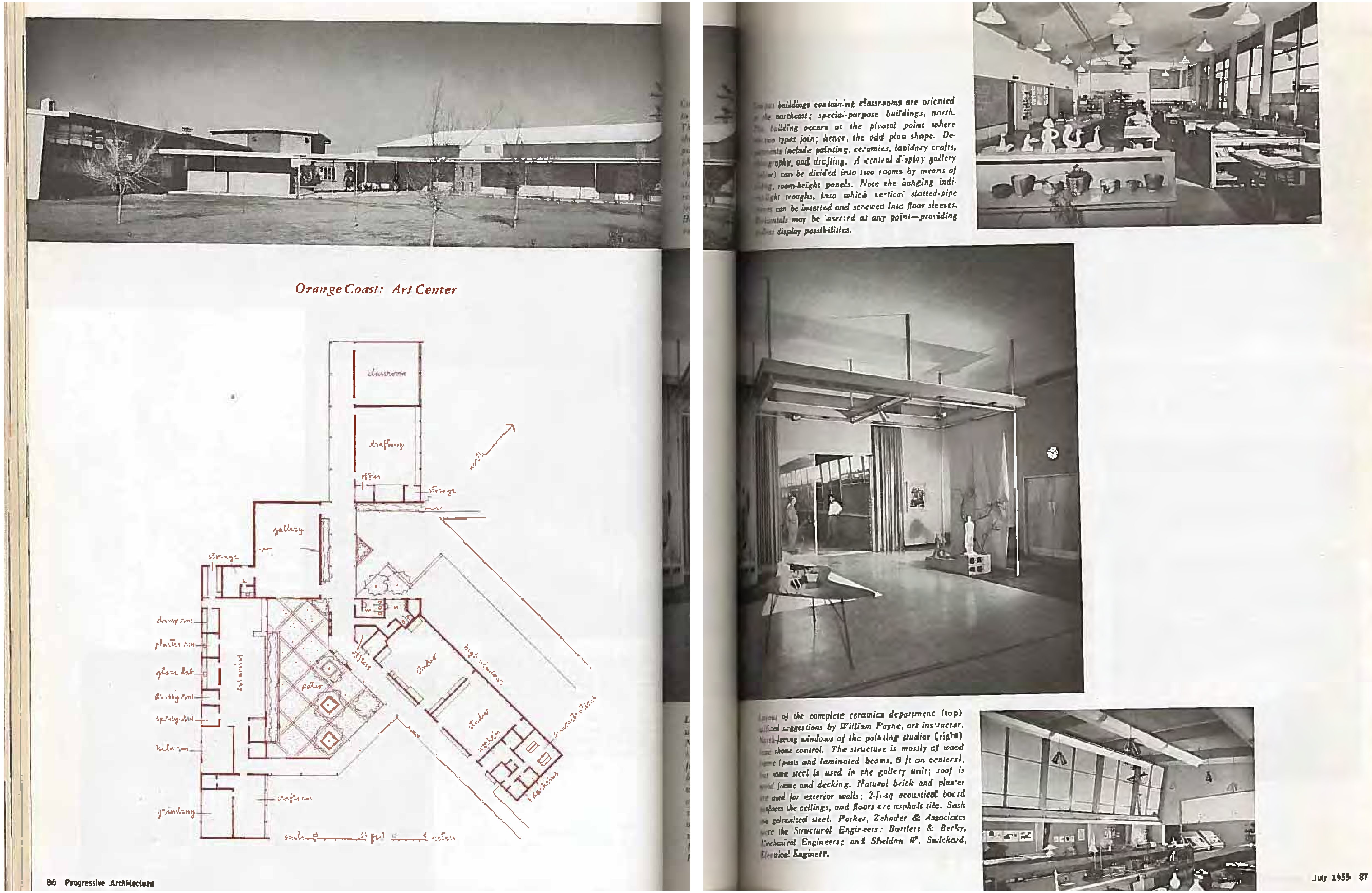
Orange Coast: Student Center



Eating, lounging, and recreational facilities are supplemented by student group offices, a journalism classroom, and a bookstore. The lounge (right) may be used as an informal auditorium and stage (raised area at rear). Sliding panels and accordion-fold doors offer great flexibility in use of dining spaces. A landscaped, south-facing court (below) provides a sunny outdoor lounge.

Opened sliding doors join lounge and main dining room (right). Structure is basically wood frame on concrete slab, grade beams, and caissons. Exterior materials include plaster, brick, and enameled-metal sunshades. Floorings are wood block or asphalt tile; acoustical tile is used on ceilings. Sash is aluminum-projected type. Parker, Zehnder & Associates, Structural Engineers; Bartlett & Besky, Mechanical Engineers; Sheldon W. Swickard, Electrical Engineer.

"Orange Coast College, Costa Mesa, California." *Progressive Architecture* v.36 (USA: July, 1955): pages 84-85. Helen Topping Architecture & Fine Arts Library, University of Southern California.



Orange Coast: Art Center

...pus buildings containing classrooms are oriented ... the northeast; special-purpose buildings, north. ... building occurs at the pivotal point where ... two types join; hence, the odd plan shape. De... ...ments include painting, ceramics, lapidary crafts, ...graphy, and drafting. A central display gallery ...w) can be divided into two rooms by means of ...g, room-height panels. Note the hanging indi... ...light troughs, into which vertical slotted-pipe ... can be inserted and screwed into floor sleeves. ...zontals may be inserted at any point—providing ... display possibilities.

...yout of the complete ceramics department (top) ...ilized suggestions by William Payne, art instructor. North-facing windows of the painting studios (right) ... shade control. The structure is mostly of wood ... (posts and laminated beams, 8 ft on centers), but some steel is used in the gallery unit; roof is ... frame and decking. Natural brick and plaster ... used for exterior walls; 2-ft-sq acoustical board ...faces the ceilings, and floors are asphalt tile. Sash ... galvanized steel. Parker, Zehnder & Associates were the Structural Engineers; Bortless & Berky, Mechanical Engineers; and Sheldon W. Sutchard, Electrical Engineer.

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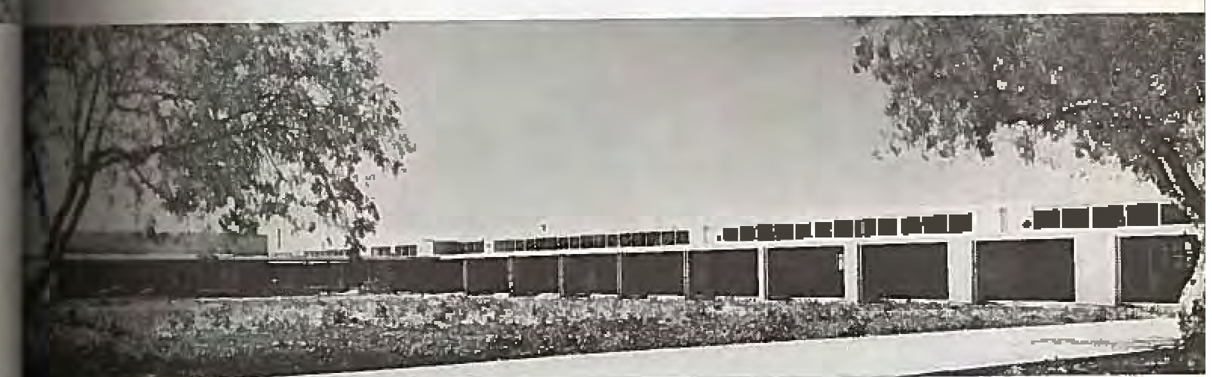
“Orange Coast College, Costa Mesa, California.” *Progressive Architecture* v.36 (USA: July, 1955): pages 86-87. Source: Helen Topping Architecture & Fine Arts Library, University of Southern California.

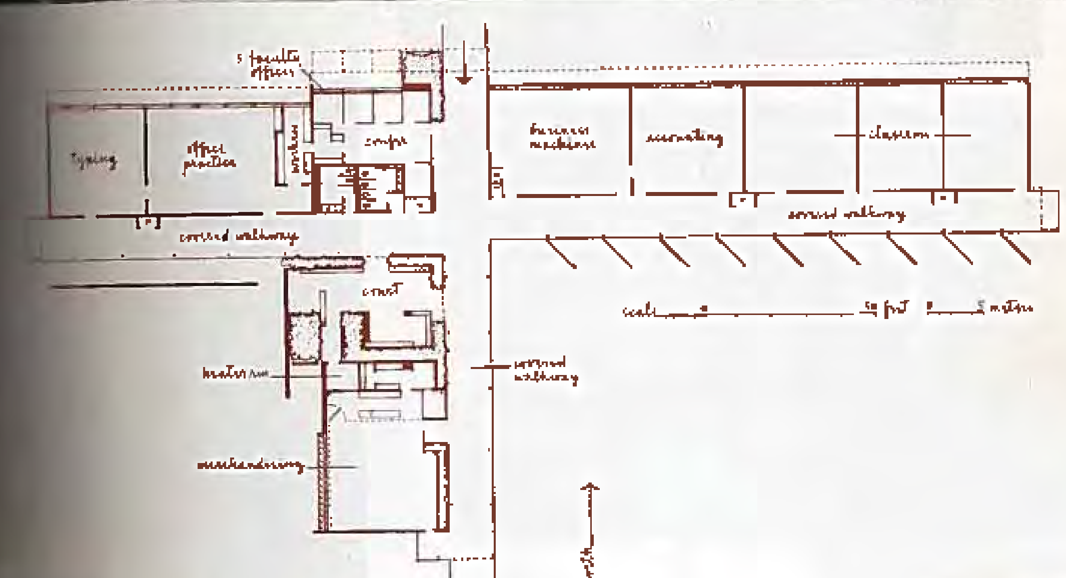
Orange Coast: Business Education Building

First of the campus buildings designed by the partnership of Richard J. Neutra & Robert E. Alexander, this T-shape structure houses a variety of facilities for instruction in business practices. The accounting lab serves also as a filing-systems teaching room. Most extraordinary unit is the merchandising lab, complete with its showcase and other elements to be found in a small store.

For details of louver at main entrance (top), see SELECTED DETAIL, *page 124.*

A landscaped court separates the merchandising lab unit from the main building (two photos acrosspage, bottom). Bordering the south-facing access corridor of the classroom wing (below) are bold masonry wing walls, set at an angle (right), that protect the passage from prevailing winds and rains, as well as sun. Basic structural scheme is of reinforced brick, the transverse walls supporting a continuous steel beam left exposed on the interior. Other portions utilize wood frame and brick veneer. Rooms are heated by individual gas-fired warm air furnaces, individually controlled thermostatically.





"Orange Coast College, Costa Mesa, California." *Progressive Architecture* v.36 (USA: July, 1955): pages 88-89. Source: Helen Topping Architecture & Fine Arts Library, University of Southern California.

Orange Coast: Business Education Building

The merchandising lab is set off from the main unit in a separate little building (top), whose west-facing windows are screened by corrugated aluminum louvers. The large space within (above) offers complete flexibility for instruction in the many phases of merchandising. At the far end of the room, a display corner with three-way mirror and store-lighting fixtures (right) allows practice in display methods. This whole work end of the room may be divided from the main space by accordion-fold partitioning.

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"Orange Coast College, Costa Mesa, California." *Progressive Architecture* v.36 (USA: July, 1955): page 90. Source: Helen Topping Architecture & Fine Arts Library, University of Southern California.

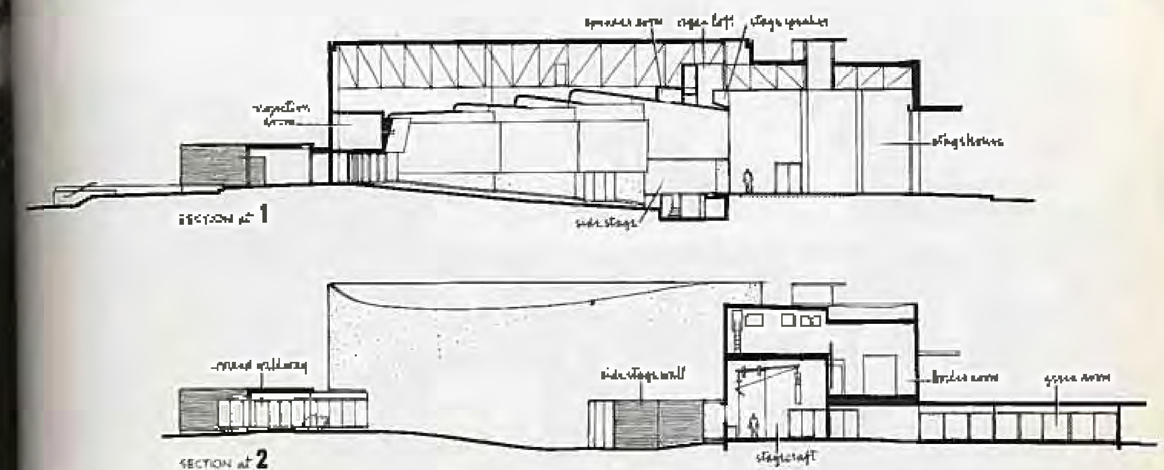
speech arts building

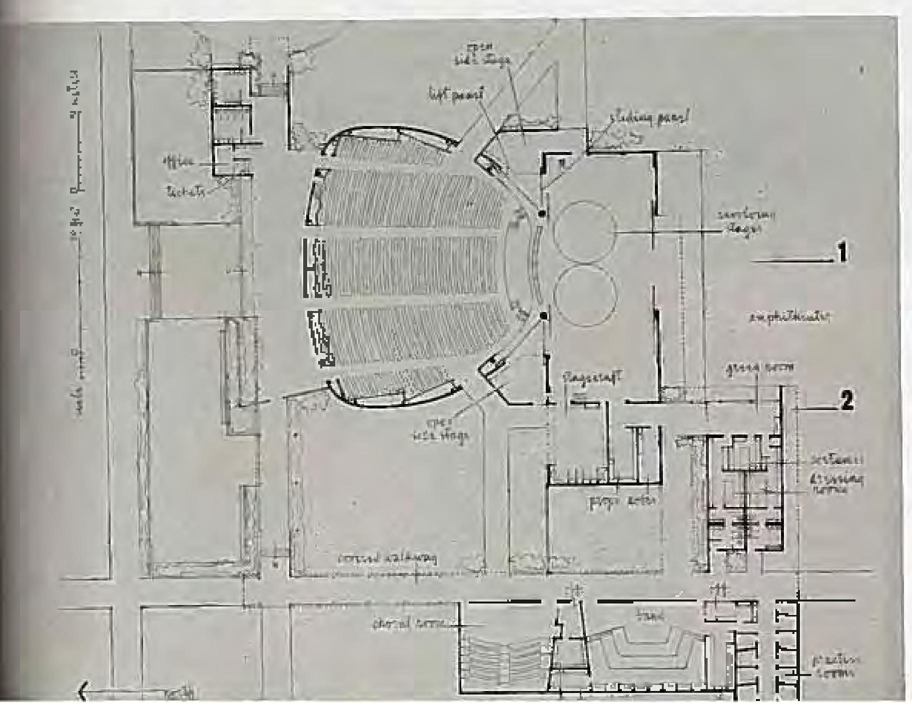
location	Costa Mesa, California
architects	Richard J. Neutra & Robert E. Alexander
associate architect	Richard H. Pleger
landscape architects	Eckbo, Royston & Williams

Latest of the campus buildings to be completed at Orange Coast College is the Speech Arts Unit, heralded in July 1955 P/A, which featured campus structures completed up to that time. The Speech Arts Center is composed of a large auditorium with multipurpose stage, amphitheater, and a music building containing choral, band, and practice rooms. It is a remarkably versatile group of buildings, which not only serves the college in many different capacities, but also the community as a whole. As Richard J. Neutra pointed out in his recent book, *Survival Through Design*, "The all-purpose character of such a space which is to serve and activate a community is markedly different from that of the more specialized theater as it developed especially since the Renaissance into a place where [illegible] tors forming one world peep [illegible] proscenium arch into another [illegible] hearsed and staged world [illegible] barrier of footlights. . . . Behind [illegible] dent body of a college, for [illegible] stands a wider and elastic [illegible] which may and should on [illegible] verge on the campus." One [illegible] change contributing to the [illegible]

[illegible]oday's campus theaters is the audience [illegible]self, which is now very often a par[illegible]ticipant rather than a group of mere spectators. "Participation," continues Neutra, "means being taken in, as much as feasible, making performance total, instead of 'half and half.' The stage extending around the 'audience,' or the audience surrounding the stage and players are two approaches to this totality, and at the same time, toward the desired intimacy between the two halves." To a degree this intimacy was achieved by the Elizabethan stage—the little theater-in-the-round—which has recently found favor again. On the other hand, suggests Neutra, there is a definite need on occasions for the opposite approach. "It is the one of surrounding the audience by action; simultaneous activity or action in sequence." This may be achieved by a widening and deepening of the stage, by special side stages, appropriate illumination, or an opening onto an outdoor terrace beyond the stage.

It would be difficult to find a more specific application or illustration of these theories than the recently completed Speech Arts Center, shown on these pages, and designed by Neutra and Robert E. Alexander. Among others who contributed to the success of these buildings were: Structural Engineers Parker, Zehnder & Associates; Mechanical Engineer Chester Walz; Electrical Engineer Earl Holmberg; J. C. Boespflug Construction Co., General Contractor; Rex Brandt, Color Consultant; Dr. Vern O. Knudsen, Acoustical Consultant.





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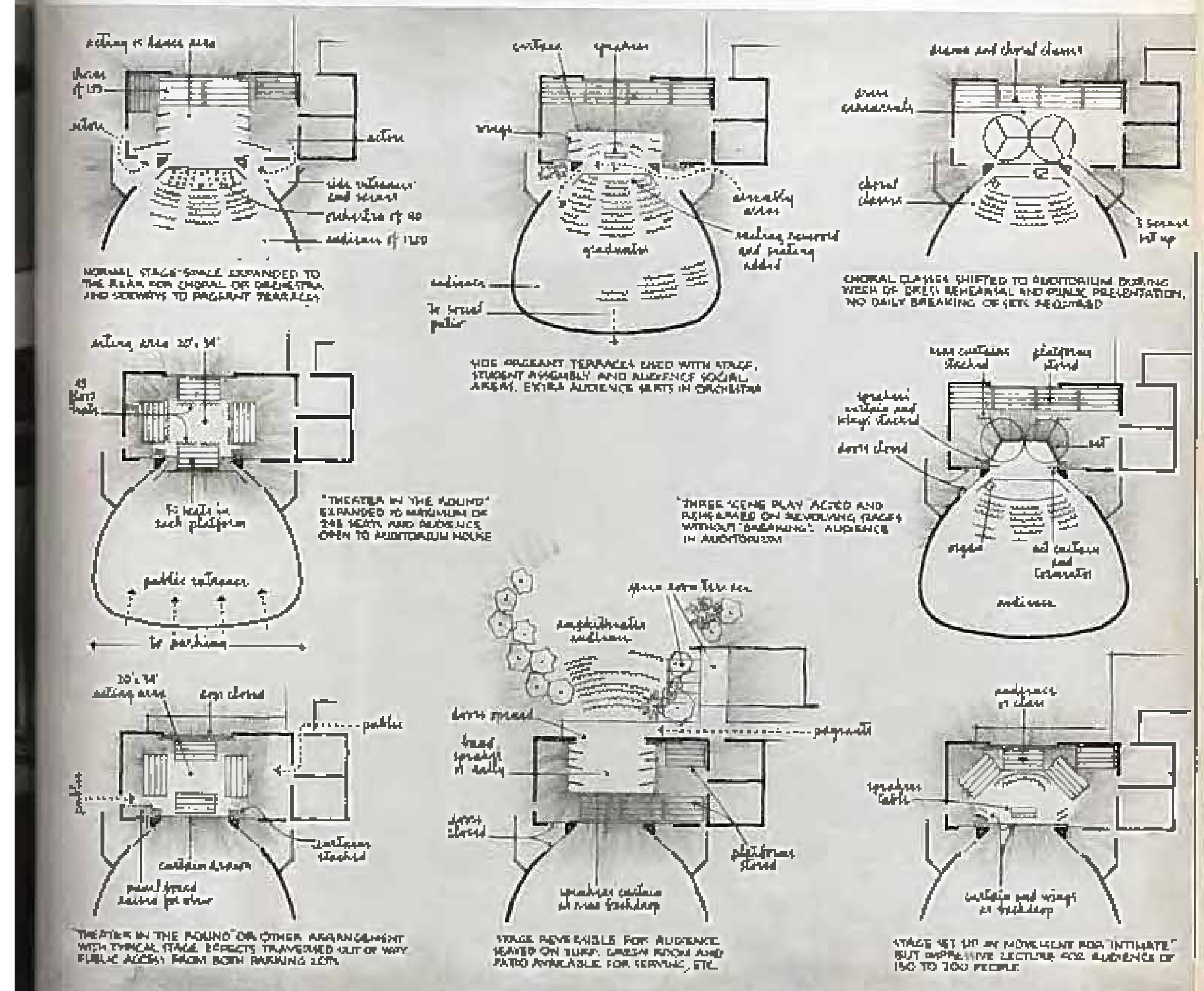
"Speech Arts Building." *Progressive Architecture* v.36 (USA: December, 1955): pages 104-105.Source: Helen Topping Architecture & Fine Arts Library, University of Southern California.

speech arts building

The auditorium, together with stage and stage-craft facilities (*above*), covers an area of 24,492 sq ft and seats 1200 persons. Adjunct services include a projection booth, orchestra pit, organ loft, public-address system, storage space, and dressing rooms. The auditorium, of roughly egg-shaped plan, has reinforced-concrete floors and walls, steel roof trusses, and wood roof construction. Inside, the auditorium has screen walls of plaster or perforated hardboard, and ceiling baffles of plaster. A separate gas-fired air heating and ventilating system provides for audience comfort. Stage and auditorium lighting-control panels, including preset boards, are placed on a platform above the sliding doors of the side stages.

The stage, an area 45 ft deep and 104 ft wide, is perhaps the most versatile and ingenious part of the Speech Arts Center. Numerous arrangements (*illustrated acrosspage*) are made feasible by movable doors, curtains, stage platforms, side stages, and revolving scenery platforms. Thus, use of the stage may range from a most intimate theater-in-the-round, seating up to 250 persons, to a focal center linking the indoor auditorium with the outdoor amphitheater, the whole seating a total of 3600 persons.

Preliminary "flexibility diagrams" (below) served as guides throughout the entire planning stages of the Speech Arts Center. From these, the manifold operations of the building are clearly apparent.



View of stage (left) from auditorium shows outdoor amphitheater in background. Automatically operated doors permit use of stage with either auditorium or outdoor amphitheater. Two revolving stage platforms allow for presetting of three or four scenes for quick changes. Tracks at ceiling carry teasers, wing drapes, and border lights. Rear main drape may also be used as front drop for amphitheater.

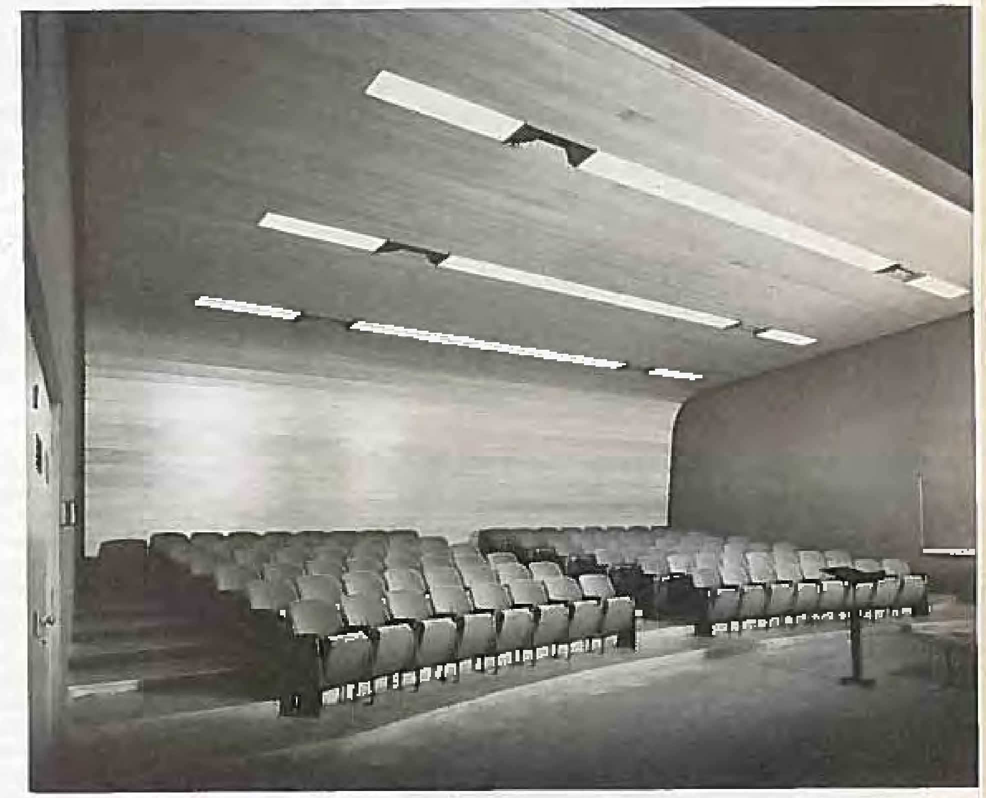
Photos: Julius Shulman

"Speech Arts Building." *Progressive Architecture* v.36 (USA: December, 1955): pages 106-107. Source: Helen Topping Architecture & Fine Arts Library, University of Southern California.

speech arts building

For economic reasons, the lobby was con[illegible] shelter without walls but shielded from [illegible] west wind by a glass screen (below). E[illegible] this lobby is from three directions—ma[illegible] approach from the east (above), pedes[illegible] from the north (left), and covered walk [illegible] (bottom). Approach from the west [illegible] shelter to music building.

Vertical marks on concrete walls of auditorium (left) are the results of slip-forms moved upward during construction. Rectangular structure in background encloses stage house, stage-crafts facilities, heater and boiler rooms. Covered walk in foreground leads to music building.



Music building houses choral, band, and practice rooms, facilities for instrument repair, and uniform storage. Choral room (above) employs sound-absorbing blankets behind perforated-hardboard end walls. End walls, part of ceiling and wall above chalkboard in band room (left) are also acoustically absorbent. Instrument storage is at rear of room.

"Speech Arts Building." *Progressive Architecture* v.36 (USA: December, 1955): pages 108-109. Source: Helen Topping Architecture & Fine Arts Library, University of Southern California.

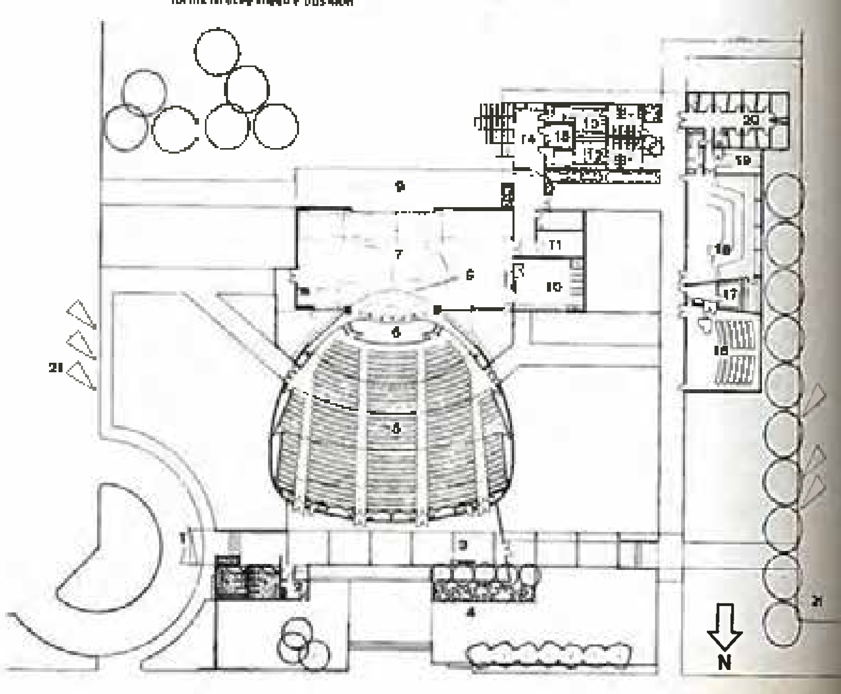
Orange Coast College, Costa Mesa, California

Architekten: Richard J. Neutra FAIA und Robert E. Alexander FAIA, Los Angeles

Gesamtansicht von Westen, der überdachte Zugang, die Billettkasse, das Auditorium.
Vue d'ensemble de l'ouest: l'accès couvert, la caisse, l'auditoire.
Assembly view from west, the covered entrance, the box office, the auditorium.

Grundriß 1:800.
Plan.

1 Zufahrt / Accès / Driveway
2 Billettkasse / Caisse des billets / Box office
3 Überdachter Zugang / Accès couvert / Entrance shelter
4 Sitzplatz im Freien / Groupe de sièges en plein air / Outdoor sitting area
5 Auditorium / Auditoire / Auditorium
6 Orchester / Orchestre / Orchestra
7 Bühne / Scène / Stage
8 Bewegliche Bestuhlungspodien für kleines Theater eingerichtet / Plate-formes amovibles de sièges, arrangées pour le petit théâtre / Movable seating platforms in little theatre position
9 Freilichtbühne / Scène en plein air / Rear ...
10 Bühnenarbeiter / Machinistes / Stagecraft
11 Kostüme / Costumes / Robe storage
12 Damengarderobe und Toiletten / Vestiaire ... des dames / Women's dressing room
13 Herrengarderobe und Toiletten / Vestiaire ... des hommes / Men's dressing room
14 Konversationszimmer / Foyer des artistes / ... room
15 Kostüme / Costumes
16 Chor- und Theorieraum / Salle du chœur ... / Choral and theory room
17 Bibliothek und Kostümlager / Bibliothèque ... d'uniformes / Library and uniform storage
18 Kapellen- und Orchesterraum / Salle de l'orchestre / Band and orchestra room
19 Instrumente / Instruments / Instrument storage
20 Übungsräume / Salle d'exercice / Practice room
21 Parkier-Flächen / Surfaces de stationnement / Parking lots



346

The main entrance at night.

1
Ansicht von Nordwest mit Haupteingang links, Toilettengebäude, Billettkasse und Auditorium.
Vue du nord-ouest: l'entrée principale, le bâtiment des toilettes, la caisse et l'auditoire.
View from north-west with main entrance left, toilets, box office and auditorium.

2
Sitzplatz im Freien und gedeckter Zugang.
Groupe de sièges en plein air et accès couvert.
Seating group in open air and covered entrance.

Es handelt sich bei dem publizierten Bau um ein Institut zur Pflege der englischen Sprache mit angeschlossenem Theater- und Konzertsaal. Das Institut ist ein Teil eines großen Collegekomplexes, der sich in Costa Mesa seit vielen Jahren langsam entwickelt hat. Nicht nur in den USA, sondern auch in anderen Ländern englischer Sprache, z. B. in Südafrika, existieren solche Institute zur Pflege der englischen Sprache und Musik. Sie sind neben diesem Hauptzweck gleichzeitig Bindeglieder zwischen Schule und Außenwelt; es trifft sich in ihnen das allgemeine Publikum, dann aber vor allem die Gönner des Institutes und die Schüler. Als Schenkungsobjekt von reich gewordenen Privatleuten lösen diese Institute, die immer mit einem Theater verbunden sind, die Bibliotheken ab, die in Amerika in jedem noch so kleinen Städtchen zu finden sind. Neben der Pflege der Sprache wird auch Gesang und Instrumentalmusik betrieben, und für bestimmte Anlässe kulminiert diese Tätigkeit in Theatervorstellungen und Konzerten.

Auf der Bühne des Auditoriums kann ein Rundtheater aufgebaut werden. Die amerikanischen Institutionen solcher Art sind Träger des experimentellen Theaters, deshalb auch die Möglichkeit, neben Aufführungen mit traditionellen Bühneneinrichtungen Arenatheater zu spielen oder z. B. bei Tanzaufführungen das Publikum auf einer Fläche in der Mitte des Theaters sitzen zu lassen und die Bühne rings um die Zuschauer zu bespielen. Von solchen experimentellen Theatern geht in Amerika die ganze Theaterentwicklung aus. Hier werden moderne Schauspieler, Regisseure und Intendanten ausgebildet, die dann mit ihrem Wissen und ihren speziellen Interessen das kommerzielle Theater der großen Städte befruchten. Es entstehen in diesen Instituten oft auch ganz moderne Stücke mit neuer Darstellungstechnik und neuen Beziehungen zwischen Zuschauerraum und Bühne, die meist darauf hinauslaufen, den direkten Kontakt zwischen dem gespielten Drama und dem Zuhörer zu vermitteln.

Angeschlossen an den Theatersaal besteht ein Freilichttheater, wo die diesem Theatertyp eigenen Probleme gestaltet und ausprobiert werden. Es bestehen klare räumliche Beziehungen zwischen dem Publikumsteil, als Wandelhalle mit Kasse und WC-Anlage vor den Saalbau gelegt, und dem Saalbau selbst. Dieser hebt sich auch kubisch sauber ab von den niedrigen Bauteilen für Publikum und Collegebetrieb. Der Bühne mit ihren Variationsmöglichkeiten ist ein großer Raum zugewiesen. In einem eigenen Bauteil liegen die beiden Übungssäle für Chor- und Orchesterarbeit zusammen mit einer Raumgruppe für Einzelunterricht und Proberäumen.

Die Architektur ist unverwechselbar von Neutra, dem großen Zauberer unter den amerikanischen Architekten. Seine Mittel versagen nie.
Zm.

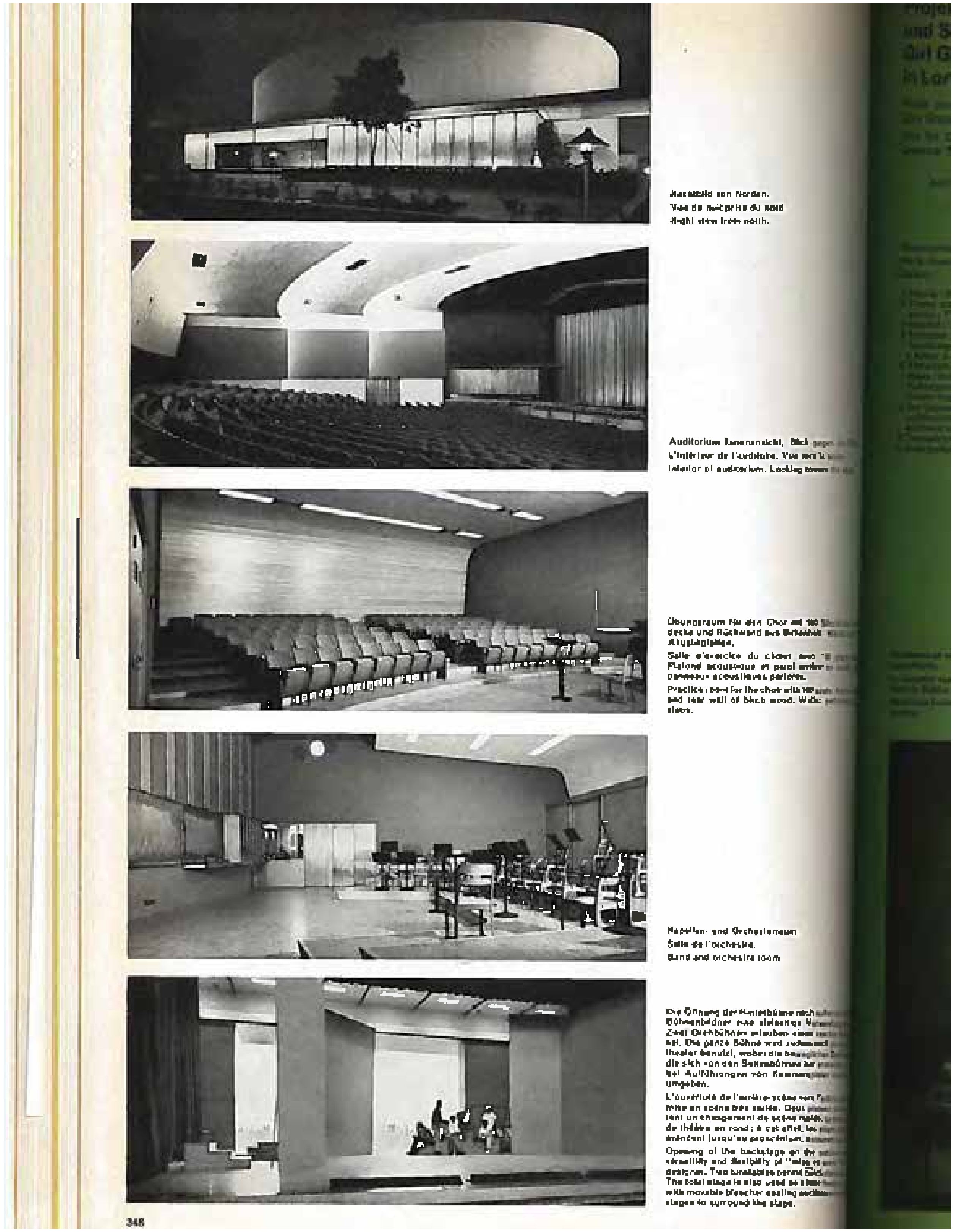
1

2

3

347

"Orange Coast College, Costa Mesa, California." *Bauen und Wohnen* v.12 (Germany: October, 1958): pages 346-347. Source: Helen Topping Architecture & Fine Arts Library, University of Southern California.



Nachtbild von Norden.
Vue de nuit prise du nord
Night view from north.

Kapellen- und Orchesterraum
Salle de l'orchestre.
Band and orchestra room

348

"Orange Coast College, Costa Mesa, California." *Bauen und Wohnen* v.12 (Germany: October, 1958): page 348. Source: Helen Topping Architecture & Fine Arts Library, University of Southern California.

Kokusai-Kentiku v.26 (Japan: November, 1959) Source: Environmental Design Library, Univesity of California, Berkeley.

"AUDITORIUM"

Note: Ideas for a creative approach to design from "Survival Through Design", Oxford University Press, New York London, 1954

Auditorium is a facility for hearing, sitting—in fact, a man made space for an acoustical offering. Also, a title of a Building group such as *Speech Arts Center* seems to emphasize that speaking, and of course, listening is the primary purpose of the assembly hall. But no specific sensory appeal is hardly ever fully isolated and all senses collaborate heterogeneously to convey to us the raw material for forming, in the "central area" of our nervous system, a picture, an impression of the surrounding outer world, our position within it, and our relationship to external happenings.

This sensed relationship includes a good deal of emotional admixtures, more or less subconscious feelings of comfort or uneasiness, as the case may be. It includes, for example, a dim but effective consciousness whether, after a while, we get sufficient oxygen into our lungs to revive us; whether there is an air inflow with marked draft phenomena over our skin with too fast a cooling by evaporation of those million tiny sweat droplets, continuously secreted through each pore and lodged there.

While we seem to follow a choral performance in the Auditorium we can become faintly, and finally quite distinctly, aware that the humidity content of the air cushion around us is too high or in another section of our sensation, that the cushioning of our seat is too low or too stiff. Our posture, while we crane our necks to see between two persons in front of us, or over their heads, what is going on in the facial expression of the singers—is recorded to us by a multitude of muscle senses. We might get even weak visceral responses of not feeling well, getting seasick, dizzy.

The volatile smells which emanate from all the organic life around us may and should never, in an auditorium, reach the level of a zoological garden, nor should we be affectionately distracted by identifying the cleaning fluids and floor polish which had been used to shine up the place before we entered it.

But above all, there is no doubt that an auditorium, unless it is in a school for the blind, is not devoid of wealth of visual images, which should be made thoroughly meaningful by the designer. The space which we humans actually live in and, as architects, create, is not a mathematical or geometrical abstraction, but a multi-sensory and an organically fused unified experience. An auditorium where we are to share the intuitive and intellectual offering of a performance, be it that of a speaker, a chamber music group, a play done by professional actors or by beginners, or some pageantry of a commencement service,—an auditorium is actually in all of these cases a classic example of humanly created and enjoyed space.

The all-purpose character of such a space which is to serve and activate a community is markedly different from that of the more specialized Theatre as it developed especially since the Renaissance into a place where spectators forming one world peep through a proscenium arch into another well rehearsed and staged world behind the barrier of footlights.

Even quantitatively speaking, the audience formed by Court society—say, in Verona or Parma, or Mannheim, was a given immutable entity—so and so many boxes would take care of all the noble families which the kingdom and its subjects could support.

Behind the student body of a college, for example, stands a wider and elastic community which may and should on occasion, converge on the campus. A neighborhood recreation center may on special and festive occasions, draw crowds from way beyond the immediate neighborhood. Static classical proportions and set constrictive limitations of performance, [illegible] during its amortization period, produce [illegible]

Returning now from such sociological trains of thought to the [illegible] base of all that is human and concerns the individual and the [illegible] which is is geared in all stages of life, we have to recognize an [illegible] fact. Rather than spectatorship that views through a Louis XV [illegible] an actors', and singers' troupe on the Prince's retinue, performing [illegible] "Opera Seria", or a kept ballet corps going through the paces [illegible] playing most traditionalized set technique, we have today in mind [illegible] *participation*, change and experiment.

Participation means being taken in, as much as feasible, making [illegible] formative mind, instead of "hail and hell". The stage extending [illegible] the "Audience", or the audience surrounding the stage and [illegible] two approaches to this totality, and at the same time, toward the [illegible] intimacy between the two halves. The Greek amphitheatre was [illegible] the "Theatre-in-the-Round". But daylight makes always [illegible] hers see each other and the chorus and actors simultaneously. [illegible] emotion was transmitted in this extended face-to-face group. [illegible] "Penthouse Players" of Seattle and the other Little Theatres [illegible] of today, turn off the electric lights except those on the [illegible] as the activity starts.

We should have this treatment on occasion, in a "Little Theatre" [illegible] then, there is also the opposite approach: it is the one of [illegible] audience by action: simultaneous activity or action in sequence. [illegible] Watching can also be enriched by illumination reaching [illegible] beyond "frontal" into peripheral vision, with stimuli to the right [illegible] eliciting drastic eye and head movements of the entire audience [illegible] binocular field may perceptibly and impressively be deepened [illegible] the rear stage wall into a relaxing distance, a backdrop of [illegible] nature which even the grand Vienna Opera, with a stagehouse [illegible] a city block, could not offer, when the ghost ship of the Flying [illegible] became visible in the gruesome thunderclouds of a far away [illegible] The broad opening of the rear stagehouse into an outdoor backdrop [illegible] permits, on special occasions to have an indoor audience [illegible] audience and thus sandwich the performance between the two. [illegible] the mentioned potential cases staging, illumination, and the [illegible] watching meaningful movement will have to be varied, the [illegible] director and artists, the grouping of musicians, the arrangement [illegible] and instruments.

Sidestages, broadening the main stage may sometimes be [illegible] They too, can open and deepen into outer yards, kept as dark [illegible] space at night performances, while a few props, a plant [illegible] black tree trunk may suggest the private garden of Don [illegible] fateful battlefield of Philippi.

Auditorium-and assembly hall with appendages of "[illegible] vistas from the "Camino Real" over the sacred plains, [illegible] timeless precipices that make up a more-than-physical universe [illegible] thinking and creation—all this is indeed a wonderful [illegible] and artist of space.

BUSINESS EDUCATION BUILDING

The Business Education building, with its interesting [illegible] tory for the most practical and realistic instruction, [illegible] Speech Art Center with the grand "aula" or auditorium [illegible] of the campus are perhaps the most original additions [illegible] development of an institution of learning. Science, sport [illegible] stadium, swimming pools have been gradually developed [illegible] ing conditions of the building market, by faithful budgetary [illegible] well as devotion to the educational program of the college. [illegible]

Night view in frontal concourse.

Photos: Julius Shulman

East entrance from series of parking areas.

オレンジ・コースト・カレッジ
カリフォルニア州 コスタ・メサ
言語芸術センター

リチャード・ノイトラ
ロバート・アレクサンダー
設計

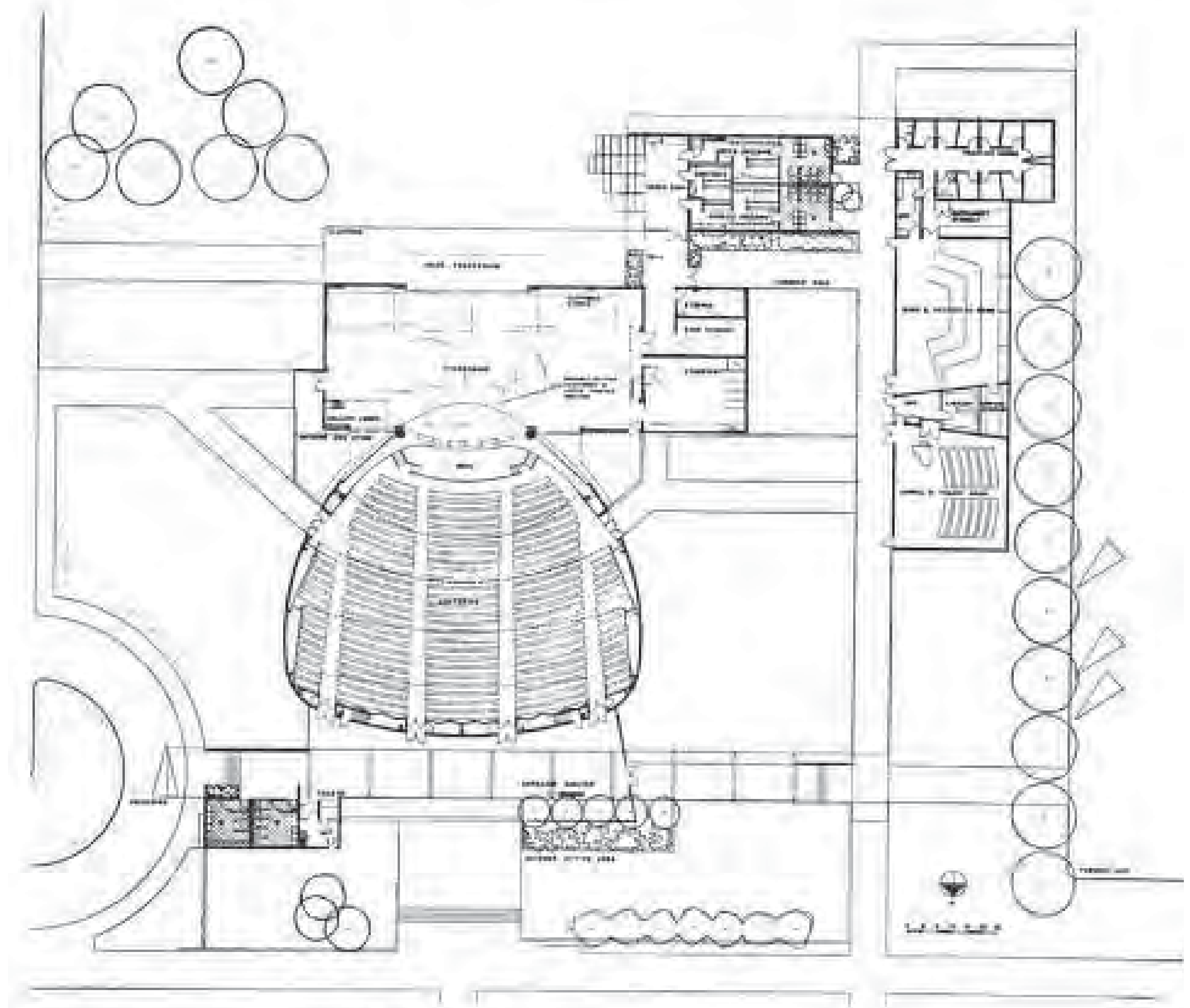
ORANGE COAST COLLEGE - SPEECH ART CENTER (Costa Mesa, California)
Richard J. Neutra & Robert Alexander, Architects

13

"Orange Coast College." *Kokusai-Kentiku* v.26 (Japan: November, 1959): pages 12-13.Source: Environmental Design Library, Univesity of California, Berkeley.

Colonnade with curved auditorium entrance front at left.

オーディトリアムについて
リチャード・ノイトラ



平面図 Floor plan

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“Orange Coast College.” *Kokusai-Kentiku* v.26 (Japan: November, 1959): pages 14-15. Source: Environmental Design Library, Univesity of California, Berkeley.

・カレッジ
ァサンダー設計

屋外のコンコース，西より見る全景 Outdoor concourse—total view from west.

吹放しのコンコース Breezeway to protected outdoor concourse.

センター
IT CENTER

November 1959

"Orange Coast College." *Kokusai-Kentiku* v.26 (Japan: November, 1959): pages 16-17. Source: Environmental Design Library, Univesity of California, Berkeley.

CENTER

18

"Survival Through Design" (Oxford University Press, New York-London, 1954)

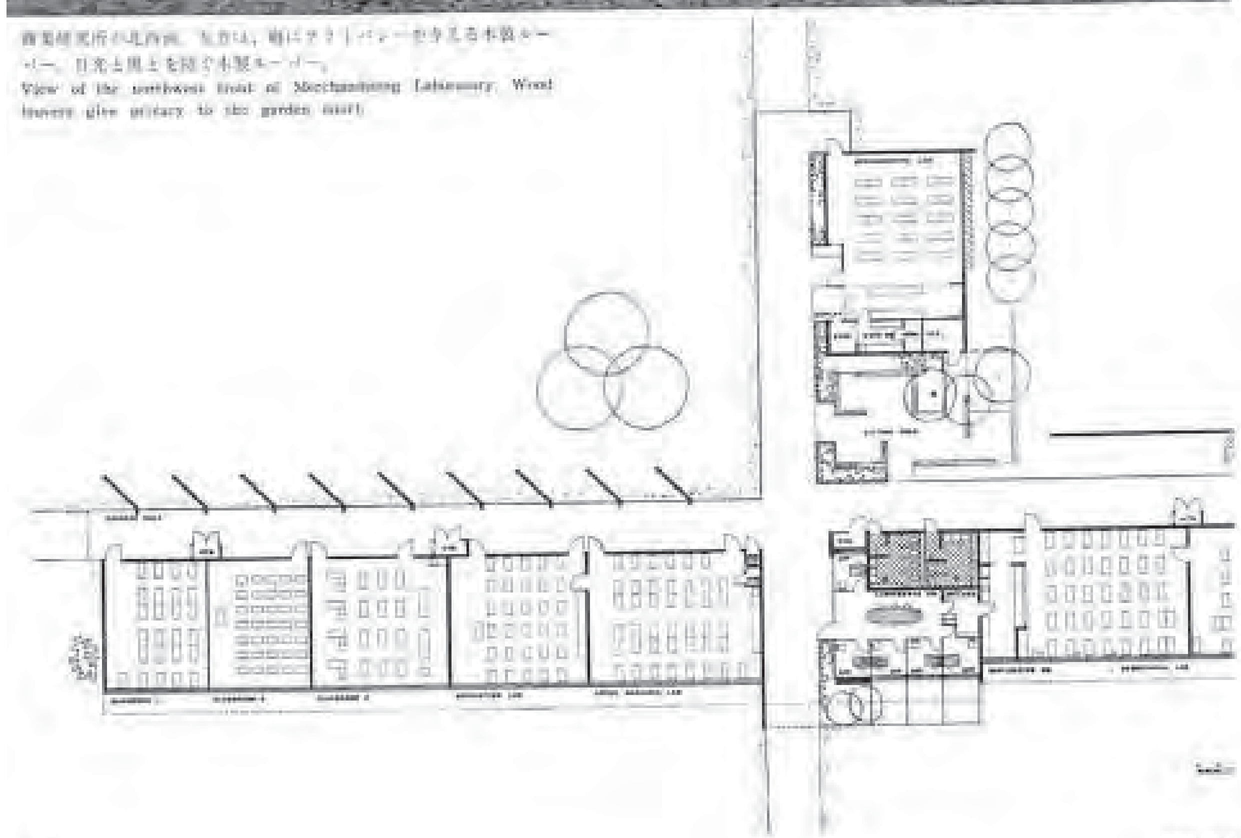
オレンジ・コースト・カレッジ　　ノイトラ&アレクサンダー設計

ORANGE COAST COLLEGE: Richard J. Neutra & Robert Alexander, Architects

19

"Orange Coast College." *Kokusai-Kentiku* v.26 (Japan: November, 1959): pages 18-19. Source: Environmental Design Library, Univesity of California, Berkeley.

View of the northwest front of Merchandising Laboratory. Wood louvers give privacy to the garden court.



20 THE KO

ジ・コースト・カレッジ
カリフォルニア州 コスタ・メサ
ビジネス教育科

リチャード・ノイトラ
ロバート・アレクサンダー 設計

COLLEGE - BUSINESS EDUCATION BLDG, Costa Mesa, Calif
ra and Ass., Architects: Richard Pfleger, Supervising Architect.

Sun and wind control louvers.

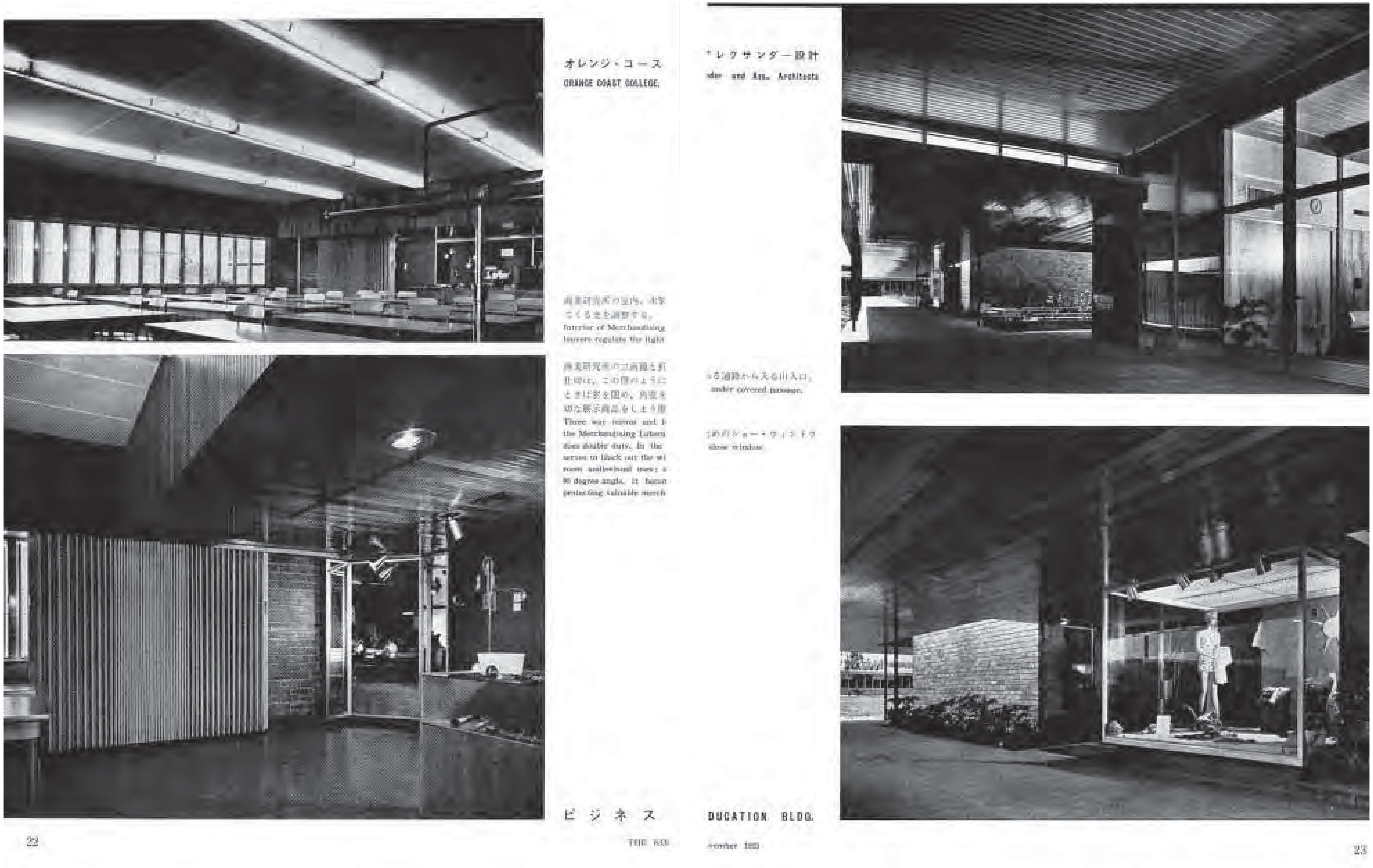
Detail of entrance court.

[illegible]

Classroom corridor and Merchandising Laboratory at right.

November 1959

"Orange Coast College." *Kokusai-Kentiku* v.26 (Japan: November, 1959): pages 20-21. Source: Environmental Design Library, Univesity of California, Berkeley.



オレンジ・コース
ORANGE COAST COLLEGE,

*レクサンダー設計
nder and Ass. Architects

商業研究所の室内。水平
つくる光を調整する。
Interior of Merchandising
louvers regulate the light

商業研究所の三面鏡と折
仕切は、この図のように
ときは窓を閉め、内部を
切な展示商品をしまう
Three way mirror and f
the Merchandising Labora
does double duty. In the
serves to black out the wi
room audiovisual uses; a
90 degree angle, it becom
protecting valuable merch

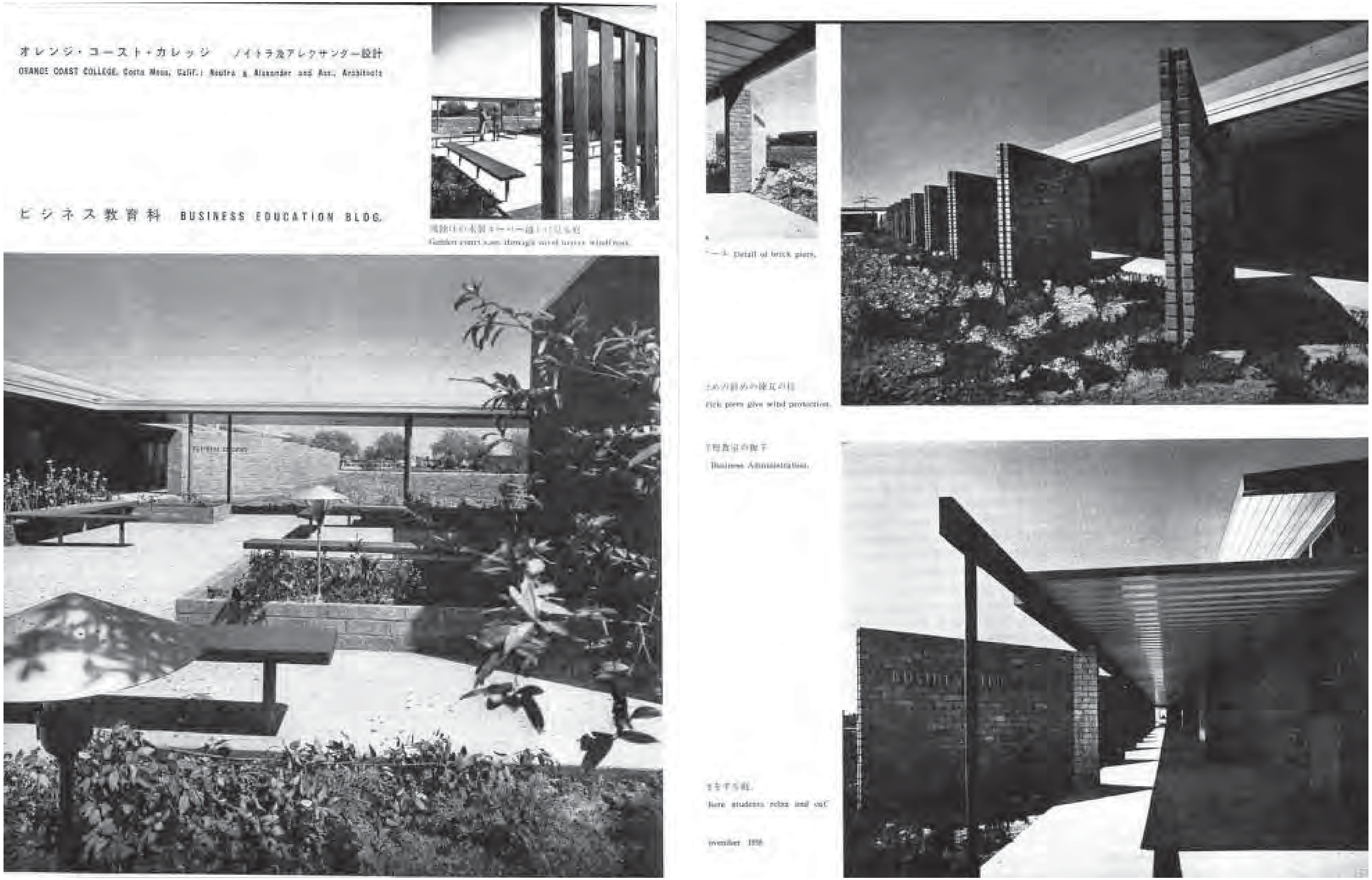
る通路から入る出入口。
under covered passage.

ためのショー・ウィンドウ
show window.

ビジネス
DUCATION BLDG.

22 THE KOK
vember 1959 23

"Orange Coast College." *Kokusai-Kentiku* v.26 (Japan: November, 1959): pages 22-23. Source: Environmental Design Library, Univesity of California, Berkeley.



オレンジ・コースト・カレッジ　ノイトラ及アレクサンダー設計

ORANGE COAST COLLEGE, Costa Mesa, Calif.: Neutra & Alexander and Ass., Architects

ビジネス教育科　BUSINESS EDUCATION BLDG.

Garden court seen through wood louver windbreak.

Detail of brick piers.

Brick piers give wind protection.

Business Administration.

Here students relax and eat.

November 1959

"Orange Coast College." *Kokusai-Kentiku* v.26 (Japan: November, 1959): pages 24-2. Source: Source: Environmental Design Library, Univesity of California, Berkeley.

"Orange Coast Science Building." *Kokusai-Kentiku* v.27 (Japan: August, 1960): cover page and page 43. Source: Environmental Design Library, Univesity of California, Berkeley.

Photos : Ju

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THE KOKUSA

ンジコースト科学館
チャード・ノイトラ＆ロバート・アレキサンダー

Photos : Julius Shulman

別稿ノイトラ論文参照　see the treatise by Neutra in another section.

ORANGE COAST SCIENCE BUILDING　Neutra & Alexander, architects
see KOKUSAI KENTIKU No. 11 1959

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"Orange Coast Science Building." *Kokusai-Kentiku* v.27 (Japan: August, 1960):pages 44-45. Source: Environmental Design Library, Univesity of California, Berkeley.

EKTUR UND WOHNFORM · INNENDEKORATION

d interiors architecture et décoration

ita Humphreys Theater, Orange Coast Theater in USA - Stadttheater
Parktheater Grenchen, Schweiz - Nationaltheater Mannheim (Entwurf)

POSTVERLAGSORT STUTTGART

der Anlage mit Freiterrasse von Westen · Gärtnerische Anlagen und
ften als zum Theatererlebnis gehörende Annäherungs-Szenerie gestaltet

the outdoor concourse, general view from the west · The landscaped
races are designed to form the scenery for approaching the performance

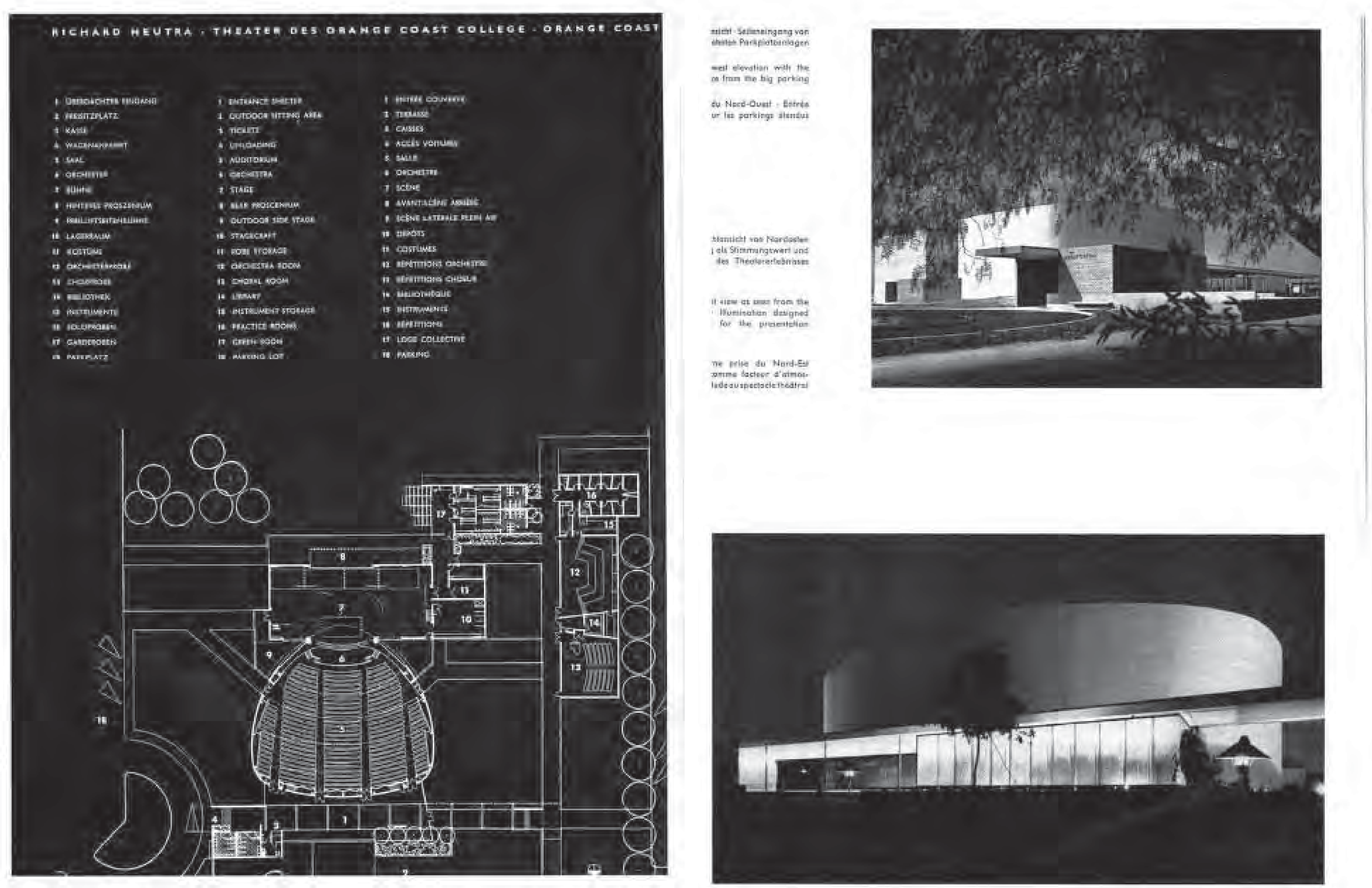
du théâtre avec sa terrasse donnant à l'Ouest · Jardins et terrasses
rement conçus comme décors préparant le public au spectacle scénique

ER DES ORANGE COAST COLLEGE IN ORANGE COAST, USA

ARCHITEKTEN: RICHARD NEUTRA UND ROBERT ALEXANDER, LOS ANGELES

Dieses Theater bildet einen Teil einer Hochschulanlage, welche etappenweise vollendet werden soll. Es stellt eine Verbindung eines Instituts zur Pflege der englischen Sprache, der Dramatik sowie der Vokal- und Instrumentalmusik mit einem Theater- und Konzertsaal dar. Es handelt sich um eine Stiftung, und das Theater soll nicht nur Lehrzwecken dienen, sondern auch zu einem Bindeglied mit der außerhalb des Campus wohnenden Gemeinde werden. Um die überragende Rolle, die es im Hochschulkomplex spielt, zum Ausdruck zu bringen, erhielt es einen zentralen Platz.
Das Auditorium, ein Vielzweckbau, soll bühnenmäßige Experimente ermöglichen. Die Technik des Rundtheaters wie auch die der dramatischen Szene, welche die Zuschauerschaft so weit wie möglich umgibt, soll während der nächsten Jahrzehnte Gegenstand von Untersuchungen werden. Vorkehrungen für diese beiden Möglichkeiten wurden getroffen, um die emotionale Teilnahme der Zuhörer zu wecken, und die Erfordernisse für die Darbietung von Sinfonien und Chorälen wurden sorgfältig geprüft.

"Theater des Orange Coast College in Oraange Coast, USA." *Architektur und Wohnform, Innen-deokoration* v.27 (Germany: August, 1960): cover page and page 87. Source: Environmental Design Library, Univesity of California, Berkeley.



RICHARD NEUTRA · THEATER DES ORANGE COAST COLLEGE · ORANGE COAST

1 ENTRANCE SHELTER
2 OUTDOOR SITTING AREA
3 TICKETS
4 UNLOADING
5 AUDITORIUM
6 ORCHESTRA
7 STAGE
8 REAR PROSCENIUM
9 OUTDOOR SIDE STAGE
10 STAGECRAFT
11 ROBE STORAGE
12 ORCHESTRA ROOM
13 CHORAL ROOM
14 LIBRARY
15 INSTRUMENT STORAGE
16 PRACTICE ROOMS
17 GREEN ROOM
18 PARKING LOT

...sicht · Saaleingang von ...sten Parkplatzanlagen

...west elevation with the ...e from the big parking

...du Nord-Ouest · Entrée ...ur les parkings étendus

...ansicht von Nordosten ...als Stimmungswert und ...des Theatererlebnisses

...t view as seen from the ... Illumination designed ... for the presentation

...ne prise du Nord-Est ...omme facteur d'atmos... ...le du spectacle théâtral

“Theater des Orange Coast College in Oraange Coast, USA.” *Architektur und Wohnform, Innen-deokoration* v.27 (Germany: August, 1960): pages 88-89. Source: Environmental Design Library, Univesity of California, Berkeley.

PLANNING ARTICLES

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Memo to: RICHARD J. NEUTRA
From: ROBERT E. ALEXANDER

Re: PLANNING A CAMPUS

Here we may look over the shoulder of a well known architect and planning consultant as he reads a report of a study of campus planning prepared by his partner

AS WE have found time after time, no two campus planning problems are the same.

At Orange Coast College we found a new institution starting in many ways from scratch, yet it was completely housed in temporary army buildings which had been condemned. An entirely new program was being developed from a survey of the community's indigenous needs and aspirations.

At St. John's we found a campus almost 300 years old, on which many of the physical determinants were already played out. Its unique curriculum and position as a pilot college in liberal arts education provided the background for a fascinating study.

Midway between these examples, at Adelphi College, we found a few permanent old buildings and an intriguing new concept for the development of a center of communicating and performing arts.

In every case, however, there is a common denominator in a method of approach and study, which we have brought to paper only as it is reflected in the end result. These methods are similar to those we have developed for the study of entire communities, and many elements of similarity, of course, can be found to any thorough architectural study. In every case, whether a new college is to be founded on a virgin site still undetermined or on the campus of the oldest university in the land, an outline of methods and approach would be helpful.

Even here, of course, a variety of approaches may be contemplated, and many steps might be eliminated or treated lightly. Naturally some factors are much more important in some cases than in others. It is also true that many boards cannot see their way clear to appropriate the funds necessary for a comprehensive study. Sometimes it is only after several years of development that it becomes painfully clear that hundreds of thousands of dollars would have been saved, if a few thousand dollars had been spent on development planning prior to the commitment of several million dollars in buildings which will serve the public for a hundred years or more.

An orderly summary of the considerations that should be taken into account in preparing a development plan should be helpful to any institution contemplating a long-range construction program.

Educational Planning

Purposes: A clear statement of the aims and purposes of an institution is essential as a guide not only to the faculty and student but to the architect as well. Here we should find the essential distinguishing characteristics which should be reflected throughout the entire planning process.

Organization: A description and even a reexamination of the organization of the institution may have a profound effect on planning. The philosophy of the institution may indicate the desirability of eliminating departmental or subject lines wherever possible, or the functional organization may be enhanced by a planning solution.

In one case that comes to mind, traditional departmental walls were consciously demolished or reduced in effect by the planning concept. In another case public attention and support were enhanced by distinguishing the unique characteristics of certain elements of the organization.

Educational program: The program developed to carry out the aims of the institution through its organization should be stated clearly. Elements of the program not yet installed, but contemplated, will affect a long-range plan. Here again it is the unusual or different educational offering which holds the greatest interest for the planner. An insight into the reasons for certain elements of the program will help in relating the design to the community, and in the development of interrelationships on the campus itself. Teaching methods should be analyzed, observed and described. These will vary from one institution to another and from course to course within the same institution.

Forecast of enrollment: A quantitative analysis of the probable growth of an institution should be made to cover the next 10 or 15 years. The technic must vary according to the circumstances. In any event it is essential that the governing board establish the ultimate enrollment for which the plan is to be made. This may involve not only the probable growth of the community and a study of age groups, but policy determinations governing admission policies as well.

Distribution of students: Quantitative assumptions must be made on the probable distribution of students among courses of study. These may be based on the past history of the institution or on a study of employment opportunities in the community.

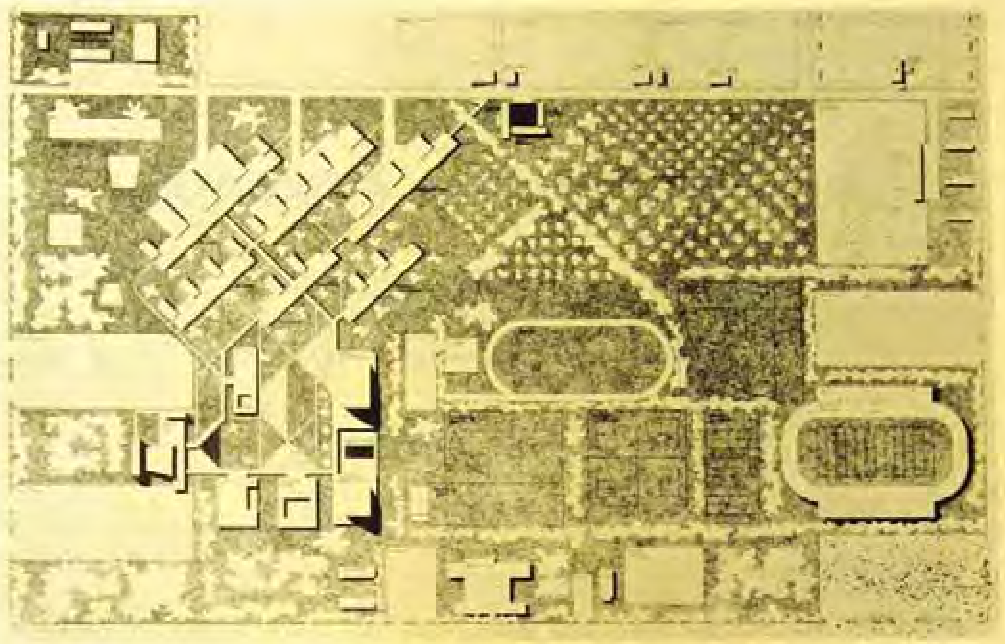
Space Planning

Space requirements: Standards of space requirements per student for various activities should be established. Faculty members should be encour-

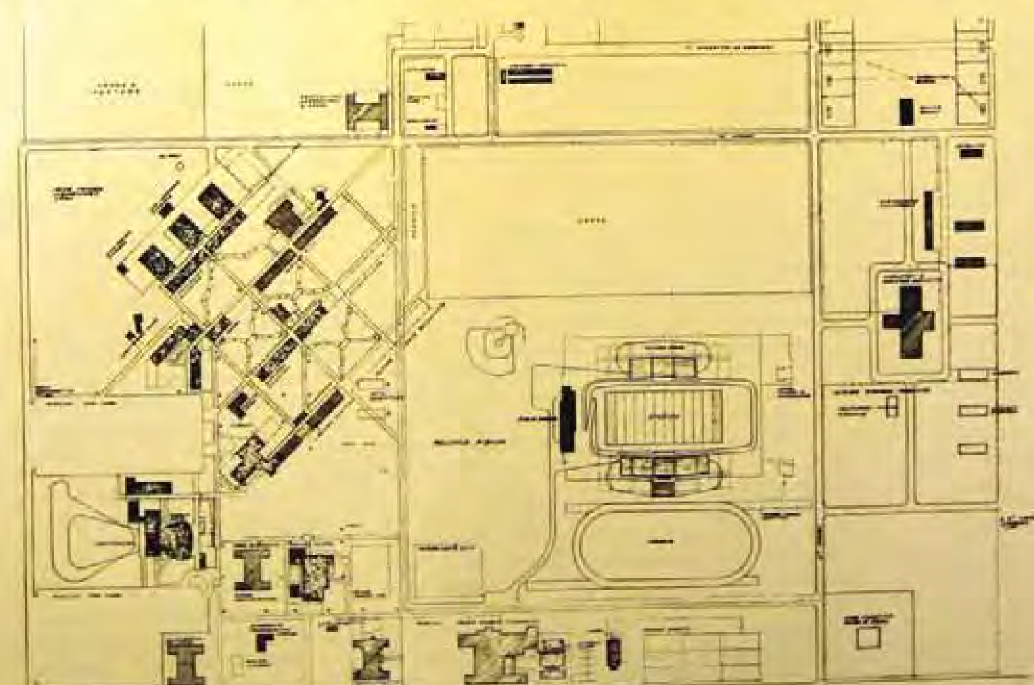
Reprinted from COLLEGE & UNIVERSITY BUSINESS, *January 1959*

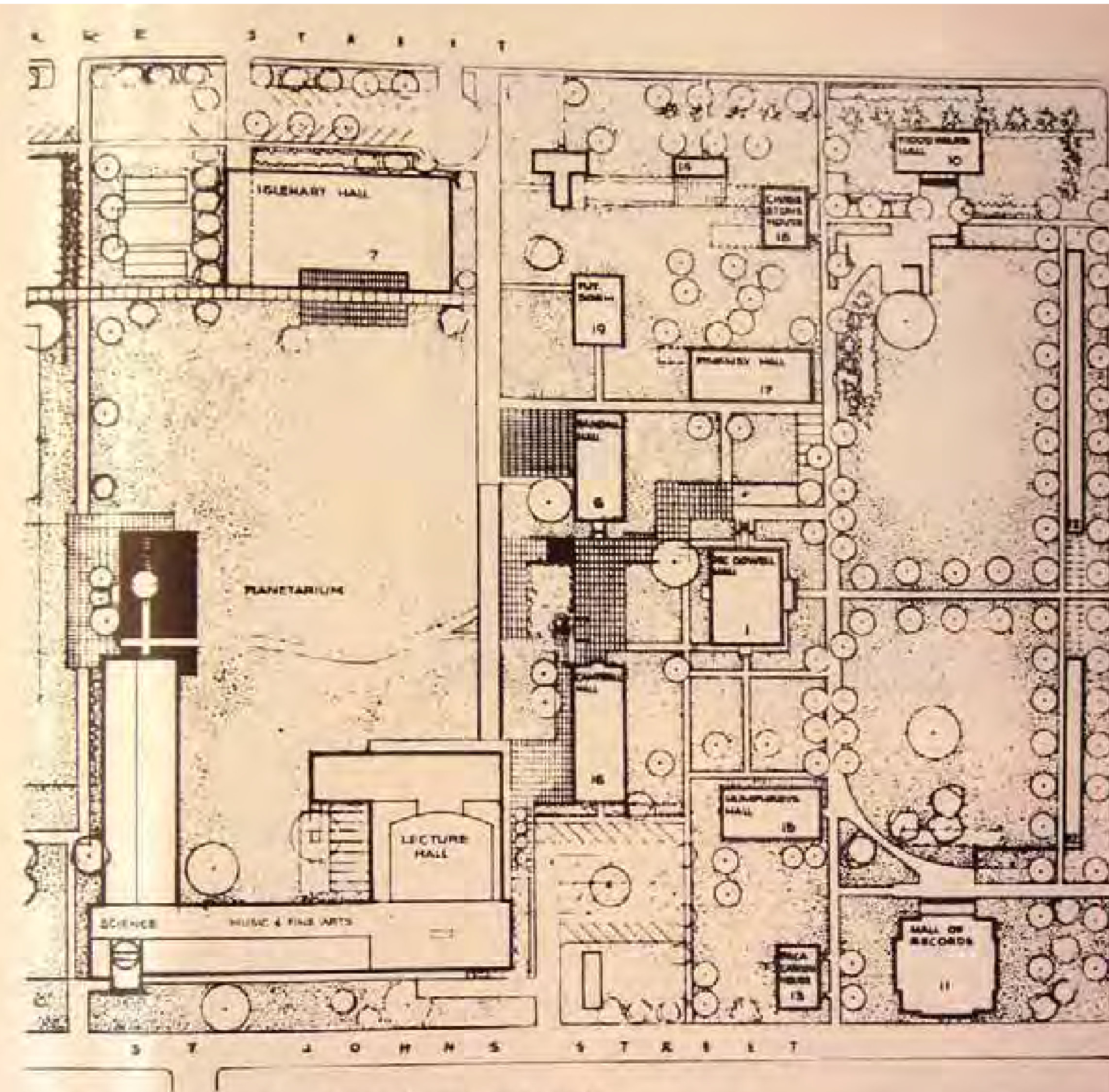
This document is missing a page. It was not present in the Robert E. Alexander archives at Cornell University's Library. Presently, no complete version of this document has been found.

Alexander, Robert E. "Memo Re: Planning a Campus." Reprinted from *College & University Business* (January, 1959). Source: Robert E. Alexander Collection, Division of Rare and Manuscript Collections, Cornell University Library.



Above: Master plan approved by the board of Orange Coast College in March 1949. Below: Master plan modified over a period of eight years. The major modifications consisted of moving the stadium with its field house closer to the center of the campus and integrating the track with it. This permitted the field house to be used in conjunction with track and baseball as well as football, and to become a regular classroom building. The pools were moved from the center of the campus, where they had been located close to the Student Center, to a location adjacent to the old gymnasium so that showers and gymnasium facilities could be used without duplication.





Master plan for St. John's College, Annapolis, Md., which in contrast to Orange Coast College, where the architects virtually started from scratch, contained buildings dating back to colonial times. The portion of the campus toward College Avenue contains 11 historic buildings on a sort of acropolis. The steam plant had been built in recent years, but otherwise the lower part of the campus contained open space on which a composite building (with auditorium, science laboratory, and music lecture hall) has recently been constructed. It is known as the Francis Scott Key Memorial and Science Laboratory.

ST. JOHN'S COLLEGE.
CAMPUS DEVELOPMENT
R J NEUTRA & R E ALEXANDER
ARCHITECTS MAY 1956

Building policies: Certain fundamental decisions regarding building design may be made as a matter of policy at the start. The relationship of the program to the amount of land available may determine a building height policy. Decisions on space standards and typical dimensions may determine a modular unit which will carry through the entire campus. Daylighting policy should be established.

The objectives of the institution may be enhanced by a close-knit, unified court scheme or by a spreadout, spacious pattern of buildings grouped around a grand mall. A minimum budget related to the scope of the problem may call for individual buildings limited in scope and separated for fire protection. A more liberal budget or policies of permanence may permit multistory, connected structures.

Interrelationships: Certain functions or buildings may be grouped in categories according to their use by the students or by the community. For instance, certain functions such as the cafeteria, gymnasium or library are

Alexander, Robert E. “Memo Re: Planning a Campus.” Reprinted from *College & University Business* (January, 1959). Source: Robert E. Alexander Collection, Division of Rare and Manuscript Collections, Cornell University Library.

Francis Scott Key Memorial and Science Laboratory, St. John's College.

used by all students frequently. Others, such as an auditorium or chapel, may be used by all occasionally. Others, such as science laboratories and other specialized spaces, are used by special groups, some of which are related to others. Certain functions, such as the administration building and the auditorium, are used frequently by the public. The fact that every student of nursing spends a great deal of time in biology or that science students take a great deal of mathematics helps determine the interrelationship and location of certain functions.

As a policy of the institution, it may be decided to promote the use or awareness of certain functions of the institution by placing the library, for instance, in such position that everyone must pass it on his way to the student union. There should be conscious reason for the placement of functions in relationship to one another.

Construction Program

Grounds improvement: When a master development plan has been prepared to accomplish a certain program, the general assessment of construction cost requirements and ways and means must be developed. In the shuffle of estimating square foot areas and building costs, adequate attention is seldom given to grounds improvement. Adequate allowance should be made for the development of utilities, especially underground electric lines and drainage. Curbs, gutters, walks, outside terraces, reflecting pools, and landscaping should be calculated. A specific schedule should be made for an incremental program to proceed with the construction of buildings.

Building construction: In developing a comprehensive program at this formative stage, a contingency of at least 10 per cent should be added to all estimates of construction costs. In addition to this, allowance should be made for site and foundation surveys, advertising and prints, inspection and laboratory tests during construction, technical services, and furnishings. It is sometimes overlooked by governing boards that these items may easily add 25 per cent to the actual construction contracts. If a fund raising campaign is required, its cost must also be taken into account.

A clear understanding of what is to be included in buildings by way of equipment and furnishings, as contrasted to those things to be purchased as movable equipment and furniture, should also be made.

Priorities: When the entire construction cost program is outlined, it may be necessary to establish an incremental program. This may become a complicated game of chess when old buildings to be removed are involved in the scheme. It may prove most economical to build an entire structure in the ultimate program which will accommodate several functions temporarily until specific buildings are constructed to house them. Construction of scattered fragments may prove more costly and unmanageable than periodic remodeling to suit a changed use.

Fiscal program: Studies of alternative plans of financing must be made. For public institutions, a tax rate increase may be feasible politically and prove adequate to meet the growing need through a pay-as-you-go financing plan. An older public institution needing a new campus may have to resort to a bond issue. The resources of a private institution must be analyzed and related to the development program. The potential resources may even influence the concept of the plan itself, as we have seen.

In any event the careful preparation of the plan of development, properly presented to the citizens or potential donors, will play a major role in the financing of the project.

Schedule: A precise schedule of critical dates in the development program should be established and maintained.

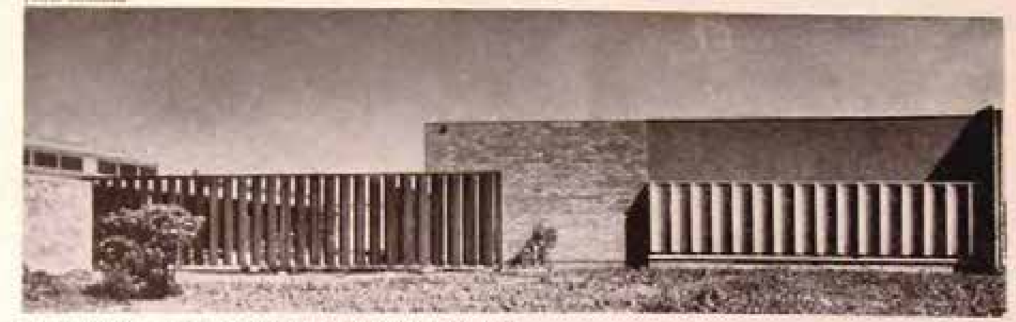
Continued Planning

Building plans: Ideally, the advisers who have prepared the development plan should carry through the design of specific buildings. When this is impractical for any reason, they should at least be retained to advise on the design of specific buildings. As careful as they have been to bring as much as possible to paper during the preparation of a development plan, the end result will still depend on the specific execution of the designs.

Development plan review: The development plan itself is intended to be a guide. Over the period of development, especially in the case of a long-range incremental plan, logical changes are usually necessary, regardless of the time and thought devoted to the plan in the first instance. Experience in the growth and development of the institution, not to mention changes in contemporary life as reflected in educational needs, will demand certain adjustments. Advisers who worked with the institution in the first instance would be helpful in servicing the continuity of the plan. ■

Alexander, Robert E. “Memo Re: Planning a Campus.” Reprinted from *College & University Business* (January, 1959). Source: Robert E. Alexander Collection, Division of Rare and Manuscript Collections, Cornell University Library.

Julius Shulman



View from the west of the new Business Education Building of Orange Coast College, Costa Mesa, California. Neutra and Alexander, architects. Cooperative planning helped to create this building.

AN ARCHITECT VIEWS THE CLIENT'S ROLE IN SCHOOL BUILDING PLANNING

by ROBERT E. ALEXANDER

Richard J. Neutra and Robert E. Alexander, Architects, Los Angeles, California

Mr. Alexander has practiced architecture alone and in partnerships since 1935. Prior to that he worked in various offices in Los Angeles and New York. He has also served as consultant on various government projects, and is presently a consultant for the Government of Guam. Mr. Alexander has a Bachelor of Architecture degree from Cornell University.

In contemporary society, the architect's client is seldom an individual person. In the case of school buildings it is sometimes difficult even to identify the real client. The theory is that the board of education, board of regents or board of trustees act as owners in trust for the people of a district which they represent. Yet, they, themselves, seldom use the buildings and seldom have a background knowledge of construction. The chief administrator, the superintendent of buildings and grounds, the faculty and even the students, all of whom use the buildings every day, must somehow be brought together with the trustees or policy group in a cooperative effort to represent the client, who is ultimately the people themselves.

Perhaps cooperative planning is taken for granted. As we all know, many an educational institution has been designed from a set of space requirements, presented by the department of buildings and grounds or some executive office to the architect, who has then produced the design without further reference, other than his own intuition or past experience, to the detailed activities or the philosophy behind the school. Very often his goal and the measure of his success is determined by winning the board of trustees through the presentation of pleasing sketches, without detailed reference to the activities within the buildings.

The architect is asked by a donor or by the board to show what the buildings will look "like." This expression gives itself away. Looking "like" something is not the same as being. The request presupposes a fraud or imitation of the real thing. This method of approach, of course, might be carried out brilliantly. An architect with great intuitive insight and broad experience might produce a superior design which satisfies not only the board of trustees and the public, but the faculty and students as well. We are convinced, however, that even in the rare instances when this method appears to produce satisfactory results, the institution would have gained precious advantages if cooperative planning had been employed.

Cooperative Planning Is a Search

Cooperative planning is an honest search for the truth in building. The process itself is even more im-

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Alexander, Robert E. "An Architect Views the Client's Role in School Building Planning." *American School & University* (1955-56). Source: Robert E. Alexander Collection, Division of Rare and Manuscript Collections, Cornell University Library.

The merchandising laboratory of the Business Education Building at Orange Coast College has a variety of display cases and windows to accommodate the class projects.

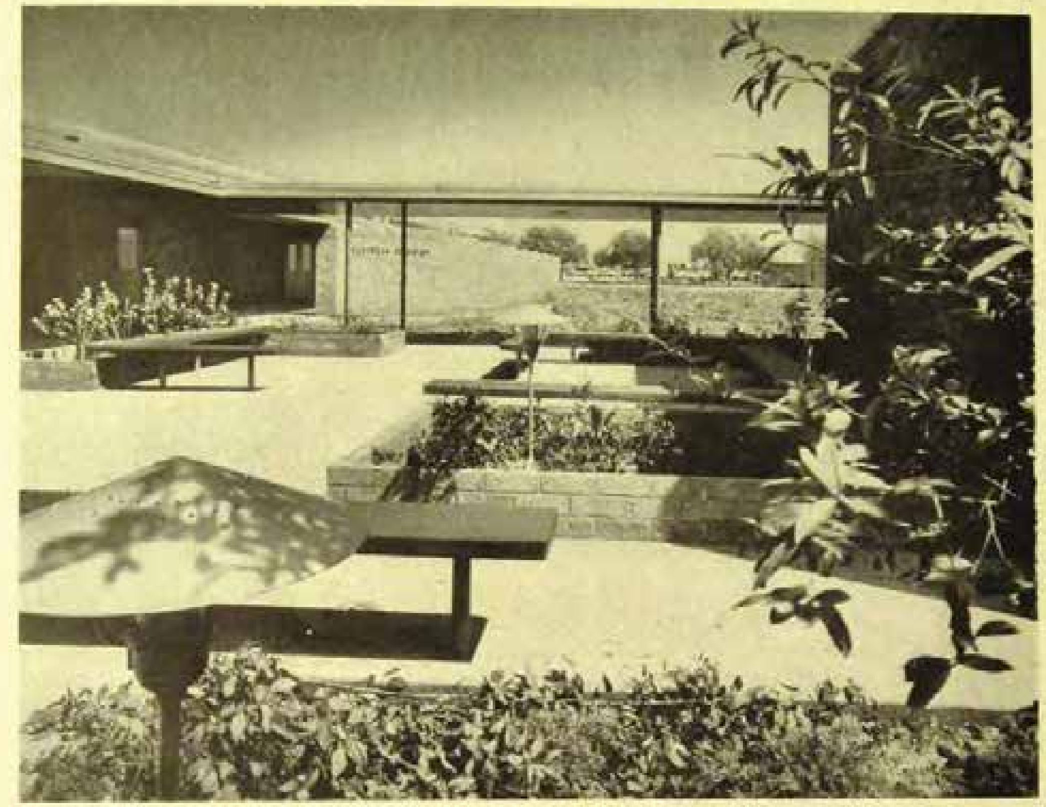
The secretarial laboratory has a switchboard and different types of office machines. A sliding partition at the front of the room separates the duplicating machines area.

portant than the building it produces. When conducted properly, it gives the many people who will occupy and use the buildings a real sense of participation, ownership and pride in the product. It fails in this, of course, if the faculty and students involved treat it merely as a necessary chore to which they are asked to devote extra hours without compensation.

When the buildings are finished, occupied and used, every instructor should feel that he at least had a voice in planning decisions. A new faculty member, coming years later, should still feel the effects of faculty solidarity and general satisfaction. He should be able to see that these are buildings in which the users themselves, that is, the real clients, had something to say which was heard and heeded.

As architects, our main professional satisfaction is derived mostly after the buildings have come to life and are found to suit their purpose better than anyone could have dreamed. Where the analysis of methods, activities and curriculum comes first and the design comes second, flowing out of them, we are convinced that we stand a fine chance of success. An investment, on the part of a faculty member, of a few hours of time in cooperative planning may easily save him and his successors countless hours and headaches in the years to come.

Assuming that cooperative planning takes place, the client's functions might be divided into two categories. One, usually handled by the policy board or by a buildings and grounds committee of the board, would include the decisions which establish aims and objectives. The second is to define the educational program and to begin the building plans. This is best handled by a building committee, composed largely of faculty members, the chief administrator and at least one member of the policy board. Invaluable guidance throughout the entire planning process is sometimes furnished by an educational consultant.



The courtyard of the Business Education Building is a pleasant outdoor area with benches placed near the planting sections.

In addition to the board members, the chief administrator, the superintendents of business and buildings and grounds and the leaders in education or deans can help to establish the client's aims and objectives. We have also found it highly desirable to include one or more students on the building committee, especially when such buildings as the student center, the auditorium, the gymnasium or any general use buildings are being considered. Buildings and grounds should also be represented on every building committee, unless there is a separate group which reviews plans.

Define Fundamental Aims

It has been found that the definition of fundamental aims of a building program is often neglected. One of the most important of these neglected items is the quantitative goal of the institution. What is the ultimate student capacity? If construction is to be accomplished in stages, what is the immediate planning goal? Either decision should be made officially and recorded as fundamental policy.

Although there is little need to involve the architect in a decision on student capacity, there is every reason for bringing him into the picture when budgets are being determined. The development of the budget should be a cooperative effort. It is quite clear that many non-architectural factors may determine a budget. The wealth of a district, the public relations policy of the board and competition for funds by other agencies must be taken into consideration. It is a frequent mistake, however, for the client to attempt to establish a building program and a fund raising plan without the full collaboration of the architect.

The most active participation of a client in the cooperative planning process comes to play in building committee meetings. Our first step, in organizing information regarding a specific building, is to distribute planning outlines to building committee members prior to the first meeting. This is a questionnaire to be filled out by individuals and designed to bring out differences of opinion before any committee discussion takes place. In addition to the questionnaire, we sometimes provide sketches of floor plans, in schematic form, of various elements of the proposed building. Although

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Draw drapes close off the doors and windows of the merchandising laboratory when necessary.

this practice might result in unfortunate preconceptions, it is pointed out strongly that these are simply test plan sketches intended merely to stimulate concrete and specific suggestions, rather than general discussion. After questionnaires are distributed, we visit classrooms in session and observe the activities as they are being carried out in existing facilities.

When the questionnaires are returned, they are digested and conflicting answers are tabulated. A diagrammatic sketch is made of the proposed building, incorporating the answers to the questionnaire in notes wherever possible. Copies of the plan are distributed to committee members at the first meeting of the building committee, at which time we explain the plan and the reasons for our decisions. Discussions and criticism ensue and a record is made of decisions by the building committee. Preliminary plans are revised and presented at a subsequent committee meeting, and the process is repeated until the committee is prepared to recommend the plan to the policy board.

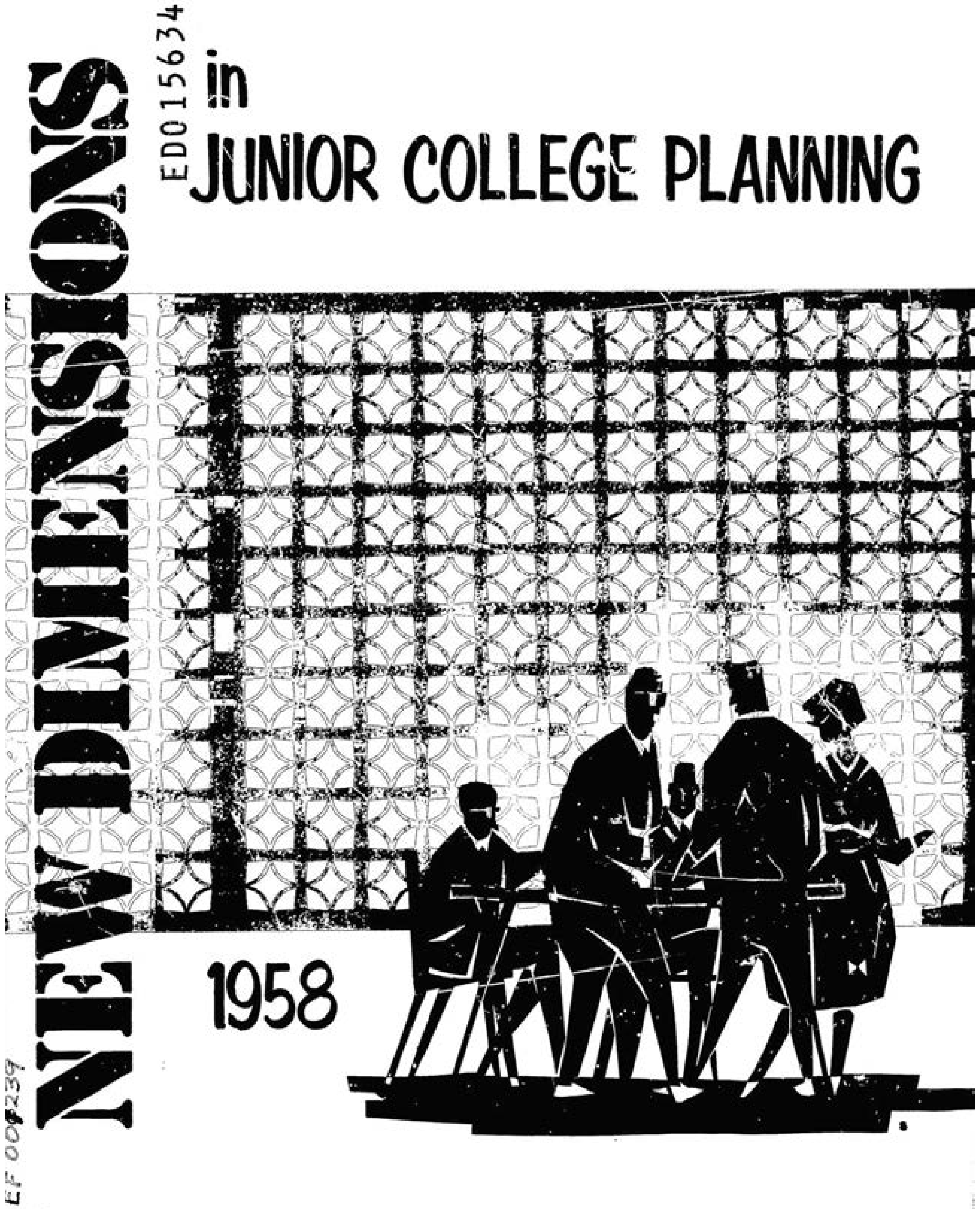
Planning Problems

There are several problems connected with the cooperative planning method which can be solved only by the client. Strong and wise administration is sometimes required to hold down the skyscraping ideas of one faculty member, while encouraging and stimulating the response of another. In this way a proper balance is maintained among departments or divisions of the same department. Another problem is presented by the faculty member whose ideas are so extraordinary that they might result in an inflexible space. Such a space could not be converted easily for other uses. Most educational buildings have a longer amortization period than the teacher.

Constant and careful cost estimating and reporting by the architect, backed up by strong control at the head of the committee, will sometimes be required to keep faculty requests in line with the budget established by the board. On the other hand, when budgets are established without reference to the real needs of the program, waste of funds often results.

Cooperative planning requires plenty of "blood and sweat," but we are convinced that it saves the tears. In spite of the work involved for both client and architect, or rather because of it, the system itself is intrinsically important in planning school buildings. If we wanted to raise peaches, we would hardly plant a prune pit. Cooperative planning is the systematic seed from which good buildings grow.

Alexander, Robert E. "An Architect Views the Client's Role in School Building Planning." *American School & University* (1955-56). Source: Robert E. Alexander Collection, Division of Rare and Manuscript Collections, Cornell University Library.



VERSATILE FACILITIES FOR TECHNOLOGY

WILLIAM F. KIMES, and
ROBERT E. ALEXANDER

The basic principles of planning used for other types of instructional areas may also be utilized for a technology building. However, it must be emphasized that the more complicated and involved a building is, the greater the need for careful educational planning. Recognizing this, it is common practice to work out an agenda for directing the educational planning for each building. Presented here are the procedures followed at Orange Coast College to solve their building problems.

The philosophy of education at Orange Coast College is based upon the premise that it is a community-centered institution. Consequently, the college offers the best of academic opportunities in areas of general education as well as vocational or trade training for students who wish to complete their education in two years. Approximately one-half of the regularly enrolled students pursue the terminal program. Several thousand adults make use of the college facilities, particularly in the fields of technology, as a means of improving their vocational skills. The stated purpose of Orange Coast College is to teach all of the people of the community all they wish to know, or are qualified to learn, in all the areas in which there are opportunities for employment or for further education in institutions of higher education.

OCCUPATIONAL SURVEY

To determine the areas of employment for which this community college should train students, a careful and intensive study was made of the vocational and professional opportunities of the district before the college commenced instruction in 1948. Two re-surveys have been made since that time. The original survey indicated sufficient job opportunities within the district in building trades, engine mechanics, metal trades (including welding), petroleum technology, and mechanical drawing to warrant providing facilities for instruction in these areas. Re-surveys showed needs in the fields of

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Alexander and Kimes. “Versatile Facilities for Technology.” In *New Dimensions in Junior College Planning* (Stanford University School Planning Lab, 1958): cover page and page 80. Source: Education Information Resources Center, http://eric.ed.gov/

radio-television technology and electronics. Orange Coast conducted the courses for the first year in temporary army buildings, giving instructors the opportunity to carefully determine the needs for the permanent structures. These instructors found that teaching a course in an inadequate area served as a strong stimulus to carefully plan the permanent structures.

As planning progressed, the architect determined that the funds available for construction were sufficient for only half of the facilities desired. Each member of the faculty committee seemed to feel that it would take at least half of the available budget for his program alone. Unavoidably, philosophies of instruction must often be influences by the amount of money available to provide housing for the several programs. At times administrative decisions were necessary to maintain realism in the face of divergent interests and objectives.

FACILITY PLANNING COMMITTEES

At Orange Coast facility planning committees have traditionally met under the leadership of the superintendent. Members of the Board of Trustees have always been invited to participate in the committee discussion. The District has been fortunate in having at least two members who have had the time and interest to serve on building committees. In addition to faculty members, a Board member, and the Assistant Superintendent in charge of Business, two students have been included on each building committee. While the students probably gained more than they gave, often the students have had real contributions to make.

Lay persons from the trade and vocational committees were not included on the building committees. The Orange Coast administrators felt that the instructor in the field, who was a member of the trade advisory committee, could adequately represent the trade in planning educational facilities.

For a facilities planning committee to be effective a plan or agenda for the meeting must be prepared by the administrative chairman. Sufficient time must be allotted for each meeting and, of no less importance, there must be sufficient time between meetings, so that the ideas of the committee may develop. At Orange Coast College the committee for the Technology Building was in session over a period of six months. The architect prepared no less than eight floor plan revisions during this period.

ADMINISTRATIVE LEADERSHIP

Administrative leadership, diplomacy and statesmanship are required to promote the best work of a faculty committee without having the individual members feel that they are being "yes men" for the superintendent. It has long been recognized that a corporate mind is superior to the sum of the several individual minds. In short, the give and take of a group of competent and interested persons brings out ideas that no individual of the group is capable of creating.

The key person is the administrator to whom falls the responsibility of holding the overly enthusiastic faculty member to the budget and at the same time drawing out the best in the quiet and retiring member of the faculty. The administrator is the only one who can tell the faculty members what he can have. This is not the function of the architect. Even where the architect has been directed to a particular committee member to work out details, it is still the responsibility for the administrator to make the final decisions.

Finally, it should be remembered that faculty members, administrators, board members, and architects come and go but the taxpayer expects the building to be there a long time - a half century or more. It takes the highest kind of educational leadership to direct the planning of a functional, flexible, adequate building that is within the financial ability of the community. The buildings must implement the curriculums, not determine them. The faculty of Orange Coast feels that their Technology Building meets these principles to a reasonable degree.

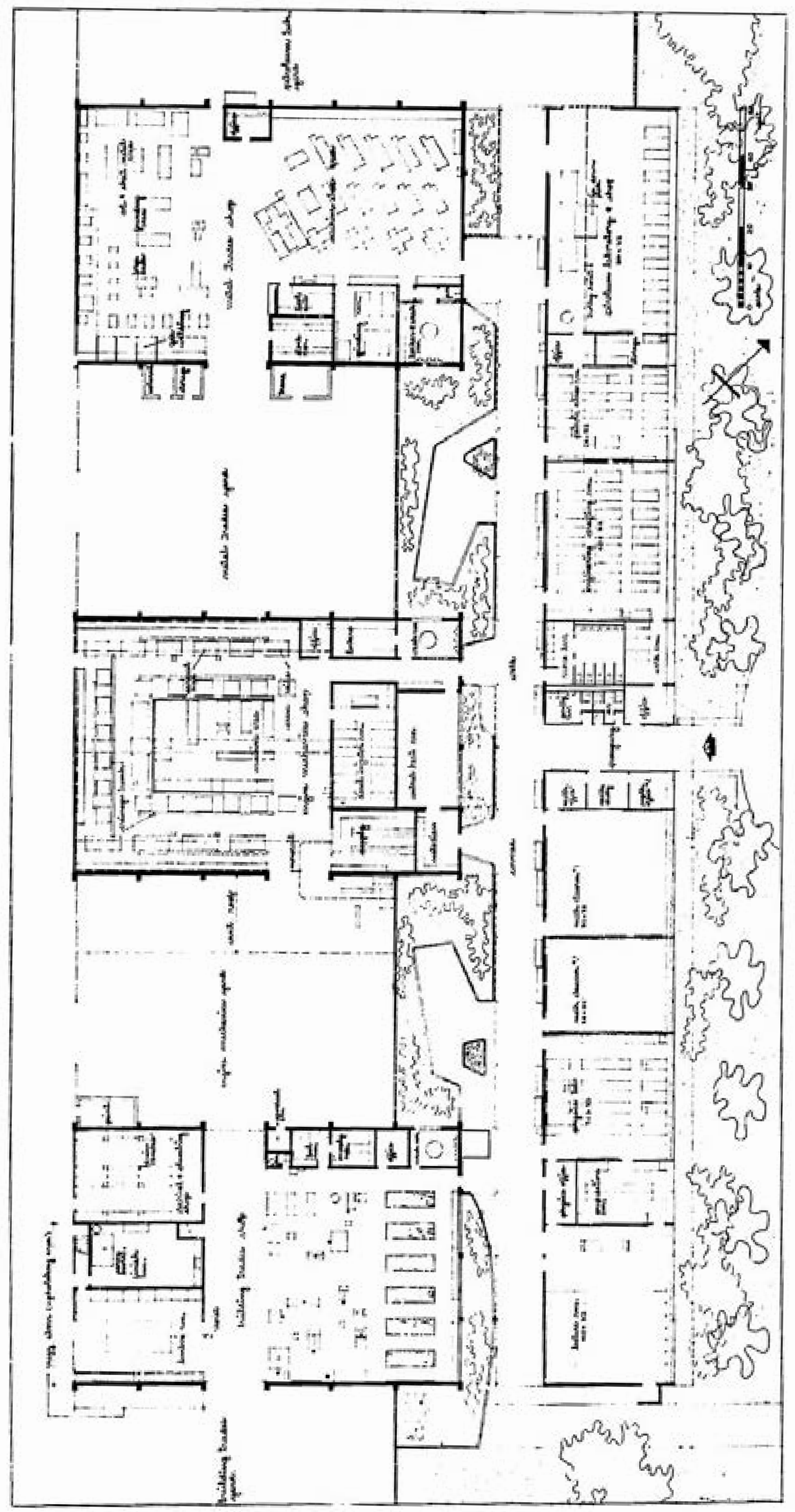
CURRICULUM DICTATES FACILITY PLANNING

The field of technology covers a number of separate disciplines or trades. Those included in the curriculum of a particular junior college will depend upon the nature of the community in which the college is located--what a community survey reveals are the interests and needs of the area.

Orange Coast College decided to make its wood shop a building trades center, not a cabinet mill. If the college had been located in Grand Rapids, Michigan, the facility probably could have been best oriented toward the manufacture of furniture. Even though the college was located in a semi-rural area when the college was begun in 1947, it was quite obvious there would be great opportunities in the building trades. This stimulated plans to provide something that was guite different from the normal secondary school vocational program, in which basic carpentry, plumbing, and electric wiring is taught.

At Orange Coast College the classes were extended into the out-of-doors. This necessitated the provision of areas in which several

Alexander and Kimes. “Versatile Facilities for Technology.” In *New Dimensions in Junior College Planning* (Stanford University School Planning Lab, 1958): pages 81-82.
Source: Education Information Resources Center, http://eric.ed.gov/



Floor plan of the multi-unit Technology Building, Orange Coast College, Costa Mesa, California

houses could be built. The first classes poured the foundations and succeeding classes layed the floor joists, framed and finished the homes. The students actually frame and tear down a half dozen houses during each semester. They also do a certain amount of plumbing and wiring. All of this requires a rather large portion of outdoor space. The nature of the activities further conditions the locations on the campus where these activities may be conducted. The buzz saws, hammers and other tools create a considerable amount of noise. The area must have easy access for trucking large pieces of machinery and bulky materials.

The woodshop portion of the building trades structure is one of the very few "clean" facilities existing. This was made possible by including a four foot crawl space below the wooden floor and using extensive blower equipment. Every machine that makes wood-chips, shavings, or sawdust is directly connected to a blower system which blows the waste out of the building. In addition, sawdust traps are located in the floor. The sawdust is carried from these receptacles into a closet located near the outside wall which facilitates disposal.

The main accent in the engine mechanics area is on diesel engines, farm machinery, and marine engines. The latter is important because the college is very close to the largest small boat harbor in California. The shop in which marine engine technology courses are taught is equipped with a universal traveling crane capable of lifting three-ton marine engines. This building includes an exhaust system which makes possible operating an engine inside and exhausting outside the building. A water pipe is located next to the exhaust connections for water cooling these motors.

The petroleum technology program at Orange Coast College concentrates on field work, exploration, and geology, preparing qualified persons for the oilfields in nearby Huntington Beach. By agreement between Orange Coast and Los Angeles Harbor College the latter offers a petroleum technology program oriented toward the type of laboratory work conducted in refineries.

In developing the facilities for the petroleum technology program the architects and the faculty sought examples of existing facilities which might be visited and studied. However, since there were no existing educational institutions which had a program of the size and type envisioned by the college authorities, the college relied upon the petroleum industry for ideas and information. A model oil well, another example of the extension of the teaching area into the out-of-doors, pumps oil from a storage tank to the well and then back to the tank. Completely equipped as a functional field unit, this facility provides a realistic field experience for students.

The type of facilities required to conduct a petroleum technology

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Alexander and Kimes. “Versatile Facilities for Technology.” In *New Dimensions in Junior College Planning* (Stanford University School Planning Lab, 1958): pages 83-84.
Source: Education Information Resources Center, http://eric.ed.gov/

pair of stations providing sufficient depth to fill or wash flasks or beakers. Extending the full depth of the table, it serves four students, each of whom has plenty of water within reach. Two students share a faucet and each has a separate aspiration, gas, and electric outlet. Compressed air and steam lines were omitted. When steam is available on campus generally, it is included at little cost. Warm air is desirable for glass drying, but care must be taken to keep it free from oil.

A sink at the end of the table, with a high faucet is used for filling unusually long tubes, and one central sink in the room contains a distilled water outlet and an eye washer. Additional distilled water stations would be convenient, but the block tin pipe required is expensive. Two table ends contain first aid fire blankets. The shower required by some codes was considered unnecessary.

A table height of three feet is standard and satisfactory. Space between tables varies from a crowded four feet to over five feet. Five feet was agreed upon but the instructor wishes it had been seven. Station widths vary from three to six feet; four and a half feet plus the sink width was the linear dimension chosen. Except in the organic lab, an improvement can be made by reducing the utility rack height in the center of the table to about nine inches. This permits a better view of demonstrations and better supervision.

These ideas may be incorporated into various room arrangements. If the class size can be kept small, an ideal plan might distribute clusters of four stations each around the perimeter of the room, leaving the center flexible and free for report writing and lectures. The population pressure in community colleges, however, usually calls for maximum class sizes, often resulting in more concentrated grouping. At Orange Coast College an eight-station table was placed in the center, and two twelve station tables at the outside, leaving space for a portable demonstration table in an ideal viewing location.

Every college visited had at least one hood with a sliding glass door. No instructors recalled ever using the door so it was decided to omit it and extend the hood the full width of the room, enabling the entire class to use it at one time. All air exhaust is brought through the hood, and no air is returned. A three minute air change provides ample ventilation. A greater flow of air produces an undesirable draft. Special hoods for radio-active or other hazardous work will probably see more use even in junior colleges in the future. Since they may be provided as portable equipment, suitable exhaust connections should be installed.

A mistake observed frequently was the instability of balance tables. Many are attached to the building, making them subject to vibration.

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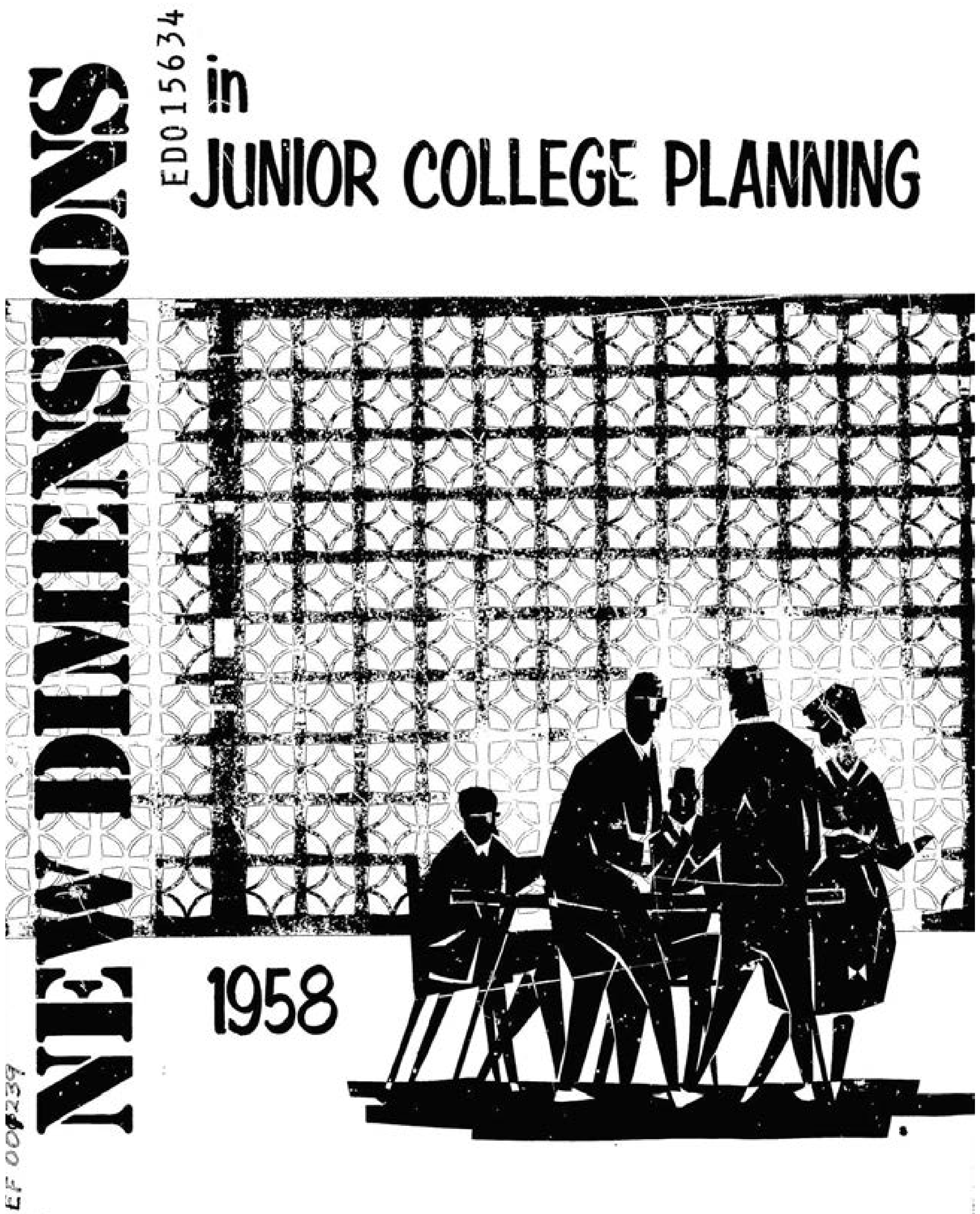
Alexander and Kimes. "Versatile Facilities for Technology." In *New Dimensions in Junior College Planning* (Stanford University School Planning Lab, 1958): pages 85.
Source: Education Information Resources Center, http://eric.ed.gov/



SCIENCE: FACILITY DESIGN

ROBERT E. ALEXANDER

Every Community College facility should be planned for the specific needs and program of the particular institution. The example presented here is the Science Building of Orange Coast College, which was planned with few preconceived notions. It is not intended to serve as a prototype to be duplicated without careful analysis and comparison with other possibilities.

Policy decisions were made by the Building Committee, headed by the President, and including the Science faculty and the Superintendent of buildings and grounds. Decisions were based on alternatives suggested by the architects after reviewing written program requirements and after visits to seven community colleges, three universities, and the office of the State Architect. The method of study and the planning procedures may be repeated with success.

PHYSICAL SCIENCE FACILITIES

The principal adverse criticisms encountered in our survey of science facilities dealt with laboratory furniture. The central trough so common in chemistry tables is difficult to keep clean and water splashes out of it a distance of several feet. To prevent splashing, some faucets had been fitted with rubber tubes, making them even more difficult to use. The typical deep end sink in such installations provided the only suitable water supply for most purposes. It was always crowded, resulting in loss of time and glass breakage. Individual "cup sinks" were universally denounced as an abomination, even worse than the trough.

The design developed to overcome these objections has proved highly successful, although the instructor is not convinced it is "necessary." An eighteen inch deep tub is placed between each

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Alexander, Robert E. "Science: Facility Design." In *New Dimensions in Junior College Planning* (Stanford University School Planning Lab, 1958): cover page and page 90.
Source: Education Information Resources Center, http://eric.ed.gov/

pair of stations providing sufficient depth to fill or wash flasks or beakers. Extending the full depth of the table, it serves four students, each of whom has plenty of water within reach. Two students share a faucet and each has a separate aspiration, gas, and electric outlet. Compressed air and steam lines were omitted. When steam is available on campus generally, it is included at little cost. Warm air is desirable for glass drying, but care must be taken to keep it free from oil.

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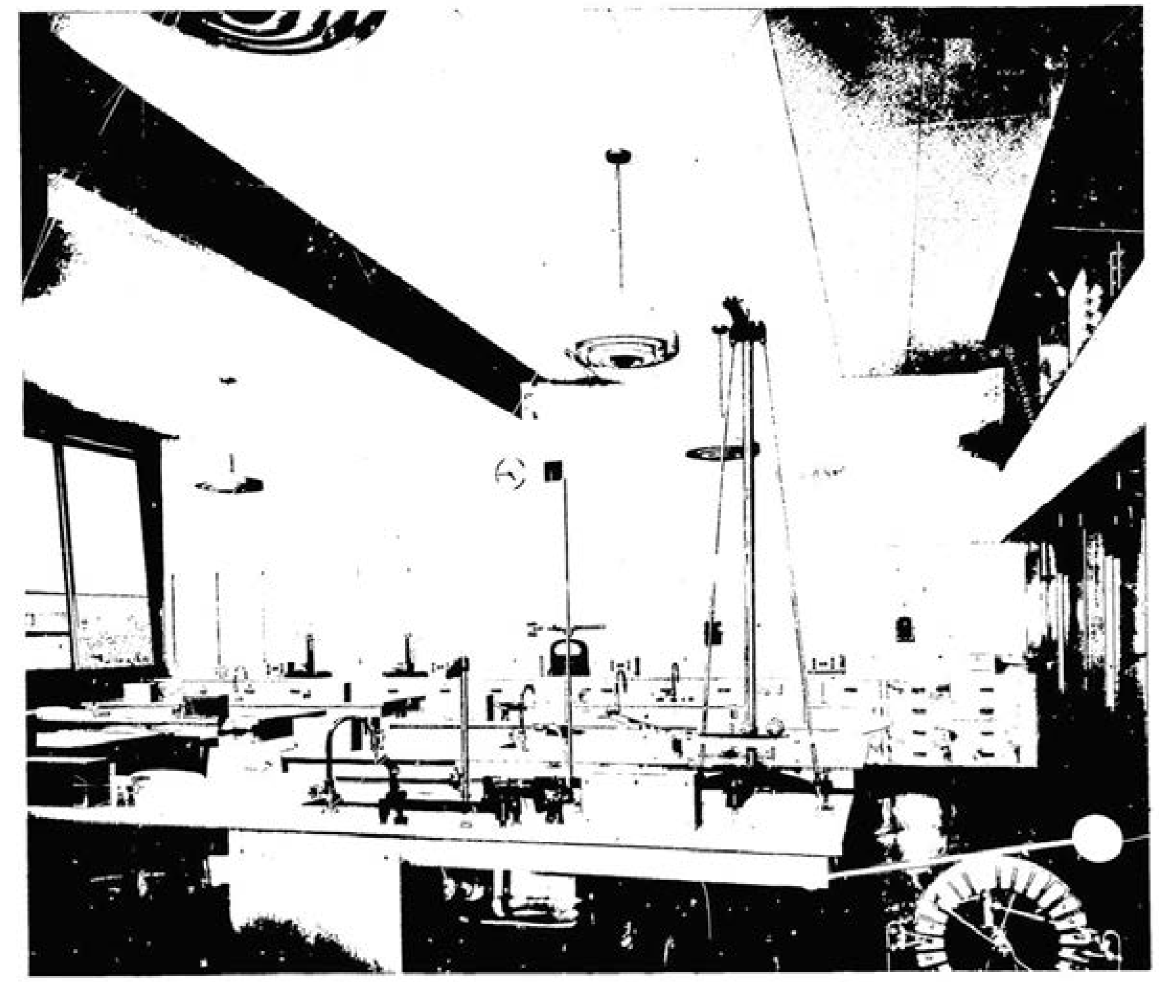

Interior view of the physics laboratory, Science Building, Orange Coast College, Costa Mesa, California

Heavy concrete platforms resting on a slab insulated from the building and resting on separate foundations should be used. Table height is frequently too low or too high. Two feet eight inches are best for working from a stool, from which most of this painstaking work should be done. Material selection constitutes a real problem. Steel

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Alexander, Robert E. "Science: Facility Design." In *New Dimensions in Junior College Planning* (Stanford University School Planning Lab, 1958): pages 91-92.
Source: Education Information Resources Center, http://eric.ed.gov/

screw-heads, lighting fixtures, register, etc. showed signs of rust even in new installations. Stainless steel, coated with pitch or asbestos-cement, may be used for ducts. Asbestos-cement was selected for the hoods and glass blowing tables. Stone table-tops and sinks are expensive but stand up well. A thirty-year old installation the committee checked looked beautiful. It was waxed once a week. Orange Coast College used a more economical patented material in which the dark colors are the least subject to staining. It may be repaired or renovated easily. No flooring is perfect, but vinyl tile may prove best, and can be replaced. Silver nitrate will mark almost any material otherwise satisfactory.

The stock room policy is an important determining factor in planning. The pre-arranged tote-tray containing materials required for a specific experiment will probably gain favor as student volume pressure and intensity of instruction develop. Where only two labs are served, the pigeon-hole wall, with tote-trays sliding through, seems a good idea, but it requires wall space even there. The central store room is needed where several labs are to be served. Seldom is sufficient space allowed for storage and preparation within the area, or for students outside. Decentralized stores are wasteful of material, space, and manpower.

The faculty requested direct access from the preparation-store room to the service entrance, three laboratories, and a lecture-demonstration room. "Seeing-eye" control of two labs from the office and of the balance room from two labs was requested. They also wanted the office to be accessible from two labs and the corridor, and two labs had to have access to a small instrument room. This series of requirements resulted in a cluster plan which provides maximum compactness, but limited flexibility for expansion.

The survey of physics facilities revealed several examples in which maximum flexibility was the objective. Service centers containing all utilities were distributed around the room, permitting a variety of loose table arrangements. Although it is used in such advanced laboratories as that at the U. S. Naval Academy, it should be clearly understood that flexibility is incompatible with sturdy stability required for many experiments. Sockets frequently provided in table tops for inserting rods were also criticised as impractical. Heavy duty clamps on firm, fixed bases are preferred.

At Orange Coast College, eight two-station tables built of two-inch thick maple stock, bolted to the floor were provided. Each bench contains a sink, two gas cocks, and two variable voltage stations. A central panel provides A-C or D-C current in a variety of voltages to any station. It eliminates the mess of wet-cell batteries, but does not provide the precision required for advanced work. Four concrete piers are distributed at table ends for optical work. A room which

can be completely darkened is necessary for demonstrations in optics. Even a "blackout" room without windows failed in one installation observed, because the exhaust ventilator admitted a faint fractional foot-candle. Stability is also provided by a wall of heavy T and G paneling. A concrete wall contains vertical slots and sliding bolts for firm attachment of instruments. A storage-preparation room serves both laboratory and demonstration-lecture room, used by physics and life-science classes.

LIFE SCIENCE FACILITIES

The survey of biology labs indicated that few tables are designed for microscope work. Tables thirty-seven inches high forced students to stand during the entire period even where adjustable stools were provided. The standard thirty inch height denies comfortable microscope work sitting or standing. Tables twenty-seven inches high were used with success.

Microscope storage also presented difficulties. When they are stored at the table, to reduce breakage, the student has no knee room and they may be easily lost. They may be stored in a cabinet behind glass doors, or bolted to a spring drawer so they pop out like a "disappearing typewriter."

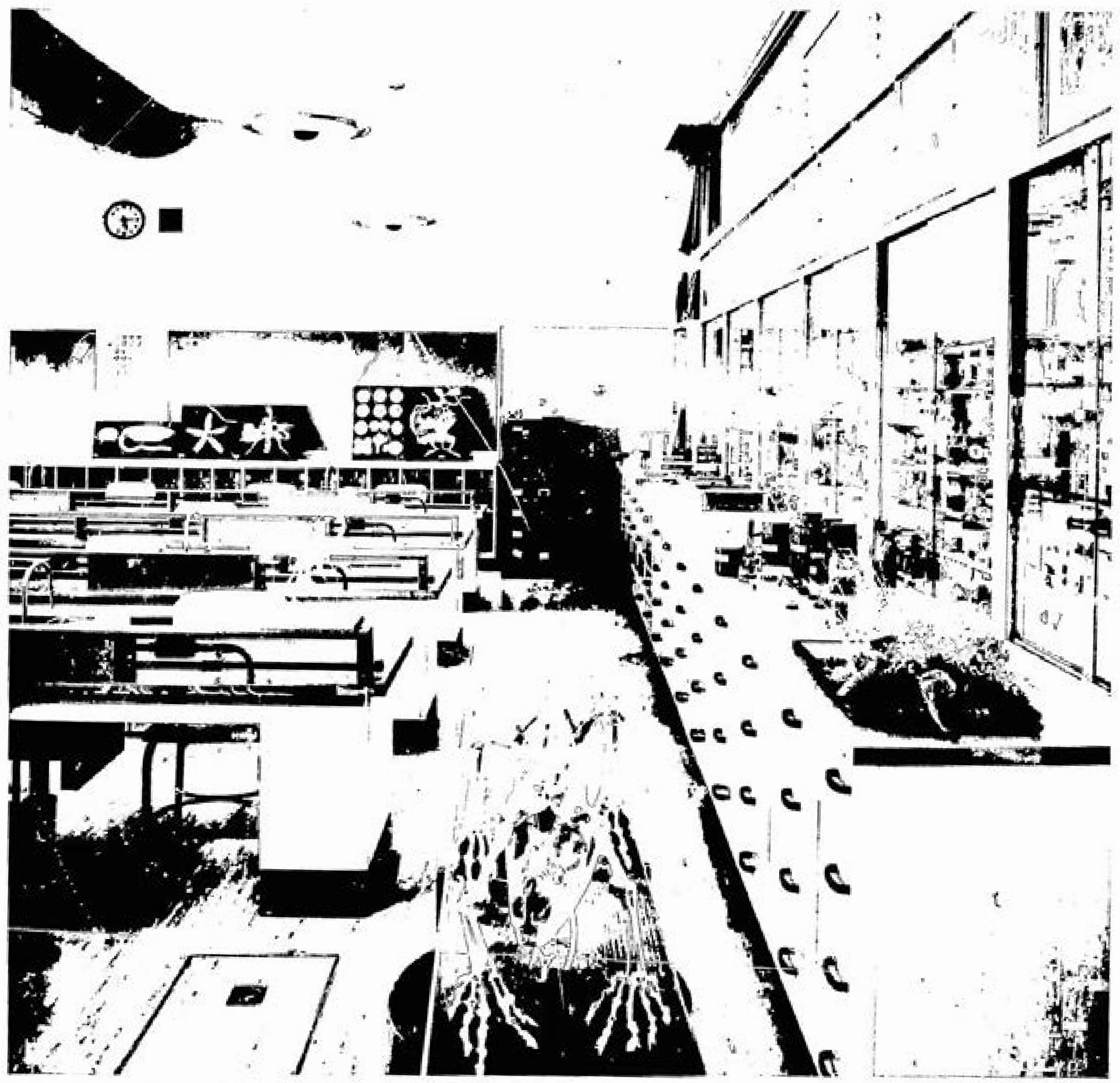
Four six-station tables are provided in each room. This serves well for lecture and demonstration as well as laboratory work. A sink separates each pair of students and each one has an electric outlet, a gas connection, and a twelve-inch wide drawer. It was found that a dark-colored fiberglass is a satisfactory material for sinks and tops. Methaline blue and other stains are hard even on stainless steel. A hood is provided for lamp-blacking paper. Cats are stored in drums vented to the outside by faculty preference, but a good arrangement observed stored them in plastic sacks on sliding shelves.

Where the budget permits, a museum is an important teaching tool and a community asset. An orderly means of storing, exhibiting, and transporting small material is by mounting it in the bottoms of drawers of standard size. The top row of drawers can then be made visible through a glass counter-top, and drawers may be inter-changed easily and frequently. They may be removed readily for classroom use. Thus a storage room for demonstration material may serve also as a stimulating local natural science museum.

An animal room and a greenhouse separated by a work room are provided at Orange Coast College opposite life science rooms across the corridor. A glass wall on the corridor side makes the aquarium, small animals, and plants visible as a display. Shades permit screening at times when desired. The opposite side borders a garden for

Alexander, Robert E. "Science: Facility Design." In *New Dimensions in Junior College Planning* (Stanford University School Planning Lab, 1958): pages 93-94.
Source: Education Information Resources Center, http://eric.ed.gov/

raising live plant material. The entire landscape plan was designed to provide specimens related to the study of botany. A reflecting pool, sectioned for various uses, provides a place for growing water plants and animals. A separate source must be provided for heating and ventilating spaces where live material is stored. Otherwise sudden temperature changes over weekends or even at night may destroy an entire collection.

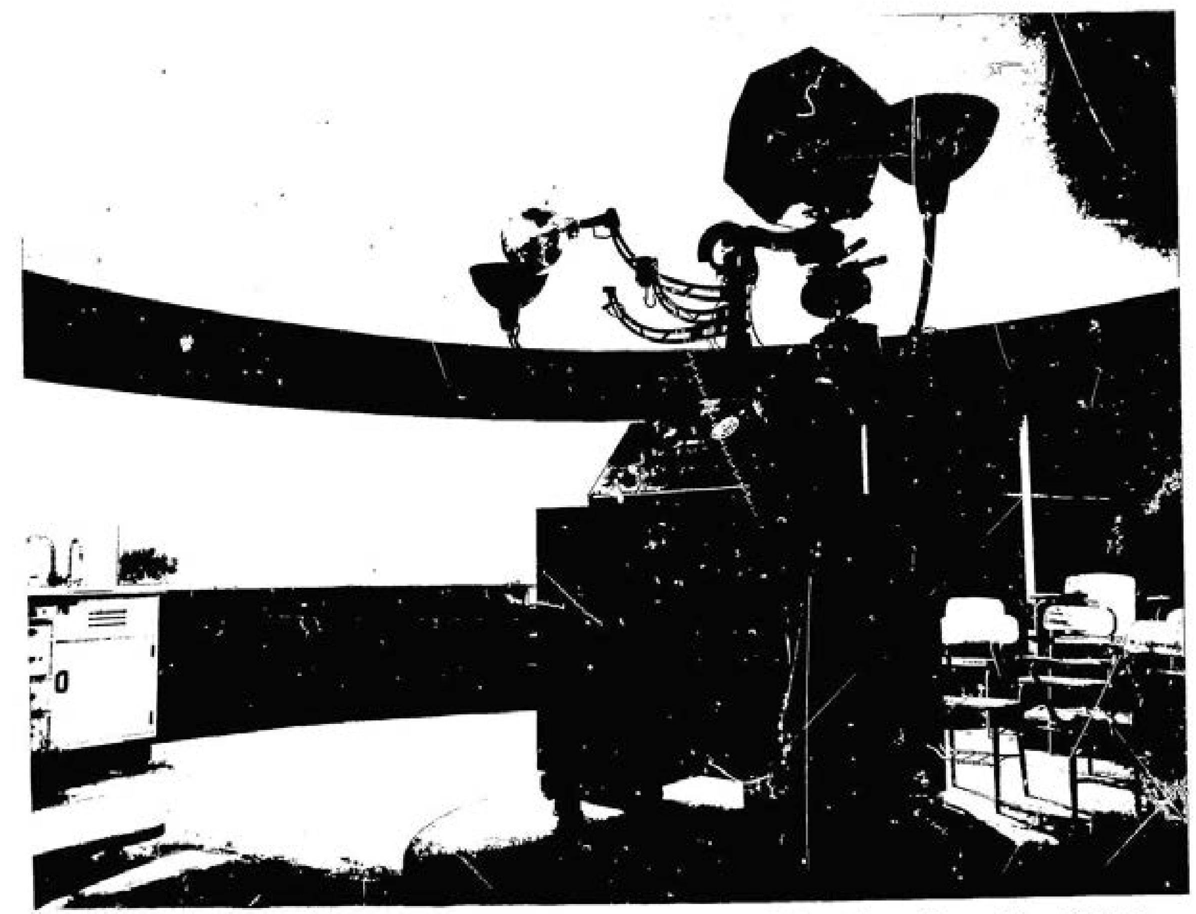


Interior view of the zoology-life science laboratory, Science Building, Orange Coast College, Costa Mesa, California

THE PLANETARIUM

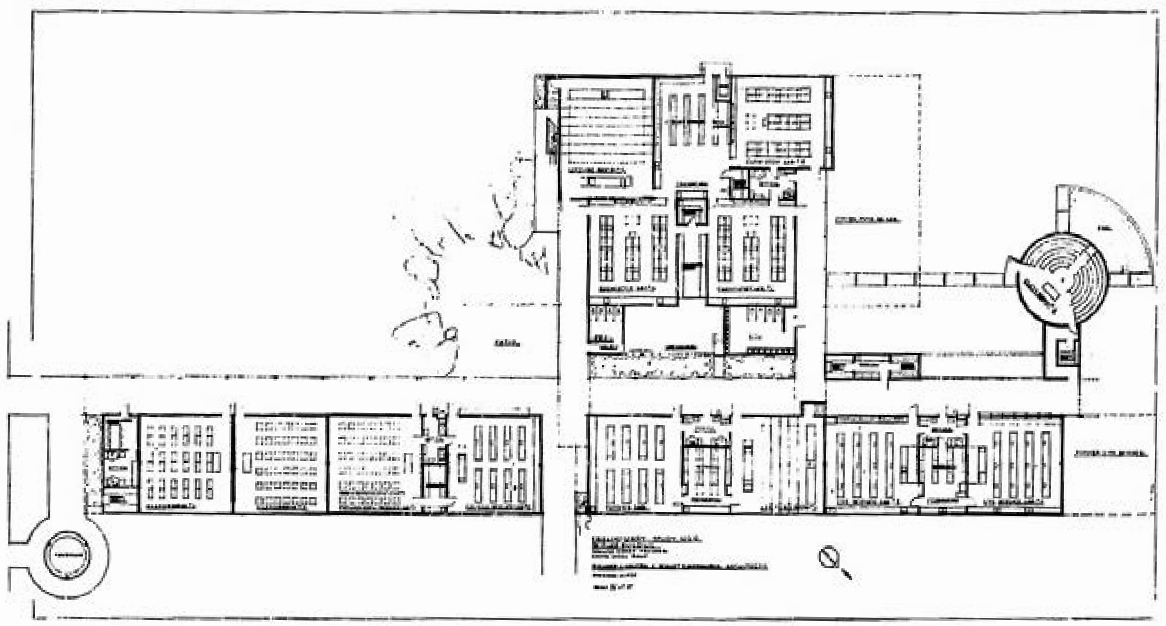
An interesting teaching facility at Orange Coast College is the Planetarium. When built, it was unique in junior college buildings. A projector developed during the war for teaching navigation makes it economically feasable. The proximity of Orange Coast College to Newport Harbor, a small boat center, made it seem unusually appropriate. It was designed fundamentally as a classroom, however, as a day-time teaching aid and as a unique community asset. This combination is not recommended.

Due to the economical design of the pin-hole type projector, the dome was limited to a diameter of twenty-four feet. The floor is extended past the dome to accommodate a full class in tablet arm chairs for general science demonstrations. A chalkboard, cabinet, and sink



Interior view of the planetarium showing chalk board and instruction stand for projector, Orange Coast College, Costa Mesa, California

Alexander, Robert E. "Science: Facility Design." In *New Dimensions in Junior College Planning* (Stanford University School Planning Lab, 1958): pages 95-96.
Source: Education Information Resources Center, http://eric.ed.gov/



Floor plan for Science Building, Orange Coast College, Costa Mesa, California

add to its general utility, providing an interesting experiment in classroom form. Storage is provided for the projector and for folding chairs when it is used as a classroom. The acoustical problems in a circular classroom with a full domed ceiling are intense. A telescope mounted on a nearby roof is used in combination with the planetarium for the study of astronomy.

The planetarium dome, illuminated and reflected in the pool, forms a focal point at the entrance to the Campus. The chemistry laboratory cluster forms a nearby appendage to the long strip of life-science, physics and general science labs and the mathematics classrooms facing North-East. Following the policy of the Campus, a small patio provides a place for students to sit outside between classes. A simplified astrolabe, resting on a base sculptured by Peterpaul Ott, graces the entrance to the building, symbolizing science.

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Alexander, Robert E. “Science: Facility Design.” In *New Dimensions in Junior College Planning* (Stanford University School Planning Lab, 1958): page 97.
Source: Education Information Resources Center, http://eric.ed.gov/

The armillary sphere of the Orange Coast College Science Building is an abstract science symbol executed by Peterpaul Ott, sculptor.

Designing for Science at Orange Coast College

by ROBERT E. ALEXANDER

FAIA, Richard J. Neutra and Robert E. Alexander, Architects, Los Angeles, California

Mr. Alexander is a graduate of Cornell University's College of Architecture. In New York City he worked on the 80 story Metropolitan Life Insurance Office building and was in charge of floor plan production of Metropolitan's Parkchester housing project. After coming to California he practiced as a partner in two successive firms before establishing his own practice in 1946. Mr. Alexander's firm has produced a variety of commercial and institutional work. His designs have won many prizes and have been published in the USA and abroad.

IGNORANCE can be an asset in planning a new building, if the architect will apply keen observation, hard work and the fundamentals of architectural organization and design. As is our custom, we approached the design of the Orange Coast College, Costa Mesa, California, Science Building as if we had never before planned such a building or even taken courses in chemistry, physics or biology.

This attitude of naiveté is essential to the development of an original design specifically suited to the needs of a particular institution. It prevents the repetition of inadequate facilities and planning mistakes which are so common that they are usually taken for granted.

After reviewing a tentative program to guide our observations, we inspected science facilities in seven similar colleges and in three universities. On these visits we were accompanied by some members of the faculty building committee. Host faculty members were generous with their time and effort and fascinated with the chance to show us good and bad points encountered in operating their facilities.

Most installations were new, but one was twenty-seven years old, providing a good test in time not found in recent examples. We made copious notes, measurements and sketches, and compiled our observations in book form for our faculty committee, headed by Dr. Basil Peterson, president of the college.

The office of the California State Architect was unusually helpful in sharing its treasure of experience. Staff members readily showed us many plans and specifications, and discussed our observations in the light of their own diverse experience.

We Uncover Problems

We found that the most common problem concerned the chemistry tables. The traditional narrow central trough, draining to the end, was severely criti-

Alexander, Robert E. "Designing for Science at Orange Coast College." *American School & University* (1955-56): page 1 of 8. Source: Robert E. Alexander Collection, Division of Rare and Manuscript Collections, Cornell University Library.

cized. Water splashes out to a distance of several feet. Short hose lengths, added to faucets to avoid splashing, are suitable only for filling test tubes, if suitable at all. Anyone who wants more than a thimbleful goes to the deep sink at the end of the table, where he fights his way through a mob doing the same thing.

This "water hole" design was not a success even where a deep sink was provided at each end of an eight station table. Paper towels, match sticks and other flotsam and jetsam usually clogged the trough which was found almost impossible to keep clean.

The use of so-called "cup sinks" would not deserve the dignity of mention if they had not been observed in recent installations. Apparently few other devices will turn a chemistry instructor into a wild man. They were universally denounced as monstrous, even for eye-dropper work, in any section of science.

The solution found most satisfactory is a standard eighteen-inch deep sink, extended the full width of the table and serving four students. Refuse jars may be placed below. This arrangement gives every student immediate access to water and enough depth to fill a flask or wash a beaker. One faucet serves two students, and each student has a separate aspirator, gas and electric connection.

The circular general science classroom has a planetarium projector.

Each table has a deep sink and high faucet at one end for filling king-sized tubes and for other general use. An extra end sink, centrally located, contains a distilled water supply and an eye-washing device for accidents.

External form of the circular general science room is a focal point of interest as seen from the main entrance road. The room is used for demonstration and lecture purposes and is an interesting experiment in circular classroom design.

Life science laboratory was designed after study and examination of such accommodations in other colleges and universities. Special attention was given to table heights for comfortable work with microscopes.

have ample suction to lift heavy gasses to the roof. Asbestos cement appeared to be the most serviceable, inert material for hood construction. This material was also u..ed for the glass-blowing tables. Two sinks and 32 gas cocks were provided for each hood.

On Sunlight and Balance

Two pet peeves were discovered among chemists. Sunlight is the chemist's worst enemy. Screen out even the smallest beam! And make the balance tables rigid. A student may wait five minutes for the balance needle to come to rest, only to have a neighbor touch his table, forcing him to tear his hair and start over again. Yet we found wooden shelves hung on walls subject to every vibration of the building and light-weight, free-standing, wooden tables with legs begging to be kicked!

We cast heavy concrete benches, separated from building walls on small slabs insulated from the building slab, and resting on separate foundations. The benches are 2 feet 8 inches high and a student can take a reading without developing curvature of the spine.

Since the ultimate program for the Orange Coast College Science Building contemplates three chemistry

A small greenhouse and animal room were provided across the corridor from the life science laboratories. A common workroom separates the two areas and leads into a small garden where plant material is raised for special experiments.

Alexander, Robert E. "Designing for Science at Orange Coast College." *American School & University* (1955-56): page 2-3 of 8. Source: Robert E. Alexander Collection, Division of Rare and Manuscript Collections, Cornell University Library.

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A small greenhouse and animal room were provided across the corridor from the life science laboratories. A common workroom separates the two areas and leads into a small garden where plant material is raised for special experiments.

In the biology laboratory the microscope storage cabinet is at the right and the smoke hood can be seen at the right rear.

Physics laboratory has a wood instrument mounting wall, at right. Foreground table holds variable voltage connection boxes.

Alexander, Robert E. "Designing for Science at Orange Coast College." *American School & University* (1955-56): page 4-5 of 8. Source: Robert E. Alexander Collection, Cornell University Library

Materials testing counter lines wall of the general science laboratory. The room contains 8 two-station tables equipped with water, electricity, gas and air. Demonstration table occupies the front.

labs, direct service from the storage and preparation room was requested. The faculty also requested visual control of laboratories from the office, access to the office from a corridor, access and visual control from two labs to the balance room, and access from two labs to a small instrument room. The lecture room was also to be served by the storage-preparation room, and the storage room was to be accessible to a service drive. This set of requirements could only be met by a "cluster" arrangement, as illustrated.

Master Plan Is Followed

Planning policy of the remainder of the building follows concepts determined in 1948 for the entire campus. Large windows face northeast and clerestory windows, on the southwest above the open corridor, are shielded by horizontal louvers. Three classrooms are used for general purposes including mathematics and surveying. One will be converted in the future to a general science lab. One room contains tablet arm chairs and another has small tables suitable for cartography. A math calculating room, office and surveying instrument storage room complete this group.

A general science room contains 8 two-station tables equipped with water, electricity, gas and air. A demonstration table occupies the front, and the rear wall contains metallurgical equipment for a materials testing course. Galvanized iron is used to take abuse and heat on the bench top. An office and storage room will ultimately serve two general science laboratories.

The Physics Lab

A variety of physics laboratory arrangements was observed. Maximum flexibility is often requested in such spaces. In most installations a common corollary of flexibility was observed. It is almost impossible to get the stability or firm, steady support required by many experiments. The utility islands should be supplemented by more than simple tables. Another failure was also noted in the commonly used sockets built into tables for inserting vertical rods. Sturdy clamps on firm, steady bases were recommended.

A physics lab, built on the Orange Coast Campus in 1949, had proven successful, and its best features were duplicated. Eight two-station benches with 2-inch thick maple tops were bolted to the floor. The ends of four benches contain solid concrete piers for optical stability. Each bench contains a sink, two gas cocks, and two variable voltage stations. A variable voltage panel previously found satisfactory for use in this college was used again, although nothing but an elaborate wet-cell battery bank is considered adequate for D-C work in many institutions.

A heavy side wall is sheathed in tongue and groove wood paneling for attaching instruments at will, and the rear wall contains bolts in slots for firm attachment. An office and a preparation-storage room serve both the lab and a demonstration lecture room. The latter is also used by life science classes.

Accommodations for the "life sciences" also varied widely in the colleges examined. A common problem encountered was the table height for microscope work. Many tables were as high as 37 inches. Even with adjustable stools, most students were standing for an entire lab period. The usual 30-inch table height will not permit comfortable microscope work either sitting or standing. We settled on a 27-inch height as maximum. Careful detailing should avoid aprons or other obstructions to knee room.

Special Storage Spaces

We found that storage of microscopes was handled in different ways. When stored in the table, there was the problem of pilfering. Frequent damage in handling was reported. For the Orange Coast Science Building we used a central storage cabinet with glass doors so that the microscopes are visible at all times, and there is extra knee room. One good solution, which we used in another case, houses the microscope in a drawer similar to a "disappearing" typewriter drawer. When the drawer is pulled open, the scope springs up to proper height at the side of the student. It is bolted to the frame.

In some situations drawers were only large enough to contain an eyedropper, slides, a pair of scissors, a probe, a 4H pencil, and a razor blade or dissecting kit. Some instructors prefer this, but others insist on sufficient size to include notes, paper and course outline material. We decided on the latter, calling for a 12-inch outside width. Four 6-station tables are provided in

The firm of Richard J. Neutra and Robert E. Alexander, Architects, inspected science facilities in seven colleges and three universities as preparation for designing the new Science Building for Orange Coast College, Costa Mesa, California.

Photos by Julius Shulman

Alexander, Robert E. "Designing for Science at Orange Coast College." *American School & University* (1955-56): page 6-7 of 8. Source: Robert E. Alexander Collection, Division of Rare and Manuscript Collections, Cornell University Library.

each room, rather than individual tables. A double electric outlet and gas connection are available for each station, and a sink is located between each two stations in a 5-inch high rack at the rear of the 26-inch deep table. The arrangement is ideal for combining lecture, demonstration and lab work.

A common problem in the physiology laboratory is the staining of table tops and sinks. Even stainless steel, excellent otherwise, looks messy in time. We used a dark fiberglas sink successfully, and would have used plastic table tops except for cost. Hardwood tops, varnished with a special plastic lacquer, seem to hold up well for a reasonable time.

A small greenhouse and animal room have been provided across the corridor from the life science laboratories. They are separated by a common workroom, which opens onto a small garden for raising plant material. The corridor wall of these rooms is glass, providing an interesting exhibit of plant material, squirrel cages and aquariums.

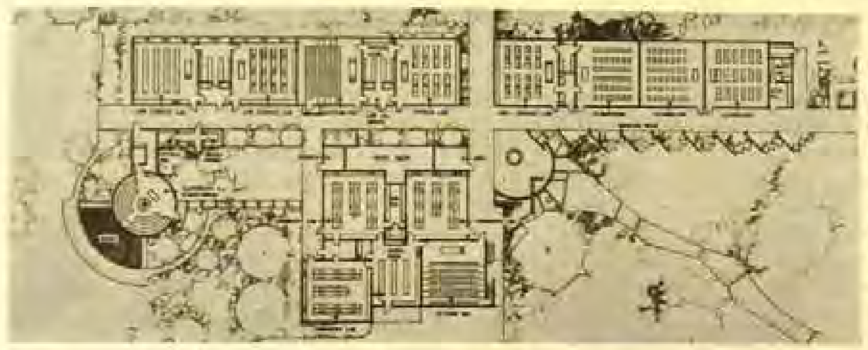
Additional exhibits line the corridor walls of the life science laboratories, and an exhibit of fossils and rocks is housed in the entrance to the Planetarium. Separate humidity and temperature control is provided for the animal room and greenhouse so that live material will not suffer when classrooms are not in use.

The College Planetarium

A feature of the Orange Coast building is the Planetarium. Based on the use of an inexpensive pinhole projector type of planetarium, the dome could not exceed a 24-foot diameter. To accommodate a full class at tablet arm chairs, the room was extended below the dome. The room is used for demonstration and lecture purposes, providing an interesting experiment in circular classroom design.

The focal point of the dome is necessarily very close to the ear of a person standing at the center of the room. Absorption material compatible with projection will only slightly reduce the effect of sound focus at this point. The effect on the audience, however, is quite satisfactory due to high absorption at the walls. The instructors, fully aware of the problem, have accepted the echo when lecturing for a "show." For other purposes they stand at the chalkboard or demonstration table, where the effect is not noticed.

The room forces a psychologically satisfying grouping conducive to seminar discussion. "Blackout" conditions, necessary for projection, are useful for optical demonstration. The external form is used as a focal point of interest as seen from the main entrance road and reflected in a pool used for raising microscopic "live stock."



Plan of the Orange Coast College Science Building. Planetarium and reflecting pool are at lower left. Wing at upper left houses life sciences and physics. Wing at right has three classrooms and the general science laboratory. Central wing has three chemistry laboratories, storage room and a lecture room.

Other Features of the Building

The building, as a whole, is enhanced by a patio with benches at the intersection of main walks and by a sculptural feature at the entrance. This feature consists of a simplified armillary sphere, identifying the building by symbolizing science. The sculptured base, bench and superstructure were developed by Peterpaul Ott, a sculptor on the faculty. The landscape design contains plant material requested by the botany instructor for demonstration and class material.

Those Who Participated

Architects of the building were Richard J. Neutra and Robert E. Alexander, with Dion Neutra, Robert R. Pierce and C. Howard Miller, associates. Structural engineers were Parker, Zehnder and Associates; mechanical engineer was Boris M. Lemos; electrical engineer was Earl Holmberg and Associates. Eckbo, Royston and Williams were the landscape architects.

The Orange Coast College, Costa Mesa, California, Board of Trustees consists of Walter M. Longmoor, president, Harry B. LeBard, Robert Niblick, Horace Parker and Donald G. Hoff. Dr. Basil H. Peterson is the president of the college, and Charles H. Lewis is chairman of the Division of Natural Science and Mathematics at the college.

Alexander, Robert E. "Designing for Science at Orange Coast College." *American School & University* (1955-56): page 8 of 8. Source: Robert E. Alexander Collection, Division of Rare and Manuscript Collections, Cornell University Library.

HISTORIC AERIAL PHOTOGRAPHS
ca.1948-1964

Orange Coast College, ca. 1948.Source: Orange Coast College Library.

Orange Coast College, ca. 1956 Source: Orange Coast College Library.

Orange Coast College, ca. 1957. Source: Orange Coast College Library.,

Orange Coast College, ca. 1959. Source: Orange Coast College Library.

Orange Coast College, 1961. Source: Orange Coast College Library.

Orange Coast College, 1964. Source: Orange Coast College Library.

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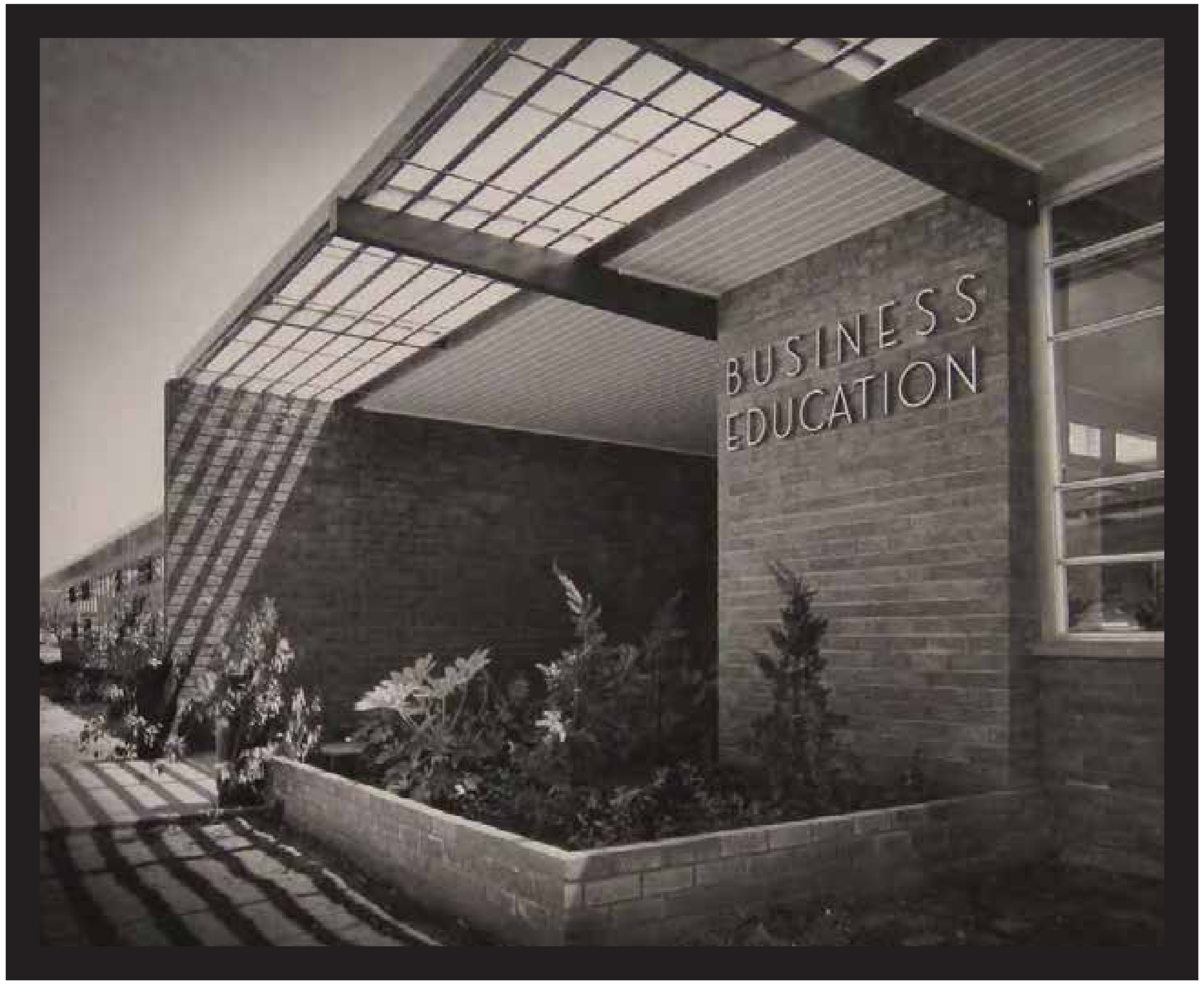
JULIUS SHULMAN PHOTOGRAPHS
ca.1954-1957

North elevation of Library Addition (Classroom and Lab, Bldg. 8). Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles.

West elevation of Library and Classroom additions (Student Success Center, Classroom and Labs, Bldg. 7, 8, and 9). Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles.



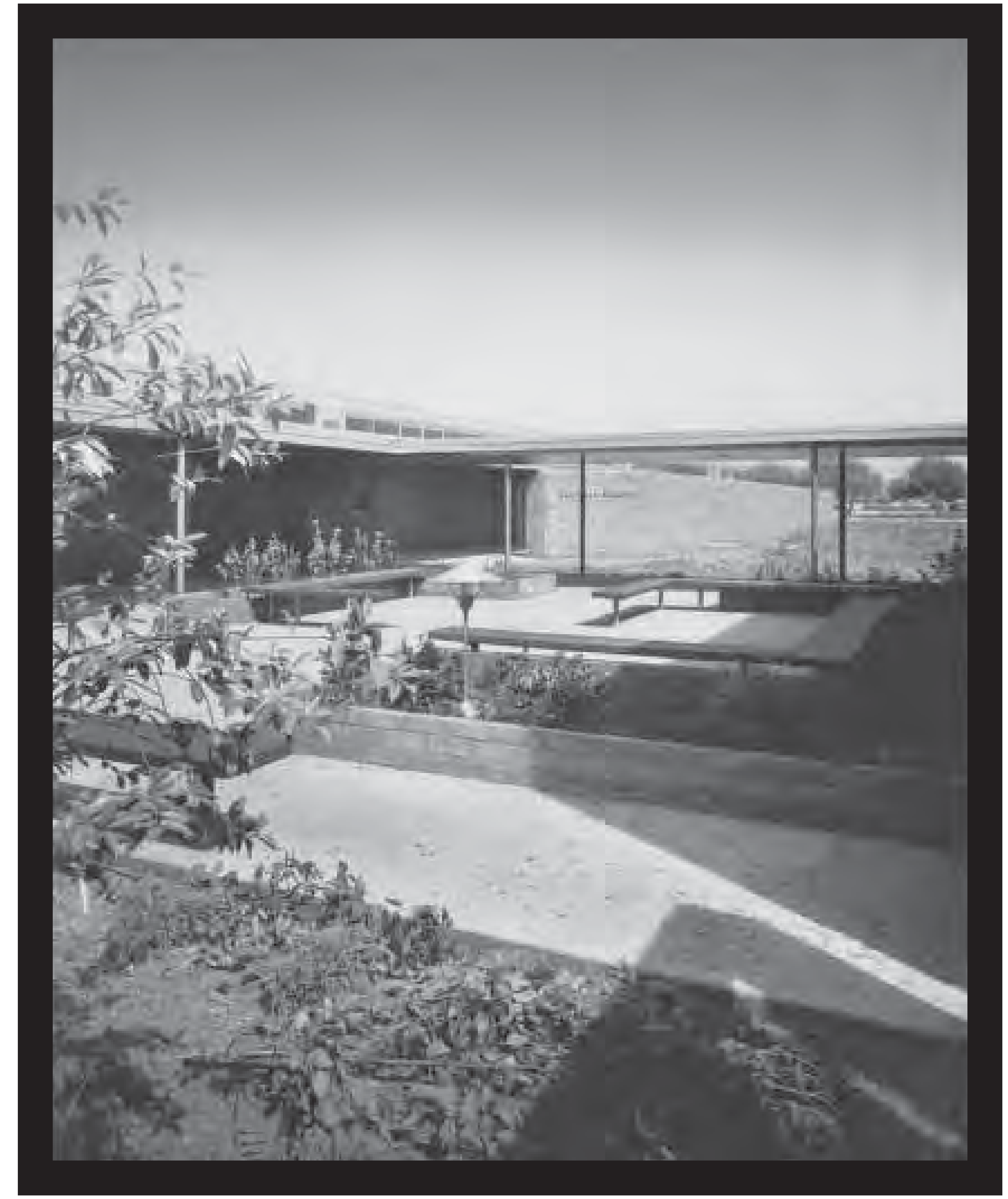
North elevation of Busiiness Education (Business Education, Bldg. 12 and 13); ca. 1954. Photo by Julius Shulman. Source: Robert E. Alexander Collection, Division of Rare and Manuscript Collections, Cornell University Library.

Business Education classroom (Business Education, Bldg. 12 or 13); ca. 1954. Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles.

South elevation of the Business Education (Business Education, Bldg. 12); ca. 1954 by Julius Shulman. Source: Robert E. Alexander Collection, Division of Rare and Manuscript Collections, Cornell University Library.

South elevation of the Business Education (Business Education, Bldg. 12, 13, and 14); ca. 1954 by Julius Shulman. Source: Robert E. Alexander Collection, Division of Rare and Manuscript Collections, Cornell University Library.

Business Education breezeway (Business Education, Bldg. 12, 13, and 14); ca. 1954 by Julius Shulman. Source: Robert E. Alexander Collection, Division of Rare and Manuscript Collections, Cornell University Library.



Business Education courtyard (Business Education, Bldg. 12, 13, and 14); ca. 1954. Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles.

Interior of Business Education Classroom (Business Education, Bldg. 12/13); ca. 1954. Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles.

North elevation of Business Education (Business Education, Bldg. 14); ca. 1954. Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles.

East elevation of the Theater Box Office (Robert Moore Theater, Bldg. 2); ca. 1955. Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles.

North elevation of the Theater (Robert Moore Theater, Bldg. 2); ca. 1955. Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles.

North elevation of the Theater (Robert Moore Theater, Bldg. 2); ca. 1955. Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles.

Entrance of the Theater (Robert Moore Theater, Bldg. 2), looking west; ca. 1955. Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles.

Covered walkway extending from the theater (Robert Moore Theater, Bldg. 2), looking east; ca. 1955. Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles.

Roundabout and east elevation of the theater and box office (Robert Moore Theater, Bldg. 2); ca. 1955. Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles.

South elevation of the Theater (Robert Moore Theater, Bldg. 2); ca. 1955. Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles.

Theater stage with south stage doors open to outdoor auditorium space (Robert Moore Theater, Bldg. 2); ca. 1955. Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles.

Obscured Glass screening wall along the north elevation of the Theater (Robert Moore Theater, Bldg. 2), looking southwest; ca. 1955. Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles.

Obscured Glass screening wall along the north elevation of the Theater (Robert Moore Theater, Bldg. 2), looking northwest; ca. 1955. Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles.

Theater Stage (Robert Moore Theater, Bldg. 2); ca. 1955. Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles.

Classroom interior in the Music Building (Bldg. 4). looking southwest; ca. 1955. Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles.

Breezeway between the Science Building wings (Math Wings, Bldgs. 35 and 36), looking southwest to the Laboratory Building (Reprographics, Bldg. 37); ca. 1957. Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles.

South elevation of the Laboratory Building (Reprographics, Bldg. 37); ca. 1957. Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles.

West elevation of the Science Building (Math Wing, Reprographics, and Planetarium: Bldgs. 36, 37, and 39); ca. 1957. Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles.

South elevation of the Science Building (Math Wing and Reprographics, Bldgs.35 and 37); ca. 1957. Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles.

North elevation of the Science Building (Math Wings and Planetarium, Bldgs. 35, 36, and 39); ca. 1957. Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles.

North elevation of the Planetarium (Bldg. 39); ca. 1957. Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles.

North elevation of the Planetarium (Bldg. 39) with curved reflecting pool, looking southwest; ca. 1957. Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles.

Classroom interior of the Planetarium (Bldg. 39); ca. 1957. Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles.

Greenhouse (demolished) of the Science Building, south adjacent to Planetarium (Bldg. 39); ca. 1957. Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles.

Looking northeast along covered walkways of the Science Building (Math Wing, Bldg. 36) to south elevation of the Planetarium (Bldg. 39) and Greenhouse (Demolished). Photo by Julius Shulman, 1956. Source: The Getty Research Institute, J Paul Getty Trust.

Classroom interior of the Science Building (Math Wing, Bldg 35 or 36), looking west; ca. 1957. Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles.

Classroom interior of the Science Building (Math Wing, Bldg 35 or 36), looking south; ca. 1957. Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles.

Swimming Pool and Bleachers (Bldg. 93), looking northeast; ca. 1954. Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles.

Swimming Pool and Bleachers (Bldg. 93), looking northwest; ca. 1955. Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles.

Stadium seating and press box (LeBard Stadium, Bldg. 105), looking west; ca. 1955. Julius Shulman Photography Archive. Copyright The J. Paul Getty Trust. The Getty Research Institute, Los Angeles.

ORANGE COAST COLLEGE
HISTORIC STRUCTURES REPORT
APPENDIX

COSTA MESA, CA
[14227]
Prepared for
COAST COMMUNITY COLLEGE DISTRICT

PAGE & TURNBULL
imagining change in historic environments through design, research, and technology

MAY, 2015

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APPENDIX 3 | STRUCTURAL EVALUATION

RISHA ENGINEERING

- ASCE 31-03 Tier 1 Screening Report
- Appendix A: Existing Drawings, Plan Views w/ Major Noncompliant Structural Items
- Appendix B: Example Details for Mitigation of Deficiencies

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Risha engineering

ASCE 31-03 Tier 1 Screening

FINAL REPORT

for Historic Structure Report

May 2015

410 E. Cypress Ave.
Burbank, CA 91501

t: 818.729.9777
f: 818.729.9779

www.risha.com

PROJECT:
ORANGE COAST COLLEGE
2701 FAIRVIEW ROAD
COSTA MESA, CALIFORNIA 92626

FOR:
PAGE & TURNBULL
417 SOUTH HILL STREET, SUITE 211
LOS ANGELES, CALIFORNIA 90013

JOB #14249

Prepared By:
Risha Engineering Group, Inc.

REGISTERED PROFESSIONAL ENGINEER
ROBERT T. LYONS
STRUCTURAL
STATE OF CALIFORNIA
06-04-15

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2. EXECUTIVE SUMMARY

The purpose of this report is to summarize the field verification, background research, conditions observed at the time of the survey, and preliminary structural evaluations that have been conducted for historical buildings located at 2701 Fairview Road in Costa Mesa, California, as part of the Historic Structures Assessment of the Orange Coast College.

The evaluation that has been performed addresses the seismic resistance of each building, and provides some additional background information and recommendations to further address areas of concern.

The Orange Coast College campus buildings included in the evaluation have been organized by building "complex" and are as follows:

1. Buildings 2 & 4
    a. Building 2 – Stage and Auditorium, Drama Workshop
    b. Building 4 – Music
2. Buildings 7, 8 & 9
    a. Building 7 – Student Success Center
    b. Buildings 8 & 9 – Classrooms and Labs
3. Buildings 12 & 13 – Business Education
4. Buildings 35 to 39
    a. Buildings 35 & 36 – East and West Math Wings
    b. Building 37 – Reprographics
    c. Building 38 - Small Office Addition
    d. Building 39 - Planetarium
5. Buildings 93, 105 & 110
    a. Building 93 – Pool Stadium
    b. Building 105 – LeBard Stadium with Press Boxes
    c. Building 110 – Field House

Note that Building 14 was not a part of this evaluation since it is currently considered non-contributing.

3. TIER 1 SCREENING BUILDING MATRIX

The following sheet contains the ASCE 31-03 Tier 1 Assessment Matrix showing a summary of deficiencies per building, classifying each as major, moderate and minor items. For more detailed information, see individual building assessments in Section 6 as well as recommendations in Section 7.

TIER 1 SCREENING BUILDING MATRIX

COMPLEX	BUILDING		CONSTRUCTION DATES				CONSTRUCTION TYPE									NONCOMPLIANT : STRUCTURAL													NONCOMPLIANT : NON-STRUCTURAL						
	No.	Name	Original	Structural Alteration 1	Structural Alteration 2	DSA File No.	Wood frames, commercial and industrial	Reinf. masonry bearing walls with flexible diaphragms	Steel moment frames with flexible diaphragms	Steel braced frames with flexible diaphragms	Conc. moment frames	Conc. shear walls with stiff diaphragms	Conc. shear walls with flexible diaphragms	Precast conc. shear walls with flexible diaphragms	ESTIMATED LEVEL OF STRUCTURAL MITIGATION REQ'D FOR COMPLIANCE	Deterioration	Proximity of adjacent buildings	Concrete shear walls	Wood shear walls	Steel braced frames	Steel moment frames	Interior mezzanine bracing	Wall anchorage	Wood diaphragm cross ties	Wood diaphragm drags	Wood diaphragm span	Precast wall foundation anchorage	Pile cap anchorage	Ceiling support / lay-in tile clips	Light fixture support in ceilings	Appendages bracing	Equipment anchorage	Tall narrow contents	Flexible pipe couplings / fire suppression bracing	MITIGATION OF DEFICIENCIES
							W2	RM1	S1A	S2A	C1	C2	C2A	PC1	L,M,H																				
1	02.	Stage and Auditorium	1953	1992	---	11148							X		M		X	X				X	X	X		X		X	X	X		X	X	X	See Section 7 and Appendix A
1	02.	Drama Workshop	1974	---	---	?							X		M		X	X				X	X								X		X	X	See Section 7 and Appendix A
1	04.	Music	1954	1964	---	11148, 24575	X	X							L		X						X	X	3				X	X					See Section 7 and Appendix A
2	07.	Student Success Center	1950	1959	1999	8112, 19362	X	X		X				X	L/M		X			X							X					X	X	X	See Section 7 and Appendix A
2	08.	Classrooms and Labs	1950	1954	---	8112, 12891(?)		X	X	X				X	M	X	X			X	X		X	X			X					X	X	X	See Section 7 and Appendix A
2	09.	Classrooms and Labs	1955	---	---	12891(?)		X	X					X	M	X	X				X		X	X			X				X	X			See Section 7 and Appendix A
3	12.	Business Education	1953	1999	---	19477(?)	X	X							L	X	X														X	X			See Section 7 and Appendix A
3	13.	Business Education	1953	1999	---	19477(?)	X	X							L	X	X														X	X	X		See Section 7 and Appendix A
4	35.	East Math Wing	1956	---	---	?	X		X						M	X	X		4		X			X		X				X	X	X	X		See Section 7 and Appendix A
4	36.	West Math Wing	1956	1959	---	?, 19362	X		X						M		X				X			X		X					X	X			See Section 7 and Appendix A
4	37.	Reprographics	1956	---	---	?	X	X							L/M	X	X						X	X	X	X			X			X	X		See Section 7 and Appendix A
4	38.	Small Office Addition	1956	---	---	19362	X								L				4													X	X		See Section 7 and Appendix A
4	39.	Planetarium	1955	unknown[1]	unknown[1]	?	X	X				X			L/M		X						X	X								X	X		See Section 7 and Appendix A
5	93.	Swimming Pools	1953	1992	---	10783	In-ground concrete pools with concrete slab on grade								L																				See Section 7 and Appendix A
5	93.	Pool Bleachers	1953	---	---	10783					X	X			L	X	X	5														X		X	See Section 7 and Appendix A
5	105.	LeBard Stadium Bleachers	1954	2000	2004	12136	Concrete bleachers slab on grade on berm								L	X																			See Section 7 and Appendix A
5	105.	East Press Box	1954	---	---	12136	X					X			L/M	X			4												X				See Section 7 and Appendix A
5	105.	West Press Box	unknown[2]	---	---	N/A[2]	X								M				X												X				See Section 7 and Appendix A
5	110.	Field House	1955	2007	---	12136	X								L	X										X							X		See Section 7 and Appendix A

MATRIX NOTES:

1. No drawings are available for the Planetarium building additions.
2. No drawings are available for the LeBard Stadium West Press Box. It appears as if this structure may not have been permitted.
3. At Building 04, adequate collectors are not present at 1 re-entrant corner location in the roof diaphragm. While this is not specifically noncompliant according to the ASCE 31-03 Tier 1 checklists, this is a deficient condition.
4. At Building 35, Building 38 and Building 105 East Press Box, no lateral force resisting system is present in at least one exterior line of walls.
5. At Building 93 Pool Bleachers, torsional irregularity is present.

LEGEND: Estimated Levels of Mitigation

L	Light
L/M	Light/Medium
M	Medium
M/H	Medium/Heavy
H	Heavy

4. APPROACH

The investigation of the existing building structures was conducted using the criteria outlined in the Tier 1 standards contained in the *ASCE/SEI Standard 31-03 Seismic Evaluation of Existing Buildings* (ASCE, 2003). This was published by the American Society of Civil Engineers with the intent to provide a standard for establishing potential seismic hazards in existing building structures.

This evaluation is based on a desired performance goal of Life Safety as defined by ASCE31-03:

> "Life Safety: Building performance that includes damage to both structural and nonstructural components during a design earthquake, such that: (a) partial or total structural collapse does not occur, and (b) damage to nonstructural components is non-life-threatening."

Original structural drawings have been made available to us for our evaluation, with the exception of 2 buildings: the Pool Stadium bleachers and the LeBard Stadium west press box. Additionally, drawings for building additions to Building 39 were not available. The evaluation included visual observations performed by 3 teams of 2 persons each on January 12, 13 & 14, 2015. Teams were led by professional engineers licensed in California. Field work was completed using ladders. No invasive measures were taken and no material testing was performed.

The teams were organized as follows:

TEAM 1	Matthew C. Breaks, SE (Leader)
	Troy Quiambao (1 day), Kerry Regan (2 days)
TEAM 2	Rimah Nazzal, PE (Leader)
	Joel Policarpio, EIT
TEAM 3	Teodor Francu, PE (Leader)
	Christian Cattan, PE

A non-structural evaluation is also included in the scope for this investigation. Miscellaneous signs, appendages, etc. may be deficient and pose a falling hazard threat. Not all non-structural components are shown on the drawings or provided with respect to the attachment used to the structure. Furthermore, the Building Code changed significantly since the original design of the buildings, making most of the current attachments likely to be non-compliant.

The evaluation entailed completion of structural and non-structural checklists identified by ASCE31-03 as Tier 1. The requirements for Tier 1 have been verified in order to identify deficiencies and make recommendations on future required actions.

5. REPORT ORGANIZATION

Following the introductory sections of the report, a detailed listing of the observations and findings is organized by individual building.

For each building, a general description of building construction and history is included. Next is a list of building deficiencies and other comments regarding structural and non-structural findings based on the completed ASCE 31-03 checklists. This is followed by pictures for each building, and then the ASCE 31-03 Tier 1 structural and non-structural checklists as completed for each building corresponding to its Building Type.

The report concludes with recommendations and limitations.

6. OBSERVATIONS & FINDINGS

6.1 GENERAL COMMENTS

The following general comments apply to each individual building evaluation contained in this section.

Performance Level - All individual building evaluations are based on a desired performance level of Life Safety as defined by ASCE31-03.

6.2 GEOLOGIC SITE HAZARDS AND FOUNDATIONS

This section applies to the campus site and therefore each individual building evaluation contained in this section. Deficiencies are noted by individual building.

Site Properties

LEVEL OF SEISMICITY: The level of seismicity as defined by ASCE31-03 is high with contributions from four major seismic faults: Newport-Inglewood, Whittier, San Andreas and San Jacinto. Lesser seismic hazard is posed by other faults such as Norwalk, Palos Verdes, Aliso, El Modeno and 4-S Ranch. The largest documented earthquake that has affected Costa Mesa, generated by the aforementioned Newport-Inglewood fault, is the Long Beach earthquake (1933) with a magnitude of 6.3 M (Mercalli Intensity Scale).

SOIL TYPE: Based on review of Geotechnical Investigation report titled “Proposed Interdisciplinary Complex, Phase I & Phase II, Orange Coast College, Costa Mesa, CA” by Geocon Geotechnical Consultants, Inc. and dated July 7, 2008, the top layer of in-situ fill is sandy clay with silty sand alluvium below.

Also based on this geotechnical investigation, there are no known liquefaction areas within the area of study for this report.

List of Deficiencies

The following items have been found noncompliant in accordance with the requirements of ASCE31-03:

1. OVERTURNING ratio at the following buildings:
    a. Building 2 – Foundations at the curved shear walls noncompliant.
    b. Building 105, West Press Box – inadequate ratio in the E-W direction.

Additional Observations

Pole foundations appear to occur at some canopies consisting of post supports on one edge and connected to the building along the other edge. Support posts in these locations are embedded in piles, which are tied together with grade beams.

Geologic Site Hazards and Foundations Checklist Sheet 1 of 2
OVERALL PROJECT SITE

Geologic Site Hazards

The following statements shall be completed for buildings in levels of high or moderate seismicity.

C	**NC**	**N/A**	LIQUEFACTION: Liquefaction-susceptible, saturated, loose granular soils that could jeopardize the building's seismic performance shall not exist in the foundation soils at depths within 50 feet under the building for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.7. 1. 1)
C	**NC**	**N/A**	SLOPE FAILURE: The building site shall be sufficiently remote from potential earthquake-induced slope failures or rockfalls to be unaffected by such failures or shall be capable of accommodating any predicted movements without failure. (Tier 2: Sec. 4. 7.1.2)
C	**NC**	**N/A**	SURFACE FAULT RUPTURE: Surface fault rupture and surface displacement at the building site is not anticipated. (Tier 2: Sec. 4.7. 1.3)

Condition of Foundations

C	**NC**	**N/A**	FOUNDATION PERFORMANCE: There shall be no evidence of excessive foundation movement such as settlement or heave that would affect the integrity or strength of the structure. (Tier 2:Sec. 4.7.2.1)
C	**NC**	**N/A**	DETERIORATION: There shall not be evidence that foundation elements have deteriorated due to corrosion, sulfate attack, material breakdown, or other reasons in a manner that would affect the integrity or strength of the structure. This statement shall apply to buildings in levels of high or moderate seismicity being evaluated to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.7.2.2)

Capacity of Foundations

C	**NC**	**N/A**	POLE FOUNDATIONS: Pole foundations shall have a minimum embedment depth of 4 feet for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4. 7 .3.1)
C	**NC**	**N/A**	OVERTURNING: The ratio of the horizontal dimension of the lateral-force-resisting system at the foundation level to the building height (base/height) shall be greater than *0.6Sa.* (Tier 2:Sec .. 4.7.3.2)

Geologic Site Hazards and Foundations Checklist Sheet 2 of 2

OVERALL PROJECT SITE

C	**NC**	**N/A**	TIES BETWEEN FOUNDATION ELEMENTS: The foundation shall have ties adequate to resist seismic forces where footings, piles, and piers are not restrained by beams, slabs, or soils classified as Class A, B, or C. (Section 3.5.2.3.1, Tier 2: Sec. 4.7.3.3)
C	**NC**	**N/A**	DEEP FOUNDATIONS: Piles and piers shall be capable of transferring the lateral forces between the structure and the soil. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.7.3.4)
C	**NC**	**N/A**	SLOPING SITES: The difference in foundation embedment depth from one side of the building to another shall not exceed one story in height. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.7.3.5)

6.3 BUILDINGS 2 & 4

6.3.1 BUILDING 2 – STAGE AND AUDITORIUM

Building Description

YEAR OF CONSTRUCTION: 1953
YEAR OF ALTERATIONS: 1992 – Theatre Alterations
BUILDING TYPE: C2A

GENERAL BUILDING DESCRIPTION: Based upon the original structural drawings provided to us and dated circa 1953, the structure is one story high. The existing building comprises diagonally sheathed wood diaphragm supported by double angle steel trusses. Exterior walkway canopies which further connect to adjacent buildings are supported by exterior building walls on one side and cantilever columns on the opposite side.

The 9,800 square feet auditorium located at the south-east corner of the campus consists of diagonally sheathed roof supported by double angle steel trusses. The bearing concrete walls extend 36 feet to the underside of the roof with no parapet.

The 140 feet long by 50 feet wide Stage, located on the south side of the Auditorium consists of diagonally sheathed roof supported by double angle steel trusses. The bearing concrete walls include a 42 inch parapet above the roof line creating an overall height of 30 feet.

In 1992, improvements carried out at the Moore Theatre primarily consisted of renovations to interior finishes, alterations for interior partitions and upgrades to the mechanical and electrical service. Additionally at the trusses above the Auditorium, supports for a new curtain were added, and outside, to the north west of the existing stage, a new mechanical enclosure was built.

There is no apparent seismic separation between the Stage and Auditorium Building and the Drama Workshop.

For exterior elevations and typical construction, see pictures Bldg02SA-01 to Bldg02SA-10.

VERTICAL STRUCTURAL SYSTEM: The foundations consist of pile caps and piles connected by reinforced concrete grade beams. The wood framed roof is supported by steel trusses and bearing concrete walls.

LATERAL STRUCTURAL SYSTEM: The lateral force resisting system comprises reinforced concrete shear walls. The roof comprises plywood sheathing over rafters. Some portions of the roof are labeled per the drawing as blocked, while the majority of the roof is labeled as unblocked.

NON-STRUCTURAL SYSTEMS: The ceilings over the auditorium are comprised of plaster and lath supported by cold rolled channels which in turn are hung from the roof wood framing. The stage is open to framing above with the exception of the west end where a mechanical mezzanine is present. The mezzanine is comprised of double tee concrete slab with reinforced concrete beams. The stage is built with wood framing and was not accessible at the time of our site visit.

List of Deficiencies

The following items have been found noncompliant in accordance with the requirements of ASCE31-03:

Structural

1. <u>STAGE & AUDITORIUM,</u> PROXIMITY OF ADJACENT BUILDINGS: The clear distance between the adjacent buildings is less than 4 percent of the height.
2. <u>STAGE & AUDITORIUM</u>, INADEQUATE REINFORCING STEEL SPACING: The spacing of reinforcing steel in the concrete walls is greater than 18 inches.
3. <u>STAGE & AUDITORIUM,</u> INADEQUATE WALL ANCHORAGE: Wall anchorages of concrete walls to diaphragm do not have the adequate strength to resist the out-of-plane connection force calculated by the ASCE 31-03 Tier 1 Quick Check Procedure.
4. <u>STAGE & AUDITORIUM</u>, NO CROSS-TIES: No continuous cross-ties are present between diaphragm chords.
5. <u>STAGE & AUDITORIUM</u>, UNBLOCKED DIAPHRAGM SPAN: The maximum unblocked plywood diaphragm horizontal span is greater than the 40 feet limit for Life Safety.
6. <u>STAGE,</u> INADEQUATE INTERIOR MEZZANINE BRACING: The interior mezzanine level is not anchored to the lateral force resisting elements of the main structure and does not have independent bracing.
7. <u>STAGE</u>, UPLIFT AT PILE CAPS: Pile caps in 2 locations do not have top reinforcement which is noncompliant.

Non-structural

8. <u>STAGE</u>, TALL NARROW CONTENTS: Various items are unanchored.
9. <u>STAGE</u>, INADEQUATELY ATTACHED EQUIPMENT: Various equipment weighing over 20 pounds is not braced.
10. <u>AUDITORIUM</u>, INADEQUATE FIRE SUPPRESSION BRACING: Fire suppression piping is not braced.

11. STAGE, NO FLEXIBLE COUPLINGS: Flexible couplings are not present at required piping type.
12. AUDITORIUM, INADEQUATE LATH AND PLASTER CEILING SUPPORT: Ceilings consisting of lath and plaster or gypsum board are not attached to resist seismic forces for every 12 square feet of area.
13. AUDITORIUM, NO INDEPENDENT LIGHT FIXTURE SUPPORT: Light fixtures in the suspended grid ceilings are not supported independently of the ceiling suspension system (picture Bldg02SA-03).

Additional Observations

There is no parapet or horizontal lifeline fall protection system at the Auditorium roof, which may pose a safety hazard.

The trusses are loaded in between panel points directly on the bottom chord by stanchions supporting a curtain on the east and west sides of the Auditorium (picture Bldg02SA-06). This is a non-desirable loading configuration which may destabilize the truss and impose loads on the bottom chord for which it is not designed.

Lights have been added in the plaster-lath ceiling over the Auditorium and in these locations the ceiling support channel is cut with no additional supports added to the roof. This may affect the ceiling's ability to span between supports (picture Bldg02SA-09).

BUILDING 2 – STAGE AND AUDITORIUM, PICTURES


Bldg02SA-01

Bldg02SA-02


Bldg02SA-03


Bldg02SA-04


Bldg02SA-05


Bldg02SA-06

Bldg02SA-07

Bldg02SA-08

Bldg02SA-09

Bldg02SA-10

Basic Structural Checklist for Building Type C2A: Concrete Shear Walls with Flexible Diaphragms
BUILDING 2 - AUDITORIUM Sheet 1 of 3

Building System

C	NC	N/A	LOAD PATH: The structure shall contain a minimum of one complete load path for Life Safety and Immediate Occupancy for seismic force effects from any horizontal direction that serves to transfer the inertial forces from the mass to the foundation. (Tier 2: Sec. 4.3.1.1)
C	NC	N/A	ADJACENT BUILDINGS: The clear distance between the building being evaluated and any adjacent building shall be greater than 4 percent of the height of the shorter building for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.1.2)
C	NC	N/A	MEZZANINES: Interior mezzanine levels shall be braced independently from the main structure, or shall be anchored to the lateral-force-resisting elements of the main structure. (Tier 2: Sec. 4.3. 1.3)
C	NC	N/A	WEAK STORY: The strength of the lateral-force-resisting system in any story shall not be less than 80 percent of the strength in an adjacent story, above or below, for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.1)
C	NC	N/A	SOFT STORY: The stiffness of the lateral-force-resisting system in any story shall not be less than 70 percent of the lateral-force-resisting system stiffness in an adjacent story above or below, or less than 80 percent of the average lateral-force-resisting system stiffness of the three stories above or below for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.2)
C	NC	N/A	GEOMETRY: There shall be no changes in horizontal dimension of the lateral-force-resisting system of more than 30 percent in a story relative to adjacent stories for Life Safety and Immediate Occupancy, excluding one-story penthouses and mezzanines. (Tier 2: Sec. 4.3.2.3)
C	NC	N/A	VERTICAL DISCONTINUITIES: All vertical elements in the lateral-force-resisting system shall be continuous to the foundation. (Tier 2: Sec. 4.3.2.4)

Basic Structural Checklist for Building Type C2A: Concrete Shear Walls with Flexible Diaphragms
BUILDING 2 - AUDITORIUM Sheet 2 of 3

C	NC	N/A	MASS: There shall be no change in effective mass more than 50 percent from one story to the next for Life Safety and Immediate Occupancy. Light roofs, penthouses, and mezzanines need not be considered. (Tier 2: Sec. 4.3.2.5)
C	NC	N/A	DETERIORATION OF WOOD: There shall be no signs of decay, shrinkage, splitting, fire damage, or sagging in any of the wood members, and none of the metal connection hardware shall be deteriorated, broken, or loose. (Tier 2: Sec. 4.3.3.1)
C	NC	N/A	DETERIORATION OF CONCRETE: There shall be no visible deterioration of concrete or reinforcing steel in any of the vertical- or lateral-force-resisting elements. (Tier 2: Sec. 4.3.3.4)
C	NC	N/A	POST-TENSIONING ANCHORS: There shall be no evidence of corrosion or spalling in the vicinity of post-tensioning or end fittings. Coil anchors shall not have been used. (Tier 2: Sec. 4.3.3.5)
C	NC	N/A	CONCRETE WALL CRACKS: All existing diagonal cracks in wall elements shall be less than 1 /8 inch for Life Safety and 1/1 6 inch for Immediate Occupancy, shall not be concentrated in one location, and shall not form an X pattern. (Tier 2: Sec. 4.3.3.9)

Lateral-Force-Resisting System

C	NC	N/A	REDUNDANCY: The number of lines of shear walls in each principal direction shall be greater than or equal to 2 for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.1.1)
C	NC	N/A	SHEAR STRESS CHECK: The shear stress in the concrete shear walls, calculated using the Quick Check procedure of Section 3.5.3.3, shall be less than the greater of 100 psi or 2*sqrt(f’c) for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.2.1)
C	NC	N/A	REINFORCING STEEL: The ratio of reinforcing steel area to gross concrete area shall be not less than 0.0015 in the vertical direction and 0.0025 in the horizontal direction for Life Safety and Immediate Occupancy. The spacing of reinforcing steel shall be equal to or less than 18 inches for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.2.2)

Basic Structural Checklist for Building Type C2A: Concrete Shear Walls with Flexible Diaphragms

BUILDING 2 - AUDITORIUM Sheet 3 of 3

Connections

C	NC	N/A	WALL ANCHORAGE: Exterior concrete or masonry walls that are dependent on the diaphragm for lateral support shall be anchored for out-of-plane forces at each diaphragm level with steel anchors, reinforcing dowels, or straps that are developed into the diaphragm. Connections shall have adequate strength to resist the connection force calculated in the Quick Check procedure of Section 3.5.3.7. (Tier 2: Sec. 4.6.1.1)
C	NC	N/A	TRANSFER TO SHEAR WALLS: Diaphragms shall be connected for transfer of loads to the shear walls for Life Safety and the connections shall be able to develop the lesser of the shear strength of the walls or diaphragms for Immediate Occupancy. (Tier 2 Sec. 4.6.2.1)
C	NC	N/A	FOUNDATION DOWELS: Wall reinforcement shall be doweled into the foundation for Life Safety, and the dowels shall be able to develop the lesser of the strength of the walls or the uplift capacity of the foundation for Immediate Occupancy. (Tier 2: Sec. 4.6.3.5)

Supplemental Structural Checklist for Building Type C2A: Concrete Shear Walls with Flexible Diaphragms
BUILDING 2 – AUDITORIUM Sheet 1 of 3

Lateral-Force-Resisting System

C	NC	N/A	COUPLING BEAMS: The stirrups in coupling beams over means of egress shall be spaced at or less than d/2 and shall be anchored into the confined core of the beam with hooks of 135° or more for Life Safety. All coupling beams shall comply with the requirements above and shall have the capacity in shear to develop the uplift capacity of the adjacent wall for Immediate Occupancy. (Tier 2: Sec. 4.4.2.2.3)
C	NC	N/A	OVERTURNING: All shear walls shall have aspect ratios less than 4-to-1. Wall piers need not be considered. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.2.4)
C	NC	N/A	CONFINEMENT REINFORCING: For shear walls with aspect ratios greater than 2-to-1, the boundary elements shall be confined with spirals or ties with spacing less than 8d1t- This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.2.5)
C	NC	N/A	REINFORCING AT OPENINGS: There shall be added trim reinforcement around all wall openings with a dimension greater than three times the thickness of the wall. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.2.6)
C	NC	N/A	WALL THICKNESS: Thickness of bearing walls shall not be less than 1/25 the unsupported height or length, whichever is shorter, nor less than 4 inches. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.2.7)

Diaphragms

C	NC	N/A	DIAPHRAGM CONTINUITY: The diaphragms shall not be composed of split-level floors and shall not have expansion joints. (Tier 2: Sec. 4.5.1.1)

Supplemental Structural Checklist for Building Type C2A: Concrete Shear Walls with Flexible Diaphragms
BUILDING 2 – AUDITORIUM Sheet 2 of 3

C	NC	N/A	CROSS TIES: There shall be continuous cross ties between diaphragm chords. (Tier 2: Sec. 4.5.1.2)
C	NC	N/A	OPENINGS AT SHEAR WALLS: Diaphragm openings immediately adjacent to the shear walls shall be less than 25 percent of the wall length for Life Safety and 15 percent of the wall length for Immediate Occupancy. (Tier 2: Sec. 4.5. I .4)
C	NC	N/A	PLAN IRREGULARITIES: There shall be tensile capacity to develop the strength of the diaphragm at re-entrant comers or other locations of plan irregularities. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.7)
C	NC	N/A	DIAPHRAGM REINFORCEMENT AT OPENINGS: There shall be reinforcing around all diaphragm openings larger than 50 percent of the building width in either major plan dimension. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.8)
C	NC	N/A	STRAIGHT SHEATHING: All straight sheathed diaphragms shall have aspect ratios less than 2-to-1 for Life Safety and 1-to-1 for Immediate Occupancy in the direction being considered. (Tier 2: Sec. 4.5.2.1)
C	NC	N/A	SPANS: All wood diaphragms with spans greater than 24 feet for Life Safety and 12 feet for Immediate Occupancy shall consist of wood structural panels or diagonal sheathing. (Tier 2: Sec. 4.5.2.2)
C	NC	N/A	UNBLOCKED DIAPHRAGMS: All diagonally sheathed or unblocked wood structural panel diaphragms shall have horizontal spans less than 40 feet for Life Safety and 30 feet for Immediate Occupancy and shall have aspect ratios less than or equal to 4-to-1 for Life Safety and 3-to-1 for Immediate Occupancy. (Tier 2: Sec. 4.5.2.3)

Supplemental Structural Checklist for Building Type C2A: Concrete Shear Walls with Flexible Diaphragms
BUILDING 2 – AUDITORIUM Sheet 3 of 3

C	NC	N/A	NON-CONCRETE FILLED DIAPHRAGMS: Untopped metal deck diaphragms or metal deck diaphragms with fill other than concrete shall consist of horizontal spans of less than 40 feet and shall have span/depth ratios less than 4-to-1. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.3. I)
C	NC	N/A	OTHER DIAPHRAGMS: The diaphragm shall not consist of a system other than wood, metal deck, concrete, or horizontal bracing. (Tier 2: Sec. 4.5.7.1)

Connections

C	NC	N/A	UPLIFT AT PILE CAPS: Pile caps shall have top reinforcement and piles shall be anchored to the pile caps for Life Safety, and the pile cap reinforcement and pile anchorage shall be able to develop the tensile capacity of the piles for Immediate Occupancy. (Tier 2: Sec. 4.6.3.10)

Basic Nonstructural Component Checklist Sheet 1 of 4
BUILDING 2 - AUDITORIUM

Partitions

C	NC	N/A	UNREINFORCED MASONRY: Unreinforced masonry or hollow clay tile partitions shall be braced at a spacing equal to or less than 10 feet in levels of low or moderate seismicity and 6 feet in levels of high seismicity. (Tier 2: Sec. 4.8.1.1)

Ceiling Systems

C	NC	N/A	SUPPORT: The integrated suspended ceiling system shall not be used to laterally support the tops of gypsum board, masonry, or hollow clay tile partitions. Gypsum board partitions need not be evaluated where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier2: Sec. 4.8.2.1)

Light Fixtures

C	NC	N/A	EMERGENCY LIGHTING: Emergency lighting shall be anchored or braced to prevent falling during an earthquake. (Tier 2: Sec. 4.8.3.1)

Cladding and Glazing

C	NC	N/A	CLADDING ANCHORS: Cladding components weighing more than 10 psf shall be mechanically anchored to the exterior wall framing at a spacing equal to or less than 4 feet. A spacing of up to 6 feet is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.1)
C	NC	N/A	DETERIORATION: There shall be no evidence of deterioration, damage or corrosion in any of the connection elements. (Tier 2: Sec. 4.8.4.2)
C	NC	N/A	CLADDING ISOLATION: For moment frame buildings of steel or concrete, panel connections shall be detailed to accommodate a story drift ratio of 0.02. Panel connection detailing for a story drift ratio of 0.01 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.3)

Basic Nonstructural Component Checklist
BUILDING 2 - AUDITORIUM

Sheet 2 of 4

C	NC	N/A	MULTI-STORY PANELS: For multi-story panels attached at each floor level, panel connections shall be detailed to accommodate a story drift ratio of 0.02. Panel connection detailing for a story drift ratio of 0.01 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.4)
C	NC	N/A	BEARING CONNECTIONS: Where bearing connections are required, there shall be a minimum of two bearing connections for each wall panel. (Tier 2: Sec. 4.8.4.5)
C	NC	N/A	INSERTS: Where inserts are used in concrete connections, the inserts shall be anchored to reinforcing steel or other positive anchorage. (Tier 2: Sec. 4.8.4.6)
C	NC	N/A	PANEL CONNECTIONS: Exterior cladding panels shall be anchored out-of-plane with a minimum of 4 connections for each wall panel. Two connections per wall panel are permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.7)

Masonry Veneer

C	NC	N/A	SHELF ANGLES: Masonry veneer shall be supported by shelf angles or other elements at each floor 30 feet or more above ground for Life Safety and at each floor above the first floor for Immediate Occupancy. (Tier 2: Sec. 4.8.5.1)
C	NC	N/A	TIES: Masonry veneer shall be connected to the back-up with corrosion-resistant ties. The ties shall have a spacing equal to or less than 24 inches with a minimum of one tie for every 2-2/3 square feet. A spacing of up to 36 inches is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.5.2)
C	NC	NA	WEAKENED PLANES: Masonry veneer shall be anchored to the back-up adjacent to weakened planes, such as at the locations of flashing. (Tier 2: Sec. 4.8.5.3)
C	NC	N/A	DETERIORATION: There shall be no evidence of deterioration, damage, or corrosion in any of the connection elements. (Tier 2: Sec. 4.8.5.4)

Basic Nonstructural Component Checklist Sheet 3 of 4
BUILDING 2 – AUDITORIUM

Parapets, Cornices, Ornamentation, and Appendages

C	NC	N/A	URM PARAPETS: There shall be no laterally unsupported unreinforced masonry parapets or cornices with height-to-thickness ratios greater than 1.5. A height-to-thickness ratio of up to 2.5 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.8.1)
C	NC	N/A	CANOPIES: Canopies located at building exits shall be anchored to the structural framing at a spacing of 6 feet or less. An anchorage spacing of up to 10 feet is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.8.2)

Masonry Chimneys

C	NC	N/A	URM CHIMNEYS: No unreinforced masonry chimney shall extend above the roof surface more than twice the least dimension of the chimney. A height above the roof surface of up to three times the least dimension of the chimney is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.9.1)

Stairs

C	NC	N/A	URM WALLS: Walls around stair enclosures shall not consist of unbraced hollow clay tile or unreinforced masonry with a height-to-thickness ratio greater than 12-to-1. A height-to-thickness ratio of up to 15-to-1 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.10.1)
C	NC	N/A	STAIR DETAILS: In moment frame structures, the connection between the stairs and the structure shall not rely on shallow anchors in concrete. Alternatively, the stair details shall be capable of accommodating the drift calculated using the Quick Check procedure of Section 3.5.3.1 without including tension in the anchors. (Tier 2: Sec. 4.8.10.2)

Basic Nonstructural Component Checklist Sheet 4 of 4
BUILDING 2 – AUDITORIUM

Building Contents and Furnishing

C	NC	N/A	TALL NARROW CONTENTS: Contents over 4 feet in height with a height-to-depth or height-to-width ratio greater than 3-to-1 shall be anchored to the floor slab or adjacent structural walls. A height-to-depth or height-to-width ratio of up to 4-to-1 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.11.1)

Mechanical and Electrical Equipment

C	NC	N/A	EMERGENCY POWER: Equipment used as part of an emergency power system shall be mounted to maintain continued operation after an earthquake. (Tier 2: Sec. 4.8.12.1)
C	NC	N/A	HAZARDOUS MATERIAL EQUIPMENT: HVAC or other equipment containing hazardous material shall not have damaged supply lines or unbraced isolation supports. (Tier 2:Sec. 4.8.12.2)
C	NC	N/A	DETERIORATION: There shall be no evidence of deterioration, damage, or corrosion in any of the anchorage or supports of mechanical or electrical equipment. (Tier 2: Sec. 4.8.12.3)
C	NC	N/A	ATTACHED EQUIPMENT: Equipment weighing over 20 lb that is attached to ceilings, walls, or other supports 4 feet above the floor level shall be braced. (Tier 2: Sec. 4.8.12.4)

Piping

C	NC	N/A	FIRE SUPPRESSION PIPING: Fire suppression piping shall be anchored and braced in accordance with NFPA-13 (NFPA, 1996). (Tier 2: Sec. 4.8.13.1)
C	NC	N/A	FLEXIBLE COUPLINGS: Fluid, gas, and fire suppression piping shall have flexible couplings. (Tier 2: Sec. 4.8.13.2)

Hazardous Materials Storage and Distribution

C	NC	N/A	TOXIC SUBSTANCES: Toxic and hazardous substances stored in breakable containers shall be restrained from falling by latched doors, shelf lips, wires, or other methods. (Tier 2: Sec. 4.8.15.1)

Intermediate Nonstructural Component Checklist Sheet 1 of 2
BUILDING 2 - AUDITORIUM

Ceiling Systems

C	NC	N/A	LAY-IN TILES: Lay-in tiles used in ceiling panels located at exits and corridors shall be secured with clips. (Tier 2: Sec. 4.8.2.2)
C	NC	N/A	INTEGRATED CEILINGS: Integrated suspended ceilings at exits and corridors or weighing more than 2 pounds per square foot shall be laterally restrained with a minimum of four diagonal wires or rigid members attached to the structure above at a spacing equal to or less than 12 feet. (Tier 2: Sec. 4.8.2.3)
C	NC	N/A	SUSPENDED LATH AND PLASTER: Ceilings consisting of suspended lath and plaster or gypsum board shall be attached to resist seismic forces for every 12 square feet of area. (Tier 2: Sec. 4.8.2.4)

Light Fixtures

C	NC	N/A	INDEPENDENT SUPPORT: Light fixtures in suspended grid ceilings shall be supported independently of the ceiling suspension system by a minimum of two wires at diagonally opposite corners of the fixtures. (Tier 2: Sec. 4.8.3.2)

Cladding and Glazing

C	NC	N/A	GLAZING: Glazing in curtain walls and individual panes over 16 square feet in area, located up to a height of 10 feet above an exterior walking surface, shall have safety glazing. Such glazing located over 10 feet above an exterior walking surface shall be laminated annealed or laminated heat-strengthened safety glass or other glazing system that will remain in the frame when glass is cracked. (Tier 2: Sec. 4.8.4.8)

Parapets, Cornices, Ornamentation, and Appendages

C	NC	N/A	CONCRETE PARAPETS: Concrete parapets with height-to-thickness ratios greater than 2.5 shall have vertical reinforcement. (Tier 2: Sec. 4.8.8.3)

Intermediate Nonstructural Component Checklist Sheet 2 of 2
BUILDING 2 – AUDITORIUM

C	NC	N/A	
C	NC	N/A	APPENDAGES: Cornices, parapets, signs, and other appendages that extend above the highest point of anchorage to the structure or cantilever from exterior wall faces and other exterior wall ornamentation shall be reinforced and anchored to the structural system at a spacing equal to or less than 10 feet for Life Safety and 6 feet for Immediate Occupancy. This requirement need not apply to parapets or cornices compliant with Section 4.8.8.1 or 4.8.8.3. (Tier 2: Sec. 4.8.8.4)

Masonry Chimneys

C	NC	N/A	ANCHORAGE: Masonry chimneys shall be anchored at each floor level and the roof. (Tier 2: Sec.4.8.9.2)

Mechanical and Electrical Equipment

C	NC	N/A	VIBRATION ISOLATORS: Equipment mounted on vibration isolators shall be equipped with restraints or snubbers. (Tier 2: Sec. 4.8.12.5)

Ducts

C	NC	N/A	STAIR AND SMOKE DUCTS: Stair pressurization and smoke control ducts shall be braced and shall have flexible connections at seismic joints. (Tier 2: Sec. 4.8.14.1)

Basic Structural Checklist for Building Type C2A: Concrete Shear Walls with Flexible Diaphragms
BUILDING 2 – STAGE Sheet 1 of 3

Building System

C	NC	N/A	LOAD PATH: The structure shall contain a minimum of one complete load path for Life Safety and Immediate Occupancy for seismic force effects from any horizontal direction that serves to transfer the inertial forces from the mass to the foundation. (Tier 2: Sec. 4.3.1.1)
C	NC	N/A	ADJACENT BUILDINGS: The clear distance between the building being evaluated and any adjacent building shall be greater than 4 percent of the height of the shorter building for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.1.2)
C	NC	N/A	MEZZANINES: Interior mezzanine levels shall be braced independently from the main structure, or shall be anchored to the lateral-force-resisting elements of the main structure. (Tier 2: Sec. 4.3. 1.3)
C	NC	N/A	WEAK STORY: The strength of the lateral-force-resisting system in any story shall not be less than 80 percent of the strength in an adjacent story, above or below, for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.1)
C	NC	N/A	SOFT STORY: The stiffness of the lateral-force-resisting system in any story shall not be less than 70 percent of the lateral-force-resisting system stiffness in an adjacent story above or below, or less than 80 percent of the average lateral-force-resisting system stiffness of the three stories above or below for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.2)
C	NC	N/A	GEOMETRY: There shall be no changes in horizontal dimension of the lateral-force-resisting system of more than 30 percent in a story relative to adjacent stories for Life Safety and Immediate Occupancy, excluding one-story penthouses and mezzanines. (Tier 2: Sec. 4.3.2.3)
C	NC	N/A	VERTICAL DISCONTINUITIES: All vertical elements in the lateral-force-resisting system shall be continuous to the foundation. (Tier 2: Sec. 4.3.2.4)

Basic Structural Checklist for Building Type C2A: Concrete Shear Walls with Flexible Diaphragms
BUILDING 2 - STAGE Sheet 2 of 3

C	NC	N/A	MASS: There shall be no change in effective mass more than 50 percent from one story to the next for Life Safety and Immediate Occupancy. Light roofs, penthouses, and mezzanines need not be considered. (Tier 2: Sec. 4.3.2.5)
C	NC	N/A	DETERIORATION OF WOOD: There shall be no signs of decay, shrinkage, splitting, fire damage, or sagging in any of the wood members, and none of the metal connection hardware shall be deteriorated, broken, or loose. (Tier 2: Sec. 4.3.3.1)
C	NC	N/A	DETERIORATION OF CONCRETE: There shall be no visible deterioration of concrete or reinforcing steel in any of the vertical- or lateral-force-resisting elements. (Tier 2: Sec. 4.3.3.4)
C	NC	N/A	POST-TENSIONING ANCHORS: There shall be no evidence of corrosion or spalling in the vicinity of post-tensioning or end fittings. Coil anchors shall not have been used. (Tier 2: Sec. 4.3.3.5)
C	NC	N/A	CONCRETE WALL CRACKS: All existing diagonal cracks in wall elements shall be less than 1 /8 inch for Life Safety and 1/1 6 inch for Immediate Occupancy, shall not be concentrated in one location, and shall not form an X pattern. (Tier 2: Sec. 4.3.3.9)

Lateral-Force-Resisting System

C	NC	N/A	REDUNDANCY: The number of lines of shear walls in each principal direction shall be greater than or equal to 2 for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.1.1)
C	NC	N/A	SHEAR STRESS CHECK: The shear stress in the concrete shear walls, calculated using the Quick Check procedure of Section 3.5.3.3, shall be less than the greater of 100 psi or 2*sqrt(f'c) for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.2.1)
C	NC	N/A	REINFORCING STEEL: The ratio of reinforcing steel area to gross concrete area shall be not less than 0.0015 in the vertical direction and 0.0025 in the horizontal direction for Life Safety and Immediate Occupancy. The spacing of reinforcing steel shall be equal to or less than 18 inches for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.2.2)

Basic Structural Checklist for Building Type C2A: Concrete Shear Walls with Flexible Diaphragms
BUILDING 2 - STAGE Sheet 3 of 3

Connections

C	NC	N/A	WALL ANCHORAGE: Exterior concrete or masonry walls that are dependent on 1he diaphragm for lateral support shall be anchored for out-of-plane forces at each diaphragm level with steel anchors, reinforcing dowels, or straps that are developed into the diaphragm. Connections shall have adequate strength to resist the connection force calculated in the Quick Check procedure of Section 3.5.3.7. (Tier 2: Sec. 4.6.1.1)
C	NC	N/A	TRANSFER TO SHEAR WALLS: Diaphragms shall be connected for transfer of loads to the shear walls for Life Safety and the connections shall be able to develop the lesser of the shear strength of the walls or diaphragms for Immediate Occupancy. (Tier 2 Sec. 4.6.2.1)
C	NC	N/A	FOUNDATION DOWELS: Wall reinforcement shall be doweled into the foundation for Life Safety, and the dowels shall be able to develop the lesser of the strength of the walls or the uplift capacity of the foundation for Immediate Occupancy. (Tier 2: Sec. 4.6.3.5)

Supplemental Structural Checklist for Building Type C2A: Concrete Shear Walls with Flexible Diaphragms
BUILDING 2 – STAGE Sheet 1 of 3

Lateral-Force-Resisting System

C	NC	N/A	COUPLING BEAMS: The stirrups in coupling beams over means of egress shall be spaced at or less than d/2 and shall be anchored into the confined core of the beam with hooks of 135° or more for Life Safety. All coupling beams shall comply with the requirements above and shall have the capacity in shear to develop the uplift capacity of the adjacent wall for Immediate Occupancy. (Tier 2: Sec. 4.4.2.2.3)
C	NC	N/A	OVERTURNING: All shear walls shall have aspect ratios less than 4-to-1. Wall piers need not be considered. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.2.4)
C	NC	N/A	CONFINEMENT REINFORCING: For shear walls with aspect ratios greater than 2-to-1, the boundary elements shall be confined with spirals or ties with spacing less than 8d1t- This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.2.5)
C	NC	N/A	REINFORCING AT OPENINGS: There shall be added trim reinforcement around all wall openings with a dimension greater than three times the thickness of the wall. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.2.6)
C	NC	N/A	WALL THICKNESS: Thickness of bearing walls shall not be less than 1/25 the unsupported height or length, whichever is shorter, nor less than 4 inches. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.2.7)

Diaphragms

C	NC	N/A	DIAPHRAGM CONTINUITY: The diaphragms shall not be composed of split-level floors and shall not have expansion joints. (Tier 2: Sec. 4.5.1.1)

Supplemental Structural Checklist for Building Type C2A: Concrete Shear Walls with Flexible Diaphragms
BUILDING 2 – STAGE Sheet 2 of 3

C	NC	N/A	CROSS TIES: There shall be continuous cross ties between diaphragm chords. (Tier 2: Sec. 4.5.1.2)
C	NC	N/A	OPENINGS AT SHEAR WALLS: Diaphragm openings immediately adjacent to the shear walls shall be less than 25 percent of the wall length for Life Safety and 15 percent of the wall length for Immediate Occupancy. (Tier 2: Sec. 4.5. I .4)
C	NC	N/A	PLAN IRREGULARITIES: There shall be tensile capacity to develop the strength of the diaphragm at re-entrant comers or other locations of plan irregularities. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.7)
C	NC	N/A	DIAPHRAGM REINFORCEMENT AT OPENINGS: There shall be reinforcing around all diaphragm openings larger than 50 percent of the building width in either major plan dimension. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.8)
C	NC	N/A	STRAIGHT SHEATHING: All straight sheathed diaphragms shall have aspect ratios less than 2-to-1 for Life Safety and 1-to-1 for Immediate Occupancy in the direction being considered. (Tier 2: Sec. 4.5.2.1)
C	NC	N/A	SPANS: All wood diaphragms with spans greater than 24 feet for Life Safety and 12 feet for Immediate Occupancy shall consist of wood structural panels or diagonal sheathing. (Tier 2: Sec. 4.5.2.2)
C	NC	N/A	UNBLOCKED DIAPHRAGMS: All diagonally sheathed or unblocked wood structural panel diaphragms shall have horizontal spans less than 40 feet for Life Safety and 30 feet for Immediate Occupancy and shall have aspect ratios less than or equal to 4-to-1 for Life Safety and 3-to-1 for Immediate Occupancy. (Tier 2: Sec. 4.5.2.3)

Supplemental Structural Checklist for Building Type C2A: Concrete Shear Walls with Flexible Diaphragms
BUILDING 2 – STAGE Sheet 3 of 3

C	NC	N/A	NON-CONCRETE FILLED DIAPHRAGMS: Untopped metal deck diaphragms or metal deck diaphragms with fill other than concrete shall consist of horizontal spans of less than 40 feet and shall have span/depth ratios less than 4-to-1. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.3. I)
C	NC	N/A	OTHER DIAPHRAGMS: The diaphragm shall not consist of a system other than wood, metal deck, concrete, or horizontal bracing. (Tier 2: Sec. 4.5.7.1)

Connections

C	NC	N/A	UPLIFT AT PILE CAPS: Pile caps shall have top reinforcement and piles shall be anchored to the pile caps for Life Safety, and the pile cap reinforcement and pile anchorage shall be able to develop the tensile capacity of the piles for Immediate Occupancy. (Tier 2: Sec. 4.6.3.10)

Basic Nonstructural Component Checklist Sheet 1 of 4
BUILDING 2 - STAGE

Partitions

C	**NC**	**N/A**	UNREINFORCED MASONRY: Unreinforced masonry or hollow clay tile partitions shall be braced at a spacing equal to or less than 10 feet in levels of low or moderate seismicity and 6 feet in levels of high seismicity. (Tier 2: Sec. 4.8.1.1)

Ceiling Systems

C	**NC**	**N/A**	SUPPORT: The integrated suspended ceiling system shall not be used to laterally support the tops of gypsum board, masonry, or hollow clay tile partitions. Gypsum board partitions need not be evaluated where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier2: Sec. 4.8.2.1)

Light Fixtures

C	**NC**	**N/A**	EMERGENCY LIGHTING: Emergency lighting shall be anchored or braced to prevent falling during an earthquake. (Tier 2: Sec. 4.8.3.1)

Cladding and Glazing

C	**NC**	**N/A**	CLADDING ANCHORS: Cladding components weighing more than 10 psf shall be mechanically anchored to the exterior wall framing at a spacing equal to or less than 4 feet. A spacing of up to 6 feet is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.1)
C	**NC**	**N/A**	DETERIORATION: There shall be no evidence of deterioration, damage or corrosion in any of the connection elements. (Tier 2: Sec. 4.8.4.2)
C	**NC**	**N/A**	CLADDING ISOLATION: For moment frame buildings of steel or concrete, panel connections shall be detailed to accommodate a story drift ratio of 0.02. Panel connection detailing for a story drift ratio of 0.01 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.3)

Basic Nonstructural Component Checklist Sheet 2 of 4
BUILDING 2 - STAGE

C	NC	N/A	MULTI-STORY PANELS: For multi-story panels attached at each floor level, panel connections shall be detailed to accommodate a story drift ratio of 0.02. Panel connection detailing for a story drift ratio of 0.01 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.4)
C	NC	N/A	BEARING CONNECTIONS: Where bearing connections are required, there shall be a minimum of two bearing connections for each wall panel. (Tier 2: Sec. 4.8.4.5)
C	NC	N/A	INSERTS: Where inserts are used in concrete connections, the inserts shall be anchored to reinforcing steel or other positive anchorage. (Tier 2: Sec. 4.8.4.6)
C	NC	N/A	PANEL CONNECTIONS: Exterior cladding panels shall be anchored out-of-plane with a minimum of 4 connections for each wall panel. Two connections per wall panel are permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.7)

Masonry Veneer

C	NC	N/A	SHELF ANGLES: Masonry veneer shall be supported by shelf angles or other elements at each floor 30 feet or more above ground for Life Safety and at each floor above the first floor for Immediate Occupancy. (Tier 2: Sec. 4.8.5.1)
C	NC	N/A	TIES: Masonry veneer shall be connected to the back-up with corrosion-resistant ties. The ties shall have a spacing equal to or less than 24 inches with a minimum of one tie for every 2-2/3 square feet. A spacing of up to 36 inches is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.5.2)
C	NC	NA	WEAKENED PLANES: Masonry veneer shall be anchored to the back-up adjacent to weakened planes, such as at the locations of flashing. (Tier 2: Sec. 4.8.5.3)
C	NC	N/A	DETERIORATION: There shall be no evidence of deterioration, damage, or corrosion in any of the connection elements. (Tier 2: Sec. 4.8.5.4)

Basic Nonstructural Component Checklist Sheet 3 of 4
BUILDING 2 – STAGE

Parapets, Cornices, Ornamentation, and Appendages

C	NC	N/A	URM PARAPETS: There shall be no laterally unsupported unreinforced masonry parapets or cornices with height-to-thickness ratios greater than 1.5. A height-to-thickness ratio of up to 2.5 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.8.1)
C	NC	N/A	CANOPIES: Canopies located at building exits shall be anchored to the structural framing at a spacing of 6 feet or less. An anchorage spacing of up to 10 feet is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.8.2)

Masonry Chimneys

C	NC	N/A	URM CHIMNEYS: No unreinforced masonry chimney shall extend above the roof surface more than twice the least dimension of the chimney. A height above the roof surface of up to three times the least dimension of the chimney is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.9.1)

Stairs

C	NC	N/A	URM WALLS: Walls around stair enclosures shall not consist of unbraced hollow clay tile or unreinforced masonry with a height-to-thickness ratio greater than 12-to-1. A height-to-thickness ratio of up to 15-to-1 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.10.1)
C	NC	N/A	STAIR DETAILS: In moment frame structures, the connection between the stairs and the structure shall not rely on shallow anchors in concrete. Alternatively, the stair details shall be capable of accommodating the drift calculated using the Quick Check procedure of Section 3.5.3.1 without including tension in the anchors. (Tier 2: Sec. 4.8.10.2)

Basic Nonstructural Component Checklist Sheet 4 of 4
BUILDING 2 – STAGE

Building Contents and Furnishing

C	NC	N/A	TALL NARROW CONTENTS: Contents over 4 feet in height with a height-to-depth or height-to-width ratio greater than 3-to-1 shall be anchored to the floor slab or adjacent structural walls. A height-to-depth or height-to-width ratio of up to 4-to-1 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.11.1)

Mechanical and Electrical Equipment

C	NC	N/A	EMERGENCY POWER: Equipment used as part of an emergency power system shall be mounted to maintain continued operation after an earthquake. (Tier 2: Sec. 4.8.12.1)
C	NC	N/A	HAZARDOUS MATERIAL EQUIPMENT: HVAC or other equipment containing hazardous material shall not have damaged supply lines or unbraced isolation supports. (Tier 2:Sec. 4.8.12.2)
C	NC	N/A	DETERIORATION: There shall be no evidence of deterioration, damage, or corrosion in any of the anchorage or supports of mechanical or electrical equipment. (Tier 2: Sec. 4.8.12.3)
C	NC	N/A	ATTACHED EQUIPMENT: Equipment weighing over 20 lb that is attached to ceilings, walls, or other supports 4 feet above the floor level shall be braced. (Tier 2: Sec. 4.8.12.4)

Piping

C	NC	N/A	FIRE SUPPRESSION PIPING: Fire suppression piping shall be anchored and braced in accordance with NFPA-13 (NFPA, 1996). (Tier 2: Sec. 4.8.13.1)
C	NC	N/A	FLEXIBLE COUPLINGS: Fluid, gas, and fire suppression piping shall have flexible couplings. (Tier 2: Sec. 4.8.13.2)

Hazardous Materials Storage and Distribution

C	NC	N/A	TOXIC SUBSTANCES: Toxic and hazardous substances stored in breakable containers shall be restrained from falling by latched doors, shelf lips, wires, or other methods. (Tier 2: Sec. 4.8.15.1)

Intermediate Nonstructural Component Checklist Sheet 1 of 2
BUILDING 2 - STAGE

Ceiling Systems

C	NC	N/A	LAY-IN TILES: Lay-in tiles used in ceiling panels located at exits and corridors shall be secured with clips. (Tier 2: Sec. 4.8.2.2)
C	NC	N/A	INTEGRATED CEILINGS: Integrated suspended ceilings at exits and corridors or weighing more than 2 pounds per square foot shall be laterally restrained with a minimum of four diagonal wires or rigid members attached to the structure above at a spacing equal to or less than 12 feet. (Tier 2: Sec. 4.8.2.3)
C	NC	N/A	SUSPENDED LATH AND PLASTER: Ceilings consisting of suspended lath and plaster or gypsum board shall be attached to resist seismic forces for every 12 square feet of area. (Tier 2: Sec. 4.8.2.4)

Light Fixtures

C	NC	N/A	INDEPENDENT SUPPORT: Light fixtures in suspended grid ceilings shall be supported independently of the ceiling suspension system by a minimum of two wires at diagonally opposite corners of the fixtures. (Tier 2: Sec. 4.8.3.2)

Cladding and Glazing

C	NC	N/A	GLAZING: Glazing in curtain walls and individual panes over 16 square feet in area, located up to a height of 10 feet above an exterior walking surface, shall have safety glazing. Such glazing located over 10 feet above an exterior walking surface shall be laminated annealed or laminated heat-strengthened safety glass or other glazing system that will remain in the frame when glass is cracked. (Tier 2: Sec. 4.8.4.8)

Parapets, Cornices, Ornamentation, and Appendages

C	NC	N/A	CONCRETE PARAPETS: Concrete parapets with height-to-thickness ratios greater than 2.5 shall have vertical reinforcement. (Tier 2: Sec. 4.8.8.3)

Intermediate Nonstructural Component Checklist Sheet 2 of 2
BUILDING 2 – STAGE

C	NC	N/A	APPENDAGES: Cornices, parapets, signs, and other appendages that extend above the highest point of anchorage to the structure or cantilever from exterior wall faces and other exterior wall ornamentation shall be reinforced and anchored to the structural system at a spacing equal to or less than 10 feet for Life Safety and 6 feet for Immediate Occupancy. This requirement need not apply to parapets or cornices compliant with Section 4.8.8.1 or 4.8.8.3. (Tier 2: Sec. 4.8.8.4)

Masonry Chimneys

C	NC	N/A	ANCHORAGE: Masonry chimneys shall be anchored at each floor level and the roof. (Tier 2: Sec.4.8.9.2)

Mechanical and Electrical Equipment

C	NC	N/A	VIBRATION ISOLATORS: Equipment mounted on vibration isolators shall be equipped with restraints or snubbers. (Tier 2: Sec. 4.8.12.5)

Ducts

C	NC	N/A	STAIR AND SMOKE DUCTS: Stair pressurization and smoke control ducts shall be braced and shall have flexible connections at seismic joints. (Tier 2: Sec. 4.8.14.1)

6.3.2 BUILDING 2 –DRAMA WORKSHOP

Building Description

YEAR OF CONSTRUCTION: 1974
YEAR OF ALTERATIONS: N/A
BUILDING TYPE: C2A

GENERAL BUILDING DESCRIPTION: Based upon the original structural drawings provided to us and dated circa 1974, the structure is one story high. The existing building comprises insulating concrete over a metal deck diaphragm supported by steel framing. At the perimeter, 12 inch thick concrete walls extend all the way up to the roof. Exterior walkway canopies which connect adjacent buildings are supported by exterior building walls on one side and cantilever columns on the opposite side.

There is no apparent seismic separation between the Stage and Auditorium building and the Drama Workshop.

For exterior elevations and typical construction, see pictures Bldg02DW-01 to Bldg02DW-07.

VERTICAL STRUCTURAL SYSTEM: Most of the building is constructed of 12 inch thick reinforced concrete walls which are 24 feet high. The foundations consist of pile caps and piles connected by reinforced concrete grade beams.

LATERAL STRUCTURAL SYSTEM: The lateral force resisting system comprises reinforced concrete shear walls. The roof comprises metal decking over steel beams

NON-STRUCTURAL SYSTEMS: There is a pipe grid supporting lighting and curtains at the Drama Workshop. It is attached with beam clamps to the steel framing. Cable bracing provides lateral restraint for the pipe grid. At the west side of the Drama Workshop, there is a mezzanine with office space. Integrated ceiling system was observed in the office space.

List of Deficiencies

The following items have been found noncompliant in accordance with the requirements of ASCE31-03:

Structural

1. PROXIMITY OF ADJACENT BUILDINGS: The clear distance between the adjacent buildings is less than 4 percent of the height.

2. INADEQUATE INTERIOR MEZZANINE BRACING: The interior mezzanine level is not anchored to the lateral force resisting elements of the main structure and does not have independent bracing.
3. INADEQUATE REINFORCING STEEL SPACING: The spacing of reinforcing steel in the concrete walls is greater than 18 inches.
4. INADEQUATE WALL ANCHORAGE: Wall anchorages of concrete walls to diaphragm do not have the adequate strength to resist the out-of-plane connection force calculated by the ASCE 31-03 Tier 1 Quick Check Procedure.

Non-structural

5. APPENDAGES: The sign over the Drama Workshop, at the Theatre entrance, appears to be inadequately braced (Bldg02DW-08 to Bldg02DW-09).
6. TALL NARROW CONTENTS: Various items are not laterally braced.
7. INADEQUATE FIRE SUPPRESSION PIPING: Fire suppression piping is not braced properly, and flexible couplings are not provided.

BUILDING 2 – DRAMA WORKSHOP, PICTURES


Bldg02DW-01


Bldg02DW-02

Bldg02DW-03


Bldg02DW-04


Bldg02DW-05


Bldg02DW-06


Bldg02DW-07


Bldg02DW-08

Bldg02DW-09

Basic Structural Checklist for Building Type C2A: Concrete Shear Walls with Flexible Diaphragms
BUILDING 2 – DRAMA WORKSHOP Sheet 1 of 3

Building System

C	NC	N/A	LOAD PATH: The structure shall contain a minimum of one complete load path for Life Safety and Immediate Occupancy for seismic force effects from any horizontal direction that serves to transfer the inertial forces from the mass to the foundation. (Tier 2: Sec. 4.3.1.1)
C	NC	N/A	ADJACENT BUILDINGS: The clear distance between the building being evaluated and any adjacent building shall be greater than 4 percent of the height of the shorter building for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.1.2)
C	NC	N/A	MEZZANINES: Interior mezzanine levels shall be braced independently from the main structure, or shall be anchored to the lateral-force-resisting elements of the main structure. (Tier 2: Sec. 4.3. 1.3)
C	NC	N/A	WEAK STORY: The strength of the lateral-force-resisting system in any story shall not be less than 80 percent of the strength in an adjacent story, above or below, for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.1)
C	NC	N/A	SOFT STORY: The stiffness of the lateral-force-resisting system in any story shall not be less than 70 percent of the lateral-force-resisting system stiffness in an adjacent story above or below, or less than 80 percent of the average lateral-force-resisting system stiffness of the three stories above or below for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.2)
C	NC	N/A	GEOMETRY: There shall be no changes in horizontal dimension of the lateral-force-resisting system of more than 30 percent in a story relative to adjacent stories for Life Safety and Immediate Occupancy, excluding one-story penthouses and mezzanines. (Tier 2: Sec. 4.3.2.3)
C	NC	N/A	VERTICAL DISCONTINUITIES: All vertical elements in the lateral-force-resisting system shall be continuous to the foundation. (Tier 2: Sec. 4.3.2.4)

Basic Structural Checklist for Building Type C2A: Concrete Shear Walls with Flexible Diaphragms
BUILDING 2 - DRAMA WORKSHOP Sheet 2 of 3

C	NC	N/A	MASS: There shall be no change in effective mass more than 50 percent from one story to the next for Life Safety and Immediate Occupancy. Light roofs, penthouses, and mezzanines need not be considered. (Tier 2: Sec. 4.3.2.5)
C	NC	N/A	DETERIORATION OF WOOD: There shall be no signs of decay, shrinkage, splitting, fire damage, or sagging in any of the wood members, and none of the metal connection hardware shall be deteriorated, broken, or loose. (Tier 2: Sec. 4.3.3.1)
C	NC	N/A	DETERIORATION OF CONCRETE: There shall be no visible deterioration of concrete or reinforcing steel in any of the vertical- or lateral-force-resisting elements. (Tier 2: Sec. 4.3.3.4)
C	NC	N/A	POST-TENSIONING ANCHORS: There shall be no evidence of corrosion or spalling in the vicinity of post-tensioning or end fittings. Coil anchors shall not have been used. (Tier 2: Sec. 4.3.3.5)
C	NC	N/A	CONCRETE WALL CRACKS: All existing diagonal cracks in wall elements shall be less than 1 /8 inch for Life Safety and 1/1 6 inch for Immediate Occupancy, shall not be concentrated in one location, and shall not form an X pattern. (Tier 2: Sec. 4.3.3.9)

Lateral-Force-Resisting System

C	NC	N/A	REDUNDANCY: The number of lines of shear walls in each principal direction shall be greater than or equal to 2 for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.1.1)
C	NC	N/A	SHEAR STRESS CHECK: The shear stress in the concrete shear walls, calculated using the Quick Check procedure of Section 3.5.3.3, shall be less than the greater of 100 psi or 2*sqrt(f'c) for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.2.1)
C	NC	N/A	REINFORCING STEEL: The ratio of reinforcing steel area to gross concrete area shall be not less than 0.0015 in the vertical direction and 0.0025 in the horizontal direction for Life Safety and Immediate Occupancy. The spacing of reinforcing steel shall be equal to or less than 18 inches for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.2.2)

Basic Structural Checklist for Building Type C2A: Concrete Shear Walls with Flexible Diaphragms
BUILDING 2 - DRAMA WORKSHOP Sheet 3 of 3

Connections

C	**NC**	**N/A**	WALL ANCHORAGE: Exterior concrete or masonry walls that are dependent on 1he diaphragm for lateral support shall be anchored for out-of-plane forces at each diaphragm level with steel anchors, reinforcing dowels, or straps that are developed into the diaphragm. Connections shall have adequate strength to resist the connection force calculated in the Quick Check procedure of Section 3.5.3.7. (Tier 2: Sec. 4.6.1.1)
C	**NC**	**N/A**	TRANSFER TO SHEAR WALLS: Diaphragms shall be connected for transfer of loads to the shear walls for Life Safety and the connections shall be able to develop the lesser of the shear strength of the walls or diaphragms for Immediate Occupancy. (Tier 2 Sec. 4.6.2.1)
C	**NC**	**N/A**	FOUNDATION DOWELS: Wall reinforcement shall be doweled into the foundation for Life Safety, and the dowels shall be able to develop the lesser of the strength of the walls or the uplift capacity of the foundation for Immediate Occupancy. (Tier 2: Sec. 4.6.3.5)

Supplemental Structural Checklist for Building Type C2A: Concrete Shear Walls with Flexible Diaphragms

BUILDING 2 – DRAMA WORKSHOP Sheet 1 of 3

Lateral-Force-Resisting System

C	NC	N/A	COUPLING BEAMS: The stirrups in coupling beams over means of egress shall be spaced at or less than d/2 and shall be anchored into the confined core of the beam with hooks of 135° or more for Life Safety. All coupling beams shall comply with the requirements above and shall have the capacity in shear to develop the uplift capacity of the adjacent wall for Immediate Occupancy. (Tier 2: Sec. 4.4.2.2.3)
C	NC	N/A	OVERTURNING: All shear walls shall have aspect ratios less than 4-to-1. Wall piers need not be considered. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.2.4)
C	NC	N/A	CONFINEMENT REINFORCING: For shear walls with aspect ratios greater than 2-to-1, the boundary elements shall be confined with spirals or ties with spacing less than 8d1t- This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.2.5)
C	NC	N/A	REINFORCING AT OPENINGS: There shall be added trim reinforcement around all wall openings with a dimension greater than three times the thickness of the wall. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.2.6)
C	NC	N/A	WALL THICKNESS: Thickness of bearing walls shall not be less than 1/25 the unsupported height or length, whichever is shorter, nor less than 4 inches. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.2.7)

Diaphragms

C	NC	N/A	DIAPHRAGM CONTINUITY: The diaphragms shall not be composed of split-level floors and shall not have expansion joints. (Tier 2: Sec. 4.5.1.1)
C	NC	N/A	CROSS TIES: There shall be continuous cross ties between diaphragm chords. (Tier 2: Sec. 4.5.1.2)

Supplemental Structural Checklist for Building Type C2A: Concrete Shear Walls with Flexible Diaphragms

BUILDING 2 – DRAMA WORKSHOP Sheet 2 of 3

C	NC	N/A	OPENINGS AT SHEAR WALLS: Diaphragm openings immediately adjacent to the shear walls shall be less than 25 percent of the wall length for Life Safety and 15 percent of the wall length for Immediate Occupancy. (Tier 2: Sec. 4.5. I .4)
C	NC	N/A	PLAN IRREGULARITIES: There shall be tensile capacity to develop the strength of the diaphragm at re-entrant comers or other locations of plan irregularities. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.7)
C	NC	N/A	DIAPHRAGM REINFORCEMENT AT OPENINGS: There shall be reinforcing around all diaphragm openings larger than 50 percent of the building width in either major plan dimension. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.8)
C	NC	N/A	STRAIGHT SHEATHING: All straight sheathed diaphragms shall have aspect ratios less than 2-to-1 for Life Safety and 1-to-1 for Immediate Occupancy in the direction being considered. (Tier 2: Sec. 4.5.2.1)
C	NC	N/A	SPANS: All wood diaphragms with spans greater than 24 feet for Life Safety and 12 feet for Immediate Occupancy shall consist of wood structural panels or diagonal sheathing. (Tier 2: Sec. 4.5.2.2)
C	NC	N/A	UNBLOCKED DIAPHRAGMS: All diagonally sheathed or unblocked wood structural panel diaphragms shall have horizontal spans less than 40 feet for Life Safety and 30 feet for Immediate Occupancy and shall have aspect ratios less than or equal to 4-to-1 for Life Safety and 3-to-1 for Immediate Occupancy. (Tier 2: Sec. 4.5.2.3)
C	NC	N/A	NON-CONCRETE FILLED DIAPHRAGMS: Untopped metal deck diaphragms or metal deck diaphragms with fill other than concrete shall consist of horizontal spans of less than 40 feet and shall have span/depth ratios less than 4-to-1. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.3. I)

Supplemental Structural Checklist for Building Type C2A: Concrete Shear Walls with Flexible Diaphragms
BUILDING 2 – DRAMA WORKSHOP Sheet 3 of 3

C	NC	N/A	OTHER DIAPHRAGMS: The diaphragm shall not consist of a system other than wood, metal deck, concrete, or horizontal bracing. (Tier 2: Sec. 4.5.7.1)

Connections

C	NC	N/A	UPLIFT AT PILE CAPS: Pile caps shall have top reinforcement and piles shall be anchored to the pile caps for Life Safety, and the pile cap reinforcement and pile anchorage shall be able to develop the tensile capacity of the piles for Immediate Occupancy. (Tier 2: Sec. 4.6.3.10)

Basic Nonstructural Component Checklist Sheet 1 of 4
BUILDING 2 – DRAMA WORKSHOP

Partitions

C	NC	N/A	UNREINFORCED MASONRY: Unreinforced masonry or hollow clay tile partitions shall be braced at a spacing equal to or less than 10 feet in levels of low or moderate seismicity and 6 feet in levels of high seismicity. (Tier 2: Sec. 4.8.1.1)

Ceiling Systems

C	NC	N/A	SUPPORT: The integrated suspended ceiling system shall not be used to laterally support the tops of gypsum board, masonry, or hollow clay tile partitions. Gypsum board partitions need not be evaluated where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier2: Sec. 4.8.2.1)

Light Fixtures

C	NC	N/A	EMERGENCY LIGHTING: Emergency lighting shall be anchored or braced to prevent falling during an earthquake. (Tier 2: Sec. 4.8.3.1)

Cladding and Glazing

C	NC	N/A	CLADDING ANCHORS: Cladding components weighing more than 10 psf shall be mechanically anchored to the exterior wall framing at a spacing equal to or less than 4 feet. A spacing of up to 6 feet is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.1)
C	NC	N/A	DETERIORATION: There shall be no evidence of deterioration, damage or corrosion in any of the connection elements. (Tier 2: Sec. 4.8.4.2)
C	NC	N/A	CLADDING ISOLATION: For moment frame buildings of steel or concrete, panel connections shall be detailed to accommodate a story drift ratio of 0.02. Panel connection detailing for a story drift ratio of 0.01 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.3)

Basic Nonstructural Component Checklist Sheet 2 of 4
BUILDING 2 – DRAMA WORKSHOP

C	NC	N/A	MULTI-STORY PANELS: For multi-story panels attached at each floor level, panel connections shall be detailed to accommodate a story drift ratio of 0.02. Panel connection detailing for a story drift ratio of 0.01 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.4)
C	NC	N/A	BEARING CONNECTIONS: Where bearing connections are required, there shall be a minimum of two bearing connections for each wall panel. (Tier 2: Sec. 4.8.4.5)
C	NC	N/A	INSERTS: Where inserts are used in concrete connections, the inserts shall be anchored to reinforcing steel or other positive anchorage. (Tier 2: Sec. 4.8.4.6)
C	NC	N/A	PANEL CONNECTIONS: Exterior cladding panels shall be anchored out-of-plane with a minimum of 4 connections for each wall panel. Two connections per wall panel are permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.7)

Masonry Veneer

C	NC	N/A	SHELF ANGLES: Masonry veneer shall be supported by shelf angles or other elements at each floor 30 feet or more above ground for Life Safety and at each floor above the first floor for Immediate Occupancy. (Tier 2: Sec. 4.8.5.1)
C	NC	N/A	TIES: Masonry veneer shall be connected to the back-up with corrosion-resistant ties. The ties shall have a spacing equal to or less than 24 inches with a minimum of one tie for every 2-2/3 square feet. A spacing of up to 36 inches is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.5.2)
C	NC	NA	WEAKENED PLANES: Masonry veneer shall be anchored to the back-up adjacent to weakened planes, such as at the locations of flashing. (Tier 2: Sec. 4.8.5.3)
C	NC	N/A	DETERIORATION: There shall be no evidence of deterioration, damage, or corrosion in any of the connection elements. (Tier 2: Sec. 4.8.5.4)

Basic Nonstructural Component Checklist
BUILDING 2 – DRAMA WORKSHOP

Sheet 3 of 4

Parapets, Cornices, Ornamentation, and Appendages

C	NC	N/A	URM PARAPETS: There shall be no laterally unsupported unreinforced masonry parapets or cornices with height-to-thickness ratios greater than 1.5. A height-to-thickness ratio of up to 2.5 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.8.1)
C	NC	N/A	CANOPIES: Canopies located at building exits shall be anchored to the structural framing at a spacing of 6 feet or less. An anchorage spacing of up to 10 feet is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.8.2)

Masonry Chimneys

C	NC	N/A	URM CHIMNEYS: No unreinforced masonry chimney shall extend above the roof surface more than twice the least dimension of the chimney. A height above the roof surface of up to three times the least dimension of the chimney is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.9.1)

Stairs

C	NC	N/A	URM WALLS: Walls around stair enclosures shall not consist of unbraced hollow clay tile or unreinforced masonry with a height-to-thickness ratio greater than 12-to-1. A height-to-thickness ratio of up to 15-to-1 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.10.1)
C	NC	N/A	STAIR DETAILS: In moment frame structures, the connection between the stairs and the structure shall not rely on shallow anchors in concrete. Alternatively, the stair details shall be capable of accommodating the drift calculated using the Quick Check procedure of Section 3.5.3.1 without including tension in the anchors. (Tier 2: Sec. 4.8.10.2)

Basic Nonstructural Component Checklist
BUILDING 2 – DRAMA WORKSHOP

Sheet 4 of 4

Building Contents and Furnishing

C	NC	N/A	TALL NARROW CONTENTS: Contents over 4 feet in height with a height-to-depth or height-to-width ratio greater than 3-to-1 shall be anchored to the floor slab or adjacent structural walls. A height-to-depth or height-to-width ratio of up to 4-to-1 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.11.1)

Mechanical and Electrical Equipment

C	NC	N/A	EMERGENCY POWER: Equipment used as part of an emergency power system shall be mounted to maintain continued operation after an earthquake. (Tier 2: Sec. 4.8.12.1)
C	NC	N/A	HAZARDOUS MATERIAL EQUIPMENT: HVAC or other equipment containing hazardous material shall not have damaged supply lines or unbraced isolation supports. (Tier 2:Sec. 4.8.12.2)
C	NC	N/A	DETERIORATION: There shall be no evidence of deterioration, damage, or corrosion in any of the anchorage or supports of mechanical or electrical equipment. (Tier 2: Sec. 4.8.12.3)
C	NC	N/A	ATTACHED EQUIPMENT: Equipment weighing over 20 lb that is attached to ceilings, walls, or other supports 4 feet above the floor level shall be braced. (Tier 2: Sec. 4.8.12.4)

Piping

C	NC	N/A	FIRE SUPPRESSION PIPING: Fire suppression piping shall be anchored and braced in accordance with NFPA-13 (NFPA, 1996). (Tier 2: Sec. 4.8.13.1)
C	NC	N/A	FLEXIBLE COUPLINGS: Fluid, gas, and fire suppression piping shall have flexible couplings. (Tier 2: Sec. 4.8.13.2)

Hazardous Materials Storage and Distribution

C	NC	N/A	TOXIC SUBSTANCES: Toxic and hazardous substances stored in breakable containers shall be restrained from falling by latched doors, shelf lips, wires, or other methods. (Tier 2: Sec. 4.8.15.1)

Intermediate Nonstructural Component Checklist Sheet 1 of 2
BUILDING 2 – DRAMA WORKSHOP

Ceiling Systems

C	NC	N/A	LAY-IN TILES: Lay-in tiles used in ceiling panels located at exits and corridors shall be secured with clips. (Tier 2: Sec. 4.8.2.2)
C	NC	N/A	INTEGRATED CEILINGS: Integrated suspended ceilings at exits and corridors or weighing more than 2 pounds per square foot shall be laterally restrained with a minimum of four diagonal wires or rigid members attached to the structure above at a spacing equal to or less than 12 feet. (Tier 2: Sec. 4.8.2.3)
C	NC	N/A	SUSPENDED LATH AND PLASTER: Ceilings consisting of suspended lath and plaster or gypsum board shall be attached to resist seismic forces for every 12 square feet of area. (Tier 2: Sec. 4.8.2.4)

Light Fixtures

C	NC	N/A	INDEPENDENT SUPPORT: Light fixtures in suspended grid ceilings shall be supported independently of the ceiling suspension system by a minimum of two wires at diagonally opposite corners of the fixtures. (Tier 2: Sec. 4.8.3.2)

Cladding and Glazing

C	NC	N/A	GLAZING: Glazing in curtain walls and individual panes over 16 square feet in area, located up to a height of 10 feet above an exterior walking surface, shall have safety glazing. Such glazing located over 10 feet above an exterior walking surface shall be laminated annealed or laminated heat-strengthened safety glass or other glazing system that will remain in the frame when glass is cracked. (Tier 2: Sec. 4.8.4.8)

Parapets, Cornices, Ornamentation, and Appendages

C	NC	N/A	CONCRETE PARAPETS: Concrete parapets with height-to-thickness ratios greater than 2.5 shall have vertical reinforcement. (Tier 2: Sec. 4.8.8.3)

Intermediate Nonstructural Component Checklist Sheet 2 of 2
BUILDING 2 – DRAMA WORKSHOP

C	NC	N/A	APPENDAGES: Cornices, parapets, signs, and other appendages that extend above the highest point of anchorage to the structure or cantilever from exterior wall faces and other exterior wall ornamentation shall be reinforced and anchored to the structural system at a spacing equal to or less than 10 feet for Life Safety and 6 feet for Immediate Occupancy. This requirement need not apply to parapets or cornices compliant with Section 4.8.8.1 or 4.8.8.3. (Tier 2: Sec. 4.8.8.4)

Masonry Chimneys

C	NC	N/A	ANCHORAGE: Masonry chimneys shall be anchored at each floor level and the roof. (Tier 2: Sec.4.8.9.2)

Mechanical and Electrical Equipment

C	NC	N/A	VIBRATION ISOLATORS: Equipment mounted on vibration isolators shall be equipped with restraints or snubbers. (Tier 2: Sec. 4.8.12.5)

Ducts

C	NC	N/A	STAIR AND SMOKE DUCTS: Stair pressurization and smoke control ducts shall be braced and shall have flexible connections at seismic joints. (Tier 2: Sec. 4.8.14.1)

6.3.3 BUILDING 4 – MUSIC

Building Description

YEAR OF CONSTRUCTION: 1954
YEAR OF ALTERATIONS: 1964 - Addition
BUILDING TYPE: W2, RM1

GENERAL BUILDING DESCRIPTION: Based on the drawings provided and dated circa 1954, the original building comprises wood framed walls combined with reinforced brick walls and a steel framed roof. In 1964, at the south end of the existing structure a building similar in shape and construction type was added to the original construction. Walkway canopies connected to other buildings are directly attached to the building.

For exterior views, see pictures Bldg04-01 to Bldg04-04.

VERTICAL STRUCTURAL SYSTEM: The original building roof framing comprises steel members with wood nailers and diagonal sheathing at the diaphragm level. The roof for the 1964 addition comprises wood framing and structural panels. The wood framed walls extend from the foundation to the roof framing.

LATERAL STRUCTURAL SYSTEM: The main lateral force resisting system of the original structure entails wood framed walls with diagonal sheathing. The 1964 addition was carried out with structural panels at the wood framed walls in lieu of the diagonal sheathing. The diaphragm comprises diagonal sheathing and structural panels for the original structure and addition respectively.

NON-STRUCTURAL SYSTEMS: Integrated ceilings appear to have compression struts and splay wires and the ceiling mounted lights are suspended independently by wires from two opposite diagonal corners.

For non-structural systems and items present within the building, see pictures Bldg04-05 and Bldg04-06.

List of Deficiencies

The following items have been found noncompliant in accordance with the requirements of ASCE31-03:

Structural

1. INADEQUATE WALL ANCHORAGE: Wall anchorages of masonry walls to diaphragm do not have the adequate strength to resist the out-of-plane connection force calculated by the ASCE 31-03 Tier 1 Quick Check Procedure.
2. PROXIMITY OF ADJACENT BUILDINGS: The clear distance between the adjacent buildings is less than 4 percent of the height; walkway canopies are directly attached, and further connect to buildings.
3. NO CROSS TIES: There are typically no cross ties between diaphragm chords.

Non-structural

4. INADEQUATE INTEGRATED CEILING SUPPORT: Lateral restraint of integrated suspended ceilings at exits and corridors are not compliant.
5. NO INDEPENDENT LIGHT FIXTURE SUPPORT: Light fixtures in the suspended grid ceilings are not supported independently of the ceiling suspension system.

Additional Observations

Within the original structure, at the south wall which connects to the new addition, there is an area with a low roof connecting to a mechanical room. This lower diaphragm contains reentrant corners which include no collectors. While this item is not specifically identified on a checklist for the building, this deficiency should be noted, as that it compromises the building's seismic lateral performance.

BUILDING 4 – MUSIC, PICTURES

Bldg04-01

Bldg04-02

Bldg04-03

Bldg04-04

Bldg04-05

Bldg04-06

Basic Structural Checklist for Building Type W2: Wood Frames, Commercial and Industrial

BUILDING 4 - Music Sheet 1 of 3

Building System

C	**NC**	**N/A**	LOAD PATH: The structure shall contain a minimum of one complete load path for Life Safety and Immediate Occupancy for seismic force effects from any horizontal direction that serves to transfer the inertial forces from the mass to the foundation. (Tier 2: Sec. 4.3.1.1)
C	**NC**	**N/A**	MEZZANINES: Interior mezzanine levels shall be braced independently from the main structure, or shall be anchored to the lateral-force-resisting elements of the main structure. (Tier 2:Sec. 4.3. 1.3)
C	**NC**	**N/A**	WEAK STORY: The strength of the lateral-force-resisting system in any story shall not be less than 80 percent of the strength in an adjacent story, above or below, for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.1)
C	**NC**	**N/A**	SOFT STORY: The stiffness of the lateral-force-resisting system in any story shall not be less than 70 percent of the lateral-force-resisting system stiffness in an adjacent story above or below, or less than 80 percent of the average lateral-force-resisting system stiffness of the three stories above or below for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.2)
C	**NC**	**N/A**	GEOMETRY: There shall be no changes in horizontal dimension of the lateral-force-resisting system of more than 30 percent in a story relative to adjacent stories for Life Safety and Immediate Occupancy, excluding one-story penthouses and mezzanines. (Tier 2: Sec. 4.3.2.3)
C	**NC**	**N/A**	VERTICAL DISCONTINUITIES: All vertical elements in the lateral-force-resisting system shall be continuous to the foundation. (Tier 2: Sec. 4.3.2.4)
C	**NC**	**N/A**	MASS: There shall be no change in effective mass more than 50 percent from one story to the next for Life Safety and Immediate Occupancy. Light roofs, penthouses, and mezzanines need not be considered. (Tier 2: Sec. 4.3.2.5)

Basic Structural Checklist for Building Type W2: Wood Frames, Commercial and Industrial
BUILDING 4 - Music Sheet 2 of 3

C	NC	N/A	DETERIORATION OF WOOD: There shall be no signs of decay, shrinkage, splitting, fire damage, or sagging in any of the wood members, and none of the metal connection hardware shall be deteriorated, broken, or loose. (Tier 2: Sec. 4.3.3. 1)
C	NC	N/A	WOOD STRUCTURAL PANEL SHEAR WALL FASTENERS: There shall be no more than 15 percent of inadequate fastening such as overdriven fasteners, omitted blocking, excessive fastening spacing, or inadequate edge distance. TI1is statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.3.3.2)

Lateral-Force-Resisting System

C	NC	N/A	REDUNDANCY: The number of lines of shear walls in each principal direction shall be greater than or equal to 2 for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.1.1)
C	NC	N/A	SHEAR STRESS CHECK: The shear stress in the shear walls, calculated using the Quick Check procedure of Section 3.5.3.3, shall be less than the following values for Life Safety and Immediate Occupancy (Tier 2: Sec. 4.4.2. 7.1): Structural panel sheathing 1,000 plf Diagonal sheathing 700 plf Straight sheathing 100 plf All other conditions 100 plf
C	NC	N/A	STUCCO (EXTERIOR PLASTER) SHEAR WALLS: Multi-story buildings shall not rely on exterior stucco walls as the primary lateral-force-resisting system. (Tier 2: Sec. 4.4.2.7.2)
C	NC	N/A	GYPSUM WALLBOARD OR PLASTER SHEAR WALLS: Interior plaster or gypsum wallboard shall not be used as shear walls on buildings over one story in height with the exception of the uppermost level of a multi-story building. (Tier 2: Sec. 4.4.2.7.3)

Basic Structural Checklist for Building Type W2: Wood Frames, Commercial and Industrial
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C	NC	N/A	NARROW WOOD SHEAR WALLS: Narrow wood shear walls with an aspect ratio greater than 2-to-1 for Life Safety and 1.5-to-1 for Immediate Occupancy shall not be used to resist lateral forces developed in the building in levels of moderate and high seismicity. Narrow wood shear walls with an aspect ratio greater than 2-to-I for Immediate Occupancy shall not be used to resist lateral forces developed in the building in levels of low seismicity. (Tier 2: Sec. 4.4.2.7.4)
C	NC	N/A	WALLS CONNECTED THROUGH FLOORS: Shear walls shall have interconnection between stories to transfer overturning and shear forces through the floor. (Tier 2: Sec. 4.4.2.7.5)
C	NC	N/A	HILLSIDE SITE: For structures that are taller on at least one side by more than one-half story due to a sloping site, all shear walls on the downhill slope shall have an aspect ratio less than 1-to-1 for Life Safety and 1-to-2 for Immediate Occupancy. (Tier 2: Sec. 4.4.2.7.6)
C	NC	N/A	CRIPPLE WALLS: Cripple walls below first-floor-level shear walls shall be braced to the foundation with wood structural panels. (Tier 2: Sec. 4.4.2. 7. 7)
C	NC	N/A	OPENINGS: Walls with openings greater than 80 percent of the length shall be braced with wood structural panel shear walls with aspect ratios of not more than 1.5-to-1 or shall be supported by adjacent construction through positive tics capable of transferring the lateral forces. (Tier 2: Sec. 4.4.2.7.8)

Connections

C	NC	N/A	WOOD POSTS: There shall be a positive connection of wood posts to the foundation. (Tier 2: Sec. 4.6.3.3)
C	NC	N/A	WOOD SILLS: All wood sills shall be bolted to the foundation. (Tier 2: Sec. 4.6.3.4)
C	NC	N/A	GIRDER/COLUMN CONNECTION: There shall be a positive connection utilizing plates, connection hardware, or straps between the girder and the column support. (Tier 2: Sec. 4.6.4.1)

Supplemental Structural Checklist for Building Type W2: Wood Frames, Commercial and Industrial
BUILDING 4 - Music Sheet 1 of 2

Lateral-Force-Resisting System

C	NC	N/A	HOLD-DOWN ANCHORS: All shear walls shall have hold-down anchors constructed per acceptable construction practices, attached to the end studs. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.7.9)

Diaphragms

C	NC	N/A	DIAPHRAGM CONTINUITY: The diaphragms shall not be composed of split-level floors and shall not have expansion joints. (Tier 2: Sec. 4.5.1.1)
C	NC	N/A	ROOF CHORD CONTINUITY: All chord elements shall be continuous, regardless of changes in roof elevation. (Tier 2: Sec. 4.5.1.3)
C	NC	N/A	PLAN IRREGULARITIES: There shall be tensile capacity to develop the strength of the diaphragm at re-entrant comers or other locations of plan irregularities. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.7)
C	NC	N/A	DIAPHRAGM REINFORCEMENT AT OPENINGS: There shall be reinforcing around all diaphragm openings larger than 50 percent of the building width in either major plan dimension. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.8)
C	NC	N/A	STRAIGHT SHEATHING: All straight sheathed diaphragms shall have aspect ratios less than 2-to-1 for Life Safety and 1-to-1 for Immediate Occupancy in the direction being considered. (Tier 2: Sec. 4.5.2.1)
C	NC	N/A	SPANS: All wood diaphragms with spans greater than 24 feet for Life Safety and 12 feet for Immediate Occupancy shall consist of wood structural panels or diagonal sheathing. Wood commercial and industrial buildings may have rod-braced systems. (Tier 2: Sec. 4.5.2.2)

Supplemental Structural Checklist for Building Type W2: Wood Frames, Commercial and Industrial
BUILDING 4 - Music Sheet 2 of 2

C	NC	N/A	UNBLOCKED DIAPHRAGMS: All diagonally sheathed or unblocked wood structural panel diaphragms shall have horizontal spans less than 40 feet for Life Safety and 30 feet for Immediate Occupancy and shall have aspect ratios less than or equal to 4-to-1 for Life Safety and 3-to-1 for Immediate Occupancy. (Tier 2: Sec. 4.5.2.3)
C	NC	N/A	OTHER DIAPHRAGMS: The diaphragm shall not consist of a system other than wood, metal deck, concrete, or horizontal bracing. (Tier 2: Sec. 4.5.7.1)

Connections

C	NC	N/A	WOOD SILL BOLTS: Sill bolts shall be spaced at 6 feet or less for Life Safety and 4 feet or less for Immediate Occupancy, with proper edge and end di stance provided for wood and concrete. (Tier 2: Sec. 4.6.3.9)

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Building System

C	NC	N/A	LOAD PATH: The Structure shall contain a minimum of one complete load path for Life Safety and Immediate Occupancy for seismic force effects from any horizontal direction that serves to transfer the inertial forces from the mass to the foundation. (Tier 2: Sec. 4.3.1.1)
C	NC	N/A	ADJACENT BUILDINGS: The clear distance between the building being evaluated and any adjacent building shall be greater than 4 percent of the height of the shorter building for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.1.2)
C	NC	N/A	MEZZANINES: Interior mezzanine levels shall be braced independently from the main structure, or shall be anchored to the lateral-force-resisting elements of the main structure. (Tier 2: Sec. 4.3.1.3)
C	NC	N/A	WEAK STORY: The strength of the lateral-force-resisting system in any story shall not be less than 80 percent of the strength in an adjacent story, above or below, for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.1)
C	NC	N/A	SOFT STORY: The stiffness of the lateral-force-resisting system in any story shall not be less than 70 percent of the lateral-force-resisting system stiffness in an adjacent story above or below, or less than 8- percent of the average lateral-force-resisting system stiffness of the three stories above or below for Life Safety an Immediate Occupancy. (Tier 2: Sec. 4.3.2.2)
C	NC	N/A	GEOMETRY: There shall be no changes in horizontal dimension of the lateral-force-resisting system of more than 30 percent in a story relative to adjacent stories for Life Safety and Immediate Occupancy, excluding one-story penthouses and mezzanines. (Tier 2: Sec. 4.3.2.3)
C	NC	N/A	VERTICAL DISCONTINUITIES: All vertical elements in the lateral-force-resisting system shall be continuous to the foundation. (Tier 2: Sec. 4.3.2.4)

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C	NC	N/A	MASS: There shall be no change in effective mass more than 50 percent from one story to the next Life safety and Immediate Occupancy. Light roofs, penthouses, and mezzanines need not be considered. (Tier 2: Sec. 4.3.2.5)
C	NC	N/A	DETERIORATION OF WOOD: There shall be no signs of decay, shrinkage, splitting, fire damage, or sagging in any of the wood members, and none of the metal connection hardware shall be deteriorated, broken, or loose. (Tier 2: Sec. 4.3.3.1)
C	NC	N/A	MASONRY UNITS: There shall be no visible deterioration of masonry units. (Tier 2: Sec. 4.3.3.7)
C	NC	N/A	MASONRY JOINTS: The mortar shall not be easily scraped away from the joints by hand with a metal tool, and there shall be no areas of eroded mortar. (Tier 2: Sec. 4.3.3.8)
C	NC	N/A	REINFORCED MASONRY WALL CRACKS: All existing diagonal cracks in wall elements shall be less than 118 inch for Life Safety and 1/16 inch for Immediate Occupancy, shall not be concentrated in one location, and shall not form an X pattern. (Tier 2: Sec. 4.3.3.10)

Lateral-Force-Resisting System

C	NC	N/A	REDUNDANCY: The number of lines of shear walls in each principal direction shall be greater than or equal to 2 for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.1.1)
C	NC	N/A	SHEAR STRESS CHECK: The shear stress in I.be reinforced masonry shear walls, calculated using the Quick Check procedure of Section 3.5.3.3, shall be less than 70 psi for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.4.1)

Basic Structural Checklist for Building Type RM1: Reinforced Masonry Bearing Walls with Flexible Diaphragms

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C	NC	N/A	REINFORCING STEEL: The total vertical and horizontal reinforcing steel ratio in reinforced masonry walls shall be greater than 0.002 for Life Safety and Immediate Occupancy of the wall with the minimum of 0.0007 for Life Safety and Immediate Occupancy in either of the two directions; the spacing of reinforcing steel shall be less than 48 inches for Life Safety and Immediate Occupancy; and all vertical bars shall extend to the top of the walls. (Tier 2: Sec. 4.4.2.4.2)

Connections

C	NC	N/A	WALL ANCHORAGE: Exterior concrete or masonry walls that are dependent on the diaphragm for lateral support shall be anchored for out-of-plane forces at each diaphragm level with steel anchors, reinforcing dowels, or straps that are developed into the diaphragm. Connections shall have adequate strength to resist the connection force calculated in the Quick Check procedure of Section 3.5.3. 7. (Tier 2: Sec. 4.6.1.1)
C	NC	N/A	WOOD LEDGERS: The connection between the wall panels and the diaphragm shall not induce cross-grain bending or tension in the wood ledgers. (Tier 2: Sec. 4.6.1.2)
C	NC	N/A	TRANSFER TO SHEAR WALLS: Diaphragms shall be connected for transfer of loads to the shear walls for Life Safety and the connections shall be able to develop the lesser of the shear strength of the walls or diaphragms for Immediate Occupancy. (Tier 2: Sec. 4.6.2.1)
C	NC	N/A	FOUNDATION DOWELS: Wall reinforcement shall be doweled into the foundation for Life Safety, and the dowels shall be able to develop the lesser of the strength of the walls or the uplift capacity of the foundation for Immediate Occupancy. (Tier 2: Sec. 4.6.3.5)
C	NC	N/A	GIRDER/COLUMN CONNECTION: There shall be a positive connection utilizing plates, connection hardware, or straps between the girder and the column support. (Tier 2: Sec. 4.6.4.1)

Supplemental Structural Checklist for Building Type RM1: Reinforced Masonry Bearing Walls with Flexible Diaphragms
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Lateral-Force-Resisting System

C	NC	N/A	REINFORCING AT OPENINGS: All wall openings that interrupt rebar shall have trim reinforcing on all sides. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.4.3)
C	NC	N/A	PROPORTIONS: The height-to-thickness ratio of the shear walls at each story shall be less than 30. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.4.4)

Diaphragms

C	NC	N/A	CROSS TIES: There shall be continuous cross ties between diaphragm chords. (Tier 2: Sec. 4.5.1.2)
C	NC	N/A	OPENINGS AT SHEAR WALLS: Diaphragm openings immediately adjacent to the shear walls shall be less than 25 percent of the wall length for Life Safety and 15 percent of the wall length for Immediate Occupancy. (Tier 2: Sec. 4.5.1.4)
C	NC	N/A	OPENINGS AT EXTERIOR MASONRY SHEAR WALLS: Diaphragm openings immediately adjacent to exterior masonry shear walls shall not be greater than 8 feet long for Life Safety and 4 feet long for Immediate Occupancy. (Tier 2: Sec. 4.5.1.6)
C	NC	N/A	PLAN IRREGULARITIES: There shall be tensile capacity to develop the strength of the diaphragm at re-entrant comers or other locations of plan irregularities. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.7)
C	NC	N/A	DIAPHRAGM REINFORCEMENT AT OPENINGS: There shall be reinforcing around all diaphragm openings larger than 50 percent of the building width in either major plan dimension. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.8)

Supplemental Structural Checklist for Building Type RM1: Reinforced Masonry Bearing Walls with Flexible Diaphragms
BUILDING 4 – MUSIC Sheet 2 of 2

C	NC	N/A	STRAIGHT SHEATHING: All straight sheathed diaphragms shall have aspect ratios less than 2-to-1 for Life Safety and 1-to-1 for Immediate Occupancy in the direction being considered. (Tier 2: Sec. 4.5.2.1)
C	NC	N/A	SPANS: All wood diaphragms with spans greater than 24 feet for Life Safety and 12 feet for Immediate Occupancy shall consist of wood structural panels or diagonal sheathing. (Tier 2: Sec. 4.5.2.2)
C	NC	N/A	UNBLOCKED DIAPHRAGMS: All diagonally sheathed or unblocked wood structural panel diaphragms shall have horizontal spans less than 40 feet for Life Safety and 30 feet for Immediate Occupancy and shall have aspect ratios less than or equal to 4-to-1 for Life Safety and 3-to-J for Immediate Occupancy. (Tier 2: Sec. 4.5.2.3)
C	NC	N/A	NON-CONCRETE FILLED DIAPHRAGMS: Untopped metal deck diaphragms or metal deck diaphragms with fill other than concrete shall consist of horizontal spans of less than 40 feet and shall have span/depth ratios less than 4-to-1. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.3.1)
C	NC	N/A	OTHER DIAPHRAGMS: The diaphragm shall not consist of a system other than wood, metal deck, concrete, or horizontal bracing. (Tier 2: Sec. 4.5. 7.1)

Connections

C	NC	N/A	STIFFNESS OF WALL ANCHORS: Anchors of concrete or masonry walls to wood structural elements shall be installed taut and shall be stiff enough to limit the relative movement between the wall and the diaphragm to no greater than 1/8 inch prior to engagement of the anchors. (Tier 2:Sec. 4.6.1.4)

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Partitions

C	NC	N/A	UNREINFORCED MASONRY: Unreinforced masonry or hollow clay tile partitions shall be braced at a spacing equal to or less than 10 feet in levels of low or moderate seismicity and 6 feet in levels of high seismicity. (Tier 2: Sec. 4.8.1.1)

Ceiling Systems

C	NC	N/A	SUPPORT: The integrated suspended ceiling system shall not be used to laterally support the tops of gypsum board, masonry, or hollow clay tile partitions. Gypsum board partitions need not be evaluated where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier2: Sec. 4.8.2.1)

Light Fixtures

C	NC	N/A	EMERGENCY LIGHTING: Emergency lighting shall be anchored or braced to prevent falling during an earthquake. (Tier 2: Sec. 4.8.3.1)

Cladding and Glazing

C	NC	N/A	CLADDING ANCHORS: Cladding components weighing more than 10 psf shall be mechanically anchored to the exterior wall framing at a spacing equal to or less than 4 feet. A spacing of up to 6 feet is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.1)
C	NC	N/A	DETERIORATION: There shall be no evidence of deterioration, damage or corrosion in any of the connection elements. (Tier 2: Sec. 4.8.4.2)
C	NC	N/A	CLADDING ISOLATION: For moment frame buildings of steel or concrete, panel connections shall be detailed to accommodate a story drift ratio of 0.02. Panel connection detailing for a story drift ratio of 0.01 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.3)

Basic Nonstructural Component Checklist Sheet 2 of 4
BUILDING 4 – MUSIC

C	NC	N/A	MULTI-STORY PANELS: For multi-story panels attached at each floor level, panel connections shall be detailed to accommodate a story drift ratio of 0.02. Panel connection detailing for a story drift ratio of 0.01 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.4)
C	NC	N/A	BEARING CONNECTIONS: Where bearing connections are required, there shall be a minimum of two bearing connections for each wall panel. (Tier 2: Sec. 4.8.4.5)
C	NC	N/A	INSERTS: Where inserts are used in concrete connections, the inserts shall be anchored to reinforcing steel or other positive anchorage. (Tier 2: Sec. 4.8.4.6)
C	NC	N/A	PANEL CONNECTIONS: Exterior cladding panels shall be anchored out-of-plane with a minimum of 4 connections for each wall panel. Two connections per wall panel are permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.7)

Masonry Veneer

C	NC	NA	SHELF ANGLES: Masonry veneer shall be supported by shelf angles or other elements at each floor 30 feet or more above ground for Life Safety and at each floor above the first floor for Immediate Occupancy. (Tier 2: Sec. 4.8.5.1)
C	NC	N/A	TIES: Masonry veneer shall be connected to the back-up with corrosion-resistant ties. The ties shall have a spacing equal to or less than 24 inches with a minimum of one tie for every 2-2/3 square feet. A spacing of up to 36 inches is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.5.2)
C	NC	N/A	WEAKENED PLANES: Masonry veneer shall be anchored to the back-up adjacent to weakened planes, such as at the locations of flashing. (Tier 2: Sec. 4.8.5.3)
C	NC	N/A	DETERIORATION: There shall be no evidence of deterioration, damage, or corrosion in any of the connection elements. (Tier 2: Sec. 4.8.5.4)

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BUILDING 4 – MUSIC

Parapets, Cornices, Ornamentation, and Appendages

C	NC	N/A	URM PARAPETS: There shall be no laterally unsupported unreinforced masonry parapets or cornices with height-to-thickness ratios greater than 1.5. A height-to-thickness ratio of up to 2.5 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.8.1)
C	NC	N/A	CANOPIES: Canopies located at building exits shall be anchored to the structural framing at a spacing of 6 feet or less. An anchorage spacing of up to 10 feet is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.8.2)

Masonry Chimneys

C	NC	N/A	URM CHIMNEYS: No unreinforced masonry chimney shall extend above the roof surface more than twice the least dimension of the chimney. A height above the roof surface of up to three times the least dimension of the chimney is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.9.1)

Stairs

C	NC	N/A	URM WALLS: Walls around stair enclosures shall not consist of unbraced hollow clay tile or unreinforced masonry with a height-to-thickness ratio greater than 12-to-1. A height-to-thickness ratio of up to 15-to-1 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.10.1)
C	NC	N/A	STAIR DETAILS: In moment frame structures, the connection between the stairs and the structure shall not rely on shallow anchors in concrete. Alternatively, the stair details shall be capable of accommodating the drift calculated using the Quick Check procedure of Section 3.5.3.1 without including tension in the anchors. (Tier 2: Sec. 4.8.10.2)

Basic Nonstructural Component Checklist Sheet 4 of 4
BUILDING 4 – MUSIC

Building Contents and Furnishing

C	NC	N/A	TALL NARROW CONTENTS: Contents over 4 feet in height with a height-to-depth or height-to-width ratio greater than 3-to-1 shall be anchored to the floor slab or adjacent structural walls. A height-to-depth or height-to-width ratio of up to 4-to-1 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.11.1)

Mechanical and Electrical Equipment

C	NC	N/A	EMERGENCY POWER: Equipment used as part of an emergency power system shall be mounted to maintain continued operation after an earthquake. (Tier 2: Sec. 4.8.12.1)
C	NC	N/A	HAZARDOUS MATERIAL EQUIPMENT: HVAC or other equipment containing hazardous material shall not have damaged supply lines or unbraced isolation supports. (Tier 2:Sec. 4.8.12.2)
C	NC	N/A	DETERIORATION: There shall be no evidence of deterioration, damage, or corrosion in any of the anchorage or supports of mechanical or electrical equipment. (Tier 2: Sec. 4.8.12.3)
C	NC	N/A	ATTACHED EQUIPMENT: Equipment weighing over 20 lb that is attached to ceilings, walls, or other supports 4 feet above the floor level shall be braced. (Tier 2: Sec. 4.8.12.4)

Piping

C	NC	N/A	FIRE SUPPRESSION PIPING: Fire suppression piping shall be anchored and braced in accordance with NFPA-13 (NFPA, 1996). (Tier 2: Sec. 4.8.13.1)
C	NC	N/A	FLEXIBLE COUPLINGS: Fluid, gas, and fire suppression piping shall have flexible couplings. (Tier 2: Sec. 4.8.13.2)

Hazardous Materials Storage and Distribution

C	NC	N/A	TOXIC SUBSTANCES: Toxic and hazardous substances stored in breakable containers shall be restrained from falling by latched doors, shelf lips, wires, or other methods. (Tier 2: Sec. 4.8.15.1)

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BUILDING 4 – MUSIC

Ceiling Systems

C	NC	N/A	LAY-IN TILES: Lay-in tiles used in ceiling panels located at exits and corridors shall be secured with clips. (Tier 2: Sec. 4.8.2.2)
C	NC	N/A	INTEGRATED CEILINGS: Integrated suspended ceilings at exits and corridors or weighing more than 2 pounds per square foot shall be laterally restrained with a minimum of four diagonal wires or rigid members attached to the structure above at a spacing equal to or less than 12 feet. (Tier 2: Sec. 4.8.2.3)
C	NC	N/A	SUSPENDED LATH AND PLASTER: Ceilings consisting of suspended lath and plaster or gypsum board shall be attached to resist seismic forces for every 12 square feet of area. (Tier 2: Sec. 4.8.2.4)

Light Fixtures

C	NC	N/A	INDEPENDENT SUPPORT: Light fixtures in suspended grid ceilings shall be supported independently of the ceiling suspension system by a minimum of two wires at diagonally opposite corners of the fixtures. (Tier 2: Sec. 4.8.3.2)

Cladding and Glazing

C	NC	N/A	GLAZING: Glazing in curtain walls and individual panes over 16 square feet in area, located up to a height of 10 feet above an exterior walking surface, shall have safety glazing. Such glazing located over 10 feet above an exterior walking surface shall be laminated annealed or laminated heat-strengthened safety glass or other glazing system that will remain in the frame when glass is cracked. (Tier 2: Sec. 4.8.4.8)

Parapets, Cornices, Ornamentation, and Appendages

C	NC	N/A	CONCRETE PARAPETS: Concrete parapets with height-to-thickness ratios greater than 2.5 shall have vertical reinforcement. (Tier 2: Sec. 4.8.8.3)

Intermediate Nonstructural Component Checklist Sheet 2 of 2
BUILDING 4 – MUSIC

C	**NC**	**N/A**	APPENDAGES: Cornices, parapets, signs, and other appendages that extend above the highest point of anchorage to the structure or cantilever from exterior wall faces and other exterior wall ornamentation shall be reinforced and anchored to the structural system at a spacing equal to or less than 10 feet for Life Safety and 6 feet for Immediate Occupancy. This requirement need not apply to parapets or cornices compliant with Section 4.8.8.1 or 4.8.8.3. (Tier 2: Sec. 4.8.8.4)

Masonry Chimneys

C	**NC**	**N/A**	ANCHORAGE: Masonry chimneys shall be anchored at each floor level and the roof. (Tier 2: Sec.4.8.9.2)

Mechanical and Electrical Equipment

C	**NC**	**N/A**	VIBRATION ISOLATORS: Equipment mounted on vibration isolators shall be equipped with restraints or snubbers. (Tier 2: Sec. 4.8.12.5)

Ducts

C	**NC**	**N/A**	STAIR AND SMOKE DUCTS: Stair pressurization and smoke control ducts shall be braced and shall have flexible connections at seismic joints. (Tier 2: Sec. 4.8.14.1)

6.4 BUILDINGS 7, 8 & 9

6.4.1 BUILDING 7 – STUDENT SUCCESS CENTER

Building Description

YEAR OF CONSTRUCTION:	1950
YEAR OF ALTERATIONS:	1959 - Library Addition
	1999 - Seismic Retrofit
BUILDING TYPE:	W2, RM1, S2A, PC1

GENERAL BUILDING DESCRIPTION: Based upon the structural drawings provided to us and dated circa 1950, the original structure, one story high, comprises wood framed, precast concrete and masonry walls with a wood diaphragm supported by steel framing. In 1999, the building underwent a seismic retrofit with significant improvements to the lateral force resisting system. The foundation system was not observed in the field, but study of the original construction documents indicate foundations consisting of continuous wall footings under walls.

For exterior elevations and typical construction, see pictures Bldg07-01 to Bldg07-10.

VERTICAL STRUCTURAL SYSTEM: The gravity system of the building is comprised of steel framing supported on steel columns, precast concrete walls, or reinforced masonry walls which in turn are supported by the continuous concrete footing.

LATERAL STRUCTURAL SYSTEM: The lateral force resisting system for the building includes wood shear walls, masonry shear walls, precast concrete shear walls and steel braced frames along with cantilevered columns. The base fixity of the cantilevered columns in the in-plane direction is achieved by casting them into a masonry stem wall, approximately 3'-4". New shear walls have been added during the 1999 retrofit along with collectors to transfer loads from the diaphragm into the various resisting elements. Plywood sheathing has also been added over the diagonal sheathing at the roof level.

NON-STRUCTURAL SYSTEMS: The integrated ceiling system appears to be adequately anchored and braced to the parent structure. The ceiling mounted lights are supported individually from two opposite corners. Cabinetry is present throughout the building.

List of Deficiencies

The following items have been found noncompliant in accordance with the requirements of ASCE31-03:

Structural

1. PROXIMITY OF ADJACENT BUILDINGS: The clear distance between Building 7 and Building 8 is less than 4 percent of the height (picture Bldg08-01).
2. INADEQUATE PRECAST PANEL CONNECTIONS: Less than 2 anchors from each precast wall panel into the diaphragm are present.
3. INADEQUATE STEEL BRACED FRAMES: The axial stress in the diagonals exceeds the 0.50Fy limit for Life Safety, and members do not meet compact section requirements.
4. PRECAST WALL PANELS AT FOUNDATION: Wall panels are not connected to the foundation along the panel lengths.

Non-structural

5. TALL NARROW CONTENTS: Cabinets throughout the building are typically unanchored.
6. DETERIORATION IN MECHANICAL ANCHORAGE: Deterioration is typical at wood support framing at units (picture Bldg07-11).
7. INADEQUATE FIRE SUPPRESSION PIPING: Fire suppression piping is not anchored and braced properly, and flexible couplings are not provided.

BUILDING 7 – STUDENT SUCCESS CENTER, PICTURES


Bldg07-01

Bldg07-02


Bldg07-03


Bldg07-04


Bldg07-05


Bldg07-06

Bldg07-07

Bldg07-08

Bldg07-09

Bldg07-10

Bldg07-11

Basic Structural Checklist for Building Type RM1: Reinforced Masonry Bearing Walls with Flexible Diaphragms
BUILDING 7 – STUDENT SUCCESS CENTER Sheet 1 of 3

Building System

C	NC	N/A	LOAD PATH: The Structure shall contain a minimum of one complete load path for Life Safety and Immediate Occupancy for seismic force effects from any horizontal direction that serves to transfer the inertial forces from the mass to the foundation. (Tier 2: Sec. 4.3.1.1)
C	NC	N/A	ADJACENT BUILDINGS: The clear distance between the building being evaluated and any adjacent building shall be greater than 4 percent of the height of the shorter building for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.1.2)
C	NC	N/A	MEZZANINES: Interior mezzanine levels shall be braced independently from the main structure, or shall be anchored to the lateral-force-resisting elements of the main structure. (Tier 2: Sec. 4.3.1.3)
C	NC	N/A	WEAK STORY: The strength of the lateral-force-resisting system in any story shall not be less than 80 percent of the strength in an adjacent story, above or below, for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.1)
C	NC	N/A	SOFT STORY: The stiffness of the lateral-force-resisting system in any story shall not be less than 70 percent of the lateral-force-resisting system stiffness in an adjacent story above or below, or less than 8- percent of the average lateral-force-resisting system stiffness of the three stories above or below for Life Safety an Immediate Occupancy. (Tier 2: Sec. 4.3.2.2)
C	NC	N/A	GEOMETRY: There shall be no changes in horizontal dimension of the lateral-force-resisting system of more than 30 percent in a story relative to adjacent stories for Life Safety and Immediate Occupancy, excluding one-story penthouses and mezzanines. (Tier 2: Sec. 4.3.2.3)
C	NC	N/A	VERTICAL DISCONTINUITIES: All vertical elements in the lateral-force-resisting system shall be continuous to the foundation. (Tier 2: Sec. 4.3.2.4)

Basic Structural Checklist for Building Type RM1: Reinforced Masonry Bearing Walls with Flexible Diaphragms
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C	NC	N/A	MASS: There shall be no change in effective mass more than 50 percent from one story to the next Life safety and Immediate Occupancy. Light roofs, penthouses, and mezzanines need not be considered. (Tier 2: Sec. 4.3.2.5)
C	NC	N/A	DETERIORATION OF WOOD: There shall be no signs of decay, shrinkage, splitting, fire damage, or sagging in any of the wood members, and none of the metal connection hardware shall be deteriorated, broken, or loose. (Tier 2: Sec. 4.3.3.1)
C	NC	N/A	MASONRY UNITS: There shall be no visible deterioration of masonry units. (Tier 2: Sec. 4.3.3.7)
C	NC	N/A	MASONRY JOINTS: The mortar shall not be easily scraped away from the joints by hand with a metal tool, and there shall be no areas of eroded mortar. (Tier 2: Sec. 4.3.3.8)
C	NC	N/A	REINFORCED MASONRY WALL CRACKS: All existing diagonal cracks in wall elements shall be less than 118 inch for Life Safety and 1/16 inch for Immediate Occupancy, shall not be concentrated in one location, and shall not form an X pattern. (Tier 2: Sec. 4.3.3.10)

Lateral-Force-Resisting System

C	NC	N/A	REDUNDANCY: The number of lines of shear walls in each principal direction shall be greater than or equal to 2 for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.1.1)
C	NC	N/A	SHEAR STRESS CHECK: The shear stress in I.be reinforced masonry shear walls, calculated using the Quick Check procedure of Section 3.5.3.3, shall be less than 70 psi for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.4.1)

Basic Structural Checklist for Building Type RM1: Reinforced Masonry Bearing Walls with Flexible Diaphragms
BUILDING 7 – STUDENT SUCCESS CENTER Sheet 3 of 3

C	NC	N/A	REINFORCING STEEL: The total vertical and horizontal reinforcing steel ratio in reinforced masonry walls shall be greater than 0.002 for Life Safety and Immediate Occupancy of the wall with the minimum of 0.0007 for Life Safety and Immediate Occupancy in either of the two directions; the spacing of reinforcing steel shall be less than 48 inches for Life Safety and Immediate Occupancy; and all vertical bars shall extend to the top of the walls. (Tier 2: Sec. 4.4.2.4.2)

Connections

C	NC	N/A	WALL ANCHORAGE: Exterior concrete or masonry walls that are dependent on the diaphragm for lateral support shall be anchored for out-of-plane forces at each diaphragm level with steel anchors, reinforcing dowels, or straps that are developed into the diaphragm. Connections shall have adequate strength to resist the connection force calculated in the Quick Check procedure of Section 3.5.3. 7. (Tier 2: Sec. 4.6.1.1)
C	NC	N/A	WOOD LEDGERS: The connection between the wall panels and the diaphragm shall not induce cross-grain bending or tension in the wood ledgers. (Tier 2: Sec. 4.6.1.2)
C	NC	N/A	TRANSFER TO SHEAR WALLS: Diaphragms shall be connected for transfer of loads to the shear walls for Life Safety and the connections shall be able to develop the lesser of the shear strength of the walls or diaphragms for Immediate Occupancy. (Tier 2: Sec. 4.6.2.1)
C	NC	N/A	FOUNDATION DOWELS: Wall reinforcement shall be doweled into the foundation for Life Safety, and the dowels shall be able to develop the lesser of the strength of the walls or the uplift capacity of the foundation for Immediate Occupancy. (Tier 2: Sec. 4.6.3.5)
C	NC	N/A	GIRDER/COLUMN CONNECTION: There shall be a positive connection utilizing plates, connection hardware, or straps between the girder and the column support. (Tier 2: Sec. 4.6.4.1)

Supplemental Structural Checklist for Building Type RM1: Reinforced Masonry Bearing Walls with Flexible Diaphragms
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Lateral-Force-Resisting System

C	NC	N/A	REINFORCING AT OPENINGS: All wall openings that interrupt rebar shall have trim reinforcing on all sides. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.4.3)
C	NC	N/A	PROPORTIONS: The height-to-thickness ratio of the shear walls at each story shall be less than 30. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.4.4)

Diaphragms

C	NC	N/A	CROSS TIES: There shall be continuous cross ties between diaphragm chords. (Tier 2: Sec. 4.5.1.2)
C	NC	N/A	OPENINGS AT SHEAR WALLS: Diaphragm openings immediately adjacent to the shear walls shall be less than 25 percent of the wall length for Life Safety and 15 percent of the wall length for Immediate Occupancy. (Tier 2: Sec. 4.5.1.4)
C	NC	N/A	OPENINGS AT EXTERIOR MASONRY SHEAR WALLS: Diaphragm openings immediately adjacent to exterior masonry shear walls shall not be greater than 8 feet long for Life Safety and 4 feet long for Immediate Occupancy. (Tier 2: Sec. 4.5.1.6)
C	NC	N/A	PLAN IRREGULARITIES: There shall be tensile capacity to develop the strength of the diaphragm at re-entrant comers or other locations of plan irregularities. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.7)
C	NC	NA	DIAPHRAGM REINFORCEMENT AT OPENINGS: There shall be reinforcing around all diaphragm openings larger than 50 percent of the building width in either major plan dimension. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.8)

Supplemental Structural Checklist for Building Type RM1: Reinforced Masonry Bearing Walls with Flexible Diaphragms
BUILDING 7 – STUDENT SUCCESS CENTER Sheet 2 of 2

C	NC	N/A	STRAIGHT SHEATHING: All straight sheathed diaphragms shall have aspect ratios less than 2-to-1 for Life Safety and 1-to-1 for Immediate Occupancy in the direction being considered. (Tier 2: Sec. 4.5.2.1)
C	NC	N/A	SPANS: All wood diaphragms with spans greater than 24 feet for Life Safety and 12 feet for Immediate Occupancy shall consist of wood structural panels or diagonal sheathing. (Tier 2: Sec. 4.5.2.2)
C	NC	N/A	UNBLOCKED DIAPHRAGMS: All diagonally sheathed or unblocked wood structural panel diaphragms shall have horizontal spans less than 40 feet for Life Safety and 30 feet for Immediate Occupancy and shall have aspect ratios less than or equal to 4-to-1 for Life Safety and 3-to-J for Immediate Occupancy. (Tier 2: Sec. 4.5.2.3)
C	NC	N/A	NON-CONCRETE FILLED DIAPHRAGMS: Untopped metal deck diaphragms or metal deck diaphragms with fill other than concrete shall consist of horizontal spans of less than 40 feet and shall have span/depth ratios less than 4-to-1. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.3.1)
C	NC	N/A	OTHER DIAPHRAGMS: The diaphragm shall not consist of a system other than wood, metal deck, concrete, or horizontal bracing. (Tier 2: Sec. 4.5. 7.1)

Connections

C	NC	N/A	STIFFNESS OF WALL ANCHORS: Anchors of concrete or masonry walls to wood structural elements shall be installed taut and shall be stiff enough to limit the relative movement between the wall and the diaphragm to no greater than 1/8 inch prior to engagement of the anchors. (Tier 2:Sec. 4.6.1.4)

Basic Structural Checklist for Building Type PC1: Precast/Tilt-Up Concrete Shear Walls with Flexible Diaphragms
BUILDING 7 – STUDENT SUCCESS CENTER Sheet 1 of 3

Building System

C	NC	N/A	LOAD PATH: The structure shall contain a minimum of one complete load path for Life Safety and Immediate Occupancy for seismic force effects from any horizontal direction that serves to transfer the inertial forces from the mass to the foundation. (Tier 2: Sec. 4.3.1 . 1)
C	NC	N/A	ADJACENT BUILDINGS: The clear distance between the building being evaluated and any adjacent building shall be greater than 4 percent of the height of the shorter building for Life Safety and immediate Occupancy. (Tier 2: Sec. 4.3. 1.2)
C	NC	N/A	MEZZANINES: Interior mezzanine levels shall be braced independently from the main structure, or shall be anchored to the lateral-force-resisting elements of the main structure. (Tier 2: Sec. 4.3. 1.3)
C	NC	N/A	WEAK STORY: The strength of the lateral-force-resisting system in any story shall not be less than 80 percent of the strength in an adjacent story, above or below, for Life Safety and Immediate Occupancy. (Tier2: Sec. 4.3.2.1)
C	NC	N/A	SOFT STORY: The stiffness of the lateral-force-resisting system in any story shall not be less than 70 percent of the lateral-force resisting system stiffness in an adjacent story above or below, or less than 80 percent of the average lateral-force-resisting system stiffness of the three stories above or below for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.2)
C	NC	N/A	GEOMETRY: There shall be no changes in horizontal dimension of the lateral-force-resisting system of more than 30 percent in a story relative to adjacent stories for Life Safety and Immediate Occupancy, excluding one-story penthouses and mezzanines. (Tier 2: Sec. 4.3.2.3)
C	NC	N/A	VERTICAL DISCONTINUITIES: All vertical elements in the lateral-force-resisting system shall be continuous to the foundation. (Tier 2: Sec. 4.3.2.4)
C	NC	N/A	MASS: There shall be no change in effective mass more than 50 percent from one story to the next for Life Safety and Immediate Occupancy. Light roofs, penthouses, and mezzanines need not be considered. (Tier 2: Sec. 4.3.2.5)
C	NC	N/A	DETERIORATION OF WOOD: There shall be no signs of decay, shrinkage, splitting, fire damage, or sagging in any of the wood members, and none of the metal connection hardware shall be deteriorated, broken, or loose. (Tier 2: Sec. 4.3.3.1I)

Basic Structural Checklist for Building Type PC1: Precast/Tilt-Up Concrete Shear Walls with Flexible Diaphragms
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C	NC	N/A	PRECAST CONCRETE WALLS: There shall be no visible deterioration of concrete or reinforcing steel or evidence of distress, especially at the connections. (Tier 2: Sec. 4.3.3.6)

Lateral-Force-Resisting System

C	NC	N/A	REDUNDANCY: The number of lines of shear walls in each principal direction shall be greater than or equal to 2 for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.1.1)
C	NC	N/A	SHEAR STRESS CHECK: The shear stress in the precast panels, calculated using the Quick Check procedure of Section 3.5.3.3, shall be less than the greater of 10 psi or $2(f'c)^{0.5}$ for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.3.1)
C	NC	N/A	REINFORCING STEEL: The ratio of reinforcing steel area to gross concrete area shall be not less than 0.0015 in the vertical direction and 0.0025 in the horizontal direction for Life Safety and Immediate Occupancy. The spacing of reinforcing steel shall be equal 10 or less than 18 inches for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.3.2)

Connections

C	NC	N/A	WALL ANCHORAGE: Exterior concrete or masonry walls that are dependent on the diaphragm for lateral support shall be anchored for out-of-plane forces at each diaphragm level with steel anchors, reinforcing dowels, or straps that are developed into the diaphragm. Connections shall have adequate strength to resist the connection force calculated in the Quick Check procedure of Section 3.5.3. 7. (Tier 2: Sec. 4.6. 1.1)
C	NC	N/A	WOOD LEDGERS: The connection between the wall panels and the diaphragm shall not induce cross-grain bending or tension in the wood ledgers. (Tier 2: Sec. 4.6. 1 .2)
C	NC	N/A	TRANSFER TO SHEAR WALLS: Diaphragms shall be connected for transfer of loads to the shear walls for Life Safety and the connections shall be able to develop the lesser of the shear strength of the walls or diaphragms for Immediate Occupancy. (Tier 2: Sec. 4.6.2.1)

Basic Structural Checklist for Building Type PC1: Precast/Tilt-Up Concrete Shear Walls with Flexible Diaphragms
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C	**NC**	**N/A**	PRECAST WALL PANELS: Precast wall panels shall be connected to the foundation for Life Safety and the connections shall be able to develop the strength of the walls for Immediate Occupancy. (Tier2: Sec. 4.6.3.7)
C	**NC**	**N/A**	GIRDER/COLUMN CONNECTION: There shall be a positive connection utilizing plates, connection hardware, or straps between the girder and the column support. (Tier 2: Sec. 4.6.4.1)

Supplemental Structural Checklist for Building Type PC1: Precast/Tilt-Up Concrete Shear Walls with Flexible Diaphragms
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Lateral-Force-Resisting System

C	NC	N/A	COUPLING BEAMS: The stirrups in coupling beams over means of egress shall be spaced at or less than d/2 and shall be anchored into the confined core of the beam with hooks of 135° or more for Life Safety. All coupling beams shall comply with the requirements above and shall have the capacity in shear to develop the uplift capacity of the adjacent wall for Immediate Occupancy. (Tier 2: Sec. 4.4.2.2.3)
C	NC	N/A	WALL OPENINGS: The total width of openings along any perimeter wall line shall constitute less than 75 percent of the length of any perimeter wall for Life Safety and 50 percent for Immediate Occupancy with the wall piers having aspect ratios of less than 2-to- l for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.3.3)
C	NC	N/A	CORNER OPENINGS: Walls with openings al a building comer larger than the width of a typical panel shall be connected to the remainder of the wall with collector reinforcing. (Tier 2: Sec. 4.4.2.3.4)
C	NC	N/A	PANEL-TO-PANEL CONNECTIONS: Adjacent wall panels shall be interconnected to transfer overturning forces between panels by methods other than welded steel inserts. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.3.5)
C	NC	N/A	WALL THICKNESS: Thickness of bearing walls shall not be less than 1125 the unsupported height or length, whichever is shorter, nor less than 4 inches. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.3.6)

Diaphragms

C	NC	N/A	CROSS TIES: There shall be continuous cross ties between diaphragm chords. (Tier 2: Sec. 4.5.1.2)
C	NC	N/A	PLAN IRREGULARITIES: There shall be tensile capacity to develop the strength of the diaphragm at re-entrant corners or other locations of plan irregularities. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.7)

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C	NC	N/A	DIAPHRAGM REINFORCEMENT AT OPENINGS: There shall be reinforcing around all diaphragm openings larger than 50 percent of the building width in either major plan dimension. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5. 1.8)
C	NC	N/A	STRAIGHT SHEATHING: All straight sheathed diaphragms shall have aspect ratios less than 2-to-1 for Life Safety and 1-to-1 for Immediate Occupancy in the direction being considered. (Tier 2: Sec. 4.5.2.1)
C	NC	N/A	SPANS: All wood diaphragms with spans greater than 24 feet for Life Safety and 12 feet for Immediate Occupancy shall consist of wood structural panels or diagonal sheathing. (Tier 2: Sec. 4.5.2.2)
C	NC	N/A	UNBLOCKED DIAPHRAGMS: All diagonally sheathed or unblocked wood structural panel diaphragms shall have horizontal spans less than 40 feet for Life Safety and 30 feet for Immediate Occupancy and shall have aspect ratios less than or equal to 4-to-l for Life Safety and 3-to-l for Immediate Occupancy. (Tier 2: Sec. 4.5.2.3)
C	NC	N/A	OTHER DIAPHRAGMS: The diaphragm shall not consist of a system other than wood, metal deck, concrete, or horizontal bracing. (Tier 2: Sec. 4.5.7. 1)

Connections

C	NC	N/A	PRECAST PANEL CONNECTIONS: There shall be at least two anchors from each precast wall panel into the diaphragm elements for Life Safety and the anchors shall be able to develop the strength of the panels for Immediate Occupancy. (Tier 2: Sec. 4.6.1.3)
C	NC	N/A	UPLIFT AT PILE CAPS: Pile caps shall have top reinforcement and piles shall be anchored to the pile caps for Life Safety, and the pile cap reinforcement and pile anchorage shall be able to develop the tensile capacity of the piles for Immediate Occupancy. (Tier 2: Sec. 4.6.3. 10)
C	NC	N/A	GIRDERS: Girders supported by walls or pilasters shall have at least two ties securing the anchor bolts for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.6.4.2)

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BUILDING 7 – STUDENT SUCCESS CENTER Sheet 1 of 4

Building System

C	NC	N/A	LOAD PATH: The structure shall contain a minimum of one complete load path for Life Safety and Immediate Occupancy for seismic force effects from any horizontal direction that serves to transfer the inertial forces from the mass to the foundation. (Tier 2: Sec. 4.3.1.1)
C	NC	N/A	MEZZANINES: Interior mezzanine levels shall be braced independently from the main structure, or shall be anchored to the lateral-force-resisting elements of the main structure. (Tier 2:Sec. 4.3. 1.3)
C	NC	N/A	WEAK STORY: The strength of the lateral-force-resisting system in any story shall not be less than 80 percent of the strength in an adjacent story, above or below, for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.1)
C	NC	N/A	SOFT STORY: The stiffness of the lateral-force-resisting system in any story shall not be less than 70 percent of the lateral-force-resisting system stiffness in an adjacent story above or below, or less than 80 percent of the average lateral-force-resisting system stiffness of the three stories above or below for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.2)
C	NC	N/A	GEOMETRY: There shall be no changes in horizontal dimension of the lateral-force-resisting system of more than 30 percent in a story relative to adjacent stories for Life Safety and Immediate Occupancy, excluding one-story penthouses and mezzanines. (Tier 2: Sec. 4.3.2.3)
C	NC	N/A	VERTICAL DISCONTINUITIES: All vertical elements in the lateral-force-resisting system shall be continuous to the foundation. (Tier 2: Sec. 4.3.2.4)
C	NC	N/A	MASS: There shall be no change in effective mass more than 50 percent from one story to the next for Life Safety and Immediate Occupancy. Light roofs, penthouses, and mezzanines need not be considered. (Tier 2: Sec. 4.3.2.5)

Basic Structural Checklist for Building Type W2: Wood Frames, Commercial and Industrial
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C	NC	N/A	DETERIORATION OF WOOD: There shall be no signs of decay, shrinkage, splitting, fire damage, or sagging in any of the wood members, and none of the metal connection hardware shall be deteriorated, broken, or loose. (Tier 2: Sec. 4.3.3. 1)
C	NC	N/A	WOOD STRUCTURAL PANEL SHEAR WALL FASTENERS: There shall be no more than 15 percent of inadequate fastening such as overdriven fasteners, omitted blocking, excessive fastening spacing, or inadequate edge distance. TI1is statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.3.3.2)

Lateral-Force-Resisting System

C	NC	N/A	REDUNDANCY: The number of lines of shear walls in each principal direction shall be greater than or equal to 2 for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.1.1)
C	NC	N/A	SHEAR STRESS CHECK: The shear stress in the shear walls, calculated using the Quick Check procedure of Section 3.5.3.3, shall be less than the following values for Life Safety and Immediate Occupancy (Tier 2: Sec. 4.4.2. 7.1): Structural panel sheathing 1,000 plf Diagonal sheathing 700 plf Straight sheathing 100 plf All other conditions 100 plf
C	NC	N/A	STUCCO (EXTERIOR PLASTER) SHEAR WALLS: Multi-story buildings shall not rely on exterior stucco walls as the primary lateral-force-resisting system. (Tier 2: Sec. 4.4.2.7.2)
C	NC	N/A	GYPSUM WALLBOARD OR PLASTER SHEAR WALLS: Interior plaster or gypsum wallboard shall not be used as shear walls on buildings over one story in height with the exception of the uppermost level of a multi-story building. (Tier 2: Sec. 4.4.2.7.3)

Basic Structural Checklist for Building Type W2: Wood Frames, Commercial and Industrial
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C	NC	N/A	NARROW WOOD SHEAR WALLS: Narrow wood shear walls with an aspect ratio greater than 2-to-1 for Life Safety and 1.5-to-1 for Immediate Occupancy shall not be used to resist lateral forces developed in the building in levels of moderate and high seismicity. Narrow wood shear walls with an aspect ratio greater than 2-to-I for Immediate Occupancy shall not be used to resist lateral forces developed in the building in levels of low seismicity. (Tier 2: Sec. 4.4.2.7.4)
C	NC	N/A	WALLS CONNECTED THROUGH FLOORS: Shear walls shall have interconnection between stories to transfer overturning and shear forces through the floor. (Tier 2: Sec. 4.4.2.7.5)
C	NC	N/A	HILLSIDE SITE: For structures that are taller on at least one side by more than one-half story due to a sloping site, all shear walls on the downhill slope shall have an aspect ratio less than 1-to-1 for Life Safety and 1-to-2 for Immediate Occupancy. (Tier 2: Sec. 4.4.2.7.6)
C	NC	N/A	CRIPPLE WALLS: Cripple walls below first-floor-level shear walls shall be braced to the foundation with wood structural panels. (Tier 2: Sec. 4.4.2. 7. 7)
C	NC	N/A	OPENINGS: Walls with openings greater than 80 percent of the length shall be braced with wood structural panel shear walls with aspect ratios of not more than 1.5-to-1 or shall be supported by adjacent construction through positive tics capable of transferring the lateral forces. (Tier 2: Sec. 4.4.2.7.8)

Connections

C	NC	N/A	WOOD POSTS: There shall be a positive connection of wood posts to the foundation. (Tier 2: Sec. 4.6.3.3)
C	NC	N/A	WOOD SILLS: All wood sills shall be bolted to the foundation. (Tier 2: Sec. 4.6.3.4)

Basic Structural Checklist for Building Type W2: Wood Frames, Commercial and Industrial
BUILDING 7 – STUDENT SUCCESS CENTER Sheet 4 of 4

C	NC	N/A	GIRDER/COLUMN CONNECTION: There shall be a positive connection utilizing plates, connection hardware, or straps between the girder and the column support. (Tier 2: Sec. 4.6.4.1)

Supplemental Structural Checklist for Building Type W2: Wood Frames, Commercial and Industrial
BUILDING 7 – STUDENT SUCCESS CENTER Sheet 1 of 2

Lateral-Force-Resisting System

C	NC	N/A	HOLD-DOWN ANCHORS: All shear walls shall have hold-down anchors constructed per acceptable construction practices, attached to the end studs. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.7.9)

Diaphragms

C	NC	N/A	DIAPHRAGM CONTINUITY: The diaphragms shall not be composed of split-level floors and shall not have expansion joints. (Tier 2: Sec. 4.5.1.1)
C	NC	N/A	ROOF CHORD CONTINUITY: All chord elements shall be continuous, regardless of changes in roof elevation. (Tier 2: Sec. 4.5.1.3)
C	NC	N/A	PLAN IRREGULARITIES: There shall be tensile capacity to develop the strength of the diaphragm at re-entrant comers or other locations of plan irregularities. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.7)
C	NC	N/A	DIAPHRAGM REINFORCEMENT AT OPENINGS: There shall be reinforcing around all diaphragm openings larger than 50 percent of the building width in either major plan dimension. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.8)
C	NC	N/A	STRAIGHT SHEATHING: All straight sheathed diaphragms shall have aspect ratios less than 2-to-1 for Life Safety and 1-to-1 for Immediate Occupancy in the direction being considered. (Tier 2: Sec. 4.5.2.1)
C	NC	N/A	SPANS: All wood diaphragms with spans greater than 24 feet for Life Safety and 12 feet for Immediate Occupancy shall consist of wood structural panels or diagonal sheathing. Wood commercial and industrial buildings may have rod-braced systems. (Tier 2: Sec. 4.5.2.2)

Supplemental Structural Checklist for Building Type W2: Wood Frames, Commercial and Industrial
BUILDING 7 – STUDENT SUCCESS CENTER Sheet 2 of 2

C	NC	N/A	UNBLOCKED DIAPHRAGMS: All diagonally sheathed or unblocked wood structural panel diaphragms shall have horizontal spans less than 40 feet for Life Safety and 30 feet for Immediate Occupancy and shall have aspect ratios less than or equal to 4-to-1 for Life Safety and 3-to-1 for Immediate Occupancy. (Tier 2: Sec. 4.5.2.3)
C	NC	N/A	OTHER DIAPHRAGMS: The diaphragm shall not consist of a system other than wood, metal deck, concrete, or horizontal bracing. (Tier 2: Sec. 4.5.7.1)

Connections

C	NC	N/A	WOOD SILL BOLTS: Sill bolts shall be spaced at 6 feet or less for Life Safety and 4 feet or less for Immediate Occupancy, with proper edge and end di stance provided for wood and concrete. (Tier 2: Sec. 4.6.3.9)

Basic Structural Checklist for Building Type S2A: Steel Braced Frames with Flexible Diaphragms
BUILDING 7 – STUDENT SUCCESS CENTER Sheet 1 of 3

Building System

C	NC	N/A	LOAD PATH: The structure shall contain a minimum of one complete load path for Life Safety and Immediate Occupancy for seismic force effects from any horizontal direction that serves to transfer the inertial forces from the mass to the foundation. (Tier 2: Sec. 4.3.1.1)
C	NC	N/A	ADJACENT BUILDINGS: The clear distance between the building being evaluated and any adjacent building shall be greater than 4 percent of the height of the shorter building for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.1 .2)
C	NC	N/A	MEZZANINES: Interior mezzanine levels shall be braced independently from the main structure, or shall be anchored to the lateral-force-resisting elements of the main structure. (Tier 2: Sec. 4.3.1.3)
C	NC	N/A	WEAK STORY: The strength of the lateral-force-resisting system in any story shall not be less than 80 percent of the strength in an adjacent story, above or below, for Life Safety and Immediate Occupancy. (Tier2: Sec. 4.3.2.1)
C	NC	N/A	SOFT STORY: The stiffness of the lateral-force-resisting system in any story shall not be less than 70 percent of the lateral-force resisting system stiffness in an adjacent story above or below, or less than 80 percent of the average lateral-force-resisting system stiffness of the three stories above or below for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.2)
C	NC	N/A	GEOMETRY: There shall be no changes in horizontal dimension of the lateral-force-resisting system of more than 30 percent in a story relative to adjacent stories for Life Safety and Immediate Occupancy, excluding one-story penthouses and mezzanines. (Tier 2: Sec. 4.3.2.3)
C	NC	N/A	VERTICAL DISCONTINUITIES: All vertical elements in the lateral-force-resisting system shall be continuous to the foundation. (Tier 2: Sec. 4.3.2.4)
C	NC	N/A	MASS: There shall be no change in effective mass more than 50 percent from one story to the next for Life Safety and Immediate Occupancy. Light roofs, penthouses, and mezzanines need not be considered. (Tier 2: Sec. 4.3.2.5)
C	NC	N/A	DETERIORATION OF WOOD: There shall be no signs of decay, shrinkage, splitting, fire damage, or sagging in any of the wood members, and none of the metal connection hardware shall be deteriorated, broken, or loose. (Tier 2: Sec. 4.3.3.1)

Basic Structural Checklist for Building Type S2A: Steel Braced Frames with Flexible Diaphragms

BUILDING 7 – STUDENT SUCCESS CENTER Sheet 2 of 3

C	NC	N/A	DETERIORATION OF STEEL: There shall be no visible rusting, corrosion, cracking, or other deterioration in any of the steel elements or connections in the vertical- or lateral-force-resisting systems. (Tier 2: Sec. 4.3.3.3)

Lateral-Force-Resisting System

C	NC	N/A	AXIAL STRESS CHECK: The axial stress due to gravity loads in columns subjected to overturning forces shall be less than $0.10F_y$ for Life Safety and Immediate Occupancy. Alternatively, the axial stress due to overturning forces alone, calculated using the Quick Check procedure of Section 3.5.3.6, shall be less than $0.30F_y$ for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.1.3.2)
C	NC	N/A	REDUNDANCY: The number of lines of braced frames in each principal direction shall be greater than or equal to 2 for Life Safety and Immediate Occupancy. The number of braced bays in each line shall be greater than 2 for Life Safety and 3 for Immediate Occupancy. (Tier 2: Sec. 4.4.3.1.1)
C	NC	N/A	AXIAL STRESS CHECK: The axial stress in the diagonals, calculated using the Quick Check procedure of Section 3.5.3.4, shall be less than $0.50F_y$ for Life Safety and for Immediate Occupancy. (Tier 2: Sec. 4.4.3.1 .2)
C	NC	N/A	COLUMN SPLICES: All column splice details located in braced frames shall develop the tensile strength of the column. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.3.1.3)

Connections

C	NC	N/A	TRANSFER TO STEEL FRAMES: Diaphragms shall be connected for transfer of loads to the steel frames for Life Safety, and the connections shall be able to develop the lesser of the strength of the frames or the diaphragms for Immediate Occupancy. (Tier 2: Sec. 4.6.2.2)

Basic Structural Checklist for Building Type S2A: Steel Braced Frames with Flexible Diaphragms
BUILDING 7 – CLASSROOMS & LABS Sheet 3 of 3

C	NC	N/A	STEEL COLUMNS: The columns in lateral-force-resisting frames shall be anchored to the building foundation for Life Safety, and the anchorage shall be able to develop the lesser of the tensile capacity of the column, the tensile capacity of the lowest level column splice (if any), or the uplift capacity of the foundation, for Immediate Occupancy. (Tier 2: Sec. 4.6.3.1)

Supplemental Structural Checklist for Building Type S2A: Steel Braced Frames with Flexible Diaphragms
BUILDING 7 – STUDENT SUCCESS CENTER Sheet 1 of 2

Lateral-Force-Resisting System

C	NC	N/A	COMPACT MEMBERS: All frame elements shall meet section requirements set forth by Seismic Provisions for Structural Steel Buildings Table 1-9-1 (AISC, 1997). (Tier 2: Sec. 4.4. 1.3.7)
C	NC	N/A	SLENDERNESS OF DIAGONALS: All diagonal elements required to carry compression shall have Kl/r ratios less than 120. (Tier 2: Sec. 4.4.3.1.4)
C	NC	N/A	CONNECTION STRENGTH: All the brace connections shall develop the yield capacity of the diagonals. (Tier 2: Sec. 4.4.3.1 .5)
C	NC	N/A	OUT-OF-PLANE BRACING: Braced frame connections attached to beam bottom flanges located away from beam-column joints shall be braced out-of-plane at the bottom flange of the beams. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2:Sec. 4.4.3.1.6)
C	NC	N/A	K-BRACING: The bracing system shall not include K-braced bays. (Tier 2: Sec. 4.4.3.2.1)
C	NC	N/A	TENSION-ONLY BRACES: Tension-only braces shall not comprise more than 70 percent of the total lateral-force-resisting capacity in structures over two stories in height. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.3.2.2)
C	NC	N/A	CHEVRON BRACING: The bracing system shall not include chevron, or V-braced, bays. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.3.2.3)
C	NC	N/A	CONCENTRICALLY BRACED FRAME JOINTS: All the diagonal braces shall frame into the beam-column joints concentrically. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.3.2.4)

Diaphragms

C	NC	N/A	CROSS TIES: There shall be continuous cross ties between diaphragm chords. (Tier 2: Sec. 4.5.1.2)
C	NC	N/A	OPENINGS AT BRACED FRAMES: Diaphragm openings immediately adjacent to the braced frames shall extend less than 25 percent of the frame length for Life Safety and 15 percent of the frame length for Immediate Occupancy. (Tier 2: Sec. 4.5.1.5)

Supplemental Structural Checklist for Building Type S2A: Steel Braced Frames with Flexible Diaphragms
BUILDING 7 – STUDENT SUCCESS CENTER Sheet 2 of 2

C	NC	N/A	PLAN IRREGULARITIES: There shall be tensile capacity to develop the strength of the diaphragm at re-entrant comers or other locations of plan irregularities. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.7)
C	NC	N/A	DIAPHRAGM REINFORCEMENT AT OPENINGS: There shall be reinforcing around all diaphragm openings larger than 50 percent of the building width in either major plan dimension. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1 .8)
C	NC	N/A	STRAIGHT SHEATHING: All straight sheathed diaphragms shall have aspect ratios less than 2-to-1 for Life Safety and 1-to-1 for Immediate Occupancy in the direction being considered. (Tier 2: Sec. 4.5.2.1)
C	NC	N/A	SPANS: All wood diaphragms with spans greater than 24 feet for Life Safety and 12 feet for Immediate Occupancy shall consist of wood structural panels or diagonal sheathing. (Tier 2: Sec. 4.5.2.2)
C	NC	N/A	UNBLOCKED DIAPHRAGMS: All diagonally sheathed or unblocked wood structural panel diaphragms shall have horizontal spans less than 40 feet for Life Safety and 30 feet for Immediate Occupancy and shall have aspect ratios less than or equal to 4-to-l for Life Safety and 3-to-l for Immediate Occupancy. (Tier 2: Sec. 4.5.2.3)
C	NC	N/A	NON-CONCRETE FILLED DIAPHRAGMS: Untopped metal deck diaphragms or metal deck diaphragms with fill other than concrete shall consist of horizontal spans of less than 40 feet and shall have span/depth ratios less than 4-to-I. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.3.1)

Connections

C	NC	N/A	UPLIFT AT PILE CAPS: Pile caps shall have top reinforcement and piles shall be anchored to the pile caps for Life Safety, and the pile cap reinforcement and pile anchorage shall be able to develop the tensile capacity of the piles for Immediate Occupancy. (Tier 2: Sec. 4.6.3.10)

Basic Nonstructural Component Checklist
BUILDING 7 – STUDENT SUCCESS CENTER

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Partitions

C	NC	N/A	UNREINFORCED MASONRY: Unreinforced masonry or hollow clay tile partitions shall be braced at a spacing equal to or less than 10 feet in levels of low or moderate seismicity and 6 feet in levels of high seismicity. (Tier 2: Sec. 4.8.1.1)

Ceiling Systems

C	NC	N/A	SUPPORT: The integrated suspended ceiling system shall not be used to laterally support the tops of gypsum board, masonry, or hollow clay tile partitions. Gypsum board partitions need not be evaluated where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier2: Sec. 4.8.2.1)

Light Fixtures

C	NC	N/A	EMERGENCY LIGHTING: Emergency lighting shall be anchored or braced to prevent falling during an earthquake. (Tier 2: Sec. 4.8.3.1)

Cladding and Glazing

C	NC	N/A	CLADDING ANCHORS: Cladding components weighing more than 10 psf shall be mechanically anchored to the exterior wall framing at a spacing equal to or less than 4 feet. A spacing of up to 6 feet is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.1)
C	NC	N/A	DETERIORATION: There shall be no evidence of deterioration, damage or corrosion in any of the connection elements. (Tier 2: Sec. 4.8.4.2)
C	NC	N/A	CLADDING ISOLATION: For moment frame buildings of steel or concrete, panel connections shall be detailed to accommodate a story drift ratio of 0.02. Panel connection detailing for a story drift ratio of 0.01 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.3)

Basic Nonstructural Component Checklist Sheet 2 of 4
BUILDING 7 – STUDENT SUCCESS CENTER

C	NC	N/A	MULTI-STORY PANELS: For multi-story panels attached at each floor level, panel connections shall be detailed to accommodate a story drift ratio of 0.02. Panel connection detailing for a story drift ratio of 0.01 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.4)
C	NC	N/A	BEARING CONNECTIONS: Where bearing connections are required, there shall be a minimum of two bearing connections for each wall panel. (Tier 2: Sec. 4.8.4.5)
C	NC	N/A	INSERTS: Where inserts are used in concrete connections, the inserts shall be anchored to reinforcing steel or other positive anchorage. (Tier 2: Sec. 4.8.4.6)
C	NC	N/A	PANEL CONNECTIONS: Exterior cladding panels shall be anchored out-of-plane with a minimum of 4 connections for each wall panel. Two connections per wall panel are permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.7)

Masonry Veneer

C	NC	N/A	SHELF ANGLES: Masonry veneer shall be supported by shelf angles or other elements at each floor 30 feet or more above ground for Life Safety and at each floor above the first floor for Immediate Occupancy. (Tier 2: Sec. 4.8.5.1)
C	NC	N/A	TIES: Masonry veneer shall be connected to the back-up with corrosion-resistant ties. The ties shall have a spacing equal to or less than 24 inches with a minimum of one tie for every 2-2/3 square feet. A spacing of up to 36 inches is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.5.2)
C	NC	N/A	WEAKENED PLANES: Masonry veneer shall be anchored to the back-up adjacent to weakened planes, such as at the locations of flashing. (Tier 2: Sec. 4.8.5.3)
C	NC	N/A	DETERIORATION: There shall be no evidence of deterioration, damage, or corrosion in any of the connection elements. (Tier 2: Sec. 4.8.5.4)

Basic Nonstructural Component Checklist
BUILDING 7 – STUDENT SUCCESS CENTER

Parapets, Cornices, Ornamentation, and Appendages

C	NC	N/A	URM PARAPETS: There shall be no laterally unsupported unreinforced masonry parapets or cornices with height-to-thickness ratios greater than 1.5. A height-to-thickness ratio of up to 2.5 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.8.1)
C	NC	N/A	CANOPIES: Canopies located at building exits shall be anchored to the structural framing at a spacing of 6 feet or less. An anchorage spacing of up to 10 feet is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.8.2)

Masonry Chimneys

C	NC	N/A	URM CHIMNEYS: No unreinforced masonry chimney shall extend above the roof surface more than twice the least dimension of the chimney. A height above the roof surface of up to three times the least dimension of the chimney is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.9.1)

Stairs

C	NC	N/A	URM WALLS: Walls around stair enclosures shall not consist of unbraced hollow clay tile or unreinforced masonry with a height-to-thickness ratio greater than 12-to-1. A height-to-thickness ratio of up to 15-to-1 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.10.1)
C	NC	N/A	STAIR DETAILS: In moment frame structures, the connection between the stairs and the structure shall not rely on shallow anchors in concrete. Alternatively, the stair details shall be capable of accommodating the drift calculated using the Quick Check procedure of Section 3.5.3.1 without including tension in the anchors. (Tier 2: Sec. 4.8.10.2)

Basic Nonstructural Component Checklist Sheet 4 of 4
BUILDING 7 – STUDENT SUCCESS CENTER

Building Contents and Furnishing

C	NC	N/A	TALL NARROW CONTENTS: Contents over 4 feet in height with a height-to-depth or height-to-width ratio greater than 3-to-1 shall be anchored to the floor slab or adjacent structural walls. A height-to-depth or height-to-width ratio of up to 4-to-1 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.11.1)

Mechanical and Electrical Equipment

C	NC	N/A	EMERGENCY POWER: Equipment used as part of an emergency power system shall be mounted to maintain continued operation after an earthquake. (Tier 2: Sec. 4.8.12.1)
C	NC	N/A	HAZARDOUS MATERIAL EQUIPMENT: HVAC or other equipment containing hazardous material shall not have damaged supply lines or unbraced isolation supports. (Tier 2:Sec. 4.8.12.2)
C	NC	N/A	DETERIORATION: There shall be no evidence of deterioration, damage, or corrosion in any of the anchorage or supports of mechanical or electrical equipment. (Tier 2: Sec. 4.8.12.3)
C	NC	N/A	ATTACHED EQUIPMENT: Equipment weighing over 20 lb that is attached to ceilings, walls, or other supports 4 feet above the floor level shall be braced. (Tier 2: Sec. 4.8.12.4)

Piping

C	NC	N/A	FIRE SUPPRESSION PIPING: Fire suppression piping shall be anchored and braced in accordance with NFPA-13 (NFPA, 1996). (Tier 2: Sec. 4.8.13.1)
C	NC	N/A	FLEXIBLE COUPLINGS: Fluid, gas, and fire suppression piping shall have flexible couplings. (Tier 2: Sec. 4.8.13.2)

Hazardous Materials Storage and Distribution

C	NC	N/A	TOXIC SUBSTANCES: Toxic and hazardous substances stored in breakable containers shall be restrained from falling by latched doors, shelf lips, wires, or other methods. (Tier 2: Sec. 4.8.15.1)

Intermediate Nonstructural Component Checklist Sheet 1 of 2
BUILDING 7 – STUDENT SUCCESS CENTER

Ceiling Systems

C	NC	N/A	LAY-IN TILES: Lay-in tiles used in ceiling panels located at exits and corridors shall be secured with clips. (Tier 2: Sec. 4.8.2.2)
C	NC	N/A	INTEGRATED CEILINGS: Integrated suspended ceilings at exits and corridors or weighing more than 2 pounds per square foot shall be laterally restrained with a minimum of four diagonal wires or rigid members attached to the structure above at a spacing equal to or less than 12 feet. (Tier 2: Sec. 4.8.2.3)
C	NC	N/A	SUSPENDED LATH AND PLASTER: Ceilings consisting of suspended lath and plaster or gypsum board shall be attached to resist seismic forces for every 12 square feet of area. (Tier 2: Sec. 4.8.2.4)

Light Fixtures

C	NC	N/A	INDEPENDENT SUPPORT: Light fixtures in suspended grid ceilings shall be supported independently of the ceiling suspension system by a minimum of two wires at diagonally opposite corners of the fixtures. (Tier 2: Sec. 4.8.3.2)

Cladding and Glazing

C	NC	N/A	GLAZING: Glazing in curtain walls and individual panes over 16 square feet in area, located up to a height of 10 feet above an exterior walking surface, shall have safety glazing. Such glazing located over 10 feet above an exterior walking surface shall be laminated annealed or laminated heat-strengthened safety glass or other glazing system that will remain in the frame when glass is cracked. (Tier 2: Sec. 4.8.4.8)

Parapets, Cornices, Ornamentation, and Appendages

C	NC	N/A	CONCRETE PARAPETS: Concrete parapets with height-to-thickness ratios greater than 2.5 shall have vertical reinforcement. (Tier 2: Sec. 4.8.8.3)

Intermediate Nonstructural Component Checklist Sheet 2 of 2
BUILDING 7 – STUDENT SUCCESS CENTER

C	NC	N/A	APPENDAGES: Cornices, parapets, signs, and other appendages that extend above the highest point of anchorage to the structure or cantilever from exterior wall faces and other exterior wall ornamentation shall be reinforced and anchored to the structural system at a spacing equal to or less than 10 feet for Life Safety and 6 feet for Immediate Occupancy. This requirement need not apply to parapets or cornices compliant with Section 4.8.8.1 or 4.8.8.3. (Tier 2: Sec. 4.8.8.4)

Masonry Chimneys

C	NC	N/A	ANCHORAGE: Masonry chimneys shall be anchored at each floor level and the roof. (Tier 2: Sec.4.8.9.2)

Mechanical and Electrical Equipment

C	NC	N/A	VIBRATION ISOLATORS: Equipment mounted on vibration isolators shall be equipped with restraints or snubbers. (Tier 2: Sec. 4.8.12.5)

Ducts

C	NC	N/A	STAIR AND SMOKE DUCTS: Stair pressurization and smoke control ducts shall be braced and shall have flexible connections at seismic joints. (Tier 2: Sec. 4.8.14.1)

6.4.2 BUILDING 8 – CLASSROOMS & LABS

Building Description

YEAR OF CONSTRUCTION: 1950
YEAR OF ALTERATIONS: 1954 - Building 8 Addition
1986 - Mechanical Improvements
BUILDING TYPE: PC1, RM1, S1A, S2A

GENERAL BUILDING DESCRIPTION: Based upon the structural drawings provided and dated circa 1950, the original portion of the structure was built at the same time as Building 7. This area is comprised of restrooms and office space. The one story building has masonry walls and precast concrete walls with a wood diaphragm. In 1954 additions were made and at the same time Building 9 was constructed. The newly added construction matches the existing with masonry walls, precast concrete walls and wood diaphragm. As part of the Building 7 Seismic Retrofit in 1999, mechanical units were added on the roof of the covered walkway running along the west side of Building 8.

For exterior elevations and other exterior views, see pictures Bldg08-01 to Bldg08-06.

VERTICAL STRUCTURAL SYSTEM: The gravity system of the building comprises steel framing supported on steel columns, precast concrete walls or reinforced masonry walls which in turn are supported by the continuous concrete grade beam and piles.

LATERAL STRUCTURAL SYSTEM: The lateral force resisting system for the building includes masonry shear walls, precast concrete shear walls, steel moment frames, and steel braced frames. The diaphragms are sheathed with diagonal 1x lumber.

NON-STRUCTURAL SYSTEMS: The integrated ceiling system appears to be adequately anchored and braced to the parent structure. The ceiling mounted lights are supported individually from two opposite corners. Cabinetry is present throughout the building.

For non-structural systems and items present within the building, see pictures Bldg08-07 to Bldg08-09.

List of Deficiencies

The following items have been found noncompliant in accordance with the requirements of ASCE31-03:

Structural

1. PROXIMITY OF ADJACENT BUILDINGS: The clear distance between Building 7 and Building 8 is less than 4 percent of the height (picture Bldg08-01). Additionally, the walkway canopy is directly attached to Building 8 and also connects to Building 9.
2. REDUNDANCY: The number of steel braced frame bays in each line is not greater than 2.
3. INADEQUATE WALL ANCHORAGE: The wall anchorage of precast concrete wall panels to the diaphragm does not have the adequate strength to resist the out-of-plane connection force calculated by the ASCE 31-03 Tier 1 Quick Check Procedure.
4. CROSS-GRAIN BENDING IN WOOD LEDGERS: Ledger connection between precast wall panels and the diaphragm induces cross-grain bending.
5. PRECAST WALL PANELS AT FOUNDATION: Wall panels are not adequately connected to the foundation
6. NO CROSS TIES: There are typically no cross ties between diaphragm chords.
7. INADEQUATE STEEL BRACED FRAMES: The axial stress in the diagonals exceeds the 0.50Fy limit for Life Safety, and members do not meet compact section requirements.
8. DETERIORATION OF WOOD: The walkway canopy wood framing supporting mechanical equipment shows signs of moderate deterioration and in-grain splitting (picture Bldg08-05).
9. INTERFERING WALLS AT MOMENT FRAMES: Infill walls in moment frames are not isolated properly.
10. UNACCEPTABLE DRIFT AT MOMENT FRAMES: The drift ratio is greater than the limit of 0.025 for Life Safety.

Non-structural

11. TALL NARROW CONTENTS: Cabinets throughout the building are typically unanchored.
12. DETERIORATION IN MECHANICAL ANCHORAGE: Deterioration is typical at wood support framing at units.
13. INADEQUATE FIRE SUPPRESSION PIPING: Fire suppression piping is not anchored and braced properly, and flexible couplings are not provided.

BUILDING 8 – CLASSROOMS & LABS, PICTURES

Bldg08-01

Bldg08-02

Bldg08-03

Bldg08-04

Bldg08-05

Bldg08-06

Bldg08-07

Bldg08-08

Bldg08-09

Basic Structural Checklist for Building Type PC1: Precast/Tilt-Up Concrete Shear Walls with Flexible Diaphragms
BUILDING 8 – CLASSROOMS & LABS Sheet 1 of 3

Building System

C	NC	N/A	LOAD PATH: The structure shall contain a minimum of one complete load path for Life Safety and Immediate Occupancy for seismic force effects from any horizontal direction that serves to transfer the inertial forces from the mass to the foundation. (Tier 2: Sec. 4.3.1 . 1)
C	NC	N/A	ADJACENT BUILDINGS: The clear distance between the building being evaluated and any adjacent building shall be greater than 4 percent of the height of the shorter building for Life Safety and immediate Occupancy. (Tier 2: Sec. 4.3. 1.2)
C	NC	N/A	MEZZANINES: Interior mezzanine levels shall be braced independently from the main structure, or shall be anchored to the lateral-force-resisting elements of the main structure. (Tier 2: Sec. 4.3. 1.3)
C	NC	N/A	WEAK STORY: The strength of the lateral-force-resisting system in any story shall not be less than 80 percent of the strength in an adjacent story, above or below, for Life Safety and Immediate Occupancy. (Tier2: Sec. 4.3.2.1)
C	NC	N/A	SOFT STORY: The stiffness of the lateral-force-resisting system in any story shall not be less than 70 percent of the lateral-force resisting system stiffness in an adjacent story above or below, or less than 80 percent of the average lateral-force-resisting system stiffness of the three stories above or below for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.2)
C	NC	N/A	GEOMETRY: There shall be no changes in horizontal dimension of the lateral-force-resisting system of more than 30 percent in a story relative to adjacent stories for Life Safety and Immediate Occupancy, excluding one-story penthouses and mezzanines. (Tier 2: Sec. 4.3.2.3)
C	NC	N/A	VERTICAL DISCONTINUITIES: All vertical elements in the lateral-force-resisting system shall be continuous to the foundation. (Tier 2: Sec. 4.3.2.4)
C	NC	N/A	MASS: There shall be no change in effective mass more than 50 percent from one story to the next for Life Safety and Immediate Occupancy. Light roofs, penthouses, and mezzanines need not be considered. (Tier 2: Sec. 4.3.2.5)
C	NC	N/A	DETERIORATION OF WOOD: There shall be no signs of decay, shrinkage, splitting, fire damage, or sagging in any of the wood members, and none of the metal connection hardware shall be deteriorated, broken, or loose. (Tier 2: Sec. 4.3.3.1I)

Basic Structural Checklist for Building Type PC1: Precast/Tilt-Up Concrete Shear Walls with Flexible Diaphragms
BUILDING 8 – CLASSROOMS & LABS Sheet 2 of 3

C	NC	N/A	PRECAST CONCRETE WALLS: There shall be no visible deterioration of concrete or reinforcing steel or evidence of distress, especially at the connections. (Tier 2: Sec. 4.3.3.6)

Lateral-Force-Resisting System

C	NC	N/A	REDUNDANCY: The number of lines of shear walls in each principal direction shall be greater than or equal to 2 for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.1.1)
C	NC	N/A	SHEAR STRESS CHECK: The shear stress in the precast panels, calculated using the Quick Check procedure of Section 3.5.3.3, shall be less than the greater of 10 psi or $2(f'c)^{0.5}$ for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.3.1)
C	NC	N/A	REINFORCING STEEL: The ratio of reinforcing steel area to gross concrete area shall be not less than 0.0015 in the vertical direction and 0.0025 in the horizontal direction for Life Safety and Immediate Occupancy. The spacing of reinforcing steel shall be equal 10 or less than 18 inches for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.3.2)

Connections

C	NC	N/A	WALL ANCHORAGE: Exterior concrete or masonry walls 1hat are dependent on the diaphragm for lateral support shall be anchored for out-of-plane forces at each diaphragm level with steel anchors, reinforcing dowels, or straps that are developed into the diaphragm. Connections shall have adequate strength to resist the connection force calculated in the Quick Check procedure of Section 3.5.3. 7. (Tier 2: Sec. 4.6. 1.1)
C	NC	N/A	WOOD LEDGERS: The connection between the wall panels and the diaphragm shall not induce cross-grain bending or tension in the wood ledgers. (Tier 2: Sec. 4.6. 1 .2)
C	NC	N/A	TRANSFER TO SHEAR WALLS: Diaphragms shall be connected for transfer of loads to the shear walls for Life Safety and the connections shall be able to develop the lesser of the shear strength of the walls or diaphragms for Immediate Occupancy. (Tier 2: Sec. 4.6.2.1)

Basic Structural Checklist for Building Type PC1: Precast/Tilt-Up Concrete Shear Walls with Flexible Diaphragms
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C	NC	N/A	PRECAST WALL PANELS: Precast wall panels shall be connected to the foundation for Life Safety and the connections shall be able to develop the strength of the walls for Immediate Occupancy. (Tier2: Sec. 4.6.3.7)
C	NC	N/A	GIRDER/COLUMN CONNECTION: There shall be a positive connection utilizing plates, connection hardware, or straps between the girder and the column support. (Tier 2: Sec. 4.6.4.1)

Supplemental Structural Checklist for Building Type PC1: Precast/Tilt-Up Concrete Shear Walls with Flexible Diaphragms
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Lateral-Force-Resisting System

C	NC	N/A	COUPLING BEAMS: The stirrups in coupling beams over means of egress shall be spaced at or less than d/2 and shall be anchored into the confined core of the beam with hooks of 135° or more for Life Safety. All coupling beams shall comply with the requirements above and shall have the capacity in shear to develop the uplift capacity of the adjacent wall for Immediate Occupancy. (Tier 2: Sec. 4.4.2.2.3)
C	NC	N/A	WALL OPENINGS: The total width of openings along any perimeter wall line shall constitute less than 75 percent of the length of any perimeter wall for Life Safety and 50 percent for Immediate Occupancy with the wall piers having aspect ratios of less than 2-to- l for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.3.3)
C	NC	N/A	CORNER OPENINGS: Walls with openings al a building comer larger than the width of a typical panel shall be connected to the remainder of the wall with collector reinforcing. (Tier 2: Sec. 4.4.2.3.4)
C	NC	N/A	PANEL-TO-PANEL CONNECTIONS: Adjacent wall panels shall be interconnected to transfer overturning forces between panels by methods other than welded steel inserts. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.3.5)
C	NC	N/A	WALL THICKNESS: Thickness of bearing walls shall not be less than 1125 the unsupported height or length, whichever is shorter, nor less than 4 inches. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.3.6)

Diaphragms

C	NC	N/A	CROSS TIES: There shall be continuous cross ties between diaphragm chords. (Tier 2: Sec. 4.5.1.2)
C	NC	N/A	PLAN IRREGULARITIES: There shall be tensile capacity to develop the strength of the diaphragm at re-entrant corners or other locations of plan irregularities. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.7)

Supplemental Structural Checklist for Building Type PC1: Precast/Tilt-Up Concrete Shear Walls with Flexible Diaphragms
BUILDING 8 – CLASSROOMS & LABS Sheet 2 of 2

C	NC	N/A	DIAPHRAGM REINFORCEMENT AT OPENINGS: There shall be reinforcing around all diaphragm openings larger than 50 percent of the building width in either major plan dimension. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5. 1.8)
C	NC	N/A	STRAIGHT SHEATHING: All straight sheathed diaphragms shall have aspect ratios less than 2-to-1 for Life Safety and 1-to-1 for Immediate Occupancy in the direction being considered. (Tier 2: Sec. 4.5.2.1)
C	NC	N/A	SPANS: All wood diaphragms with spans greater than 24 feet for Life Safety and 12 feet for Immediate Occupancy shall consist of wood structural panels or diagonal sheathing. (Tier 2: Sec. 4.5.2.2)
C	NC	N/A	UNBLOCKED DIAPHRAGMS: All diagonally sheathed or unblocked wood structural panel diaphragms shall have horizontal spans less than 40 feet for Life Safety and 30 feet for Immediate Occupancy and shall have aspect ratios less than or equal to 4-to-l for Life Safety and 3-to-l for Immediate Occupancy. (Tier 2: Sec. 4.5.2.3)
C	NC	N/A	OTHER DIAPHRAGMS: The diaphragm shall not consist of a system other than wood, metal deck, concrete, or horizontal bracing. (Tier 2: Sec. 4.5.7. 1)

Connections

C	NC	N/A	PRECAST PANEL CONNECTIONS: There shall be at least two anchors from each precast wall panel into the diaphragm elements for Life Safety and the anchors shall be able to develop the strength of the panels for Immediate Occupancy. (Tier 2: Sec. 4.6.1.3)
C	NC	N/A	UPLIFT AT PILE CAPS: Pile caps shall have top reinforcement and piles shall be anchored to the pile caps for Life Safety, and the pile cap reinforcement and pile anchorage shall be able to develop the tensile capacity of the piles for Immediate Occupancy. (Tier 2: Sec. 4.6.3. 10)
C	NC	N/A	GIRDERS: Girders supported by walls or pilasters shall have at least two ties securing the anchor bolts for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.6.4.2)

Basic Structural Checklist for Building Type RM1: Reinforced Masonry Bearing Walls with Flexible Diaphragms
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Building System

C	**NC**	**N/A**	LOAD PATH: The Structure shall contain a minimum of one complete load path for Life Safety and Immediate Occupancy for seismic force effects from any horizontal direction that serves to transfer the inertial forces from the mass to the foundation. (Tier 2: Sec. 4.3.1.1)
C	**NC**	**N/A**	ADJACENT BUILDINGS: The clear distance between the building being evaluated and any adjacent building shall be greater than 4 percent of the height of the shorter building for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.1.2)
C	**NC**	**N/A**	MEZZANINES: Interior mezzanine levels shall be braced independently from the main structure, or shall be anchored to the lateral-force-resisting elements of the main structure. (Tier 2: Sec. 4.3.1.3)
C	**NC**	**N/A**	WEAK STORY: The strength of the lateral-force-resisting system in any story shall not be less than 80 percent of the strength in an adjacent story, above or below, for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.1)
C	**NC**	**N/A**	SOFT STORY: The stiffness of the lateral-force-resisting system in any story shall not be less than 70 percent of the lateral-force-resisting system stiffness in an adjacent story above or below, or less than 8- percent of the average lateral-force-resisting system stiffness of the three stories above or below for Life Safety an Immediate Occupancy. (Tier 2: Sec. 4.3.2.2)
C	**NC**	**N/A**	GEOMETRY: There shall be no changes in horizontal dimension of the lateral-force-resisting system of more than 30 percent in a story relative to adjacent stories for Life Safety and Immediate Occupancy, excluding one-story penthouses and mezzanines. (Tier 2: Sec. 4.3.2.3)
C	**NC**	**N/A**	VERTICAL DISCONTINUITIES: All vertical elements in the lateral-force-resisting system shall be continuous to the foundation. (Tier 2: Sec. 4.3.2.4)

Basic Structural Checklist for Building Type RM1: Reinforced Masonry Bearing Walls with Flexible Diaphragms
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C	NC	N/A	MASS: There shall be no change in effective mass more than 50 percent from one story to the next Life safety and Immediate Occupancy. Light roofs, penthouses, and mezzanines need not be considered. (Tier 2: Sec. 4.3.2.5)
C	NC	N/A	DETERIORATION OF WOOD: There shall be no signs of decay, shrinkage, splitting, fire damage, or sagging in any of the wood members, and none of the metal connection hardware shall be deteriorated, broken, or loose. (Tier 2: Sec. 4.3.3.1)
C	NC	N/A	MASONRY UNITS: There shall be no visible deterioration of masonry units. (Tier 2: Sec. 4.3.3.7)
C	NC	N/A	MASONRY JOINTS: The mortar shall not be easily scraped away from the joints by hand with a metal tool, and there shall be no areas of eroded mortar. (Tier 2: Sec. 4.3.3.8)
C	NC	N/A	REINFORCED MASONRY WALL CRACKS: All existing diagonal cracks in wall elements shall be less than 118 inch for Life Safety and 1/16 inch for Immediate Occupancy, shall not be concentrated in one location, and shall not form an X pattern. (Tier 2: Sec. 4.3.3.10)

Lateral-Force-Resisting System

C	NC	N/A	REDUNDANCY: The number of lines of shear walls in each principal direction shall be greater than or equal to 2 for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.1.1)
C	NC	N/A	SHEAR STRESS CHECK: The shear stress in I.be reinforced masonry shear walls, calculated using the Quick Check procedure of Section 3.5.3.3, shall be less than 70 psi for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.4.1)

Basic Structural Checklist for Building Type RM1: Reinforced Masonry Bearing Walls with Flexible Diaphragms
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C	NC	N/A	REINFORCING STEEL: The total vertical and horizontal reinforcing steel ratio in reinforced masonry walls shall be greater than 0.002 for Life Safety and Immediate Occupancy of the wall with the minimum of 0.0007 for Life Safety and Immediate Occupancy in either of the two directions; the spacing of reinforcing steel shall be less than 48 inches for Life Safety and Immediate Occupancy; and all vertical bars shall extend to the top of the walls. (Tier 2: Sec. 4.4.2.4.2)

Connections

C	NC	N/A	WALL ANCHORAGE: Exterior concrete or masonry walls that are dependent on the diaphragm for lateral support shall be anchored for out-of-plane forces at each diaphragm level with steel anchors, reinforcing dowels, or straps that are developed into the diaphragm. Connections shall have adequate strength to resist the connection force calculated in the Quick Check procedure of Section 3.5.3. 7. (Tier 2: Sec. 4.6.1.1)
C	NC	N/A	WOOD LEDGERS: The connection between the wall panels and the diaphragm shall not induce cross-grain bending or tension in the wood ledgers. (Tier 2: Sec. 4.6.1.2)
C	NC	N/A	TRANSFER TO SHEAR WALLS: Diaphragms shall be connected for transfer of loads to the shear walls for Life Safety and the connections shall be able to develop the lesser of the shear strength of the walls or diaphragms for Immediate Occupancy. (Tier 2: Sec. 4.6.2.1)
C	NC	N/A	FOUNDATION DOWELS: Wall reinforcement shall be doweled into the foundation for Life Safety, and the dowels shall be able to develop the lesser of the strength of the walls or the uplift capacity of the foundation for Immediate Occupancy. (Tier 2: Sec. 4.6.3.5)
C	NC	N/A	GIRDER/COLUMN CONNECTION: There shall be a positive connection utilizing plates, connection hardware, or straps between the girder and the column support. (Tier 2: Sec. 4.6.4.1)

Supplemental Structural Checklist for Building Type RM1: Reinforced Masonry Bearing Walls with Flexible Diaphragms
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Lateral-Force-Resisting System

C	NC	N/A	REINFORCING AT OPENINGS: All wall openings that interrupt rebar shall have trim reinforcing on all sides. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.4.3)
C	NC	N/A	PROPORTIONS: The height-to-thickness ratio of the shear walls at each story shall be less than 30. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.4.4)

Diaphragms

C	NC	N/A	CROSS TIES: There shall be continuous cross ties between diaphragm chords. (Tier 2: Sec. 4.5.1.2)
C	NC	N/A	OPENINGS AT SHEAR WALLS: Diaphragm openings immediately adjacent to the shear walls shall be less than 25 percent of the wall length for Life Safety and 15 percent of the wall length for Immediate Occupancy. (Tier 2: Sec. 4.5.1.4)
C	NC	N/A	OPENINGS AT EXTERIOR MASONRY SHEAR WALLS: Diaphragm openings immediately adjacent to exterior masonry shear walls shall not be greater than 8 feet long for Life Safety and 4 feet long for Immediate Occupancy. (Tier 2: Sec. 4.5.1.6)
C	NC	N/A	PLAN IRREGULARITIES: There shall be tensile capacity to develop the strength of the diaphragm at re-entrant comers or other locations of plan irregularities. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.7)
C	NC	NA	DIAPHRAGM REINFORCEMENT AT OPENINGS: There shall be reinforcing around all diaphragm openings larger than 50 percent of the building width in either major plan dimension. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.8)

Supplemental Structural Checklist for Building Type RM1: Reinforced Masonry Bearing Walls with Flexible Diaphragms
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C	NC	N/A	STRAIGHT SHEATHING: All straight sheathed diaphragms shall have aspect ratios less than 2-to-1 for Life Safety and 1-to-1 for Immediate Occupancy in the direction being considered. (Tier 2: Sec. 4.5.2.1)
C	NC	N/A	SPANS: All wood diaphragms with spans greater than 24 feet for Life Safety and 12 feet for Immediate Occupancy shall consist of wood structural panels or diagonal sheathing. (Tier 2: Sec. 4.5.2.2)
C	NC	N/A	UNBLOCKED DIAPHRAGMS: All diagonally sheathed or unblocked wood structural panel diaphragms shall have horizontal spans less than 40 feet for Life Safety and 30 feet for Immediate Occupancy and shall have aspect ratios less than or equal to 4-to-1 for Life Safety and 3-to-J for Immediate Occupancy. (Tier 2: Sec. 4.5.2.3)
C	NC	N/A	NON-CONCRETE FILLED DIAPHRAGMS: Untopped metal deck diaphragms or metal deck diaphragms with fill other than concrete shall consist of horizontal spans of less than 40 feet and shall have span/depth ratios less than 4-to-1. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.3.1)
C	NC	N/A	OTHER DIAPHRAGMS: The diaphragm shall not consist of a system other than wood, metal deck, concrete, or horizontal bracing. (Tier 2: Sec. 4.5. 7.1)

Connections

C	NC	N/A	STIFFNESS OF WALL ANCHORS: Anchors of concrete or masonry walls to wood structural elements shall be installed taut and shall be stiff enough to limit the relative movement between the wall and the diaphragm to no greater than 1/8 inch prior to engagement of the anchors. (Tier 2:Sec. 4.6.1.4)

Basic Structural Checklist for Building Type S1A: Steel Moment Frames with Flexible Diaphragms

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Building System

C	**NC**	**N/A**	LOAD PATH: The structure shall contain a minimum of one complete load path for Life Safety and Immediate Occupancy for seismic force effects from any horizontal direction that serves to transfer the inertial forces from the mass to the foundation. (Tier 2: Sec. 4.3.1.1)
C	**NC**	**N/A**	ADJACENT BUILDINGS: The clear distance between the building being evaluated and any adjacent building shall be greater than 4 percent of the height of the shorter building for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.1 .2)
C	**NC**	**N/A**	MEZZANINES: Interior mezzanine levels shall be braced independently from the main structure, or shall be anchored to the lateral-force-resisting elements of the main structure. (Tier 2: Sec. 4.3.1.3)
C	**NC**	**N/A**	WEAK STORY: The strength of the lateral-force-resisting system in any story shall not be less than 80 percent of the strength in an adjacent story, above or below, for Life Safety and Immediate Occupancy. (Tier2: Sec. 4.3.2.1)
C	**NC**	**N/A**	SOFT STORY: The stiffness of the lateral-force-resisting system in any story shall not be less than 70 percent of the lateral-force resisting system stiffness in an adjacent story above or below, or less than 80 percent of the average lateral-force-resisting system stiffness of the three stories above or below for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.2)
C	**NC**	**N/A**	GEOMETRY: There shall be no changes in horizontal dimension of the lateral-force-resisting system of more than 30 percent in a story relative to adjacent stories for Life Safety and Immediate Occupancy, excluding one-story penthouses and mezzanines. (Tier 2: Sec. 4.3.2.3)
C	**NC**	**N/A**	VERTICAL DISCONTINUITIES: All vertical elements in the lateral-force-resisting system shall be continuous to the foundation. (Tier 2: Sec. 4.3.2.4)
C	**NC**	**N/A**	MASS: There shall be no change in effective mass more than 50 percent from one story to the next for Life Safety and Immediate Occupancy. Light roofs, penthouses, and mezzanines need not be considered. (Tier 2: Sec. 4.3.2.5)
C	**NC**	**N/A**	DETERIORATION OF WOOD: There shall be no signs of decay, shrinkage, splitting, fire damage, or sagging in any of the wood members, and none of the metal connection hardware shall be deteriorated, broken, or loose. (Tier 2: Sec. 4.3.3.1)

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C	NC	N/A	DETERIORATION OF STEEL: There shall be no visible rusting, corrosion, cracking, or other deterioration in any of the steel elements or connections in the vertical- or lateral-force-resisting systems. (Tier 2: Sec. 4.3.3.3)

Lateral-Force-Resisting System

C	NC	N/A	REDUNDANCY: The number of lines of moment frames in each principal direction shall be greater than or equal to 2 for Life Safety and Immediate Occupancy. The number of bays of moment frames in each line shall be greater than or equal 10 2 for Life Safety and 3 for Immediate Occupancy. (Tier 2: Sec. 4.4.1.1.1)
C	NC	N/A	INTERFERING WALLS: All concrete and masonry infill walls placed in moment frames shall be isolated from structural elements. (Tier 2: Sec. 4.4.1.2.1)
C	NC	N/A	DRIFT CHECK: The drift ratio of the steel moment frames, calculated using the Quick Check procedure of Section 3.5.3.1, shall be less than 0.025 for Life Safety and 0.015 for Immediate Occupancy. (Tier 2: Sec. 4.4.1.3.1)
C	NC	N/A	AXIAL STRESS CHECK: The axial stress due to gravity loads in columns subjected to overturning forces shall be less than $0.10F_y$ for Life Safety and Immediate Occupancy. Alternatively, the axial stress due to overturning forces alone, calculated using the Quick Check procedure of Section 3.5.3.6, shall be less than $0.30F_y$ for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.1.3.2)

Connections

C	NC	N/A	TRANSFER TO STEEL FRAMES: Diaphragms shall be connected for transfer of loads to the steel frames for Life Safety, and the connections shall be able to develop the lesser of the strength of the frames or the diaphragms for Immediate Occupancy. (Tier 2: Sec. 4.6.2.2)

Basic Structural Checklist for Building Type S1A: Steel Moment Frames with Flexible Diaphragms
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C	NC	N/A	STEEL COLUMNS: The columns in lateral-force-resisting frames shall be anchored to the building foundation for Life Safety, and the anchorage shall be able to develop the lesser of the tensile capacity of the column, the tensile capacity of the lowest level column splice (if any), or the uplift capacity of the foundation, for Immediate Occupancy. (Tier 2: Sec. 4.6.3.1)

Supplemental Structural Checklist for Building Type S1A: Steel Moment Frames with Flexible Diaphragms
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Lateral-Force-Resisting System

C	NC	N/A	MOMENT-RESISTING CONNECTIONS: All moment connections shall be able to develop the strength of the adjoining members or panel zones. (Tier 2: Sec. 4.4.1.3.3)
C	NC	N/A	PANEL ZONES: All panel zones shall have the shear capacity to resist the shear demand required to develop 0.8 times the sum of the flexural strengths of the girders framing in at the face of the column. (Tier 2: Sec. 4.4.1.3.4)
C	NC	N/A	COLUMN SPLICES: All column splice details located in moment-resisting frames shall include connection of both flanges and the web for Life Safety,, and the splice shall develop the strength of the column for Immediate Occupancy. (Tier 2: Sec. 4.4.1.3.5)
C	NC	N/A	STRONG COLUMN/WEAK BEAM: The percentage of strong column/weak beam joints in each story of each line of moment-resisting frames shall be greater than *50* percent for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.1.3.6)
C	NC	N/A	COMPACT MEMBERS: All frame elements shall meet section requirements set forth by *Seismic Provisions for Structural Steel Buildings* Table I-9-1 (AISC, 1997). (Tier 2: Sec. 4.4.1.3. 7)
C	NC	N/A	BEAM PENETRATIONS: All openings in frame-beam webs shall be less than 1/4 of the beam depth and shall be located in the center half of the beams. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.1.3.8)
C	NC	N/A	GIRDER FLANGE CONTINUITY PLATES: There shall be girder flange continuity plates at all moment-resisting frame joints. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.1.3.9)
C	NC	N/A	OUT-OF-PLANE BRACING: Beam-column joints shall be braced out-of-plane. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.1.3. I 0)
C	NC	N/A	BOTTOM FLANGE BRACING: The bottom flanges of beams shall be braced out-of-plane. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.1.3.11)

Supplemental Structural Checklist for Building Type S1A: Steel Moment Frames with Flexible Diaphragms

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Diaphragms

C	**NC**	**N/A**	CROSS TIES: There shall be continuous cross ties between diaphragm chords. (Tier 2: Sec. 4.5.1.2)
C	**NC**	**N/A**	PLAN IRREGULARITIES: There shall be tensile capacity to develop the strength of the diaphragm at re-entrant corners or other locations of plan irregularities. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.7)
C	**NC**	**N/A**	DIAPHRAGM REINFORCEMENT AT OPENINGS: There shall be reinforcing around all diaphragm openings larger than 50 percent of the building width in either major plan dimension. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.8)
C	**NC**	**N/A**	STRAIGHT SHEATHING: All straight sheathed diaphragms shall have aspect ratios less than 2-to-1 for Life Safety and 1-to-1 for Immediate Occupancy in the direction being considered. (Tier 2: Sec. 4.5.2.1)
C	**NC**	**N/A**	SPANS: All wood diaphragms with spans greater than 24 feet for Life Safety and 12 feet for Immediate Occupancy shall consist of wood structural panels or diagonal sheathing. (Tier 2: Sec. 4.5.2.2)
C	**NC**	**N/A**	UNBLOCKED DIAPHRAGMS: All diagonally sheathed or unblocked wood structural panel diaphragms shall have horizontal spans less than 40 feet for Life Safety and 30 feet for Immediate Occupancy and shall have aspect ratios less than or equal to 4-to-l for Life Safety and 3-to-l for Immediate Occupancy. (Tier 2: Sec. 4.5.2.3)
C	**NC**	**N/A**	NON-CONCRETE FILLED DIAPHRAGMS: Untopped metal deck diaphragms or metal deck diaphragms with fill other than concrete shall consist of horizontal spans of less than 40 feet and shall have span/depth ratios less than 4-to-I. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.3.1)
C	**NC**	**N/A**	OTHER DIAPHRAGMS: The diaphragm shall not consist of a system other than wood, metal deck, concrete, or horizontal bracing. (Tier 2: Sec. 4.5.7. 1)

Supplemental Structural Checklist for Building Type S1A: Steel Moment Frames with Flexible Diaphragms
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Connections

C	NC	N/A	UPLIFT AT PILE CAPS: Pile caps shall have top reinforcement and piles shall be anchored to the pile caps for Life Safety, and the pile cap reinforcement and pile anchorage shall be able to develop the tensile capacity of the piles for Immediate Occupancy. (Tier 2: Sec. 4.6.3.10)

Basic Structural Checklist for Building Type S2A: Steel Braced Frames with Flexible Diaphragms

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Building System

C	**NC**	**N/A**	LOAD PATH: The structure shall contain a minimum of one complete load path for Life Safety and Immediate Occupancy for seismic force effects from any horizontal direction that serves to transfer the inertial forces from the mass to the foundation. (Tier 2: Sec. 4.3.1.1)
C	**NC**	**N/A**	ADJACENT BUILDINGS: The clear distance between the building being evaluated and any adjacent building shall be greater than 4 percent of the height of the shorter building for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.1 .2)
C	**NC**	**N/A**	MEZZANINES: Interior mezzanine levels shall be braced independently from the main structure, or shall be anchored to the lateral-force-resisting elements of the main structure. (Tier 2: Sec. 4.3.1.3)
C	**NC**	**N/A**	WEAK STORY: The strength of the lateral-force-resisting system in any story shall not be less than 80 percent of the strength in an adjacent story, above or below, for Life Safety and Immediate Occupancy. (Tier2: Sec. 4.3.2.1)
C	**NC**	**N/A**	SOFT STORY: The stiffness of the lateral-force-resisting system in any story shall not be less than 70 percent of the lateral-force resisting system stiffness in an adjacent story above or below, or less than 80 percent of the average lateral-force-resisting system stiffness of the three stories above or below for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.2)
C	**NC**	**N/A**	GEOMETRY: There shall be no changes in horizontal dimension of the lateral-force-resisting system of more than 30 percent in a story relative to adjacent stories for Life Safety and Immediate Occupancy, excluding one-story penthouses and mezzanines. (Tier 2: Sec. 4.3.2.3)
C	**NC**	**N/A**	VERTICAL DISCONTINUITIES: All vertical elements in the lateral-force-resisting system shall be continuous to the foundation. (Tier 2: Sec. 4.3.2.4)
C	**NC**	**N/A**	MASS: There shall be no change in effective mass more than 50 percent from one story to the next for Life Safety and Immediate Occupancy. Light roofs, penthouses, and mezzanines need not be considered. (Tier 2: Sec. 4.3.2.5)
C	**NC**	**N/A**	DETERIORATION OF WOOD: There shall be no signs of decay, shrinkage, splitting, fire damage, or sagging in any of the wood members, and none of the metal connection hardware shall be deteriorated, broken, or loose. (Tier 2: Sec. 4.3.3.1)

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BUILDING 8 – CLASSROOMS & LABS Sheet 2 of 3

C	NC	N/A	DETERIORATION OF STEEL: There shall be no visible rusting, corrosion, cracking, or other deterioration in any of the steel elements or connections in the vertical- or lateral-force-resisting systems. (Tier 2: Sec. 4.3.3.3)

Lateral-Force-Resisting System

C	NC	N/A	AXIAL STRESS CHECK: The axial stress due to gravity loads in columns subjected to overturning forces shall be less than $0.10F_y$ for Life Safety and Immediate Occupancy. Alternatively, the axial stress due to overturning forces alone, calculated using the Quick Check procedure of Section 3.5.3.6, shall be less than $0.30F_y$ for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.1.3.2)
C	NC	N/A	REDUNDANCY: The number of lines of braced frames in each principal direction shall be greater than or equal to 2 for Life Safety and Immediate Occupancy. The number of braced bays in each line shall be greater than 2 for Life Safety and 3 for Immediate Occupancy. (Tier 2: Sec. 4.4.3.1.1)
C	NC	N/A	AXIAL STRESS CHECK: The axial stress in the diagonals, calculated using the Quick Check procedure of Section 3.5.3.4, shall be less than $0.50F_y$ for Life Safety and for Immediate Occupancy. (Tier 2: Sec. 4.4.3.1 .2)
C	NC	N/A	COLUMN SPLICES: All column splice details located in braced frames shall develop the tensile strength of the column. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.3.1.3)

Connections

C	NC	N/A	TRANSFER TO STEEL FRAMES: Diaphragms shall be connected for transfer of loads to the steel frames for Life Safety, and the connections shall be able to develop the lesser of the strength of the frames or the diaphragms for Immediate Occupancy. (Tier 2: Sec. 4.6.2.2)

Basic Structural Checklist for Building Type S2A: Steel Braced Frames with Flexible Diaphragms
BUILDING 8 – CLASSROOMS & LABS Sheet 3 of 3

C	NC	N/A	STEEL COLUMNS: The columns in lateral-force-resisting frames shall be anchored to the building foundation for Life Safety, and the anchorage shall be able to develop the lesser of the tensile capacity of the column, the tensile capacity of the lowest level column splice (if any), or the uplift capacity of the foundation, for Immediate Occupancy. (Tier 2: Sec. 4.6.3.1)

Supplemental Structural Checklist for Building Type S2A: Steel Braced Frames with Flexible Diaphragms
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Lateral-Force-Resisting System

C	NC	N/A	COMPACT MEMBERS: All frame elements shall meet section requirements set forth by Seismic Provisions for Structural Steel Buildings Table 1-9-1 (AISC, 1997). (Tier 2: Sec. 4.4. 1.3.7)
C	NC	N/A	SLENDERNESS OF DIAGONALS: All diagonal elements required to carry compression shall have Kl/r ratios less than 120. (Tier 2: Sec. 4.4.3.1.4)
C	NC	N/A	CONNECTION STRENGTH: All the brace connections shall develop the yield capacity of the diagonals. (Tier 2: Sec. 4.4.3.1 .5)
C	NC	N/A	OUT-OF-PLANE BRACING: Braced frame connections attached to beam bottom flanges located away from beam-column joints shall be braced out-of-plane at the bottom flange of the beams. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2:Sec. 4.4.3.1.6)
C	NC	N/A	K-BRACING: The bracing system shall not include K-braced bays. (Tier 2: Sec. 4.4.3.2.1)
C	NC	N/A	TENSION-ONLY BRACES: Tension-only braces shall not comprise more than 70 percent of the total lateral-force-resisting capacity in structures over two stories in height. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.3.2.2)
C	NC	N/A	CHEVRON BRACING: The bracing system shall not include chevron, or V-braced, bays. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.3.2.3)
C	NC	N/A	CONCENTRICALLY BRACED FRAME JOINTS: All the diagonal braces shall frame into the beam-column joints concentrically. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.3.2.4)

Diaphragms

C	NC	N/A	CROSS TIES: There shall be continuous cross ties between diaphragm chords. (Tier 2: Sec. 4.5.1.2)
C	NC	N/A	OPENINGS AT BRACED FRAMES: Diaphragm openings immediately adjacent to the braced frames shall extend less than 25 percent of the frame length for Life Safety and 15 percent of the frame length for Immediate Occupancy. (Tier 2: Sec. 4.5.1.5)

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C	NC	N/A	PLAN IRREGULARITIES: There shall be tensile capacity to develop the strength of the diaphragm at re-entrant comers or other locations of plan irregularities. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.7)
C	NC	N/A	DIAPHRAGM REINFORCEMENT AT OPENINGS: There shall be reinforcing around all diaphragm openings larger than 50 percent of the building width in either major plan dimension. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1 .8)
C	NC	N/A	STRAIGHT SHEATHING: All straight sheathed diaphragms shall have aspect ratios less than 2-to-1 for Life Safety and 1-to-1 for Immediate Occupancy in the direction being considered. (Tier 2: Sec. 4.5.2.1)
C	NC	N/A	SPANS: All wood diaphragms with spans greater than 24 feet for Life Safety and 12 feet for Immediate Occupancy shall consist of wood structural panels or diagonal sheathing. (Tier 2: Sec. 4.5.2.2)
C	NC	N/A	UNBLOCKED DIAPHRAGMS: All diagonally sheathed or unblocked wood structural panel diaphragms shall have horizontal spans less than 40 feet for Life Safety and 30 feet for Immediate Occupancy and shall have aspect ratios less than or equal to 4-to-l for Life Safety and 3-to-l for Immediate Occupancy. (Tier 2: Sec. 4.5.2.3)
C	NC	N/A	NON-CONCRETE FILLED DIAPHRAGMS: Untopped metal deck diaphragms or metal deck diaphragms with fill other than concrete shall consist of horizontal spans of less than 40 feet and shall have span/depth ratios less than 4-to-I. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.3.1)

Connections

C	NC	N/A	UPLIFT AT PILE CAPS: Pile caps shall have top reinforcement and piles shall be anchored to the pile caps for Life Safety, and the pile cap reinforcement and pile anchorage shall be able to develop the tensile capacity of the piles for Immediate Occupancy. (Tier 2: Sec. 4.6.3.10)

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Partitions

C	NC	N/A	UNREINFORCED MASONRY: Unreinforced masonry or hollow clay tile partitions shall be braced at a spacing equal to or less than 10 feet in levels of low or moderate seismicity and 6 feet in levels of high seismicity. (Tier 2: Sec. 4.8.1.1)

Ceiling Systems

C	NC	N/A	SUPPORT: The integrated suspended ceiling system shall not be used to laterally support the tops of gypsum board, masonry, or hollow clay tile partitions. Gypsum board partitions need not be evaluated where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier2: Sec. 4.8.2.1)

Light Fixtures

C	NC	N/A	EMERGENCY LIGHTING: Emergency lighting shall be anchored or braced to prevent falling during an earthquake. (Tier 2: Sec. 4.8.3.1)

Cladding and Glazing

C	NC	N/A	CLADDING ANCHORS: Cladding components weighing more than 10 psf shall be mechanically anchored to the exterior wall framing at a spacing equal to or less than 4 feet. A spacing of up to 6 feet is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.1)
C	NC	N/A	DETERIORATION: There shall be no evidence of deterioration, damage or corrosion in any of the connection elements. (Tier 2: Sec. 4.8.4.2)
C	NC	N/A	CLADDING ISOLATION: For moment frame buildings of steel or concrete, panel connections shall be detailed to accommodate a story drift ratio of 0.02. Panel connection detailing for a story drift ratio of 0.01 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.3)

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BUILDING 8 – CLASSROOMS & LABS

C	**NC**	**N/A**	MULTI-STORY PANELS: For multi-story panels attached at each floor level, panel connections shall be detailed to accommodate a story drift ratio of 0.02. Panel connection detailing for a story drift ratio of 0.01 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.4)
C	**NC**	**N/A**	BEARING CONNECTIONS: Where bearing connections are required, there shall be a minimum of two bearing connections for each wall panel. (Tier 2: Sec. 4.8.4.5)
C	**NC**	**N/A**	INSERTS: Where inserts are used in concrete connections, the inserts shall be anchored to reinforcing steel or other positive anchorage. (Tier 2: Sec. 4.8.4.6)
C	**NC**	**N/A**	PANEL CONNECTIONS: Exterior cladding panels shall be anchored out-of-plane with a minimum of 4 connections for each wall panel. Two connections per wall panel are permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.7)

Masonry Veneer

C	**NC**	**N/A**	SHELF ANGLES: Masonry veneer shall be supported by shelf angles or other elements at each floor 30 feet or more above ground for Life Safety and at each floor above the first floor for Immediate Occupancy. (Tier 2: Sec. 4.8.5.1)
C	**NC**	**N/A**	TIES: Masonry veneer shall be connected to the back-up with corrosion-resistant ties. The ties shall have a spacing equal to or less than 24 inches with a minimum of one tie for every 2-2/3 square feet. A spacing of up to 36 inches is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.5.2)
C	**NC**	**N/A**	WEAKENED PLANES: Masonry veneer shall be anchored to the back-up adjacent to weakened planes, such as at the locations of flashing. (Tier 2: Sec. 4.8.5.3)
C	**NC**	**N/A**	DETERIORATION: There shall be no evidence of deterioration, damage, or corrosion in any of the connection elements. (Tier 2: Sec. 4.8.5.4)

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BUILDING 8 – CLASSROOMS & LABS

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Parapets, Cornices, Ornamentation, and Appendages

C	NC	N/A	URM PARAPETS: There shall be no laterally unsupported unreinforced masonry parapets or cornices with height-to-thickness ratios greater than 1.5. A height-to-thickness ratio of up to 2.5 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.8.1)
C	NC	N/A	CANOPIES: Canopies located at building exits shall be anchored to the structural framing at a spacing of 6 feet or less. An anchorage spacing of up to 10 feet is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.8.2)

Masonry Chimneys

C	NC	N/A	URM CHIMNEYS: No unreinforced masonry chimney shall extend above the roof surface more than twice the least dimension of the chimney. A height above the roof surface of up to three times the least dimension of the chimney is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.9.1)

Stairs

C	NC	N/A	URM WALLS: Walls around stair enclosures shall not consist of unbraced hollow clay tile or unreinforced masonry with a height-to-thickness ratio greater than 12-to-1. A height-to-thickness ratio of up to 15-to-1 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.10.1)
C	NC	N/A	STAIR DETAILS: In moment frame structures, the connection between the stairs and the structure shall not rely on shallow anchors in concrete. Alternatively, the stair details shall be capable of accommodating the drift calculated using the Quick Check procedure of Section 3.5.3.1 without including tension in the anchors. (Tier 2: Sec. 4.8.10.2)

Basic Nonstructural Component Checklist
BUILDING 8 – CLASSROOMS & LABS

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Building Contents and Furnishing

C	NC	N/A	TALL NARROW CONTENTS: Contents over 4 feet in height with a height-to-depth or height-to-width ratio greater than 3-to-1 shall be anchored to the floor slab or adjacent structural walls. A height-to-depth or height-to-width ratio of up to 4-to-1 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.11.1)

Mechanical and Electrical Equipment

C	NC	N/A	EMERGENCY POWER: Equipment used as part of an emergency power system shall be mounted to maintain continued operation after an earthquake. (Tier 2: Sec. 4.8.12.1)
C	NC	N/A	HAZARDOUS MATERIAL EQUIPMENT: HVAC or other equipment containing hazardous material shall not have damaged supply lines or unbraced isolation supports. (Tier 2:Sec. 4.8.12.2)
C	NC	N/A	DETERIORATION: There shall be no evidence of deterioration, damage, or corrosion in any of the anchorage or supports of mechanical or electrical equipment. (Tier 2: Sec. 4.8.12.3)
C	NC	N/A	ATTACHED EQUIPMENT: Equipment weighing over 20 lb that is attached to ceilings, walls, or other supports 4 feet above the floor level shall be braced. (Tier 2: Sec. 4.8.12.4)

Piping

C	NC	N/A	FIRE SUPPRESSION PIPING: Fire suppression piping shall be anchored and braced in accordance with NFPA-13 (NFPA, 1996). (Tier 2: Sec. 4.8.13.1)
C	NC	N/A	FLEXIBLE COUPLINGS: Fluid, gas, and fire suppression piping shall have flexible couplings. (Tier 2: Sec. 4.8.13.2)

Hazardous Materials Storage and Distribution

C	NC	N/A	TOXIC SUBSTANCES: Toxic and hazardous substances stored in breakable containers shall be restrained from falling by latched doors, shelf lips, wires, or other methods. (Tier 2: Sec. 4.8.15.1)

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BUILDING 8 – CLASSROOMS & LABS

Ceiling Systems

C	NC	N/A	LAY-IN TILES: Lay-in tiles used in ceiling panels located at exits and corridors shall be secured with clips. (Tier 2: Sec. 4.8.2.2)
C	NC	N/A	INTEGRATED CEILINGS: Integrated suspended ceilings at exits and corridors or weighing more than 2 pounds per square foot shall be laterally restrained with a minimum of four diagonal wires or rigid members attached to the structure above at a spacing equal to or less than 12 feet. (Tier 2: Sec. 4.8.2.3)
C	NC	N/A	SUSPENDED LATH AND PLASTER: Ceilings consisting of suspended lath and plaster or gypsum board shall be attached to resist seismic forces for every 12 square feet of area. (Tier 2: Sec. 4.8.2.4)

Light Fixtures

C	NC	N/A	INDEPENDENT SUPPORT: Light fixtures in suspended grid ceilings shall be supported independently of the ceiling suspension system by a minimum of two wires at diagonally opposite corners of the fixtures. (Tier 2: Sec. 4.8.3.2)

Cladding and Glazing

C	NC	N/A	GLAZING: Glazing in curtain walls and individual panes over 16 square feet in area, located up to a height of 10 feet above an exterior walking surface, shall have safety glazing. Such glazing located over 10 feet above an exterior walking surface shall be laminated annealed or laminated heat-strengthened safety glass or other glazing system that will remain in the frame when glass is cracked. (Tier 2: Sec. 4.8.4.8)

Parapets, Cornices, Ornamentation, and Appendages

C	NC	N/A	CONCRETE PARAPETS: Concrete parapets with height-to-thickness ratios greater than 2.5 shall have vertical reinforcement. (Tier 2: Sec. 4.8.8.3)

Intermediate Nonstructural Component Checklist Sheet 2 of 2
BUILDING 8 – CLASSROOMS & LABS

C	**NC**	**N/A**	APPENDAGES: Cornices, parapets, signs, and other appendages that extend above the highest point of anchorage to the structure or cantilever from exterior wall faces and other exterior wall ornamentation shall be reinforced and anchored to the structural system at a spacing equal to or less than 10 feet for Life Safety and 6 feet for Immediate Occupancy. This requirement need not apply to parapets or cornices compliant with Section 4.8.8.1 or 4.8.8.3. (Tier 2: Sec. 4.8.8.4)

Masonry Chimneys

C	**NC**	**N/A**	ANCHORAGE: Masonry chimneys shall be anchored at each floor level and the roof. (Tier 2: Sec.4.8.9.2)

Mechanical and Electrical Equipment

C	**NC**	**N/A**	VIBRATION ISOLATORS: Equipment mounted on vibration isolators shall be equipped with restraints or snubbers. (Tier 2: Sec. 4.8.12.5)

Ducts

C	**NC**	**N/A**	STAIR AND SMOKE DUCTS: Stair pressurization and smoke control ducts shall be braced and shall have flexible connections at seismic joints. (Tier 2: Sec. 4.8.14.1)

6.4.3 BUILDING 9 – CLASSROOMS & LABS

Building Description

YEAR OF CONSTRUCTION: 1955
YEAR OF ALTERATIONS: 1997 – Ceiling and Lighting Seismic Retrofit
BUILDING TYPE: S1A, PC1 (Main Building), RM1 (Storage Building)

GENERAL BUILDING DESCRIPTION: The Classroom Lab main building is a 1 story structure constructed of precast concrete walls, steel columns, and reinforced masonry brick. The structural drawings received are dated 1955. The structure was built at the same time an addition was made to Building 8. It is 140 feet long by 32 feet wide and 15 feet high. There is an additional freestanding ancillary storage structure adjacent to the main building. This building is approximately 43 feet long by 15 feet wide by 8 feet high and is constructed with reinforced masonry. It houses restrooms and a storage area. There is visible deterioration of the brick walls of this building. A walkway canopy is attached between the structures. Additionally there is a damaged beam on the walkway located in close proximity to the buildings. The main structure appears in good condition. Both structures are connected to Building 8 by the walkway canopy.

For exterior elevations and typical construction, see pictures Bldg09-01 to Bldg09-06.

VERTICAL STRUCTURAL SYSTEM: The gravity system of the main building is comprised of wood and steel roof framing supported on steel columns with precast concrete walls. The adjacent ancillary storage structure is comprised of wood roof framing supported on reinforced masonry walls. Both structures are supported by continuous concrete grade beams and piles.

LATERAL STRUCTURAL SYSTEM: The lateral force resisting system for the main building consists of a plywood roof diaphragm with precast concrete shear walls in the transverse direction. In the longitudinal direction, steel moment frames are located along the east exterior wall, and steel cantilevered columns to precast concrete panels are located along the west exterior wall. The steel cantilevered columns are approximately 4 feet in height and transfer the roof diaphragm load to the precast concrete shear walls.

The adjacent ancillary storage structure consists of a plywood roof diaphragm with reinforced masonry shear walls.

NON-STRUCTURAL SYSTEMS: Mechanical equipment is supported on walkway canopies and is not adequately anchored. The projector systems in the main building classrooms are typically not anchored properly.

For non-structural systems and items present within the building, see pictures Bldg09-07 to Bldg09-09.

List of Deficiencies

The following items have been found noncompliant in accordance with the requirements of ASCE31-03:

Structural

1. MAIN AND STORAGE BUILDINGS, PROXIMITY OF ADJACENT BUILDINGS: The clear distance between the Buildings and walkway canopies does not conform to the minimum limit; walkway canopies are connected to both the Storage and Main Buildings and further connect to Building 8.
1. MAIN BUILDING, INTERFERING WALLS AT MOMENT FRAMES: At south wall, infill walls in moment frames are not isolated properly.
2. MAIN BUILDING, UNACCEPTABLE DRIFT AT MOMENT FRAMES: The drift ratio is greater than the limit of 0.025 for Life Safety.
3. MAIN BUILDING, UNACCEPTABLE STEEL MOMENT FRAMES: Moment-resisting connections, panel zone shear capacities, strong column/weak beam, and compact member criteria are unacceptable and the governing criteria is not sufficiently met.
4. MAIN AND STORAGE BUILDINGS, DETERIORATION OF WOOD: Walkway canopy wood framing supporting mechanical equipment shows signs of overall moderate deterioration, with major deterioration noted in one location (Bldg09-06).
5. STORAGE BUILDING, MASONRY UNITS: Deterioration in masonry units is minor, but visible, in the storage building exterior walls.
6. MAIN BUILDING, NO CROSS TIES: There are typically no cross ties between diaphragm chords.
7. MAIN AND STORAGE BUILDINGS, INADEQUATE WALL ANCHORAGE: Wall anchorage of precast concrete wall panels and reinforced masonry walls to diaphragm do not have the adequate strength to resist the out-of-plane connection force calculated by the ASCE 31-03 Tier 1 Quick Check Procedure.
8. MAIN AND STORAGE BUILDINGS, CROSS-GRAIN BENDING IN WOOD LEDGERS: Ledger connection between precast wall panels and the diaphragm induces cross-grain bending.
9. MAIN BUILDING, PRECAST WALL PANELS AT FOUNDATION: Wall panels are not adequately connected to the foundation.

Non-structural

10. MAIN BUILDING, INADEQUATE EQUIPMENT ATTACHMENT: Screen projectors are not adequately braced in some locations (picture Bldg09-07).
11. MAIN AND STORAGE BUILDINGS, INADEQUATE ANCHORAGE AT MECHANICAL UNITS: Units on building canopies are not anchored adequately (picture Bldg 09-09).

BUILDING 9 – CLASSROOMS & LABS, PICTURES

Bldg09-01

Bldg09-02

Bldg09-03

Bldg09-04

Bldg09-05

Bldg09-06

Bldg09-07

Bldg09-08

Bldg09-09

Basic Structural Checklist for Building Type S1A: Steel Moment Frames with Flexible Diaphragms
BUILDING 9 – MAIN BUILDING, CLASSROOMS & LABS Sheet 1 of 3

Building System

C	NC	N/A	LOAD PATH: The structure shall contain a minimum of one complete load path for Life Safety and Immediate Occupancy for seismic force effects from any horizontal direction that serves to transfer the inertial forces from the mass to the foundation. (Tier 2: Sec. 4.3.1.1)
C	NC	N/A	ADJACENT BUILDINGS: The clear distance between the building being evaluated and any adjacent building shall be greater than 4 percent of the height of the shorter building for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.1 .2)
C	NC	N/A	MEZZANINES: Interior mezzanine levels shall be braced independently from the main structure, or shall be anchored to the lateral-force-resisting elements of the main structure. (Tier 2: Sec. 4.3.1.3)
C	NC	N/A	WEAK STORY: The strength of the lateral-force-resisting system in any story shall not be less than 80 percent of the strength in an adjacent story, above or below, for Life Safety and Immediate Occupancy. (Tier2: Sec. 4.3.2.1)
C	NC	N/A	SOFT STORY: The stiffness of the lateral-force-resisting system in any story shall not be less than 70 percent of the lateral-force resisting system stiffness in an adjacent story above or below, or less than 80 percent of the average lateral-force-resisting system stiffness of the three stories above or below for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.2)
C	NC	N/A	GEOMETRY: There shall be no changes in horizontal dimension of the lateral-force-resisting system of more than 30 percent in a story relative to adjacent stories for Life Safety and Immediate Occupancy, excluding one-story penthouses and mezzanines. (Tier 2: Sec. 4.3.2.3)
C	NC	N/A	VERTICAL DISCONTINUITIES: All vertical elements in the lateral-force-resisting system shall be continuous to the foundation. (Tier 2: Sec. 4.3.2.4)
C	NC	N/A	MASS: There shall be no change in effective mass more than 50 percent from one story to the next for Life Safety and Immediate Occupancy. Light roofs, penthouses, and mezzanines need not be considered. (Tier 2: Sec. 4.3.2.5)
C	NC	N/A	DETERIORATION OF WOOD: There shall be no signs of decay, shrinkage, splitting, fire damage, or sagging in any of the wood members, and none of the metal connection hardware shall be deteriorated, broken, or loose. (Tier 2: Sec. 4.3.3.1)

Basic Structural Checklist for Building Type S1A: Steel Moment Frames with Flexible Diaphragms
BUILDING 9 – MAIN BUILDING, CLASSROOMS & LABS Sheet 2 of 3

C	NC	N/A	DETERIORATION OF STEEL: There shall be no visible rusting, corrosion, cracking, or other deterioration in any of the steel elements or connections in the vertical- or lateral-force-resisting systems. (Tier 2: Sec. 4.3.3.3)

Lateral-Force-Resisting System

C	NC	N/A	REDUNDANCY: The number of lines of moment frames in each principal direction shall be greater than or equal to 2 for Life Safety and Immediate Occupancy. The number of bays of moment frames in each line shall be greater than or equal 10 2 for Life Safety and 3 for Immediate Occupancy. (Tier 2: Sec. 4.4.1.1.1)
C	NC	N/A	INTERFERING WALLS: All concrete and masonry infill walls placed in moment frames shall be isolated from structural elements. (Tier 2: Sec. 4.4.1.2.1)
C	NC	N/A	DRIFT CHECK: The drift ratio of the steel moment frames, calculated using the Quick Check procedure of Section 3.5.3.1, shall be less than 0.025 for Life Safety and 0.015 for Immediate Occupancy. (Tier 2: Sec. 4.4.1.3.1)
C	NC	N/A	AXIAL STRESS CHECK: The axial stress due to gravity loads in columns subjected to overturning forces shall be less than 0.10*Fy* for Life Safety and Immediate Occupancy. Alternatively, the axial stress due to overturning forces alone, calculated using the Quick Check procedure of Section 3.5.3.6, shall be less than *0.30Fy* for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.1.3.2)

Connections

C	NC	N/A	TRANSFER TO STEEL FRAMES: Diaphragms shall be connected for transfer of loads to the steel frames for Life Safety, and the connections shall be able to develop the lesser of the strength of the frames or the diaphragms for Immediate Occupancy. (Tier 2: Sec. 4.6.2.2)

Basic Structural Checklist for Building Type S1A: Steel Moment Frames with Flexible Diaphragms
BUILDING 9 – MAIN BUILDING, CLASSROOMS & LABS Sheet 3 of 3

C	NC	N/A	STEEL COLUMNS: The columns in lateral-force-resisting frames shall be anchored to the building foundation for Life Safety, and the anchorage shall be able to develop the lesser of the tensile capacity of the column, the tensile capacity of the lowest level column splice (if any), or the uplift capacity of the foundation, for Immediate Occupancy. (Tier 2: Sec. 4.6.3.1)

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BUILDING 9 – MAIN BUILDING, CLASSROOMS & LABS Sheet 1 of 3

Lateral-Force-Resisting System

C	NC	N/A	MOMENT-RESISTING CONNECTIONS: All moment connections shall be able to develop the strength of the adjoining members or panel zones. (Tier 2: Sec. 4.4.1.3.3)
C	NC	N/A	PANEL ZONES: All panel zones shall have the shear capacity to resist the shear demand required to develop 0.8 times the sum of the flexural strengths of the girders framing in at the face of the column. (Tier 2: Sec. 4.4.1.3.4)
C	NC	N/A	COLUMN SPLICES: All column splice details located in moment-resisting frames shall include connection of both flanges and the web for Life Safety,, and the splice shall develop the strength of the column for Immediate Occupancy. (Tier 2: Sec. 4.4.1.3.5)
C	NC	N/A	STRONG COLUMN/WEAK BEAM: The percentage of strong column/weak beam joints in each story of each line of moment-resisting frames shall be greater than *50* percent for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.1.3.6)
C	NC	N/A	COMPACT MEMBERS: All frame elements shall meet section requirements set forth by *Seismic Provisions for Structural Steel Buildings* Table I-9-1 (AISC, 1997). (Tier 2: Sec. 4.4.1.3. 7)
C	NC	N/A	BEAM PENETRATIONS: All openings in frame-beam webs shall be less than 1/4 of the beam depth and shall be located in the center half of the beams. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.1.3.8)
C	NC	N/A	GIRDER FLANGE CONTINUITY PLATES: There shall be girder flange continuity plates at all moment-resisting frame joints. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.1.3.9)
C	NC	N/A	OUT-OF-PLANE BRACING: Beam-column joints shall be braced out-of-plane. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.1.3. I 0)
C	NC	N/A	BOTTOM FLANGE BRACING: The bottom flanges of beams shall be braced out-of-plane. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.1.3.11)

Supplemental Structural Checklist for Building Type S1A: Steel Moment Frames with Flexible Diaphragms
BUILDING 9 MAIN BUILDING, CLASSROOMS & LABS Sheet 2 of 3

Diaphragms

C	NC	N/A	CROSS TIES: There shall be continuous cross ties between diaphragm chords. (Tier 2: Sec. 4.5.1.2)
C	NC	N/A	PLAN IRREGULARITIES: There shall be tensile capacity to develop the strength of the diaphragm at re-entrant corners or other locations of plan irregularities. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.7)
C	NC	N/A	DIAPHRAGM REINFORCEMENT AT OPENINGS: There shall be reinforcing around all diaphragm openings larger than 50 percent of the building width in either major plan dimension. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.8)
C	NC	N/A	STRAIGHT SHEATHING: All straight sheathed diaphragms shall have aspect ratios less than 2-to-1 for Life Safety and 1-to-1 for Immediate Occupancy in the direction being considered. (Tier 2: Sec. 4.5.2.1)
C	NC	N/A	SPANS: All wood diaphragms with spans greater than 24 feet for Life Safety and 12 feet for Immediate Occupancy shall consist of wood structural panels or diagonal sheathing. (Tier 2: Sec. 4.5.2.2)
C	NC	N/A	UNBLOCKED DIAPHRAGMS: All diagonally sheathed or unblocked wood structural panel diaphragms shall have horizontal spans less than 40 feet for Life Safety and 30 feet for Immediate Occupancy and shall have aspect ratios less than or equal to 4-to-l for Life Safety and 3-to-l for Immediate Occupancy. (Tier 2: Sec. 4.5.2.3)
C	NC	N/A	NON-CONCRETE FILLED DIAPHRAGMS: Untopped metal deck diaphragms or metal deck diaphragms with fill other than concrete shall consist of horizontal spans of less than 40 feet and shall have span/depth ratios less than 4-to-I. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.3.1)
C	NC	N/A	OTHER DIAPHRAGMS: The diaphragm shall not consist of a system other than wood, metal deck, concrete, or horizontal bracing. (Tier 2: Sec. 4.5.7. 1)

Supplemental Structural Checklist for Building Type S1A: Steel Moment Frames with Flexible Diaphragms
BUILDING 9 – MAIN BUILDING, CLASSROOMS & LABS Sheet 3 of 3

Connections

C	**NC**	**N/A**	UPLIFT AT PILE CAPS: Pile caps shall have top reinforcement and piles shall be anchored to the pile caps for Life Safety, and the pile cap reinforcement and pile anchorage shall be able to develop the tensile capacity of the piles for Immediate Occupancy. (Tier 2: Sec. 4.6.3.10)

Basic Structural Checklist for Building Type PC1: Precast/Tilt-Up Concrete Shear Walls with Flexible Diaphragms
BUILDING 9 – MAIN BUILDING, CLASSROOMS & LABS Sheet 1 of 3

Building System

C	NC	N/A	LOAD PATH: The structure shall contain a minimum of one complete load path for Life Safety and Immediate Occupancy for seismic force effects from any horizontal direction that serves to transfer the inertial forces from the mass to the foundation. (Tier 2: Sec. 4.3.1 . 1)
C	NC	N/A	ADJACENT BUILDINGS: The clear distance between the building being evaluated and any adjacent building shall be greater than 4 percent of the height of the shorter building for Life Safety and immediate Occupancy. (Tier 2: Sec. 4.3. 1.2)
C	NC	N/A	MEZZANINES: Interior mezzanine levels shall be braced independently from the main structure, or shall be anchored to the lateral-force-resisting elements of the main structure. (Tier 2: Sec. 4.3. 1.3)
C	NC	N/A	WEAK STORY: The strength of the lateral-force-resisting system in any story shall not be less than 80 percent of the strength in an adjacent story, above or below, for Life Safety and Immediate Occupancy. (Tier2: Sec. 4.3.2.1)
C	NC	N/A	SOFT STORY: The stiffness of the lateral-force-resisting system in any story shall not be less than 70 percent of the lateral-force resisting system stiffness in an adjacent story above or below, or less than 80 percent of the average lateral-force-resisting system stiffness of the three stories above or below for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.2)
C	NC	N/A	GEOMETRY: There shall be no changes in horizontal dimension of the lateral-force-resisting system of more than 30 percent in a story relative to adjacent stories for Life Safety and Immediate Occupancy, excluding one-story penthouses and mezzanines. (Tier 2: Sec. 4.3.2.3)
C	NC	N/A	VERTICAL DISCONTINUITIES: All vertical elements in the lateral-force-resisting system shall be continuous to the foundation. (Tier 2: Sec. 4.3.2.4)
C	NC	N/A	MASS: There shall be no change in effective mass more than 50 percent from one story to the next for Life Safety and Immediate Occupancy. Light roofs, penthouses, and mezzanines need not be considered. (Tier 2: Sec. 4.3.2.5)
C	NC	N/A	DETERIORATION OF WOOD: There shall be no signs of decay, shrinkage, splitting, fire damage, or sagging in any of the wood members, and none of the metal connection hardware shall be deteriorated, broken, or loose. (Tier 2: Sec. 4.3.3.1l)

Basic Structural Checklist for Building Type PC1: Precast/Tilt-Up Concrete Shear Walls with Flexible Diaphragms
BUILDING 9 – MAIN BUILDING, CLASSROOMS & LABS Sheet 2 of 3

C	NC	N/A	PRECAST CONCRETE WALLS: There shall be no visible deterioration of concrete or reinforcing steel or evidence of distress, especially at the connections. (Tier 2: Sec. 4.3.3.6)

Lateral-Force-Resisting System

C	NC	N/A	REDUNDANCY: The number of lines of shear walls in each principal direction shall be greater than or equal to 2 for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.1.1)
C	NC	N/A	SHEAR STRESS CHECK: The shear stress in the precast panels, calculated using the Quick Check procedure of Section 3.5.3.3, shall be less than the greater of 10 psi or $2(f'c)^{0.5}$ for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.3.1)
C	NC	N/A	REINFORCING STEEL: The ratio of reinforcing steel area to gross concrete area shall be not less than 0.0015 in the vertical direction and 0.0025 in the horizontal direction for Life Safety and Immediate Occupancy. The spacing of reinforcing steel shall be equal 10 or less than 18 inches for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.3.2)

Connections

C	NC	N/A	WALL ANCHORAGE: Exterior concrete or masonry walls 1hat are dependent on the diaphragm for lateral support shall be anchored for out-of-plane forces at each diaphragm level with steel anchors, reinforcing dowels, or straps that are developed into the diaphragm. Connections shall have adequate strength to resist the connection force calculated in the Quick Check procedure of Section 3.5.3. 7. (Tier 2: Sec. 4.6. 1.1)
C	NC	N/A	WOOD LEDGERS: The connection between the wall panels and the diaphragm shall not induce cross-grain bending or tension in the wood ledgers. (Tier 2: Sec. 4.6. 1 .2)
C	NC	N/A	TRANSFER TO SHEAR WALLS: Diaphragms shall be connected for transfer of loads to the shear walls for Life Safety and the connections shall be able to develop the lesser of the shear strength of the walls or diaphragms for Immediate Occupancy. (Tier 2: Sec. 4.6.2.1)

Basic Structural Checklist for Building Type PC1: Precast/Tilt-Up Concrete Shear Walls with Flexible Diaphragms
BUILDING 9 – MAIN BUILDING, CLASSROOMS & LABS Sheet 3 of 3

C	**NC**	**N/A**	PRECAST WALL PANELS: Precast wall panels shall be connected to the foundation for Life Safety and the connections shall be able to develop the strength of the walls for Immediate Occupancy. (Tier2: Sec. 4.6.3.7)
C	**NC**	**N/A**	GIRDER/COLUMN CONNECTION: There shall be a positive connection utilizing plates, connection hardware, or straps between the girder and the column support. (Tier 2: Sec. 4.6.4.1)

Supplemental Structural Checklist for Building Type PC1: Precast/Tilt-Up Concrete Shear Walls with Flexible Diaphragms
BUILDING 9 – MAIN BUILDING, CLASSROOMS & LABS Sheet 1 of 2

Lateral-Force-Resisting System

C	NC	N/A	COUPLING BEAMS: The stirrups in coupling beams over means of egress shall be spaced at or less than d/2 and shall be anchored into the confined core of the beam with hooks of 135° or more for Life Safety. All coupling beams shall comply with the requirements above and shall have the capacity in shear to develop the uplift capacity of the adjacent wall for Immediate Occupancy. (Tier 2: Sec. 4.4.2.2.3)
C	NC	N/A	WALL OPENINGS: The total width of openings along any perimeter wall line shall constitute less than 75 percent of the length of any perimeter wall for Life Safety and 50 percent for Immediate Occupancy with the wall piers having aspect ratios of less than 2-to- l for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.3.3)
C	NC	N/A	CORNER OPENINGS: Walls with openings al a building comer larger than the width of a typical panel shall be connected to the remainder of the wall with collector reinforcing. (Tier 2: Sec. 4.4.2.3.4)
C	NC	N/A	PANEL-TO-PANEL CONNECTIONS: Adjacent wall panels shall be interconnected to transfer overturning forces between panels by methods other than welded steel inserts. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.3.5)
C	NC	N/A	WALL THICKNESS: Thickness of bearing walls shall not be less than 1125 the unsupported height or length, whichever is shorter, nor less than 4 inches. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.3.6)

Diaphragms

C	NC	N/A	CROSS TIES: There shall be continuous cross ties between diaphragm chords. (Tier 2: Sec. 4.5.1.2)
C	NC	N/A	PLAN IRREGULARITIES: There shall be tensile capacity to develop the strength of the diaphragm at re-entrant corners or other locations of plan irregularities. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.7)

Supplemental Structural Checklist for Building Type PC1: Precast/Tilt-Up Concrete Shear Walls with Flexible Diaphragms
BUILDING 9 – MAIN BUILDING, CLASSROOMS & LABS Sheet 2 of 2

C	NC	N/A	DIAPHRAGM REINFORCEMENT AT OPENINGS: There shall be reinforcing around all diaphragm openings larger than 50 percent of the building width in either major plan dimension. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5. 1.8)
C	NC	N/A	STRAIGHT SHEATHING: All straight sheathed diaphragms shall have aspect ratios less than 2-to-1 for Life Safety and 1-to-1 for Immediate Occupancy in the direction being considered. (Tier 2: Sec. 4.5.2.1)
C	NC	N/A	SPANS: All wood diaphragms with spans greater than 24 feet for Life Safety and 12 feet for Immediate Occupancy shall consist of wood structural panels or diagonal sheathing. (Tier 2: Sec. 4.5.2.2)
C	NC	N/A	UNBLOCKED DIAPHRAGMS: All diagonally sheathed or unblocked wood structural panel diaphragms shall have horizontal spans less than 40 feet for Life Safety and 30 feet for Immediate Occupancy and shall have aspect ratios less than or equal to 4-to-l for Life Safety and 3-to-l for Immediate Occupancy. (Tier 2: Sec. 4.5.2.3)
C	NC	N/A	OTHER DIAPHRAGMS: The diaphragm shall not consist of a system other than wood, metal deck, concrete, or horizontal bracing. (Tier 2: Sec. 4.5.7. 1)

Connections

C	NC	N/A	PRECAST PANEL CONNECTIONS: There shall be at least two anchors from each precast wall panel into the diaphragm elements for Life Safety and the anchors shall be able to develop the strength of the panels for Immediate Occupancy. (Tier 2: Sec. 4.6.1.3)
C	NC	N/A	UPLIFT AT PILE CAPS: Pile caps shall have top reinforcement and piles shall be anchored to the pile caps for Life Safety, and the pile cap reinforcement and pile anchorage shall be able to develop the tensile capacity of the piles for Immediate Occupancy. (Tier 2: Sec. 4.6.3. 10)
C	NC	N/A	GIRDERS: Girders supported by walls or pilasters shall have at least two ties securing the anchor bolts for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.6.4.2)

Basic Structural Checklist for Building Type RM1: Reinforced Masonry Bearing Walls with Flexible Diaphragms
BUILDING 9 – STORAGE BUILDING Sheet 1 of 3

Building System

C	NC	N/A	LOAD PATH: The structure shall contain a minimum of one complete load path for Life Safety and Immediate Occupancy for seismic force effects from any horizontal direction that serves to transfer the inertial forces from the mass to the foundation. (Tier 2: Sec. 4.3.1.1)
C	NC	N/A	ADJACENT BUILDINGS: The clear distance between the building being evaluated and any adjacent building shall be greater than 4 percent of the height of the shorter building for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.1.2)
C	NC	N/A	MEZZANINES: Interior mezzanine levels shall be braced independently from the main structure, or shall be anchored to the lateral-force-resisting elements of the main structure. (Tier 2: Sec. 4.3.1.3)
C	NC	N/A	WEAK STORY: The strength of the lateral-force-resisting system in any story shall not be less than 80 percent of the strength in an adjacent story, above or below, for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.1)
C	NC	N/A	SOFT STORY: The stiffness of the lateral-force-resisting system in any story shall not be less than 70 percent of the lateral-force-resisting system stiffness in an adjacent story above or below, or less than 8- percent of the average lateral-force-resisting system stiffness of the three stories above or below for Life Safety an Immediate Occupancy. (Tier 2: Sec. 4.3.2.2)
C	NC	N/A	GEOMETRY: There shall be no changes in horizontal dimension of the lateral-force-resisting system of more than 30 percent in a story relative to adjacent stories for Life Safety and Immediate Occupancy, excluding one-story penthouses and mezzanines. (Tier 2: Sec. 4.3.2.3)
C	NC	N/A	VERTICAL DISCONTINUITIES: All vertical elements in the lateral-force-resisting system shall be continuous to the foundation. (Tier 2: Sec. 4.3.2.4)

Basic Structural Checklist for Building Type RM1: Reinforced Masonry Bearing Walls with Flexible Diaphragms
BUILDING 9 – STORAGE BUILDING Sheet 2 of 3

C	NC	N/A	MASS: There shall be no change in effective mass more than 50 percent from one story to the next Life safety and Immediate Occupancy. Light roofs, penthouses, and mezzanines need not be considered. (Tier 2: Sec. 4.3.2.5)
C	NC	N/A	DETERIORATION OF WOOD: There shall be no signs of decay, shrinkage, splitting, fire damage, or sagging in any of the wood members, and none of the metal connection hardware shall be deteriorated, broken, or loose. (Tier 2: Sec. 4.3.3.1)
C	NC	N/A	MASONRY UNITS: There shall be no visible deterioration of masonry units. (Tier 2: Sec. 4.3.3.7)
C	NC	N/A	MASONRY JOINTS: The mortar shall not be easily scraped away from the joints by hand with a metal tool, and there shall be no areas of eroded mortar. (Tier 2: Sec. 4.3.3.8)
C	NC	N/A	REINFORCED MASONRY WALL CRACKS: All existing diagonal cracks in wall elements shall be less than 118 inch for Life Safety and 1/16 inch for Immediate Occupancy, shall not be concentrated in one location, and shall not form an X pattern. (Tier 2: Sec. 4.3.3.10)

Lateral-Force-Resisting System

C	NC	N/A	REDUNDANCY: The number of lines of shear walls in each principal direction shall be greater than or equal to 2 for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.1.1)
C	NC	N/A	SHEAR STRESS CHECK: The shear stress in I.be reinforced masonry shear walls, calculated using the Quick Check procedure of Section 3.5.3.3, shall be less than 70 psi for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.4.1)

Basic Structural Checklist for Building Type RM1: Reinforced Masonry Bearing Walls with Flexible Diaphragms
BUILDING 9 – STORAGE BUILDING Sheet 3 of 3

C	NC	N/A	REINFORCING STEEL: The total vertical and horizontal reinforcing steel ratio in reinforced masonry walls shall be greater than 0.002 for Life Safety and Immediate Occupancy of the wall with the minimum of 0.0007 for Life Safety and Immediate Occupancy in either of the two directions; the spacing of reinforcing steel shall be less than 48 inches for Life Safety and Immediate Occupancy; and all vertical bars shall extend to the top of the walls. (Tier 2: Sec. 4.4.2.4.2)

Connections

C	NC	N/A	WALL ANCHORAGE: Exterior concrete or masonry walls that are dependent on the diaphragm for lateral support shall be anchored for out-of-plane forces at each diaphragm level with steel anchors, reinforcing dowels, or straps that are developed into the diaphragm. Connections shall have adequate strength to resist the connection force calculated in the Quick Check procedure of Section 3.5.3. 7. (Tier 2: Sec. 4.6.1.1)
C	NC	N/A	WOOD LEDGERS: The connection between the wall panels and the diaphragm shall not induce cross-grain bending or tension in the wood ledgers. (Tier 2: Sec. 4.6.1.2)
C	NC	N/A	TRANSFER TO SHEAR WALLS: Diaphragms shall be connected for transfer of loads to the shear walls for Life Safety and the connections shall be able to develop the lesser of the shear strength of the walls or diaphragms for Immediate Occupancy. (Tier 2: Sec. 4.6.2.1)
C	NC	N/A	FOUNDATION DOWELS: Wall reinforcement shall be doweled into the foundation for Life Safety, and the dowels shall be able to develop the lesser of the strength of the walls or the uplift capacity of the foundation for Immediate Occupancy. (Tier 2: Sec. 4.6.3.5)
C	NC	N/A	GIRDER/COLUMN CONNECTION: There shall be a positive connection utilizing plates, connection hardware, or straps between the girder and the column support. (Tier 2: Sec. 4.6.4.1)

Supplemental Structural Checklist for Building Type RM1: Reinforced Masonry Bearing Walls with Flexible Diaphragms
BUILDING 9 – STORAGE BUILDING Sheet 1 of 2

Lateral-Force-Resisting System

C	NC	N/A	REINFORCING AT OPENINGS: All wall openings that interrupt rebar shall have trim reinforcing on all sides. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.4.3)
C	NC	N/A	PROPORTIONS: The height-to-thickness ratio of the shear walls at each story shall be less than 30. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.4.4)

Diaphragms

C	NC	N/A	CROSS TIES: There shall be continuous cross ties between diaphragm chords. (Tier 2: Sec. 4.5.1.2)
C	NC	N/A	OPENINGS AT SHEAR WALLS: Diaphragm openings immediately adjacent to the shear walls shall be less than 25 percent of the wall length for Life Safety and 15 percent of the wall length for Immediate Occupancy. (Tier 2: Sec. 4.5.1.4)
C	NC	N/A	OPENINGS AT EXTERIOR MASONRY SHEAR WALLS: Diaphragm openings immediately adjacent to exterior masonry shear walls shall not be greater than 8 feet long for Life Safety and 4 feet long for Immediate Occupancy. (Tier 2: Sec. 4.5.1.6)
C	NC	N/A	PLAN IRREGULARITIES: There shall be tensile capacity to develop the strength of the diaphragm at re-entrant comers or other locations of plan irregularities. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.7)
C	NC	NA	DIAPHRAGM REINFORCEMENT AT OPENINGS: There shall be reinforcing around all diaphragm openings larger than 50 percent of the building width in either major plan dimension. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.8)

Supplemental Structural Checklist for Building Type RM1: Reinforced Masonry Bearing Walls with Flexible Diaphragms
BUILDING 9 – STORAGE BUILDING Sheet 2 of 2

C	NC	N/A	STRAIGHT SHEATHING: All straight sheathed diaphragms shall have aspect ratios less than 2-to-1 for Life Safety and 1-to-1 for Immediate Occupancy in the direction being considered. (Tier 2: Sec. 4.5.2.1)
C	NC	N/A	SPANS: All wood diaphragms with spans greater than 24 feet for Life Safety and 12 feet for Immediate Occupancy shall consist of wood structural panels or diagonal sheathing. (Tier 2: Sec. 4.5.2.2)
C	NC	N/A	UNBLOCKED DIAPHRAGMS: All diagonally sheathed or unblocked wood structural panel diaphragms shall have horizontal spans less than 40 feet for Life Safety and 30 feet for Immediate Occupancy and shall have aspect ratios less than or equal to 4-to-1 for Life Safety and 3-to-J for Immediate Occupancy. (Tier 2: Sec. 4.5.2.3)
C	NC	N/A	NON-CONCRETE FILLED DIAPHRAGMS: Untopped metal deck diaphragms or metal deck diaphragms with fill other than concrete shall consist of horizontal spans of less than 40 feet and shall have span/depth ratios less than 4-to-1. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.3.1)
C	NC	N/A	OTHER DIAPHRAGMS: The diaphragm shall not consist of a system other than wood, metal deck, concrete, or horizontal bracing. (Tier 2: Sec. 4.5. 7.1)

Connections

C	NC	N/A	STIFFNESS OF WALL ANCHORS: Anchors of concrete or masonry walls to wood structural elements shall be installed taut and shall be stiff enough to limit the relative movement between the wall and the diaphragm to no greater than 1/8 inch prior to engagement of the anchors. (Tier 2:Sec. 4.6.1.4)

Basic Nonstructural Component Checklist Sheet 1 of 4
BUILDING 9 – CLASSROOMS & LABS

Partitions

C	NC	N/A	UNREINFORCED MASONRY: Unreinforced masonry or hollow clay tile partitions shall be braced at a spacing equal to or less than 10 feet in levels of low or moderate seismicity and 6 feet in levels of high seismicity. (Tier 2: Sec. 4.8.1.1)

Ceiling Systems

C	NC	N/A	SUPPORT: The integrated suspended ceiling system shall not be used to laterally support the tops of gypsum board, masonry, or hollow clay tile partitions. Gypsum board partitions need not be evaluated where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier2: Sec. 4.8.2.1)

Light Fixtures

C	NC	N/A	EMERGENCY LIGHTING: Emergency lighting shall be anchored or braced to prevent falling during an earthquake. (Tier 2: Sec. 4.8.3.1)

Cladding and Glazing

C	NC	N/A	CLADDING ANCHORS: Cladding components weighing more than 10 psf shall be mechanically anchored to the exterior wall framing at a spacing equal to or less than 4 feet. A spacing of up to 6 feet is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.1)
C	NC	N/A	DETERIORATION: There shall be no evidence of deterioration, damage or corrosion in any of the connection elements. (Tier 2: Sec. 4.8.4.2)
C	NC	N/A	CLADDING ISOLATION: For moment frame buildings of steel or concrete, panel connections shall be detailed to accommodate a story drift ratio of 0.02. Panel connection detailing for a story drift ratio of 0.01 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.3)

Basic Nonstructural Component Checklist Sheet 2 of 4
BUILDING 9 – CLASSROOMS & LABS

C	**NC**	**N/A**	MULTI-STORY PANELS: For multi-story panels attached at each floor level, panel connections shall be detailed to accommodate a story drift ratio of 0.02. Panel connection detailing for a story drift ratio of 0.01 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.4)
C	**NC**	**N/A**	BEARING CONNECTIONS: Where bearing connections are required, there shall be a minimum of two bearing connections for each wall panel. (Tier 2: Sec. 4.8.4.5)
C	**NC**	**N/A**	INSERTS: Where inserts are used in concrete connections, the inserts shall be anchored to reinforcing steel or other positive anchorage. (Tier 2: Sec. 4.8.4.6)
C	**NC**	**N/A**	PANEL CONNECTIONS: Exterior cladding panels shall be anchored out-of-plane with a minimum of 4 connections for each wall panel. Two connections per wall panel are permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.7)

Masonry Veneer

C	**NC**	**N/A**	SHELF ANGLES: Masonry veneer shall be supported by shelf angles or other elements at each floor 30 feet or more above ground for Life Safety and at each floor above the first floor for Immediate Occupancy. (Tier 2: Sec. 4.8.5.1)
C	**NC**	**N/A**	TIES: Masonry veneer shall be connected to the back-up with corrosion-resistant ties. The ties shall have a spacing equal to or less than 24 inches with a minimum of one tie for every 2-2/3 square feet. A spacing of up to 36 inches is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.5.2)
C	**NC**	**N/A**	WEAKENED PLANES: Masonry veneer shall be anchored to the back-up adjacent to weakened planes, such as at the locations of flashing. (Tier 2: Sec. 4.8.5.3)
C	**NC**	**N/A**	DETERIORATION: There shall be no evidence of deterioration, damage, or corrosion in any of the connection elements. (Tier 2: Sec. 4.8.5.4)

Basic Nonstructural Component Checklist Sheet 3 of 4
BUILDING 9 – CLASSROOMS & LABS

Parapets, Cornices, Ornamentation, and Appendages

C	NC	N/A	URM PARAPETS: There shall be no laterally unsupported unreinforced masonry parapets or cornices with height-to-thickness ratios greater than 1.5. A height-to-thickness ratio of up to 2.5 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.8.1)
C	NC	N/A	CANOPIES: Canopies located at building exits shall be anchored to the structural framing at a spacing of 6 feet or less. An anchorage spacing of up to 10 feet is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.8.2)

Masonry Chimneys

C	NC	N/A	URM CHIMNEYS: No unreinforced masonry chimney shall extend above the roof surface more than twice the least dimension of the chimney. A height above the roof surface of up to three times the least dimension of the chimney is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.9.1)

Stairs

C	NC	N/A	URM WALLS: Walls around stair enclosures shall not consist of unbraced hollow clay tile or unreinforced masonry with a height-to-thickness ratio greater than 12-to-1. A height-to-thickness ratio of up to 15-to-1 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.10.1)
C	NC	N/A	STAIR DETAILS: In moment frame structures, the connection between the stairs and the structure shall not rely on shallow anchors in concrete. Alternatively, the stair details shall be capable of accommodating the drift calculated using the Quick Check procedure of Section 3.5.3.1 without including tension in the anchors. (Tier 2: Sec. 4.8.10.2)

Basic Nonstructural Component Checklist
BUILDING 9 – CLASSROOMS & LABS

Sheet 4 of 4

Building Contents and Furnishing

C	NC	N/A	TALL NARROW CONTENTS: Contents over 4 feet in height with a height-to-depth or height-to-width ratio greater than 3-to-1 shall be anchored to the floor slab or adjacent structural walls. A height-to-depth or height-to-width ratio of up to 4-to-1 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.11.1)

Mechanical and Electrical Equipment

C	NC	N/A	EMERGENCY POWER: Equipment used as part of an emergency power system shall be mounted to maintain continued operation after an earthquake. (Tier 2: Sec. 4.8.12.1)
C	NC	N/A	HAZARDOUS MATERIAL EQUIPMENT: HVAC or other equipment containing hazardous material shall not have damaged supply lines or unbraced isolation supports. (Tier 2:Sec. 4.8.12.2)
C	NC	N/A	DETERIORATION: There shall be no evidence of deterioration, damage, or corrosion in any of the anchorage or supports of mechanical or electrical equipment. (Tier 2: Sec. 4.8.12.3)
C	NC	N/A	ATTACHED EQUIPMENT: Equipment weighing over 20 lb that is attached to ceilings, walls, or other supports 4 feet above the floor level shall be braced. (Tier 2: Sec. 4.8.12.4)

Piping

C	NC	N/A	FIRE SUPPRESSION PIPING: Fire suppression piping shall be anchored and braced in accordance with NFPA-13 (NFPA, 1996). (Tier 2: Sec. 4.8.13.1)
C	NC	N/A	FLEXIBLE COUPLINGS: Fluid, gas, and fire suppression piping shall have flexible couplings. (Tier 2: Sec. 4.8.13.2)

Hazardous Materials Storage and Distribution

C	NC	N/A	TOXIC SUBSTANCES: Toxic and hazardous substances stored in breakable containers shall be restrained from falling by latched doors, shelf lips, wires, or other methods. (Tier 2: Sec. 4.8.15.1)

Intermediate Nonstructural Component Checklist Sheet 1 of 2
BUILDING 9 – CLASSROOMS & LABS

Ceiling Systems

C	NC	N/A	LAY-IN TILES: Lay-in tiles used in ceiling panels located at exits and corridors shall be secured with clips. (Tier 2: Sec. 4.8.2.2)
C	NC	N/A	INTEGRATED CEILINGS: Integrated suspended ceilings at exits and corridors or weighing more than 2 pounds per square foot shall be laterally restrained with a minimum of four diagonal wires or rigid members attached to the structure above at a spacing equal to or less than 12 feet. (Tier 2: Sec. 4.8.2.3)
C	NC	N/A	SUSPENDED LATH AND PLASTER: Ceilings consisting of suspended lath and plaster or gypsum board shall be attached to resist seismic forces for every 12 square feet of area. (Tier 2: Sec. 4.8.2.4)

Light Fixtures

C	NC	N/A	INDEPENDENT SUPPORT: Light fixtures in suspended grid ceilings shall be supported independently of the ceiling suspension system by a minimum of two wires at diagonally opposite corners of the fixtures. (Tier 2: Sec. 4.8.3.2)

Cladding and Glazing

C	NC	N/A	GLAZING: Glazing in curtain walls and individual panes over 16 square feet in area, located up to a height of 10 feet above an exterior walking surface, shall have safety glazing. Such glazing located over 10 feet above an exterior walking surface shall be laminated annealed or laminated heat-strengthened safety glass or other glazing system that will remain in the frame when glass is cracked. (Tier 2: Sec. 4.8.4.8)

Parapets, Cornices, Ornamentation, and Appendages

C	NC	N/A	CONCRETE PARAPETS: Concrete parapets with height-to-thickness ratios greater than 2.5 shall have vertical reinforcement. (Tier 2: Sec. 4.8.8.3)

Intermediate Nonstructural Component Checklist Sheet 2 of 2
BUILDING 9 – CLASSROOMS & LABS

C	NC	N/A	APPENDAGES: Cornices, parapets, signs, and other appendages that extend above the highest point of anchorage to the structure or cantilever from exterior wall faces and other exterior wall ornamentation shall be reinforced and anchored to the structural system at a spacing equal to or less than 10 feet for Life Safety and 6 feet for Immediate Occupancy. This requirement need not apply to parapets or cornices compliant with Section 4.8.8.1 or 4.8.8.3. (Tier 2: Sec. 4.8.8.4)

Masonry Chimneys

C	NC	N/A	ANCHORAGE: Masonry chimneys shall be anchored at each floor level and the roof. (Tier 2: Sec.4.8.9.2)

Mechanical and Electrical Equipment

C	NC	N/A	VIBRATION ISOLATORS: Equipment mounted on vibration isolators shall be equipped with restraints or snubbers. (Tier 2: Sec. 4.8.12.5)

Ducts

C	NC	N/A	STAIR AND SMOKE DUCTS: Stair pressurization and smoke control ducts shall be braced and shall have flexible connections at seismic joints. (Tier 2: Sec. 4.8.14.1)

6.5 BUILDINGS 12 & 13

6.5.1 BUILDING 12 – BUSINESS EDUCATION

Building Description

YEAR OF CONSTRUCTION:	1953
YEAR OF ALTERATIONS:	1997 – Ceiling and Lighting Seismic Retrofit 1999 – Structural Seismic Retrofit
BUILDING TYPE:	W2, RM1

GENERAL BUILDING DESCRIPTION: The Business Education Building is a reinforced masonry brick structure measuring approximately 156 feet long by 40 feet wide and 14 feet tall. It was retrofitted in 1997: wood shear walls were added to the north exterior wall of the building, steel columns were added along the south exterior masonry wall, and roof-to-wall anchorage was upgraded in the roof diaphragm.

The building is primarily used as classrooms and is connected to Building 13 by a walkway canopy. The building appears in good condition, although there is deterioration in the freestanding masonry wing walls and walkway canopy. Also note that masonry at the wing walls is typically chalky to the touch (pictures Bldg12-07 & 08).

For exterior elevations and typical construction, see pictures Bldg12-01 to Bldg12-11.

VERTICAL STRUCTURAL SYSTEM: The structure contains a caisson foundation with grade beams around the perimeter of the structure and at interior walls. The floor level is concrete slab on grade. The wood roof rafters are supported by a central steel beam and exterior walls which span the length of the building. Along the north wall is a row of windows over half the height of the building.

LATERAL STRUCTURAL SYSTEM: The lateral system consists of new plywood added over the original diagonal roof sheathing. Reinforced masonry brick shear walls are present along the interior and exterior of the building. The north wall contains sections of wood shear walls added during the 1999 seismic retrofit. The retrofit also included addition of out-of-plane anchorage for the south masonry wall with steel tube columns, and the east and west interior and exterior masonry walls with retrofit roof diaphragm ties, plywood, and blocking.

NON-STRUCTURAL SYSTEMS: A walkway canopy to the south supports the mechanical units for the building with ducting along the adjacent longitudinal wall interior. The projectors in the classrooms are anchored properly. Lighting is hung from roof framing.

For non-structural systems and items present within the building, see picture Bldg12-12.

List of Deficiencies

The following items have been found noncompliant in accordance with the requirements of ASCE31-03:

Structural

2. PROXIMITY OF ADJACENT BUILDINGS: The clear distance between the reinforced masonry and walkway canopies does not conform to the minimum limit; walkway canopies are connected to both Buildings 12 and 13.
3. DETERIORATION OF WOOD: Walkway canopy wood framing supporting mechanical equipment showed signs of moderate deterioration (pictures Bldg12-10 to Bldg12-11).
4. MASONRY UNITS: Deterioration of masonry units in visible on the wing walls along the southern walkway (pictures Bldg12-07 to Bldg12-08).

Non-structural

5. INADEQUATE EQUIPMENT ATTACHMENT: Projector screens in classrooms are typically braced at 1 supported end only.
6. MECHANICAL EQUIPMENT ANCHORAGE: Mechanical equipment on the roof is not anchored to the roof structure.

BUILDING 12 – BUSINESS EDUCATION, PICTURES


Bldg12-01


Bldg12-02


Bldg12-03


Bldg12-04


Bldg12-05


Bldg12-06

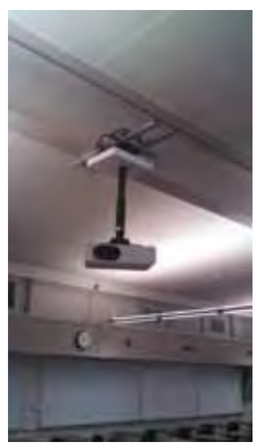

Bldg12-07


Bldg12-08


Bldg12-09


Bldg12-10


Bldg12-11


Bldg12-12

Basic Structural Checklist for Building Type RM1: Reinforced Masonry Bearing Walls with Flexible Diaphragms
BUILDING 12 – BUSINESS EDUCATION Sheet 1 of 3

Building System

C	NC	N/A	LOAD PATH: The Structure shall contain a minimum of one complete load path for Life Safety and Immediate Occupancy for seismic force effects from any horizontal direction that serves to transfer the inertial forces from the mass to the foundation. (Tier 2: Sec. 4.3.1.1)
C	NC	N/A	ADJACENT BUILDINGS: The clear distance between the building being evaluated and any adjacent building shall be greater than 4 percent of the height of the shorter building for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.1.2)
C	NC	N/A	MEZZANINES: Interior mezzanine levels shall be braced independently from the main structure, or shall be anchored to the lateral-force-resisting elements of the main structure. (Tier 2: Sec. 4.3.1.3)
C	NC	N/A	WEAK STORY: The strength of the lateral-force-resisting system in any story shall not be less than 80 percent of the strength in an adjacent story, above or below, for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.1)
C	NC	N/A	SOFT STORY: The stiffness of the lateral-force-resisting system in any story shall not be less than 70 percent of the lateral-force-resisting system stiffness in an adjacent story above or below, or less than 8- percent of the average lateral-force-resisting system stiffness of the three stories above or below for Life Safety an Immediate Occupancy. (Tier 2: Sec. 4.3.2.2)
C	NC	N/A	GEOMETRY: There shall be no changes in horizontal dimension of the lateral-force-resisting system of more than 30 percent in a story relative to adjacent stories for Life Safety and Immediate Occupancy, excluding one-story penthouses and mezzanines. (Tier 2: Sec. 4.3.2.3)
C	NC	N/A	VERTICAL DISCONTINUITIES: All vertical elements in the lateral-force-resisting system shall be continuous to the foundation. (Tier 2: Sec. 4.3.2.4)

Basic Structural Checklist for Building Type RM1: Reinforced Masonry Bearing Walls with Flexible Diaphragms
BUILDING 12 – BUSINESS EDUCATION Sheet 2 of 3

C	NC	N/A	MASS: There shall be no change in effective mass more than 50 percent from one story to the next Life safety and Immediate Occupancy. Light roofs, penthouses, and mezzanines need not be considered. (Tier 2: Sec. 4.3.2.5)
C	NC	N/A	DETERIORATION OF WOOD: There shall be no signs of decay, shrinkage, splitting, fire damage, or sagging in any of the wood members, and none of the metal connection hardware shall be deteriorated, broken, or loose. (Tier 2: Sec. 4.3.3.1)
C	NC	N/A	MASONRY UNITS: There shall be no visible deterioration of masonry units. (Tier 2: Sec. 4.3.3.7)
C	NC	N/A	MASONRY JOINTS: The mortar shall not be easily scraped away from the joints by hand with a metal tool, and there shall be no areas of eroded mortar. (Tier 2: Sec. 4.3.3.8)
C	NC	N/A	REINFORCED MASONRY WALL CRACKS: All existing diagonal cracks in wall elements shall be less than 118 inch for Life Safety and 1/16 inch for Immediate Occupancy, shall not be concentrated in one location, and shall not form an X pattern. (Tier 2: Sec. 4.3.3.10)

Lateral-Force-Resisting System

C	NC	N/A	REDUNDANCY: The number of lines of shear walls in each principal direction shall be greater than or equal to 2 for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.1.1)
C	NC	N/A	SHEAR STRESS CHECK: The shear stress in I.be reinforced masonry shear walls, calculated using the Quick Check procedure of Section 3.5.3.3, shall be less than 70 psi for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.4.1)

Basic Structural Checklist for Building Type RM1: Reinforced Masonry Bearing Walls with Flexible Diaphragms
BUILDING 12 – BUSINESS EDUCATION Sheet 3 of 3

C	NC	N/A	REINFORCING STEEL: The total vertical and horizontal reinforcing steel ratio in reinforced masonry walls shall be greater than 0.002 for Life Safety and Immediate Occupancy of the wall with the minimum of 0.0007 for Life Safety and Immediate Occupancy in either of the two directions; the spacing of reinforcing steel shall be less than 48 inches for Life Safety and Immediate Occupancy; and all vertical bars shall extend to the top of the walls. (Tier 2: Sec. 4.4.2.4.2)

Connections

C	NC	N/A	WALL ANCHORAGE: Exterior concrete or masonry walls that are dependent on the diaphragm for lateral support shall be anchored for out-of-plane forces at each diaphragm level with steel anchors, reinforcing dowels, or straps that are developed into the diaphragm. Connections shall have adequate strength to resist the connection force calculated in the Quick Check procedure of Section 3.5.3. 7. (Tier 2: Sec. 4.6.1.1)
C	NC	N/A	WOOD LEDGERS: The connection between the wall panels and the diaphragm shall not induce cross-grain bending or tension in the wood ledgers. (Tier 2: Sec. 4.6.1.2)
C	NC	N/A	TRANSFER TO SHEAR WALLS: Diaphragms shall be connected for transfer of loads to the shear walls for Life Safety and the connections shall be able to develop the lesser of the shear strength of the walls or diaphragms for Immediate Occupancy. (Tier 2: Sec. 4.6.2.1)
C	NC	N/A	FOUNDATION DOWELS: Wall reinforcement shall be doweled into the foundation for Life Safety, and the dowels shall be able to develop the lesser of the strength of the walls or the uplift capacity of the foundation for Immediate Occupancy. (Tier 2: Sec. 4.6.3.5)
C	NC	N/A	GIRDER/COLUMN CONNECTION: There shall be a positive connection utilizing plates, connection hardware, or straps between the girder and the column support. (Tier 2: Sec. 4.6.4.1)

Supplemental Structural Checklist for Building Type RM1: Reinforced Masonry Bearing Walls with Flexible Diaphragms
BUILDING 12 – BUSINESS EDUCATION Sheet 1 of 2

Lateral-Force-Resisting System

C	NC	N/A	REINFORCING AT OPENINGS: All wall openings that interrupt rebar shall have trim reinforcing on all sides. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.4.3)
C	NC	N/A	PROPORTIONS: The height-to-thickness ratio of the shear walls at each story shall be less than 30. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.4.4)

Diaphragms

C	NC	N/A	CROSS TIES: There shall be continuous cross ties between diaphragm chords. (Tier 2: Sec. 4.5.1.2)
C	NC	N/A	OPENINGS AT SHEAR WALLS: Diaphragm openings immediately adjacent to the shear walls shall be less than 25 percent of the wall length for Life Safety and 15 percent of the wall length for Immediate Occupancy. (Tier 2: Sec. 4.5.1.4)
C	NC	N/A	OPENINGS AT EXTERIOR MASONRY SHEAR WALLS: Diaphragm openings immediately adjacent to exterior masonry shear walls shall not be greater than 8 feet long for Life Safety and 4 feet long for Immediate Occupancy. (Tier 2: Sec. 4.5.1.6)
C	NC	N/A	PLAN IRREGULARITIES: There shall be tensile capacity to develop the strength of the diaphragm at re-entrant comers or other locations of plan irregularities. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.7)
C	NC	N/A	DIAPHRAGM REINFORCEMENT AT OPENINGS: There shall be reinforcing around all diaphragm openings larger than 50 percent of the building width in either major plan dimension. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.8)

Supplemental Structural Checklist for Building Type RM1: Reinforced Masonry Bearing Walls with Flexible Diaphragms
BUILDING 12 – BUSINESS EDUCATION Sheet 2 of 2

C	NC	N/A	STRAIGHT SHEATHING: All straight sheathed diaphragms shall have aspect ratios less than 2-to-1 for Life Safety and 1-to-1 for Immediate Occupancy in the direction being considered. (Tier 2: Sec. 4.5.2.1)
C	NC	N/A	SPANS: All wood diaphragms with spans greater than 24 feet for Life Safety and 12 feet for Immediate Occupancy shall consist of wood structural panels or diagonal sheathing. (Tier 2: Sec. 4.5.2.2)
C	NC	N/A	UNBLOCKED DIAPHRAGMS: All diagonally sheathed or unblocked wood structural panel diaphragms shall have horizontal spans less than 40 feet for Life Safety and 30 feet for Immediate Occupancy and shall have aspect ratios less than or equal to 4-to-1 for Life Safety and 3-to-J for Immediate Occupancy. (Tier 2: Sec. 4.5.2.3)
C	NC	N/A	NON-CONCRETE FILLED DIAPHRAGMS: Untopped metal deck diaphragms or metal deck diaphragms with fill other than concrete shall consist of horizontal spans of less than 40 feet and shall have span/depth ratios less than 4-to-1. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.3.1)
C	NC	N/A	OTHER DIAPHRAGMS: The diaphragm shall not consist of a system other than wood, metal deck, concrete, or horizontal bracing. (Tier 2: Sec. 4.5. 7.1)

Connections

C	NC	N/A	STIFFNESS OF WALL ANCHORS: Anchors of concrete or masonry walls to wood structural elements shall be installed taut and shall be stiff enough to limit the relative movement between the wall and the diaphragm to no greater than 1/8 inch prior to engagement of the anchors. (Tier 2:Sec. 4.6.1.4)

Basic Structural Checklist for Building Type W2: Wood Frames, Commercial and Industrial
BUILDING 12 – BUSINESS EDUCATION Sheet 1 of 4

Building System

C	NC	N/A	LOAD PATH: The structure shall contain a minimum of one complete load path for Life Safety and Immediate Occupancy for seismic force effects from any horizontal direction that serves to transfer the inertial forces from the mass to the foundation. (Tier 2: Sec. 4.3.1.1)
C	NC	N/A	MEZZANINES: Interior mezzanine levels shall be braced independently from the main structure, or shall be anchored to the lateral-force-resisting elements of the main structure. (Tier 2:Sec. 4.3. 1.3)
C	NC	N/A	WEAK STORY: The strength of the lateral-force-resisting system in any story shall not be less than 80 percent of the strength in an adjacent story, above or below, for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.1)
C	NC	N/A	SOFT STORY: The stiffness of the lateral-force-resisting system in any story shall not be less than 70 percent of the lateral-force-resisting system stiffness in an adjacent story above or below, or less than 80 percent of the average lateral-force-resisting system stiffness of the three stories above or below for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.2)
C	NC	N/A	GEOMETRY: There shall be no changes in horizontal dimension of the lateral-force-resisting system of more than 30 percent in a story relative to adjacent stories for Life Safety and Immediate Occupancy, excluding one-story penthouses and mezzanines. (Tier 2: Sec. 4.3.2.3)
C	NC	N/A	VERTICAL DISCONTINUITIES: All vertical elements in the lateral-force-resisting system shall be continuous to the foundation. (Tier 2: Sec. 4.3.2.4)
C	NC	N/A	MASS: There shall be no change in effective mass more than 50 percent from one story to the next for Life Safety and Immediate Occupancy. Light roofs, penthouses, and mezzanines need not be considered. (Tier 2: Sec. 4.3.2.5)

Basic Structural Checklist for Building Type W2: Wood Frames, Commercial and Industrial
BUILDING 12 – BUSINESS EDUCATION Sheet 2 of 4

C	NC	N/A	DETERIORATION OF WOOD: There shall be no signs of decay, shrinkage, splitting, fire damage, or sagging in any of the wood members, and none of the metal connection hardware shall be deteriorated, broken, or loose. (Tier 2: Sec. 4.3.3. 1)
C	NC	N/A	WOOD STRUCTURAL PANEL SHEAR WALL FASTENERS: There shall be no more than 15 percent of inadequate fastening such as overdriven fasteners, omitted blocking, excessive fastening spacing, or inadequate edge distance. TI1is statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.3.3.2)

Lateral-Force-Resisting System

C	NC	N/A	REDUNDANCY: The number of lines of shear walls in each principal direction shall be greater than or equal to 2 for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.1.1)
C	NC	N/A	SHEAR STRESS CHECK: The shear stress in the shear walls, calculated using the Quick Check procedure of Section 3.5.3.3, shall be less than the following values for Life Safety and Immediate Occupancy (Tier 2: Sec. 4.4.2. 7.1): Structural panel sheathing 1,000 plf Diagonal sheathing 700 plf Straight sheathing 100 plf All other conditions 100 plf
C	NC	N/A	STUCCO (EXTERIOR PLASTER) SHEAR WALLS: Multi-story buildings shall not rely on exterior stucco walls as the primary lateral-force-resisting system. (Tier 2: Sec. 4.4.2.7.2)
C	NC	N/A	GYPSUM WALLBOARD OR PLASTER SHEAR WALLS: Interior plaster or gypsum wallboard shall not be used as shear walls on buildings over one story in height with the exception of the uppermost level of a multi-story building. (Tier 2: Sec. 4.4.2.7.3)

Basic Structural Checklist for Building Type W2: Wood Frames, Commercial and Industrial
BUILDING 12 – BUSINESS EDUCATION Sheet 3 of 4

C	NC	N/A	NARROW WOOD SHEAR WALLS: Narrow wood shear walls with an aspect ratio greater than 2-to-1 for Life Safety and 1.5-to-1 for Immediate Occupancy shall not be used to resist lateral forces developed in the building in levels of moderate and high seismicity. Narrow wood shear walls with an aspect ratio greater than 2-to-I for Immediate Occupancy shall not be used to resist lateral forces developed in the building in levels of low seismicity. (Tier 2: Sec. 4.4.2.7.4)
C	NC	N/A	WALLS CONNECTED THROUGH FLOORS: Shear walls shall have interconnection between stories to transfer overturning and shear forces through the floor. (Tier 2: Sec. 4.4.2.7.5)
C	NC	N/A	HILLSIDE SITE: For structures that are taller on at least one side by more than one-half story due to a sloping site, all shear walls on the downhill slope shall have an aspect ratio less than 1-to-1 for Life Safety and 1-to-2 for Immediate Occupancy. (Tier 2: Sec. 4.4.2.7.6)
C	NC	N/A	CRIPPLE WALLS: Cripple walls below first-floor-level shear walls shall be braced to the foundation with wood structural panels. (Tier 2: Sec. 4.4.2. 7. 7)
C	NC	N/A	OPENINGS: Walls with openings greater than 80 percent of the length shall be braced with wood structural panel shear walls with aspect ratios of not more than 1.5-to-1 or shall be supported by adjacent construction through positive tics capable of transferring the lateral forces. (Tier 2: Sec. 4.4.2.7.8)

Connections

C	NC	N/A	WOOD POSTS: There shall be a positive connection of wood posts to the foundation. (Tier 2: Sec. 4.6.3.3)
C	NC	N/A	WOOD SILLS: All wood sills shall be bolted to the foundation. (Tier 2: Sec. 4.6.3.4)

Basic Structural Checklist for Building Type W2: Wood Frames, Commercial and Industrial
BUILDING 12 – BUSINESS EDUCATION Sheet 4 of 4

C	NC	N/A	GIRDER/COLUMN CONNECTION: There shall be a positive connection utilizing plates, connection hardware, or straps between the girder and the column support. (Tier 2: Sec. 4.6.4.1)

Supplemental Structural Checklist for Building Type W2: Wood Frames, Commercial and Industrial
BUILDING 12 – BUSINESS EDUCATION Sheet 1 of 2

Lateral-Force-Resisting System

C	NC	N/A	HOLD-DOWN ANCHORS: All shear walls shall have hold-down anchors constructed per acceptable construction practices, attached to the end studs. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.7.9)

Diaphragms

C	NC	N/A	DIAPHRAGM CONTINUITY: The diaphragms shall not be composed of split-level floors and shall not have expansion joints. (Tier 2: Sec. 4.5.1.1)
C	NC	N/A	ROOF CHORD CONTINUITY: All chord elements shall be continuous, regardless of changes in roof elevation. (Tier 2: Sec. 4.5.1.3)
C	NC	N/A	PLAN IRREGULARITIES: There shall be tensile capacity to develop the strength of the diaphragm at re-entrant comers or other locations of plan irregularities. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.7)
C	NC	N/A	DIAPHRAGM REINFORCEMENT AT OPENINGS: There shall be reinforcing around all diaphragm openings larger than 50 percent of the building width in either major plan dimension. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.8)
C	NC	N/A	STRAIGHT SHEATHING: All straight sheathed diaphragms shall have aspect ratios less than 2-to-1 for Life Safety and 1-to-1 for Immediate Occupancy in the direction being considered. (Tier 2: Sec. 4.5.2.1)
C	NC	N/A	SPANS: All wood diaphragms with spans greater than 24 feet for Life Safety and 12 feet for Immediate Occupancy shall consist of wood structural panels or diagonal sheathing. Wood commercial and industrial buildings may have rod-braced systems. (Tier 2: Sec. 4.5.2.2)

Supplemental Structural Checklist for Building Type W2: Wood Frames, Commercial and Industrial
BUILDING 12 – BUSINESS EDUCATION Sheet 2 of 2

C	NC	N/A	UNBLOCKED DIAPHRAGMS: All diagonally sheathed or unblocked wood structural panel diaphragms shall have horizontal spans less than 40 feet for Life Safety and 30 feet for Immediate Occupancy and shall have aspect ratios less than or equal to 4-to-1 for Life Safety and 3-to-1 for Immediate Occupancy. (Tier 2: Sec. 4.5.2.3)
C	NC	N/A	OTHER DIAPHRAGMS: The diaphragm shall not consist of a system other than wood, metal deck, concrete, or horizontal bracing. (Tier 2: Sec. 4.5.7.1)

Connections

C	NC	N/A	WOOD SILL BOLTS: Sill bolts shall be spaced at 6 feet or less for Life Safety and 4 feet or less for Immediate Occupancy, with proper edge and end di stance provided for wood and concrete. (Tier 2: Sec. 4.6.3.9)

Basic Nonstructural Component Checklist
BUILDING 12 – BUSINESS EDUCATION

Sheet 1 of 4

Partitions

C	NC	N/A	UNREINFORCED MASONRY: Unreinforced masonry or hollow clay tile partitions shall be braced at a spacing equal to or less than 10 feet in levels of low or moderate seismicity and 6 feet in levels of high seismicity. (Tier 2: Sec. 4.8.1.1)

Ceiling Systems

C	NC	N/A	SUPPORT: The integrated suspended ceiling system shall not be used to laterally support the tops of gypsum board, masonry, or hollow clay tile partitions. Gypsum board partitions need not be evaluated where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier2: Sec. 4.8.2.1)

Light Fixtures

C	NC	N/A	EMERGENCY LIGHTING: Emergency lighting shall be anchored or braced to prevent falling during an earthquake. (Tier 2: Sec. 4.8.3.1)

Cladding and Glazing

C	NC	N/A	CLADDING ANCHORS: Cladding components weighing more than 10 psf shall be mechanically anchored to the exterior wall framing at a spacing equal to or less than 4 feet. A spacing of up to 6 feet is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.1)
C	NC	N/A	DETERIORATION: There shall be no evidence of deterioration, damage or corrosion in any of the connection elements. (Tier 2: Sec. 4.8.4.2)
C	NC	N/A	CLADDING ISOLATION: For moment frame buildings of steel or concrete, panel connections shall be detailed to accommodate a story drift ratio of 0.02. Panel connection detailing for a story drift ratio of 0.01 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.3)

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C	NC	N/A	MULTI-STORY PANELS: For multi-story panels attached at each floor level, panel connections shall be detailed to accommodate a story drift ratio of 0.02. Panel connection detailing for a story drift ratio of 0.01 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.4)
C	NC	N/A	BEARING CONNECTIONS: Where bearing connections are required, there shall be a minimum of two bearing connections for each wall panel. (Tier 2: Sec. 4.8.4.5)
C	NC	N/A	INSERTS: Where inserts are used in concrete connections, the inserts shall be anchored to reinforcing steel or other positive anchorage. (Tier 2: Sec. 4.8.4.6)
C	NC	N/A	PANEL CONNECTIONS: Exterior cladding panels shall be anchored out-of-plane with a minimum of 4 connections for each wall panel. Two connections per wall panel are permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.7)

Masonry Veneer

C	NC	N/A	SHELF ANGLES: Masonry veneer shall be supported by shelf angles or other elements at each floor 30 feet or more above ground for Life Safety and at each floor above the first floor for Immediate Occupancy. (Tier 2: Sec. 4.8.5.1)
C	NC	N/A	TIES: Masonry veneer shall be connected to the back-up with corrosion-resistant ties. The ties shall have a spacing equal to or less than 24 inches with a minimum of one tie for every 2-2/3 square feet. A spacing of up to 36 inches is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.5.2)
C	NC	N/A	WEAKENED PLANES: Masonry veneer shall be anchored to the back-up adjacent to weakened planes, such as at the locations of flashing. (Tier 2: Sec. 4.8.5.3)
C	NC	N/A	DETERIORATION: There shall be no evidence of deterioration, damage, or corrosion in any of the connection elements. (Tier 2: Sec. 4.8.5.4)

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Parapets, Cornices, Ornamentation, and Appendages

C	NC	N/A	URM PARAPETS: There shall be no laterally unsupported unreinforced masonry parapets or cornices with height-to-thickness ratios greater than 1.5. A height-to-thickness ratio of up to 2.5 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.8.1)
C	NC	N/A	CANOPIES: Canopies located at building exits shall be anchored to the structural framing at a spacing of 6 feet or less. An anchorage spacing of up to 10 feet is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.8.2)

Masonry Chimneys

C	NC	N/A	URM CHIMNEYS: No unreinforced masonry chimney shall extend above the roof surface more than twice the least dimension of the chimney. A height above the roof surface of up to three times the least dimension of the chimney is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.9.1)

Stairs

C	NC	N/A	URM WALLS: Walls around stair enclosures shall not consist of unbraced hollow clay tile or unreinforced masonry with a height-to-thickness ratio greater than 12-to-1. A height-to-thickness ratio of up to 15-to-1 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.10.1)
C	NC	N/A	STAIR DETAILS: In moment frame structures, the connection between the stairs and the structure shall not rely on shallow anchors in concrete. Alternatively, the stair details shall be capable of accommodating the drift calculated using the Quick Check procedure of Section 3.5.3.1 without including tension in the anchors. (Tier 2: Sec. 4.8.10.2)

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Building Contents and Furnishing

C	NC	N/A	TALL NARROW CONTENTS: Contents over 4 feet in height with a height-to-depth or height-to-width ratio greater than 3-to-1 shall be anchored to the floor slab or adjacent structural walls. A height-to-depth or height-to-width ratio of up to 4-to-1 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.11.1)

Mechanical and Electrical Equipment

C	NC	N/A	EMERGENCY POWER: Equipment used as part of an emergency power system shall be mounted to maintain continued operation after an earthquake. (Tier 2: Sec. 4.8.12.1)
C	NC	N/A	HAZARDOUS MATERIAL EQUIPMENT: HVAC or other equipment containing hazardous material shall not have damaged supply lines or unbraced isolation supports. (Tier 2:Sec. 4.8.12.2)
C	NC	N/A	DETERIORATION: There shall be no evidence of deterioration, damage, or corrosion in any of the anchorage or supports of mechanical or electrical equipment. (Tier 2: Sec. 4.8.12.3)
C	NC	N/A	ATTACHED EQUIPMENT: Equipment weighing over 20 lb that is attached to ceilings, walls, or other supports 4 feet above the floor level shall be braced. (Tier 2: Sec. 4.8.12.4)

Piping

C	NC	N/A	FIRE SUPPRESSION PIPING: Fire suppression piping shall be anchored and braced in accordance with NFPA-13 (NFPA, 1996). (Tier 2: Sec. 4.8.13.1)
C	NC	N/A	FLEXIBLE COUPLINGS: Fluid, gas, and fire suppression piping shall have flexible couplings. (Tier 2: Sec. 4.8.13.2)

Hazardous Materials Storage and Distribution

C	NC	N/A	TOXIC SUBSTANCES: Toxic and hazardous substances stored in breakable containers shall be restrained from falling by latched doors, shelf lips, wires, or other methods. (Tier 2: Sec. 4.8.15.1)

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Ceiling Systems

C	NC	N/A	LAY-IN TILES: Lay-in tiles used in ceiling panels located at exits and corridors shall be secured with clips. (Tier 2: Sec. 4.8.2.2)
C	NC	N/A	INTEGRATED CEILINGS: Integrated suspended ceilings at exits and corridors or weighing more than 2 pounds per square foot shall be laterally restrained with a minimum of four diagonal wires or rigid members attached to the structure above at a spacing equal to or less than 12 feet. (Tier 2: Sec. 4.8.2.3)
C	NC	N/A	SUSPENDED LATH AND PLASTER: Ceilings consisting of suspended lath and plaster or gypsum board shall be attached to resist seismic forces for every 12 square feet of area. (Tier 2: Sec. 4.8.2.4)

Light Fixtures

C	NC	N/A	INDEPENDENT SUPPORT: Light fixtures in suspended grid ceilings shall be supported independently of the ceiling suspension system by a minimum of two wires at diagonally opposite corners of the fixtures. (Tier 2: Sec. 4.8.3.2)

Cladding and Glazing

C	NC	N/A	GLAZING: Glazing in curtain walls and individual panes over 16 square feet in area, located up to a height of 10 feet above an exterior walking surface, shall have safety glazing. Such glazing located over 10 feet above an exterior walking surface shall be laminated annealed or laminated heat-strengthened safety glass or other glazing system that will remain in the frame when glass is cracked. (Tier 2: Sec. 4.8.4.8)

Parapets, Cornices, Ornamentation, and Appendages

C	NC	N/A	CONCRETE PARAPETS: Concrete parapets with height-to-thickness ratios greater than 2.5 shall have vertical reinforcement. (Tier 2: Sec. 4.8.8.3)

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C	**NC**	**N/A**	APPENDAGES: Cornices, parapets, signs, and other appendages that extend above the highest point of anchorage to the structure or cantilever from exterior wall faces and other exterior wall ornamentation shall be reinforced and anchored to the structural system at a spacing equal to or less than 10 feet for Life Safety and 6 feet for Immediate Occupancy. This requirement need not apply to parapets or cornices compliant with Section 4.8.8.1 or 4.8.8.3. (Tier 2: Sec. 4.8.8.4)

Masonry Chimneys

C	**NC**	**N/A**	ANCHORAGE: Masonry chimneys shall be anchored at each floor level and the roof. (Tier 2: Sec.4.8.9.2)

Mechanical and Electrical Equipment

C	**NC**	**N/A**	VIBRATION ISOLATORS: Equipment mounted on vibration isolators shall be equipped with restraints or snubbers. (Tier 2: Sec. 4.8.12.5)

Ducts

C	**NC**	**N/A**	STAIR AND SMOKE DUCTS: Stair pressurization and smoke control ducts shall be braced and shall have flexible connections at seismic joints. (Tier 2: Sec. 4.8.14.1)

6.5.2 BUILDING 13 – BUSINESS EDUCATION

Building Description

YEAR OF CONSTRUCTION:	1953
YEAR OF ALTERATIONS:	1997 – Ceiling and Lighting Seismic Retrofit 1999 – Structural Seismic Retrofit
BUILDING TYPE:	W2, RM1

GENERAL BUILDING DESCRIPTION: The Business Education Building is a reinforced masonry brick structure measuring approximately 118 feet long by 40 feet wide and 14 feet tall. It was retrofitted in 1997: wood shear walls were added to the north exterior wall of the building, steel columns were added along the south exterior masonry wall, and roof-to-wall anchorage was upgraded in the roof diaphragm.

The building is primarily used as classrooms and is connected to Building 12 by a walkway canopy. The building appears in good condition, although there is considerable deterioration of the cantilever canopy at the southeast corner of the building (picture Bldg13-04).

For exterior elevations and typical construction, see pictures Bldg13-01 to Bldg13-05.

VERTICAL STRUCTURAL SYSTEM: The structure contains a caisson foundation with grade beams around the perimeter of the structure and under interior walls. The floor level is concrete slab on grade. The wood roof rafters are supported by a central steel beam and exterior walls for the north length of the building. Along the north wall is a row of windows half the height of the building. Roof purlins support wood subpurlins at the northern roof and cantilever past the exterior wall to support a canopy in this location.

LATERAL STRUCTURAL SYSTEM: The lateral system consists of new plywood added over original diagonal roof sheathing. Reinforced masonry brick shear walls are present along the interior and exterior of the building. The north wall contains sections of wood shear walls added during the 1999 seismic retrofit. The retrofit also included addition of out-of-plane anchorage for the south masonry wall with steel tube columns, and the east and west interior and exterior masonry walls with retrofit roof diaphragm ties, plywood, and blocking.

NON-STRUCTURAL SYSTEMS: A walkway canopy to the south of the building contains the mechanical units for the building. The projectors in the classrooms are anchored properly. Lighting is hung from roof framing.

For non-structural systems and items present within the building, see pictures Bldg13-06 to Bldg13-09.

List of Deficiencies

The following items have been found noncompliant in accordance with the requirements of ASCE31-03:

Structural

1. PROXIMITY OF ADJACENT BUILDINGS: The clear distance between the reinforced masonry and walkway canopies does not meet the limit; walkway canopies are connected to both Buildings 12 and 13.
2. DETERIORATION OF WOOD: Cantilever Canopy at front of building shows considerable damage and deterioration (picture Bldg13-04). Walkway canopy wood framing supporting mechanical equipment showed signs of moderate deterioration

Non-structural

3. TALL NARROW CONTENTS: Two server racks, two file cabinets in Room 105A, and one shelf system in Room 106A are not anchored (pictures Bldg13-08 to Bldg13-09).
4. INADEQUATE EQUIPMENT ATTACHMENT: Projector screens in classrooms are typically not adequately braced.
5. MECHANICAL EQUIPMENT ANCHORAGE: Mechanical equipment on the roof is not anchored to the roof structure

BUILDING 13 – BUSINESS EDUCATION, PICTURES

Bldg13-01

Bldg13-02

Bldg13-03


Bldg13-04


Bldg13-05


Bldg13-06

Bldg13-07

Bldg13-08

Bldg13-09

Basic Structural Checklist for Building Type RM1: Reinforced Masonry Bearing Walls with Flexible Diaphragms
BUILDING 13 – BUSINESS EDUCATION Sheet 1 of 3

Building System

C	NC	N/A	LOAD PATH: The Structure shall contain a minimum of one complete load path for Life Safety and Immediate Occupancy for seismic force effects from any horizontal direction that serves to transfer the inertial forces from the mass to the foundation. (Tier 2: Sec. 4.3.1.1)
C	NC	N/A	ADJACENT BUILDINGS: The clear distance between the building being evaluated and any adjacent building shall be greater than 4 percent of the height of the shorter building for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.1.2)
C	NC	N/A	MEZZANINES: Interior mezzanine levels shall be braced independently from the main structure, or shall be anchored to the lateral-force-resisting elements of the main structure. (Tier 2: Sec. 4.3.1.3)
C	NC	N/A	WEAK STORY: The strength of the lateral-force-resisting system in any story shall not be less than 80 percent of the strength in an adjacent story, above or below, for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.1)
C	NC	N/A	SOFT STORY: The stiffness of the lateral-force-resisting system in any story shall not be less than 70 percent of the lateral-force-resisting system stiffness in an adjacent story above or below, or less than 8- percent of the average lateral-force-resisting system stiffness of the three stories above or below for Life Safety an Immediate Occupancy. (Tier 2: Sec. 4.3.2.2)
C	NC	N/A	GEOMETRY: There shall be no changes in horizontal dimension of the lateral-force-resisting system of more than 30 percent in a story relative to adjacent stories for Life Safety and Immediate Occupancy, excluding one-story penthouses and mezzanines. (Tier 2: Sec. 4.3.2.3)
C	NC	N/A	VERTICAL DISCONTINUITIES: All vertical elements in the lateral-force-resisting system shall be continuous to the foundation. (Tier 2: Sec. 4.3.2.4)

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BUILDING 13 – BUSINESS EDUCATION Sheet 2 of 3

C	NC	N/A	MASS: There shall be no change in effective mass more than 50 percent from one story to the next Life safety and Immediate Occupancy. Light roofs, penthouses, and mezzanines need not be considered. (Tier 2: Sec. 4.3.2.5)
C	NC	N/A	DETERIORATION OF WOOD: There shall be no signs of decay, shrinkage, splitting, fire damage, or sagging in any of the wood members, and none of the metal connection hardware shall be deteriorated, broken, or loose. (Tier 2: Sec. 4.3.3.1)
C	NC	N/A	MASONRY UNITS: There shall be no visible deterioration of masonry units. (Tier 2: Sec. 4.3.3.7)
C	NC	N/A	MASONRY JOINTS: The mortar shall not be easily scraped away from the joints by hand with a metal tool, and there shall be no areas of eroded mortar. (Tier 2: Sec. 4.3.3.8)
C	NC	N/A	REINFORCED MASONRY WALL CRACKS: All existing diagonal cracks in wall elements shall be less than 118 inch for Life Safety and 1/16 inch for Immediate Occupancy, shall not be concentrated in one location, and shall not form an X pattern. (Tier 2: Sec. 4.3.3.10)

Lateral-Force-Resisting System

C	NC	N/A	REDUNDANCY: The number of lines of shear walls in each principal direction shall be greater than or equal to 2 for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.1.1)
C	NC	N/A	SHEAR STRESS CHECK: The shear stress in I.be reinforced masonry shear walls, calculated using the Quick Check procedure of Section 3.5.3.3, shall be less than 70 psi for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.4.1)

Basic Structural Checklist for Building Type RM1: Reinforced Masonry Bearing Walls with Flexible Diaphragms
BUILDING 13 – BUSINESS EDUCATION Sheet 3 of 3

C	NC	N/A	REINFORCING STEEL: The total vertical and horizontal reinforcing steel ratio in reinforced masonry walls shall be greater than 0.002 for Life Safety and Immediate Occupancy of the wall with the minimum of 0.0007 for Life Safety and Immediate Occupancy in either of the two directions; the spacing of reinforcing steel shall be less than 48 inches for Life Safety and Immediate Occupancy; and all vertical bars shall extend to the top of the walls. (Tier 2: Sec. 4.4.2.4.2)

Connections

C	NC	N/A	WALL ANCHORAGE: Exterior concrete or masonry walls that are dependent on the diaphragm for lateral support shall be anchored for out-of-plane forces at each diaphragm level with steel anchors, reinforcing dowels, or straps that are developed into the diaphragm. Connections shall have adequate strength to resist the connection force calculated in the Quick Check procedure of Section 3.5.3. 7. (Tier 2: Sec. 4.6.1.1)
C	NC	N/A	WOOD LEDGERS: The connection between the wall panels and the diaphragm shall not induce cross-grain bending or tension in the wood ledgers. (Tier 2: Sec. 4.6.1.2)
C	NC	N/A	TRANSFER TO SHEAR WALLS: Diaphragms shall be connected for transfer of loads to the shear walls for Life Safety and the connections shall be able to develop the lesser of the shear strength of the walls or diaphragms for Immediate Occupancy. (Tier 2: Sec. 4.6.2.1)
C	NC	N/A	FOUNDATION DOWELS: Wall reinforcement shall be doweled into the foundation for Life Safety, and the dowels shall be able to develop the lesser of the strength of the walls or the uplift capacity of the foundation for Immediate Occupancy. (Tier 2: Sec. 4.6.3.5)
C	NC	N/A	GIRDER/COLUMN CONNECTION: There shall be a positive connection utilizing plates, connection hardware, or straps between the girder and the column support. (Tier 2: Sec. 4.6.4.1)

Supplemental Structural Checklist for Building Type RM1: Reinforced Masonry Bearing Walls with Flexible Diaphragms
BUILDING 13 – BUSINESS EDUCATION Sheet 1 of 2

Lateral-Force-Resisting System

C	NC	N/A	REINFORCING AT OPENINGS: All wall openings that interrupt rebar shall have trim reinforcing on all sides. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.4.3)
C	NC	N/A	PROPORTIONS: The height-to-thickness ratio of the shear walls at each story shall be less than 30. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.4.4)

Diaphragms

C	NC	N/A	CROSS TIES: There shall be continuous cross ties between diaphragm chords. (Tier 2: Sec. 4.5.1.2)
C	NC	N/A	OPENINGS AT SHEAR WALLS: Diaphragm openings immediately adjacent to the shear walls shall be less than 25 percent of the wall length for Life Safety and 15 percent of the wall length for Immediate Occupancy. (Tier 2: Sec. 4.5.1.4)
C	NC	N/A	OPENINGS AT EXTERIOR MASONRY SHEAR WALLS: Diaphragm openings immediately adjacent to exterior masonry shear walls shall not be greater than 8 feet long for Life Safety and 4 feet long for Immediate Occupancy. (Tier 2: Sec. 4.5.1.6)
C	NC	N/A	PLAN IRREGULARITIES: There shall be tensile capacity to develop the strength of the diaphragm at re-entrant comers or other locations of plan irregularities. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.7)
C	NC	N/A	DIAPHRAGM REINFORCEMENT AT OPENINGS: There shall be reinforcing around all diaphragm openings larger than 50 percent of the building width in either major plan dimension. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.8)

Supplemental Structural Checklist for Building Type RM1: Reinforced Masonry Bearing Walls with Flexible Diaphragms
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C	NC	N/A	STRAIGHT SHEATHING: All straight sheathed diaphragms shall have aspect ratios less than 2-to-1 for Life Safety and 1-to-1 for Immediate Occupancy in the direction being considered. (Tier 2: Sec. 4.5.2.1)
C	NC	N/A	SPANS: All wood diaphragms with spans greater than 24 feet for Life Safety and 12 feet for Immediate Occupancy shall consist of wood structural panels or diagonal sheathing. (Tier 2: Sec. 4.5.2.2)
C	NC	N/A	UNBLOCKED DIAPHRAGMS: All diagonally sheathed or unblocked wood structural panel diaphragms shall have horizontal spans less than 40 feet for Life Safety and 30 feet for Immediate Occupancy and shall have aspect ratios less than or equal to 4-to-1 for Life Safety and 3-to-J for Immediate Occupancy. (Tier 2: Sec. 4.5.2.3)
C	NC	N/A	NON-CONCRETE FILLED DIAPHRAGMS: Untopped metal deck diaphragms or metal deck diaphragms with fill other than concrete shall consist of horizontal spans of less than 40 feet and shall have span/depth ratios less than 4-to-1. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.3.1)
C	NC	N/A	OTHER DIAPHRAGMS: The diaphragm shall not consist of a system other than wood, metal deck, concrete, or horizontal bracing. (Tier 2: Sec. 4.5. 7.1)

Connections

C	NC	N/A	STIFFNESS OF WALL ANCHORS: Anchors of concrete or masonry walls to wood structural elements shall be installed taut and shall be stiff enough to limit the relative movement between the wall and the diaphragm to no greater than 1/8 inch prior to engagement of the anchors. (Tier 2:Sec. 4.6.1.4)

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Building System

C	NC	N/A	LOAD PATH: The structure shall contain a minimum of one complete load path for Life Safety and Immediate Occupancy for seismic force effects from any horizontal direction that serves to transfer the inertial forces from the mass to the foundation. (Tier 2: Sec. 4.3.1.1)
C	NC	N/A	MEZZANINES: Interior mezzanine levels shall be braced independently from the main structure, or shall be anchored to the lateral-force-resisting elements of the main structure. (Tier 2:Sec. 4.3. 1.3)
C	NC	N/A	WEAK STORY: The strength of the lateral-force-resisting system in any story shall not be less than 80 percent of the strength in an adjacent story, above or below, for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.1)
C	NC	N/A	SOFT STORY: The stiffness of the lateral-force-resisting system in any story shall not be less than 70 percent of the lateral-force-resisting system stiffness in an adjacent story above or below, or less than 80 percent of the average lateral-force-resisting system stiffness of the three stories above or below for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.2)
C	NC	N/A	GEOMETRY: There shall be no changes in horizontal dimension of the lateral-force-resisting system of more than 30 percent in a story relative to adjacent stories for Life Safety and Immediate Occupancy, excluding one-story penthouses and mezzanines. (Tier 2: Sec. 4.3.2.3)
C	NC	N/A	VERTICAL DISCONTINUITIES: All vertical elements in the lateral-force-resisting system shall be continuous to the foundation. (Tier 2: Sec. 4.3.2.4)
C	NC	N/A	MASS: There shall be no change in effective mass more than 50 percent from one story to the next for Life Safety and Immediate Occupancy. Light roofs, penthouses, and mezzanines need not be considered. (Tier 2: Sec. 4.3.2.5)

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C	NC	N/A	DETERIORATION OF WOOD: There shall be no signs of decay, shrinkage, splitting, fire damage, or sagging in any of the wood members, and none of the metal connection hardware shall be deteriorated, broken, or loose. (Tier 2: Sec. 4.3.3. 1)
C	NC	N/A	WOOD STRUCTURAL PANEL SHEAR WALL FASTENERS: There shall be no more than 15 percent of inadequate fastening such as overdriven fasteners, omitted blocking, excessive fastening spacing, or inadequate edge distance. TI1is statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.3.3.2)

Lateral-Force-Resisting System

C	NC	N/A	REDUNDANCY: The number of lines of shear walls in each principal direction shall be greater than or equal to 2 for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.1.1)
C	NC	N/A	SHEAR STRESS CHECK: The shear stress in the shear walls, calculated using the Quick Check procedure of Section 3.5.3.3, shall be less than the following values for Life Safety and Immediate Occupancy (Tier 2: Sec. 4.4.2. 7.1): Structural panel sheathing 1,000 plf Diagonal sheathing 700 plf Straight sheathing 100 plf All other conditions 100 plf
C	NC	N/A	STUCCO (EXTERIOR PLASTER) SHEAR WALLS: Multi-story buildings shall not rely on exterior stucco walls as the primary lateral-force-resisting system. (Tier 2: Sec. 4.4.2.7.2)
C	NC	N/A	GYPSUM WALLBOARD OR PLASTER SHEAR WALLS: Interior plaster or gypsum wallboard shall not be used as shear walls on buildings over one story in height with the exception of the uppermost level of a multi-story building. (Tier 2: Sec. 4.4.2.7.3)

Basic Structural Checklist for Building Type W2: Wood Frames, Commercial and Industrial
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C	NC	N/A	NARROW WOOD SHEAR WALLS: Narrow wood shear walls with an aspect ratio greater than 2-to-1 for Life Safety and 1.5-to-1 for Immediate Occupancy shall not be used to resist lateral forces developed in the building in levels of moderate and high seismicity. Narrow wood shear walls with an aspect ratio greater than 2-to-I for Immediate Occupancy shall not be used to resist lateral forces developed in the building in levels of low seismicity. (Tier 2: Sec. 4.4.2.7.4)
C	NC	N/A	WALLS CONNECTED THROUGH FLOORS: Shear walls shall have interconnection between stories to transfer overturning and shear forces through the floor. (Tier 2: Sec. 4.4.2.7.5)
C	NC	N/A	HILLSIDE SITE: For structures that are taller on at least one side by more than one-half story due to a sloping site, all shear walls on the downhill slope shall have an aspect ratio less than 1-to-1 for Life Safety and 1-to-2 for Immediate Occupancy. (Tier 2: Sec. 4.4.2.7.6)
C	NC	N/A	CRIPPLE WALLS: Cripple walls below first-floor-level shear walls shall be braced to the foundation with wood structural panels. (Tier 2: Sec. 4.4.2. 7. 7)
C	NC	N/A	OPENINGS: Walls with openings greater than 80 percent of the length shall be braced with wood structural panel shear walls with aspect ratios of not more than 1.5-to-1 or shall be supported by adjacent construction through positive tics capable of transferring the lateral forces. (Tier 2: Sec. 4.4.2.7.8)

Connections

C	NC	N/A	WOOD POSTS: There shall be a positive connection of wood posts to the foundation. (Tier 2: Sec. 4.6.3.3)
C	NC	N/A	WOOD SILLS: All wood sills shall be bolted to the foundation. (Tier 2: Sec. 4.6.3.4)

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C	NC	N/A	GIRDER/COLUMN CONNECTION: There shall be a positive connection utilizing plates, connection hardware, or straps between the girder and the column support. (Tier 2: Sec. 4.6.4.1)

Supplemental Structural Checklist for Building Type W2: Wood Frames, Commercial and Industrial
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Lateral-Force-Resisting System

C	NC	N/A	HOLD-DOWN ANCHORS: All shear walls shall have hold-down anchors constructed per acceptable construction practices, attached to the end studs. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.7.9)

Diaphragms

C	NC	N/A	DIAPHRAGM CONTINUITY: The diaphragms shall not be composed of split-level floors and shall not have expansion joints. (Tier 2: Sec. 4.5.1.1)
C	NC	N/A	ROOF CHORD CONTINUITY: All chord elements shall be continuous, regardless of changes in roof elevation. (Tier 2: Sec. 4.5.1.3)
C	NC	N/A	PLAN IRREGULARITIES: There shall be tensile capacity to develop the strength of the diaphragm at re-entrant comers or other locations of plan irregularities. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.7)
C	NC	N/A	DIAPHRAGM REINFORCEMENT AT OPENINGS: There shall be reinforcing around all diaphragm openings larger than 50 percent of the building width in either major plan dimension. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.8)
C	NC	N/A	STRAIGHT SHEATHING: All straight sheathed diaphragms shall have aspect ratios less than 2-to-1 for Life Safety and 1-to-1 for Immediate Occupancy in the direction being considered. (Tier 2: Sec. 4.5.2.1)
C	NC	N/A	SPANS: All wood diaphragms with spans greater than 24 feet for Life Safety and 12 feet for Immediate Occupancy shall consist of wood structural panels or diagonal sheathing. Wood commercial and industrial buildings may have rod-braced systems. (Tier 2: Sec. 4.5.2.2)

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C	NC	N/A	UNBLOCKED DIAPHRAGMS: All diagonally sheathed or unblocked wood structural panel diaphragms shall have horizontal spans less than 40 feet for Life Safety and 30 feet for Immediate Occupancy and shall have aspect ratios less than or equal to 4-to-1 for Life Safety and 3-to-1 for Immediate Occupancy. (Tier 2: Sec. 4.5.2.3)
C	NC	N/A	OTHER DIAPHRAGMS: The diaphragm shall not consist of a system other than wood, metal deck, concrete, or horizontal bracing. (Tier 2: Sec. 4.5.7.1)

Connections

C	NC	N/A	WOOD SILL BOLTS: Sill bolts shall be spaced at 6 feet or less for Life Safety and 4 feet or less for Immediate Occupancy, with proper edge and end di stance provided for wood and concrete. (Tier 2: Sec. 4.6.3.9)

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Partitions

C	NC	N/A	UNREINFORCED MASONRY: Unreinforced masonry or hollow clay tile partitions shall be braced at a spacing equal to or less than 10 feet in levels of low or moderate seismicity and 6 feet in levels of high seismicity. (Tier 2: Sec. 4.8.1.1)

Ceiling Systems

C	NC	N/A	SUPPORT: The integrated suspended ceiling system shall not be used to laterally support the tops of gypsum board, masonry, or hollow clay tile partitions. Gypsum board partitions need not be evaluated where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier2: Sec. 4.8.2.1)

Light Fixtures

C	NC	N/A	EMERGENCY LIGHTING: Emergency lighting shall be anchored or braced to prevent falling during an earthquake. (Tier 2: Sec. 4.8.3.1)

Cladding and Glazing

C	NC	N/A	CLADDING ANCHORS: Cladding components weighing more than 10 psf shall be mechanically anchored to the exterior wall framing at a spacing equal to or less than 4 feet. A spacing of up to 6 feet is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.1)
C	NC	N/A	DETERIORATION: There shall be no evidence of deterioration, damage or corrosion in any of the connection elements. (Tier 2: Sec. 4.8.4.2)
C	NC	N/A	CLADDING ISOLATION: For moment frame buildings of steel or concrete, panel connections shall be detailed to accommodate a story drift ratio of 0.02. Panel connection detailing for a story drift ratio of 0.01 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.3)

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C	NC	N/A	MULTI-STORY PANELS: For multi-story panels attached at each floor level, panel connections shall be detailed to accommodate a story drift ratio of 0.02. Panel connection detailing for a story drift ratio of 0.01 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.4)
C	NC	N/A	BEARING CONNECTIONS: Where bearing connections are required, there shall be a minimum of two bearing connections for each wall panel. (Tier 2: Sec. 4.8.4.5)
C	NC	N/A	INSERTS: Where inserts are used in concrete connections, the inserts shall be anchored to reinforcing steel or other positive anchorage. (Tier 2: Sec. 4.8.4.6)
C	NC	N/A	PANEL CONNECTIONS: Exterior cladding panels shall be anchored out-of-plane with a minimum of 4 connections for each wall panel. Two connections per wall panel are permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.7)

Masonry Veneer

C	NC	N/A	SHELF ANGLES: Masonry veneer shall be supported by shelf angles or other elements at each floor 30 feet or more above ground for Life Safety and at each floor above the first floor for Immediate Occupancy. (Tier 2: Sec. 4.8.5.1)
C	NC	N/A	TIES: Masonry veneer shall be connected to the back-up with corrosion-resistant ties. The ties shall have a spacing equal to or less than 24 inches with a minimum of one tie for every 2-2/3 square feet. A spacing of up to 36 inches is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.5.2)
C	NC	N/A	WEAKENED PLANES: Masonry veneer shall be anchored to the back-up adjacent to weakened planes, such as at the locations of flashing. (Tier 2: Sec. 4.8.5.3)
C	NC	N/A	DETERIORATION: There shall be no evidence of deterioration, damage, or corrosion in any of the connection elements. (Tier 2: Sec. 4.8.5.4)

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Parapets, Cornices, Ornamentation, and Appendages

C	NC	N/A	URM PARAPETS: There shall be no laterally unsupported unreinforced masonry parapets or cornices with height-to-thickness ratios greater than 1.5. A height-to-thickness ratio of up to 2.5 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.8.1)
C	NC	N/A	CANOPIES: Canopies located at building exits shall be anchored to the structural framing at a spacing of 6 feet or less. An anchorage spacing of up to 10 feet is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.8.2)

Masonry Chimneys

C	NC	N/A	URM CHIMNEYS: No unreinforced masonry chimney shall extend above the roof surface more than twice the least dimension of the chimney. A height above the roof surface of up to three times the least dimension of the chimney is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.9.1)

Stairs

C	NC	N/A	URM WALLS: Walls around stair enclosures shall not consist of unbraced hollow clay tile or unreinforced masonry with a height-to-thickness ratio greater than 12-to-1. A height-to-thickness ratio of up to 15-to-1 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.10.1)
C	NC	N/A	STAIR DETAILS: In moment frame structures, the connection between the stairs and the structure shall not rely on shallow anchors in concrete. Alternatively, the stair details shall be capable of accommodating the drift calculated using the Quick Check procedure of Section 3.5.3.1 without including tension in the anchors. (Tier 2: Sec. 4.8.10.2)

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Building Contents and Furnishing

C	NC	N/A	TALL NARROW CONTENTS: Contents over 4 feet in height with a height-to-depth or height-to-width ratio greater than 3-to-1 shall be anchored to the floor slab or adjacent structural walls. A height-to-depth or height-to-width ratio of up to 4-to-1 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.11.1)

Mechanical and Electrical Equipment

C	NC	N/A	EMERGENCY POWER: Equipment used as part of an emergency power system shall be mounted to maintain continued operation after an earthquake. (Tier 2: Sec. 4.8.12.1)
C	NC	N/A	HAZARDOUS MATERIAL EQUIPMENT: HVAC or other equipment containing hazardous material shall not have damaged supply lines or unbraced isolation supports. (Tier 2:Sec. 4.8.12.2)
C	NC	N/A	DETERIORATION: There shall be no evidence of deterioration, damage, or corrosion in any of the anchorage or supports of mechanical or electrical equipment. (Tier 2: Sec. 4.8.12.3)
C	NC	N/A	ATTACHED EQUIPMENT: Equipment weighing over 20 lb that is attached to ceilings, walls, or other supports 4 feet above the floor level shall be braced. (Tier 2: Sec. 4.8.12.4)

Piping

C	NC	N/A	FIRE SUPPRESSION PIPING: Fire suppression piping shall be anchored and braced in accordance with NFPA-13 (NFPA, 1996). (Tier 2: Sec. 4.8.13.1)
C	NC	N/A	FLEXIBLE COUPLINGS: Fluid, gas, and fire suppression piping shall have flexible couplings. (Tier 2: Sec. 4.8.13.2)

Hazardous Materials Storage and Distribution

C	NC	N/A	TOXIC SUBSTANCES: Toxic and hazardous substances stored in breakable containers shall be restrained from falling by latched doors, shelf lips, wires, or other methods. (Tier 2: Sec. 4.8.15.1)

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Ceiling Systems

C	NC	N/A	LAY-IN TILES: Lay-in tiles used in ceiling panels located at exits and corridors shall be secured with clips. (Tier 2: Sec. 4.8.2.2)
C	NC	N/A	INTEGRATED CEILINGS: Integrated suspended ceilings at exits and corridors or weighing more than 2 pounds per square foot shall be laterally restrained with a minimum of four diagonal wires or rigid members attached to the structure above at a spacing equal to or less than 12 feet. (Tier 2: Sec. 4.8.2.3)
C	NC	N/A	SUSPENDED LATH AND PLASTER: Ceilings consisting of suspended lath and plaster or gypsum board shall be attached to resist seismic forces for every 12 square feet of area. (Tier 2: Sec. 4.8.2.4)

Light Fixtures

C	NC	N/A	INDEPENDENT SUPPORT: Light fixtures in suspended grid ceilings shall be supported independently of the ceiling suspension system by a minimum of two wires at diagonally opposite corners of the fixtures. (Tier 2: Sec. 4.8.3.2)

Cladding and Glazing

C	NC	N/A	GLAZING: Glazing in curtain walls and individual panes over 16 square feet in area, located up to a height of 10 feet above an exterior walking surface, shall have safety glazing. Such glazing located over 10 feet above an exterior walking surface shall be laminated annealed or laminated heat-strengthened safety glass or other glazing system that will remain in the frame when glass is cracked. (Tier 2: Sec. 4.8.4.8)

Parapets, Cornices, Ornamentation, and Appendages

C	NC	N/A	CONCRETE PARAPETS: Concrete parapets with height-to-thickness ratios greater than 2.5 shall have vertical reinforcement. (Tier 2: Sec. 4.8.8.3)

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C	**NC**	**N/A**	APPENDAGES: Cornices, parapets, signs, and other appendages that extend above the highest point of anchorage to the structure or cantilever from exterior wall faces and other exterior wall ornamentation shall be reinforced and anchored to the structural system at a spacing equal to or less than 10 feet for Life Safety and 6 feet for Immediate Occupancy. This requirement need not apply to parapets or cornices compliant with Section 4.8.8.1 or 4.8.8.3. (Tier 2: Sec. 4.8.8.4)

Masonry Chimneys

C	**NC**	**N/A**	ANCHORAGE: Masonry chimneys shall be anchored at each floor level and the roof. (Tier 2: Sec.4.8.9.2)

Mechanical and Electrical Equipment

C	**NC**	**N/A**	VIBRATION ISOLATORS: Equipment mounted on vibration isolators shall be equipped with restraints or snubbers. (Tier 2: Sec. 4.8.12.5)

Ducts

C	**NC**	**N/A**	STAIR AND SMOKE DUCTS: Stair pressurization and smoke control ducts shall be braced and shall have flexible connections at seismic joints. (Tier 2: Sec. 4.8.14.1)

6.6 BUILDINGS 35 TO 39

6.6.1 BUILDING 35 – EAST MATH WING

Building Description

YEAR OF CONSTRUCTION: 1956
YEAR OF ALTERATIONS: 1997 – Ceiling and Lighting Seismic Retrofit
BUILDING TYPE: S1A, W2

GENERAL BUILDING DESCRIPTION: The East Math Wing building is mostly wood frame construction. It is approximately 14 feet high, 33 feet wide and 150 feet long. The building is joined to the West Math Wing by a walkway canopy; additionally the walkway extends to Building 37, 38 and 39. The building is currently being used as classrooms and staff offices.

It appears in good condition and there is no visible wood deterioration. There is deterioration evident in the exterior masonry wing walls (pictures Bldg35-06 and Bldg35-07).

For exterior elevations and typical construction, see pictures Bldg35-01 to Bldg35-07.

VERTICAL STRUCTURAL SYSTEM: The foundation is composed of caissons connected with grade beams around the perimeter and along interior walls. The floor construction is concrete slab is on grade. The wood roof rafters are supported by a central steel beam and exterior wood walls or headers. The entire length of the north wall contains windows spanning half the height of wall. The windows are separated with small steel columns embedded in a reinforced masonry wall that runs from the ground to the window sill. The remaining exterior and interior walls are wood stud walls.

LATERAL STRUCTURAL SYSTEM: The building contains plywood shear walls. There is no evident lateral system along the south exterior wall; wood shear walls shown in existing drawings are not present. Along the north exterior wall, there are steel moment frames. The roof diaphragm is unblocked plywood sheathing. No cross ties are present in the roof diaphragm.

NON-STRUCTURAL SYSTEMS: It appears mechanical units were at one time located on the roof of the structure and have been moved to the walkway canopies shared between Building 35, 36, and 39. The walkways may not be adequate for the weight of mechanical units. The ceiling and lighting systems appear to be current and in good condition. Screen projects in some classrooms are not adequately braced. In one particular room there are light fixtures which are not independently supported. There is also a drop ceiling with no sway wires.

For non-structural systems and items present within the building, see pictures Bldg35-08 to Bldg35-12.

List of Deficiencies

The following items have been found noncompliant in accordance with the requirements of ASCE31-03:

Structural

1. PROXIMITY OF ADJACENT BUILDINGS: The clear distance between the building and walkway canopies does not conform to the minimum limit; walkway canopies are connected between Buildings 35-39.
2. UNACCEPTABLE DRIFT AT MOMENT FRAMES: The drift ratio is greater than the limit of 0.025 for Life Safety.
3. UNACCEPTABLE STEEL MOMENT FRAMES: Moment-resisting connections, panel zone shear capacities and strong column/weak beam criteria are unacceptable and the governing criteria is not met.
4. NO CROSS TIES: There are no cross ties between diaphragm chords.
5. UNBLOCKED DIAPHRAGM SPAN: The maximum unblocked plywood diaphragm horizontal span is 41 feet, greater than the 40 feet limit for Life Safety.
6. REDUNDANCY: The south longitudinal direction does not contain any plywood shear walls.
7. OPENINGS: No wood structural panel shear walls are present for bracing at the south longitudinal wall.
8. MASONRY UNITS: Masonry units of wing walls along the south side of the building show minor signs of deterioration (pictures Bldg35-06 & Bldg35-07). Note this item is not covered on a check list for Building 35 due to building type, but should still be considered a deficiency.

Non-structural

9. TALL NARROW CONTENTS: Bookshelves in the staff office are unanchored (pictures Bldg35-10 to Bldg35-12).
10. INADEQUATE EQUIPMENT ATTACHMENT: Screen projectors in some classrooms are not adequately braced.
11. NO INDEPENDENT SUPPORT, LIGHT FIXTURES: Light fixtures in Rooms 152 and 153 are not supported independent of the suspended ceiling.
12. MECHANICAL EQUIPMENT ANCHORAGE: Mechanical equipment on the shared walkway canopy is not anchored to the structure.

Additional Observations

A significant amount of ponding water is present around the existing mechanical units on the canopy roof connecting Buildings 35 and 36 to Building 39 (pictures Bldg39-07 & Bldg39-08).

BUILDING 35 – EAST MATH WING, PICTURES

Bldg35-01


Bldg35-02

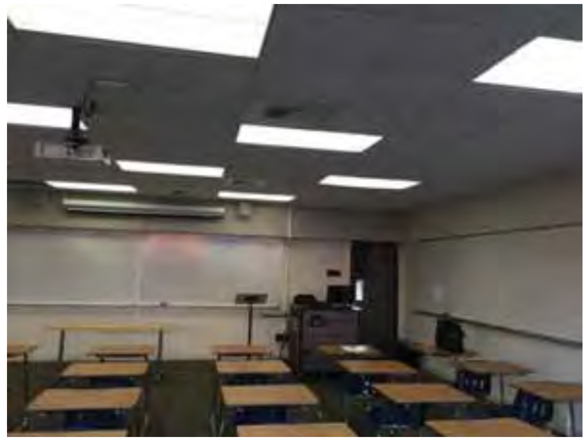

Bldg35-03


Bldg35-04


Bldg35-05


Bldg35-06

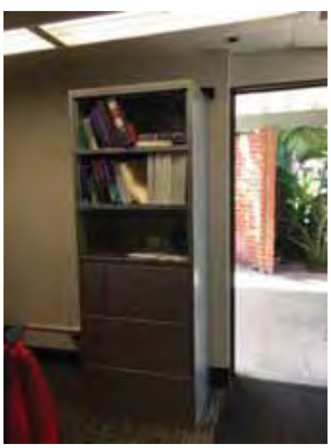
Bldg35-07



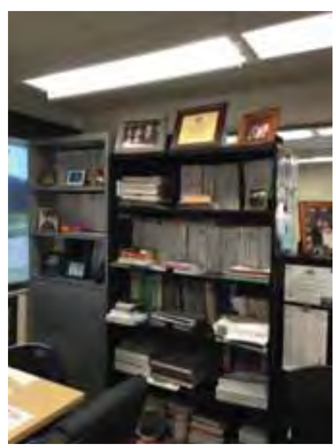
Bldg35-08

Bldg35-09

Bldg35-10



Bldg35-11



Bldg35-12

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Building System

C	NC	N/A	LOAD PATH: The structure shall contain a minimum of one complete load path for Life Safety and Immediate Occupancy for seismic force effects from any horizontal direction that serves to transfer the inertial forces from the mass to the foundation. (Tier 2: Sec. 4.3.1.1)
C	NC	N/A	ADJACENT BUILDINGS: The clear distance between the building being evaluated and any adjacent building shall be greater than 4 percent of the height of the shorter building for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.1 .2)
C	NC	N/A	MEZZANINES: Interior mezzanine levels shall be braced independently from the main structure, or shall be anchored to the lateral-force-resisting elements of the main structure. (Tier 2: Sec. 4.3.1.3)
C	NC	N/A	WEAK STORY: The strength of the lateral-force-resisting system in any story shall not be less than 80 percent of the strength in an adjacent story, above or below, for Life Safety and Immediate Occupancy. (Tier2: Sec. 4.3.2.1)
C	NC	N/A	SOFT STORY: The stiffness of the lateral-force-resisting system in any story shall not be less than 70 percent of the lateral-force resisting system stiffness in an adjacent story above or below, or less than 80 percent of the average lateral-force-resisting system stiffness of the three stories above or below for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.2)
C	NC	N/A	GEOMETRY: There shall be no changes in horizontal dimension of the lateral-force-resisting system of more than 30 percent in a story relative to adjacent stories for Life Safety and Immediate Occupancy, excluding one-story penthouses and mezzanines. (Tier 2: Sec. 4.3.2.3)
C	NC	N/A	VERTICAL DISCONTINUITIES: All vertical elements in the lateral-force-resisting system shall be continuous to the foundation. (Tier 2: Sec. 4.3.2.4)
C	NC	N/A	MASS: There shall be no change in effective mass more than 50 percent from one story to the next for Life Safety and Immediate Occupancy. Light roofs, penthouses, and mezzanines need not be considered. (Tier 2: Sec. 4.3.2.5)
C	NC	N/A	DETERIORATION OF WOOD: There shall be no signs of decay, shrinkage, splitting, fire damage, or sagging in any of the wood members, and none of the metal connection hardware shall be deteriorated, broken, or loose. (Tier 2: Sec. 4.3.3.1)

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BUILDING 35 – MATH WING Sheet 2 of 3

C	NC	N/A	DETERIORATION OF STEEL: There shall be no visible rusting, corrosion, cracking, or other deterioration in any of the steel elements or connections in the vertical- or lateral-force-resisting systems. (Tier 2: Sec. 4.3.3.3)

Lateral-Force-Resisting System

C	NC	N/A	REDUNDANCY: The number of lines of moment frames in each principal direction shall be greater than or equal to 2 for Life Safety and Immediate Occupancy. The number of bays of moment frames in each line shall be greater than or equal 10 2 for Life Safety and 3 for Immediate Occupancy. (Tier 2: Sec. 4.4.1.1.1)
C	NC	N/A	INTERFERING WALLS: All concrete and masonry infill walls placed in moment frames shall be isolated from structural elements. (Tier 2: Sec. 4.4.1.2.1)
C	NC	N/A	DRIFT CHECK: The drift ratio of the steel moment frames, calculated using the Quick Check procedure of Section 3.5.3.1, shall be less than 0.025 for Life Safety and 0.015 for Immediate Occupancy. (Tier 2: Sec. 4.4.1.3.1)
C	NC	N/A	AXIAL STRESS CHECK: The axial stress due to gravity loads in columns subjected to overturning forces shall be less than 0.10*Fy* for Life Safety and Immediate Occupancy. Alternatively, the axial stress due to overturning forces alone, calculated using the Quick Check procedure of Section 3.5.3.6, shall be less than *0.30Fy* for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.1.3.2)

Connections

C	NC	N/A	TRANSFER TO STEEL FRAMES: Diaphragms shall be connected for transfer of loads to the steel frames for Life Safety, and the connections shall be able to develop the lesser of the strength of the frames or the diaphragms for Immediate Occupancy. (Tier 2: Sec. 4.6.2.2)

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C	NC	N/A	STEEL COLUMNS: The columns in lateral-force-resisting frames shall be anchored to the building foundation for Life Safety, and the anchorage shall be able to develop the lesser of the tensile capacity of the column, the tensile capacity of the lowest level column splice (if any), or the uplift capacity of the foundation, for Immediate Occupancy. (Tier 2: Sec. 4.6.3.1)

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Lateral-Force-Resisting System

C	**NC**	**N/A**	MOMENT-RESISTING CONNECTIONS: All moment connections shall be able to develop the strength of the adjoining members or panel zones. (Tier 2: Sec. 4.4.1.3.3)
C	**NC**	**N/A**	PANEL ZONES: All panel zones shall have the shear capacity to resist the shear demand required to develop 0.8 times the sum of the flexural strengths of the girders framing in at the face of the column. (Tier 2: Sec. 4.4.1.3.4)
C	**NC**	**N/A**	COLUMN SPLICES: All column splice details located in moment-resisting frames shall include connection of both flanges and the web for Life Safety,, and the splice shall develop the strength of the column for Immediate Occupancy. (Tier 2: Sec. 4.4.1.3.5)
C	**NC**	**N/A**	STRONG COLUMN/WEAK BEAM: The percentage of strong column/weak beam joints in each story of each line of moment-resisting frames shall be greater than *50* percent for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.1.3.6)
C	**NC**	**N/A**	COMPACT MEMBERS: All frame elements shall meet section requirements set forth by *Seismic Provisions for Structural Steel Buildings* Table I-9-1 (AISC, 1997). (Tier 2: Sec. 4.4.1.3. 7)
C	**NC**	**N/A**	BEAM PENETRATIONS: All openings in frame-beam webs shall be less than 1/4 of the beam depth and shall be located in the center half of the beams. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.1.3.8)
C	**NC**	**N/A**	GIRDER FLANGE CONTINUITY PLATES: There shall be girder flange continuity plates at all moment-resisting frame joints. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.1.3.9)
C	**NC**	**N/A**	OUT-OF-PLANE BRACING: Beam-column joints shall be braced out-of-plane. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.1.3. I 0)
C	**NC**	**N/A**	BOTTOM FLANGE BRACING: The bottom flanges of beams shall be braced out-of-plane. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.1.3.11)

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Diaphragms

C	NC	N/A	CROSS TIES: There shall be continuous cross ties between diaphragm chords. (Tier 2: Sec. 4.5.1.2)
C	NC	N/A	PLAN IRREGULARITIES: There shall be tensile capacity to develop the strength of the diaphragm at re-entrant corners or other locations of plan irregularities. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.7)
C	NC	N/A	DIAPHRAGM REINFORCEMENT AT OPENINGS: There shall be reinforcing around all diaphragm openings larger than 50 percent of the building width in either major plan dimension. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.8)
C	NC	N/A	STRAIGHT SHEATHING: All straight sheathed diaphragms shall have aspect ratios less than 2-to-1 for Life Safety and 1-to-1 for Immediate Occupancy in the direction being considered. (Tier 2: Sec. 4.5.2.1)
C	NC	N/A	SPANS: All wood diaphragms with spans greater than 24 feet for Life Safety and 12 feet for Immediate Occupancy shall consist of wood structural panels or diagonal sheathing. (Tier 2: Sec. 4.5.2.2)
C	NC	N/A	UNBLOCKED DIAPHRAGMS: All diagonally sheathed or unblocked wood structural panel diaphragms shall have horizontal spans less than 40 feet for Life Safety and 30 feet for Immediate Occupancy and shall have aspect ratios less than or equal to 4-to-l for Life Safety and 3-to-l for Immediate Occupancy. (Tier 2: Sec. 4.5.2.3)
C	NC	N/A	NON-CONCRETE FILLED DIAPHRAGMS: Untopped metal deck diaphragms or metal deck diaphragms with fill other than concrete shall consist of horizontal spans of less than 40 feet and shall have span/depth ratios less than 4-to-I. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.3.1)
C	NC	N/A	OTHER DIAPHRAGMS: The diaphragm shall not consist of a system other than wood, metal deck, concrete, or horizontal bracing. (Tier 2: Sec. 4.5.7. 1)

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Connections

C	NC	N/A	UPLIFT AT PILE CAPS: Pile caps shall have top reinforcement and piles shall be anchored to the pile caps for Life Safety, and the pile cap reinforcement and pile anchorage shall be able to develop the tensile capacity of the piles for Immediate Occupancy. (Tier 2: Sec. 4.6.3.10)

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Building System

C	NC	N/A	LOAD PATH: The structure shall contain a minimum of one complete load path for Life Safety and Immediate Occupancy for seismic force effects from any horizontal direction that serves to transfer the inertial forces from the mass to the foundation. (Tier 2: Sec. 4.3.1.1)
C	NC	N/A	MEZZANINES: Interior mezzanine levels shall be braced independently from the main structure, or shall be anchored to the lateral-force-resisting elements of the main structure. (Tier 2:Sec. 4.3. 1.3)
C	NC	N/A	WEAK STORY: The strength of the lateral-force-resisting system in any story shall not be less than 80 percent of the strength in an adjacent story, above or below, for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.1)
C	NC	N/A	SOFT STORY: The stiffness of the lateral-force-resisting system in any story shall not be less than 70 percent of the lateral-force-resisting system stiffness in an adjacent story above or below, or less than 80 percent of the average lateral-force-resisting system stiffness of the three stories above or below for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.2)
C	NC	N/A	GEOMETRY: There shall be no changes in horizontal dimension of the lateral-force-resisting system of more than 30 percent in a story relative to adjacent stories for Life Safety and Immediate Occupancy, excluding one-story penthouses and mezzanines. (Tier 2: Sec. 4.3.2.3)
C	NC	N/A	VERTICAL DISCONTINUITIES: All vertical elements in the lateral-force-resisting system shall be continuous to the foundation. (Tier 2: Sec. 4.3.2.4)
C	NC	N/A	MASS: There shall be no change in effective mass more than 50 percent from one story to the next for Life Safety and Immediate Occupancy. Light roofs, penthouses, and mezzanines need not be considered. (Tier 2: Sec. 4.3.2.5)

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C	NC	N/A	DETERIORATION OF WOOD: There shall be no signs of decay, shrinkage, splitting, fire damage, or sagging in any of the wood members, and none of the metal connection hardware shall be deteriorated, broken, or loose. (Tier 2: Sec. 4.3.3. 1)
C	N	N/A	WOOD STRUCTURAL PANEL SHEAR WALL FASTENERS: There shall be no more than 15 percent of inadequate fastening such as overdriven fasteners, omitted blocking, excessive fastening spacing, or inadequate edge distance. TI1is statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.3.3.2)

Lateral-Force-Resisting System

C	NC	N/A	REDUNDANCY: The number of lines of shear walls in each principal direction shall be greater than or equal to 2 for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.1.1)
C	NC	N/A	SHEAR STRESS CHECK: The shear stress in the shear walls, calculated using the Quick Check procedure of Section 3.5.3.3, shall be less than the following values for Life Safety and Immediate Occupancy (Tier 2: Sec. 4.4.2. 7.1): Structural panel sheathing 1,000 plf Diagonal sheathing 700 plf Straight sheathing 100 plf All other conditions 100 plf
C	NC	N/A	STUCCO (EXTERIOR PLASTER) SHEAR WALLS: Multi-story buildings shall not rely on exterior stucco walls as the primary lateral-force-resisting system. (Tier 2: Sec. 4.4.2.7.2)
C	NC	N/A	GYPSUM WALLBOARD OR PLASTER SHEAR WALLS: Interior plaster or gypsum wallboard shall not be used as shear walls on buildings over one story in height with the exception of the uppermost level of a multi-story building. (Tier 2: Sec. 4.4.2.7.3)

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C	NC	N/A	NARROW WOOD SHEAR WALLS: Narrow wood shear walls with an aspect ratio greater than 2-to-1 for Life Safety and 1.5-to-1 for Immediate Occupancy shall not be used to resist lateral forces developed in the building in levels of moderate and high seismicity. Narrow wood shear walls with an aspect ratio greater than 2-to-I for Immediate Occupancy shall not be used to resist lateral forces developed in the building in levels of low seismicity. (Tier 2: Sec. 4.4.2.7.4)
C	NC	N/A	WALLS CONNECTED THROUGH FLOORS: Shear walls shall have interconnection between stories to transfer overturning and shear forces through the floor. (Tier 2: Sec. 4.4.2.7.5)
C	NC	N/A	HILLSIDE SITE: For structures that are taller on at least one side by more than one-half story due to a sloping site, all shear walls on the downhill slope shall have an aspect ratio less than 1-to-1 for Life Safety and 1-to-2 for Immediate Occupancy. (Tier 2: Sec. 4.4.2.7.6)
C	NC	N/A	CRIPPLE WALLS: Cripple walls below first-floor-level shear walls shall be braced to the foundation with wood structural panels. (Tier 2: Sec. 4.4.2. 7. 7)
C	NC	N/A	OPENINGS: Walls with openings greater than 80 percent of the length shall be braced with wood structural panel shear walls with aspect ratios of not more than 1.5-to-1 or shall be supported by adjacent construction through positive tics capable of transferring the lateral forces. (Tier 2: Sec. 4.4.2.7.8)

Connections

C	NC	N/A	WOOD POSTS: There shall be a positive connection of wood posts to the foundation. (Tier 2: Sec. 4.6.3.3)
C	NC	N/A	WOOD SILLS: All wood sills shall be bolted to the foundation. (Tier 2: Sec. 4.6.3.4)

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C	NC	N/A	GIRDER/COLUMN CONNECTION: There shall be a positive connection utilizing plates, connection hardware, or straps between the girder and the column support. (Tier 2: Sec. 4.6.4.1)

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Lateral-Force-Resisting System

C	NC	N/A	HOLD-DOWN ANCHORS: All shear walls shall have hold-down anchors constructed per acceptable construction practices, attached to the end studs. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.7.9)

Diaphragms

C	NC	N/A	DIAPHRAGM CONTINUITY: The diaphragms shall not be composed of split-level floors and shall not have expansion joints. (Tier 2: Sec. 4.5.1.1)
C	NC	N/A	ROOF CHORD CONTINUITY: All chord elements shall be continuous, regardless of changes in roof elevation. (Tier 2: Sec. 4.5.1.3)
C	NC	N/A	PLAN IRREGULARITIES: There shall be tensile capacity to develop the strength of the diaphragm at re-entrant comers or other locations of plan irregularities. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.7)
C	NC	N/A	DIAPHRAGM REINFORCEMENT AT OPENINGS: There shall be reinforcing around all diaphragm openings larger than 50 percent of the building width in either major plan dimension. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.8)
C	NC	N/A	STRAIGHT SHEATHING: All straight sheathed diaphragms shall have aspect ratios less than 2-to-1 for Life Safety and 1-to-1 for Immediate Occupancy in the direction being considered. (Tier 2: Sec. 4.5.2.1)
C	NC	N/A	SPANS: All wood diaphragms with spans greater than 24 feet for Life Safety and 12 feet for Immediate Occupancy shall consist of wood structural panels or diagonal sheathing. Wood commercial and industrial buildings may have rod-braced systems. (Tier 2: Sec. 4.5.2.2)

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BUILDING 35 – MATH WING Sheet 2 of 2

C	**NC**	**N/A**	UNBLOCKED DIAPHRAGMS: All diagonally sheathed or unblocked wood structural panel diaphragms shall have horizontal spans less than 40 feet for Life Safety and 30 feet for Immediate Occupancy and shall have aspect ratios less than or equal to 4-to-1 for Life Safety and 3-to-1 for Immediate Occupancy. (Tier 2: Sec. 4.5.2.3)
C	**NC**	**N/A**	OTHER DIAPHRAGMS: The diaphragm shall not consist of a system other than wood, metal deck, concrete, or horizontal bracing. (Tier 2: Sec. 4.5.7.1)

Connections

C	**NC**	**N/A**	WOOD SILL BOLTS: Sill bolts shall be spaced at 6 feet or less for Life Safety and 4 feet or less for Immediate Occupancy, with proper edge and end di stance provided for wood and concrete. (Tier 2: Sec. 4.6.3.9)

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BUILDING 35 – MATH WING

Partitions

C	NC	N/A	UNREINFORCED MASONRY: Unreinforced masonry or hollow clay tile partitions shall be braced at a spacing equal to or less than 10 feet in levels of low or moderate seismicity and 6 feet in levels of high seismicity. (Tier 2: Sec. 4.8.1.1)

Ceiling Systems

C	NC	N/A	SUPPORT: The integrated suspended ceiling system shall not be used to laterally support the tops of gypsum board, masonry, or hollow clay tile partitions. Gypsum board partitions need not be evaluated where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier2: Sec. 4.8.2.1)

Light Fixtures

C	NC	N/A	EMERGENCY LIGHTING: Emergency lighting shall be anchored or braced to prevent falling during an earthquake. (Tier 2: Sec. 4.8.3.1)

Cladding and Glazing

C	NC	N/A	CLADDING ANCHORS: Cladding components weighing more than 10 psf shall be mechanically anchored to the exterior wall framing at a spacing equal to or less than 4 feet. A spacing of up to 6 feet is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.1)
C	NC	N/A	DETERIORATION: There shall be no evidence of deterioration, damage or corrosion in any of the connection elements. (Tier 2: Sec. 4.8.4.2)
C	NC	N/A	CLADDING ISOLATION: For moment frame buildings of steel or concrete, panel connections shall be detailed to accommodate a story drift ratio of 0.02. Panel connection detailing for a story drift ratio of 0.01 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.3)

Basic Nonstructural Component Checklist
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C	NC	N/A	MULTI-STORY PANELS: For multi-story panels attached at each floor level, panel connections shall be detailed to accommodate a story drift ratio of 0.02. Panel connection detailing for a story drift ratio of 0.01 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.4)
C	NC	N/A	BEARING CONNECTIONS: Where bearing connections are required, there shall be a minimum of two bearing connections for each wall panel. (Tier 2: Sec. 4.8.4.5)
C	NC	N/A	INSERTS: Where inserts are used in concrete connections, the inserts shall be anchored to reinforcing steel or other positive anchorage. (Tier 2: Sec. 4.8.4.6)
C	NC	N/A	PANEL CONNECTIONS: Exterior cladding panels shall be anchored out-of-plane with a minimum of 4 connections for each wall panel. Two connections per wall panel are permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.7)

Masonry Veneer

C	NC	N/A	SHELF ANGLES: Masonry veneer shall be supported by shelf angles or other elements at each floor 30 feet or more above ground for Life Safety and at each floor above the first floor for Immediate Occupancy. (Tier 2: Sec. 4.8.5.1)
C	NC	N/A	TIES: Masonry veneer shall be connected to the back-up with corrosion-resistant ties. The ties shall have a spacing equal to or less than 24 inches with a minimum of one tie for every 2-2/3 square feet. A spacing of up to 36 inches is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.5.2)
C	NC	N/A	WEAKENED PLANES: Masonry veneer shall be anchored to the back-up adjacent to weakened planes, such as at the locations of flashing. (Tier 2: Sec. 4.8.5.3)
C	NC	N/A	DETERIORATION: There shall be no evidence of deterioration, damage, or corrosion in any of the connection elements. (Tier 2: Sec. 4.8.5.4)

Basic Nonstructural Component Checklist Sheet 3 of 4
BUILDING 35 – MATH WING

Parapets, Cornices, Ornamentation, and Appendages

C	NC	N/A	URM PARAPETS: There shall be no laterally unsupported unreinforced masonry parapets or cornices with height-to-thickness ratios greater than 1.5. A height-to-thickness ratio of up to 2.5 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.8.1)
C	NC	N/A	CANOPIES: Canopies located at building exits shall be anchored to the structural framing at a spacing of 6 feet or less. An anchorage spacing of up to 10 feet is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.8.2)

Masonry Chimneys

C	NC	N/A	URM CHIMNEYS: No unreinforced masonry chimney shall extend above the roof surface more than twice the least dimension of the chimney. A height above the roof surface of up to three times the least dimension of the chimney is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.9.1)

Stairs

C	NC	N/A	URM WALLS: Walls around stair enclosures shall not consist of unbraced hollow clay tile or unreinforced masonry with a height-to-thickness ratio greater than 12-to-1. A height-to-thickness ratio of up to 15-to-1 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.10.1)
C	NC	N/A	STAIR DETAILS: In moment frame structures, the connection between the stairs and the structure shall not rely on shallow anchors in concrete. Alternatively, the stair details shall be capable of accommodating the drift calculated using the Quick Check procedure of Section 3.5.3.1 without including tension in the anchors. (Tier 2: Sec. 4.8.10.2)

Basic Nonstructural Component Checklist Sheet 4 of 4
BUILDING 35 – MATH WING

Building Contents and Furnishing

C	NC	N/A	TALL NARROW CONTENTS: Contents over 4 feet in height with a height-to-depth or height-to-width ratio greater than 3-to-1 shall be anchored to the floor slab or adjacent structural walls. A height-to-depth or height-to-width ratio of up to 4-to-1 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.11.1)

Mechanical and Electrical Equipment

C	NC	N/A	EMERGENCY POWER: Equipment used as part of an emergency power system shall be mounted to maintain continued operation after an earthquake. (Tier 2: Sec. 4.8.12.1)
C	NC	N/A	HAZARDOUS MATERIAL EQUIPMENT: HVAC or other equipment containing hazardous material shall not have damaged supply lines or unbraced isolation supports. (Tier 2:Sec. 4.8.12.2)
C	NC	N/A	DETERIORATION: There shall be no evidence of deterioration, damage, or corrosion in any of the anchorage or supports of mechanical or electrical equipment. (Tier 2: Sec. 4.8.12.3)
C	NC	N/A	ATTACHED EQUIPMENT: Equipment weighing over 20 lb that is attached to ceilings, walls, or other supports 4 feet above the floor level shall be braced. (Tier 2: Sec. 4.8.12.4)

Piping

C	NC	N/A	FIRE SUPPRESSION PIPING: Fire suppression piping shall be anchored and braced in accordance with NFPA-13 (NFPA, 1996). (Tier 2: Sec. 4.8.13.1)
C	NC	N/A	FLEXIBLE COUPLINGS: Fluid, gas, and fire suppression piping shall have flexible couplings. (Tier 2: Sec. 4.8.13.2)

Hazardous Materials Storage and Distribution

C	NC	N/A	TOXIC SUBSTANCES: Toxic and hazardous substances stored in breakable containers shall be restrained from falling by latched doors, shelf lips, wires, or other methods. (Tier 2: Sec. 4.8.15.1)

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BUILDING 35 – MATH WING

Ceiling Systems

C	NC	N/A	LAY-IN TILES: Lay-in tiles used in ceiling panels located at exits and corridors shall be secured with clips. (Tier 2: Sec. 4.8.2.2)
C	NC	N/A	INTEGRATED CEILINGS: Integrated suspended ceilings at exits and corridors or weighing more than 2 pounds per square foot shall be laterally restrained with a minimum of four diagonal wires or rigid members attached to the structure above at a spacing equal to or less than 12 feet. (Tier 2: Sec. 4.8.2.3)
C	NC	N/A	SUSPENDED LATH AND PLASTER: Ceilings consisting of suspended lath and plaster or gypsum board shall be attached to resist seismic forces for every 12 square feet of area. (Tier 2: Sec. 4.8.2.4)

Light Fixtures

C	NC	N/A	INDEPENDENT SUPPORT: Light fixtures in suspended grid ceilings shall be supported independently of the ceiling suspension system by a minimum of two wires at diagonally opposite corners of the fixtures. (Tier 2: Sec. 4.8.3.2)

Cladding and Glazing

C	NC	N/A	GLAZING: Glazing in curtain walls and individual panes over 16 square feet in area, located up to a height of 10 feet above an exterior walking surface, shall have safety glazing. Such glazing located over 10 feet above an exterior walking surface shall be laminated annealed or laminated heat-strengthened safety glass or other glazing system that will remain in the frame when glass is cracked. (Tier 2: Sec. 4.8.4.8)

Parapets, Cornices, Ornamentation, and Appendages

C	NC	N/A	CONCRETE PARAPETS: Concrete parapets with height-to-thickness ratios greater than 2.5 shall have vertical reinforcement. (Tier 2: Sec. 4.8.8.3)

Intermediate Nonstructural Component Checklist Sheet 2 of 2
BUILDING 35 – MATH WING

C	NC	N/A	APPENDAGES: Cornices, parapets, signs, and other appendages that extend above the highest point of anchorage to the structure or cantilever from exterior wall faces and other exterior wall ornamentation shall be reinforced and anchored to the structural system at a spacing equal to or less than 10 feet for Life Safety and 6 feet for Immediate Occupancy. This requirement need not apply to parapets or cornices compliant with Section 4.8.8.1 or 4.8.8.3. (Tier 2: Sec. 4.8.8.4)

Masonry Chimneys

C	NC	N/A	ANCHORAGE: Masonry chimneys shall be anchored at each floor level and the roof. (Tier 2: Sec.4.8.9.2)

Mechanical and Electrical Equipment

C	NC	N/A	VIBRATION ISOLATORS: Equipment mounted on vibration isolators shall be equipped with restraints or snubbers. (Tier 2: Sec. 4.8.12.5)

Ducts

C	NC	N/A	STAIR AND SMOKE DUCTS: Stair pressurization and smoke control ducts shall be braced and shall have flexible connections at seismic joints. (Tier 2: Sec. 4.8.14.1)

6.6.2 BUILDING 36 – WEST MATH WING

Building Description

YEAR OF CONSTRUCTION: 1956
YEAR OF ALTERATIONS: 1959 – Building Addition
1997 – Ceiling and Lighting Seismic Retrofit
BUILDING TYPE: S1A, W2

GENERAL BUILDING DESCRIPTION: The West Math Wing building is mostly wood frame construction. It is approximately 14 feet high, 33 feet wide and 250 feet long. The original building was 160 feet long and an addition to the building was made in 1959. The addition's construction type is similar to the original structure. The building is joined with the East Math Wing by a walkway canopy; the canopy further connects to Buildings 37-39. The building is currently being used as classrooms.

It appears in good condition. There is no visible wood deterioration, but there is some minor, visible cracking in the concrete finish along the north wall's window sill (picture Bldg36-05).

For exterior elevations and typical construction, see pictures Bldg36-01 to Bldg36-04.

VERTICAL STRUCTURAL SYSTEM: The foundation is composed of caissons connected with grade beams around the perimeter and along interior walls. The floor construction is concrete slab on grade. The wood roof rafters are supported by a central steel beam and exterior wood walls or headers. The entire length of the north wall contains windows spanning half the height of wall. The windows are separated with small steel columns embedded in a reinforced masonry wall that runs from the ground to the window sill. The remaining exterior and interior walls are wood stud walls.

LATERAL STRUCTURAL SYSTEM: The building typically contains plywood shear walls. The north exterior wall contains steel moment frames. The roof rafters rest on a central steel beam which spans the length of the building. The roof diaphragm is unblocked plywood sheathing. No cross ties are present in the roof diaphragm.

NON-STRUCTURAL SYSTEMS: It appears mechanical units were at one time located on the roof of the structure and have been moved to the walkway canopies shared between Building 35, 36, and 39. The walkways may not be adequate for the weight of mechanical units. The ceiling and lighting systems appear to be current and in good condition. Screen projects in some classrooms are not adequately braced.

For non-structural systems and items present within the building, see pictures Bldg36-06 to Bldg36-09.

List of Deficiencies

The following items have been found noncompliant in accordance with the requirements of ASCE31-03:

Structural

1. PROXIMITY OF ADJACENT BUILDINGS: The clear distance between the building and walkway canopies does not conform to the minimum limit; walkway canopies are connected between Buildings 35-39.
2. UNACCEPTABLE DRIFT AT MOMENT FRAMES: The drift ratio is greater than the limit of 0.025 for Life Safety.
3. UNACCEPTABLE STEEL MOMENT FRAMES: Moment-resisting connections, panel zone shear capacities, and strong column / weak beam criteria are unacceptable and the governing criteria is not met.
4. NO CROSS TIES: There are no cross ties between diaphragm chords.
5. UNBLOCKED DIAPHRAGM SPAN: The maximum unblocked plywood diaphragm horizontal span is 41 feet, greater than the 40 feet limit for Life Safety.

Non-structural

6. INADEQUATE EQUIPMENT ATTACHMENT: Screen projectors in some classrooms are not adequately braced.
7. MECHANICAL EQUIPMENT ANCHORAGE: Mechanical equipment on the shared walkway canopy is not anchored to the structure.

Additional Observations

A significant amount of ponding water is typically present on the roof around the existing mechanical units located on the canopy connecting Buildings 35 and 36 to Building 39 (pictures Bldg39-07 & Bldg39-08).

BUILDING 36 – WEST MATH WING, PICTURES

Bldg36-01

Bldg36-02

Bldg36-03

Bldg36-04

Bldg36-05

Bldg36-06


Bldg36-07


Bldg36-08


Bldg36-09

Basic Structural Checklist for Building Type S1A: Steel Moment Frames with Flexible Diaphragms

BUILDING 36 – MATH WING

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Building System

C	NC	N/A	LOAD PATH: The structure shall contain a minimum of one complete load path for Life Safety and Immediate Occupancy for seismic force effects from any horizontal direction that serves to transfer the inertial forces from the mass to the foundation. (Tier 2: Sec. 4.3.1.1)
C	NC	N/A	ADJACENT BUILDINGS: The clear distance between the building being evaluated and any adjacent building shall be greater than 4 percent of the height of the shorter building for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.1 .2)
C	NC	N/A	MEZZANINES: Interior mezzanine levels shall be braced independently from the main structure, or shall be anchored to the lateral-force-resisting elements of the main structure. (Tier 2: Sec. 4.3.1.3)
C	NC	N/A	WEAK STORY: The strength of the lateral-force-resisting system in any story shall not be less than 80 percent of the strength in an adjacent story, above or below, for Life Safety and Immediate Occupancy. (Tier2: Sec. 4.3.2.1)
C	NC	N/A	SOFT STORY: The stiffness of the lateral-force-resisting system in any story shall not be less than 70 percent of the lateral-force resisting system stiffness in an adjacent story above or below, or less than 80 percent of the average lateral-force-resisting system stiffness of the three stories above or below for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.2)
C	NC	N/A	GEOMETRY: There shall be no changes in horizontal dimension of the lateral-force-resisting system of more than 30 percent in a story relative to adjacent stories for Life Safety and Immediate Occupancy, excluding one-story penthouses and mezzanines. (Tier 2: Sec. 4.3.2.3)
C	NC	N/A	VERTICAL DISCONTINUITIES: All vertical elements in the lateral-force-resisting system shall be continuous to the foundation. (Tier 2: Sec. 4.3.2.4)
C	NC	N/A	MASS: There shall be no change in effective mass more than 50 percent from one story to the next for Life Safety and Immediate Occupancy. Light roofs, penthouses, and mezzanines need not be considered. (Tier 2: Sec. 4.3.2.5)
C	NC	N/A	DETERIORATION OF WOOD: There shall be no signs of decay, shrinkage, splitting, fire damage, or sagging in any of the wood members, and none of the metal connection hardware shall be deteriorated, broken, or loose. (Tier 2: Sec. 4.3.3.1)

Basic Structural Checklist for Building Type S1A: Steel Moment Frames with Flexible Diaphragms

BUILDING 36 – MATH WING Sheet 2 of 3

C	NC	N/A	DETERIORATION OF STEEL: There shall be no visible rusting, corrosion, cracking, or other deterioration in any of the steel elements or connections in the vertical- or lateral-force-resisting systems. (Tier 2: Sec. 4.3.3.3)

Lateral-Force-Resisting System

C	NC	N/A	REDUNDANCY: The number of lines of moment frames in each principal direction shall be greater than or equal to 2 for Life Safety and Immediate Occupancy. The number of bays of moment frames in each line shall be greater than or equal 10 2 for Life Safety and 3 for Immediate Occupancy. (Tier 2: Sec. 4.4.1.1.1)
C	NC	N/A	INTERFERING WALLS: All concrete and masonry infill walls placed in moment frames shall be isolated from structural elements. (Tier 2: Sec. 4.4.1.2.1)
C	NC	N/A	DRIFT CHECK: The drift ratio of the steel moment frames, calculated using the Quick Check procedure of Section 3.5.3.1, shall be less than 0.025 for Life Safety and 0.015 for Immediate Occupancy. (Tier 2: Sec. 4.4.1.3.1)
C	NC	N/A	AXIAL STRESS CHECK: The axial stress due to gravity loads in columns subjected to overturning forces shall be less than 0.10*Fy* for Life Safety and Immediate Occupancy. Alternatively, the axial stress due to overturning forces alone, calculated using the Quick Check procedure of Section 3.5.3.6, shall be less than *0.30Fy* for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.1.3.2)

Connections

C	NC	N/A	TRANSFER TO STEEL FRAMES: Diaphragms shall be connected for transfer of loads to the steel frames for Life Safety, and the connections shall be able to develop the lesser of the strength of the frames or the diaphragms for Immediate Occupancy. (Tier 2: Sec. 4.6.2.2)

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C	NC	N/A	STEEL COLUMNS: The columns in lateral-force-resisting frames shall be anchored to the building foundation for Life Safety, and the anchorage shall be able to develop the lesser of the tensile capacity of the column, the tensile capacity of the lowest level column splice (if any), or the uplift capacity of the foundation, for Immediate Occupancy. (Tier 2: Sec. 4.6.3.1)

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BUILDING 36 – MATH WING Sheet 1 of 3

Lateral-Force-Resisting System

C	NC	N/A	MOMENT-RESISTING CONNECTIONS: All moment connections shall be able to develop the strength of the adjoining members or panel zones. (Tier 2: Sec. 4.4.1.3.3)
C	NC	N/A	PANEL ZONES: All panel zones shall have the shear capacity to resist the shear demand required to develop 0.8 times the sum of the flexural strengths of the girders framing in at the face of the column. (Tier 2: Sec. 4.4.1.3.4)
C	NC	N/A	COLUMN SPLICES: All column splice details located in moment-resisting frames shall include connection of both flanges and the web for Life Safety,, and the splice shall develop the strength of the column for Immediate Occupancy. (Tier 2: Sec. 4.4.1.3.5)
C	NC	N/A	STRONG COLUMN/WEAK BEAM: The percentage of strong column/weak beam joints in each story of each line of moment-resisting frames shall be greater than *50* percent for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.1.3.6)
C	NC	N/A	COMPACT MEMBERS: All frame elements shall meet section requirements set forth by *Seismic Provisions for Structural Steel Buildings* Table I-9-1 (AISC, 1997). (Tier 2: Sec. 4.4.1.3. 7)
C	NC	N/A	BEAM PENETRATIONS: All openings in frame-beam webs shall be less than 1/4 of the beam depth and shall be located in the center half of the beams. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.1.3.8)
C	NC	N/A	GIRDER FLANGE CONTINUITY PLATES: There shall be girder flange continuity plates at all moment-resisting frame joints. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.1.3.9)
C	NC	N/A	OUT-OF-PLANE BRACING: Beam-column joints shall be braced out-of-plane. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.1.3. I 0)
C	NC	N/A	BOTTOM FLANGE BRACING: The bottom flanges of beams shall be braced out-of-plane. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.1.3.11)

Supplemental Structural Checklist for Building Type S1A: Steel Moment Frames with Flexible Diaphragms
BUILDING 36 – MATH WING Sheet 2 of 3

Diaphragms

C	NC	N/A	CROSS TIES: There shall be continuous cross ties between diaphragm chords. (Tier 2: Sec. 4.5.1.2)
C	NC	N/A	PLAN IRREGULARITIES: There shall be tensile capacity to develop the strength of the diaphragm at re-entrant corners or other locations of plan irregularities. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.7)
C	NC	N/A	DIAPHRAGM REINFORCEMENT AT OPENINGS: There shall be reinforcing around all diaphragm openings larger than 50 percent of the building width in either major plan dimension. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.8)
C	NC	N/A	STRAIGHT SHEATHING: All straight sheathed diaphragms shall have aspect ratios less than 2-to-1 for Life Safety and 1-to-1 for Immediate Occupancy in the direction being considered. (Tier 2: Sec. 4.5.2.1)
C	NC	N/A	SPANS: All wood diaphragms with spans greater than 24 feet for Life Safety and 12 feet for Immediate Occupancy shall consist of wood structural panels or diagonal sheathing. (Tier 2: Sec. 4.5.2.2)
C	NC	N/A	UNBLOCKED DIAPHRAGMS: All diagonally sheathed or unblocked wood structural panel diaphragms shall have horizontal spans less than 40 feet for Life Safety and 30 feet for Immediate Occupancy and shall have aspect ratios less than or equal to 4-to-l for Life Safety and 3-to-l for Immediate Occupancy. (Tier 2: Sec. 4.5.2.3)
C	NC	N/A	NON-CONCRETE FILLED DIAPHRAGMS: Untopped metal deck diaphragms or metal deck diaphragms with fill other than concrete shall consist of horizontal spans of less than 40 feet and shall have span/depth ratios less than 4-to-I. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.3.1)
C	NC	N/A	OTHER DIAPHRAGMS: The diaphragm shall not consist of a system other than wood, metal deck, concrete, or horizontal bracing. (Tier 2: Sec. 4.5.7. 1)

Supplemental Structural Checklist for Building Type S1A: Steel Moment Frames with Flexible Diaphragms
BUILDING 36 – MATH WING Sheet 3 of 3

Connections

C	NC	N/A	UPLIFT AT PILE CAPS: Pile caps shall have top reinforcement and piles shall be anchored to the pile caps for Life Safety, and the pile cap reinforcement and pile anchorage shall be able to develop the tensile capacity of the piles for Immediate Occupancy. (Tier 2: Sec. 4.6.3.10)

Basic Structural Checklist for Building Type W2: Wood Frames, Commercial and Industrial

BUILDING 36 – MATH WING Sheet 1 of 4

Building System

C	NC	N/A	LOAD PATH: The structure shall contain a minimum of one complete load path for Life Safety and Immediate Occupancy for seismic force effects from any horizontal direction that serves to transfer the inertial forces from the mass to the foundation. (Tier 2: Sec. 4.3.1.1)
C	NC	N/A	MEZZANINES: Interior mezzanine levels shall be braced independently from the main structure, or shall be anchored to the lateral-force-resisting elements of the main structure. (Tier 2:Sec. 4.3. 1.3)
C	NC	N/A	WEAK STORY: The strength of the lateral-force-resisting system in any story shall not be less than 80 percent of the strength in an adjacent story, above or below, for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.1)
C	NC	N/A	SOFT STORY: The stiffness of the lateral-force-resisting system in any story shall not be less than 70 percent of the lateral-force-resisting system stiffness in an adjacent story above or below, or less than 80 percent of the average lateral-force-resisting system stiffness of the three stories above or below for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.2)
C	NC	N/A	GEOMETRY: There shall be no changes in horizontal dimension of the lateral-force-resisting system of more than 30 percent in a story relative to adjacent stories for Life Safety and Immediate Occupancy, excluding one-story penthouses and mezzanines. (Tier 2: Sec. 4.3.2.3)
C	NC	N/A	VERTICAL DISCONTINUITIES: All vertical elements in the lateral-force-resisting system shall be continuous to the foundation. (Tier 2: Sec. 4.3.2.4)
C	NC	N/A	MASS: There shall be no change in effective mass more than 50 percent from one story to the next for Life Safety and Immediate Occupancy. Light roofs, penthouses, and mezzanines need not be considered. (Tier 2: Sec. 4.3.2.5)

Basic Structural Checklist for Building Type W2: Wood Frames, Commercial and Industrial
BUILDING 36 – MATH WING Sheet 2 of 4

C	NC	N/A	DETERIORATION OF WOOD: There shall be no signs of decay, shrinkage, splitting, fire damage, or sagging in any of the wood members, and none of the metal connection hardware shall be deteriorated, broken, or loose. (Tier 2: Sec. 4.3.3. 1)
C	N	N/A	WOOD STRUCTURAL PANEL SHEAR WALL FASTENERS: There shall be no more than 15 percent of inadequate fastening such as overdriven fasteners, omitted blocking, excessive fastening spacing, or inadequate edge distance. TI1is statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.3.3.2)

Lateral-Force-Resisting System

C	NC	N/A	REDUNDANCY: The number of lines of shear walls in each principal direction shall be greater than or equal to 2 for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.1.1)
C	NC	N/A	SHEAR STRESS CHECK: The shear stress in the shear walls, calculated using the Quick Check procedure of Section 3.5.3.3, shall be less than the following values for Life Safety and Immediate Occupancy (Tier 2: Sec. 4.4.2. 7.1): Structural panel sheathing 1,000 plf Diagonal sheathing 700 plf Straight sheathing 100 plf All other conditions 100 plf
C	NC	N/A	STUCCO (EXTERIOR PLASTER) SHEAR WALLS: Multi-story buildings shall not rely on exterior stucco walls as the primary lateral-force-resisting system. (Tier 2: Sec. 4.4.2.7.2)
C	NC	N/A	GYPSUM WALLBOARD OR PLASTER SHEAR WALLS: Interior plaster or gypsum wallboard shall not be used as shear walls on buildings over one story in height with the exception of the uppermost level of a multi-story building. (Tier 2: Sec. 4.4.2.7.3)

Basic Structural Checklist for Building Type W2: Wood Frames, Commercial and Industrial
BUILDING 36 – MATH WING Sheet 3 of 4

C	NC	N/A	NARROW WOOD SHEAR WALLS: Narrow wood shear walls with an aspect ratio greater than 2-to-1 for Life Safety and 1.5-to-1 for Immediate Occupancy shall not be used to resist lateral forces developed in the building in levels of moderate and high seismicity. Narrow wood shear walls with an aspect ratio greater than 2-to-I for Immediate Occupancy shall not be used to resist lateral forces developed in the building in levels of low seismicity. (Tier 2: Sec. 4.4.2.7.4)
C	NC	N/A	WALLS CONNECTED THROUGH FLOORS: Shear walls shall have interconnection between stories to transfer overturning and shear forces through the floor. (Tier 2: Sec. 4.4.2.7.5)
C	NC	N/A	HILLSIDE SITE: For structures that are taller on at least one side by more than one-half story due to a sloping site, all shear walls on the downhill slope shall have an aspect ratio less than 1-to-1 for Life Safety and 1-to-2 for Immediate Occupancy. (Tier 2: Sec. 4.4.2.7.6)
C	NC	N/A	CRIPPLE WALLS: Cripple walls below first-floor-level shear walls shall be braced to the foundation with wood structural panels. (Tier 2: Sec. 4.4.2. 7. 7)
C	NC	N/A	OPENINGS: Walls with openings greater than 80 percent of the length shall be braced with wood structural panel shear walls with aspect ratios of not more than 1.5-to-1 or shall be supported by adjacent construction through positive tics capable of transferring the lateral forces. (Tier 2: Sec. 4.4.2.7.8)

Connections

C	NC	N/A	WOOD POSTS: There shall be a positive connection of wood posts to the foundation. (Tier 2: Sec. 4.6.3.3)
C	NC	N/A	WOOD SILLS: All wood sills shall be bolted to the foundation. (Tier 2: Sec. 4.6.3.4)

Basic Structural Checklist for Building Type W2: Wood Frames, Commercial and Industrial
BUILDING 36 – MATH WING Sheet 4 of 4

C	NC	N/A	GIRDER/COLUMN CONNECTION: There shall be a positive connection utilizing plates, connection hardware, or straps between the girder and the column support. (Tier 2: Sec. 4.6.4.1)

Supplemental Structural Checklist for Building Type W2: Wood Frames, Commercial and Industrial
BUILDING 36 – MATH WING Sheet 1 of 2

Lateral-Force-Resisting System

C	NC	N/A	HOLD-DOWN ANCHORS: All shear walls shall have hold-down anchors constructed per acceptable construction practices, attached to the end studs. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.7.9)

Diaphragms

C	NC	N/A	DIAPHRAGM CONTINUITY: The diaphragms shall not be composed of split-level floors and shall not have expansion joints. (Tier 2: Sec. 4.5.1.1)
C	NC	N/A	ROOF CHORD CONTINUITY: All chord elements shall be continuous, regardless of changes in roof elevation. (Tier 2: Sec. 4.5.1.3)
C	NC	N/A	PLAN IRREGULARITIES: There shall be tensile capacity to develop the strength of the diaphragm at re-entrant comers or other locations of plan irregularities. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.7)
C	NC	N/A	DIAPHRAGM REINFORCEMENT AT OPENINGS: There shall be reinforcing around all diaphragm openings larger than 50 percent of the building width in either major plan dimension. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.8)
C	NC	N/A	STRAIGHT SHEATHING: All straight sheathed diaphragms shall have aspect ratios less than 2-to-1 for Life Safety and 1-to-1 for Immediate Occupancy in the direction being considered. (Tier 2: Sec. 4.5.2.1)
C	NC	N/A	SPANS: All wood diaphragms with spans greater than 24 feet for Life Safety and 12 feet for Immediate Occupancy shall consist of wood structural panels or diagonal sheathing. Wood commercial and industrial buildings may have rod-braced systems. (Tier 2: Sec. 4.5.2.2)

Supplemental Structural Checklist for Building Type W2: Wood Frames, Commercial and Industrial
BUILDING 36 – MATH WING Sheet 2 of 2

C	NC	N/A	UNBLOCKED DIAPHRAGMS: All diagonally sheathed or unblocked wood structural panel diaphragms shall have horizontal spans less than 40 feet for Life Safety and 30 feet for Immediate Occupancy and shall have aspect ratios less than or equal to 4-to-1 for Life Safety and 3-to-1 for Immediate Occupancy. (Tier 2: Sec. 4.5.2.3)
C	NC	N/A	OTHER DIAPHRAGMS: The diaphragm shall not consist of a system other than wood, metal deck, concrete, or horizontal bracing. (Tier 2: Sec. 4.5.7.1)

Connections

C	NC	N/A	WOOD SILL BOLTS: Sill bolts shall be spaced at 6 feet or less for Life Safety and 4 feet or less for Immediate Occupancy, with proper edge and end di stance provided for wood and concrete. (Tier 2: Sec. 4.6.3.9)

Basic Nonstructural Component Checklist Sheet 1 of 4
BUILDING 36 – MATH WING

Partitions

C	NC	N/A	UNREINFORCED MASONRY: Unreinforced masonry or hollow clay tile partitions shall be braced at a spacing equal to or less than 10 feet in levels of low or moderate seismicity and 6 feet in levels of high seismicity. (Tier 2: Sec. 4.8.1.1)

Ceiling Systems

C	NC	N/A	SUPPORT: The integrated suspended ceiling system shall not be used to laterally support the tops of gypsum board, masonry, or hollow clay tile partitions. Gypsum board partitions need not be evaluated where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier2: Sec. 4.8.2.1)

Light Fixtures

C	NC	N/A	EMERGENCY LIGHTING: Emergency lighting shall be anchored or braced to prevent falling during an earthquake. (Tier 2: Sec. 4.8.3.1)

Cladding and Glazing

C	NC	N/A	CLADDING ANCHORS: Cladding components weighing more than 10 psf shall be mechanically anchored to the exterior wall framing at a spacing equal to or less than 4 feet. A spacing of up to 6 feet is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.1)
C	NC	N/A	DETERIORATION: There shall be no evidence of deterioration, damage or corrosion in any of the connection elements. (Tier 2: Sec. 4.8.4.2)
C	NC	N/A	CLADDING ISOLATION: For moment frame buildings of steel or concrete, panel connections shall be detailed to accommodate a story drift ratio of 0.02. Panel connection detailing for a story drift ratio of 0.01 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.3)

Basic Nonstructural Component Checklist Sheet 2 of 4
BUILDING 36 – MATH WING

C	NC	N/A	MULTI-STORY PANELS: For multi-story panels attached at each floor level, panel connections shall be detailed to accommodate a story drift ratio of 0.02. Panel connection detailing for a story drift ratio of 0.01 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.4)
C	NC	N/A	BEARING CONNECTIONS: Where bearing connections are required, there shall be a minimum of two bearing connections for each wall panel. (Tier 2: Sec. 4.8.4.5)
C	NC	N/A	INSERTS: Where inserts are used in concrete connections, the inserts shall be anchored to reinforcing steel or other positive anchorage. (Tier 2: Sec. 4.8.4.6)
C	NC	N/A	PANEL CONNECTIONS: Exterior cladding panels shall be anchored out-of-plane with a minimum of 4 connections for each wall panel. Two connections per wall panel are permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.7)

Masonry Veneer

C	NC	N/A	SHELF ANGLES: Masonry veneer shall be supported by shelf angles or other elements at each floor 30 feet or more above ground for Life Safety and at each floor above the first floor for Immediate Occupancy. (Tier 2: Sec. 4.8.5.1)
C	NC	N/A	TIES: Masonry veneer shall be connected to the back-up with corrosion-resistant ties. The ties shall have a spacing equal to or less than 24 inches with a minimum of one tie for every 2-2/3 square feet. A spacing of up to 36 inches is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.5.2)
C	NC	N/A	WEAKENED PLANES: Masonry veneer shall be anchored to the back-up adjacent to weakened planes, such as at the locations of flashing. (Tier 2: Sec. 4.8.5.3)
C	NC	N/A	DETERIORATION: There shall be no evidence of deterioration, damage, or corrosion in any of the connection elements. (Tier 2: Sec. 4.8.5.4)

Basic Nonstructural Component Checklist Sheet 3 of 4
BUILDING 36 – MATH WING

Parapets, Cornices, Ornamentation, and Appendages

C	NC	N/A	URM PARAPETS: There shall be no laterally unsupported unreinforced masonry parapets or cornices with height-to-thickness ratios greater than 1.5. A height-to-thickness ratio of up to 2.5 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.8.1)
C	NC	N/A	CANOPIES: Canopies located at building exits shall be anchored to the structural framing at a spacing of 6 feet or less. An anchorage spacing of up to 10 feet is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.8.2)

Masonry Chimneys

C	NC	N/A	URM CHIMNEYS: No unreinforced masonry chimney shall extend above the roof surface more than twice the least dimension of the chimney. A height above the roof surface of up to three times the least dimension of the chimney is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.9.1)

Stairs

C	NC	N/A	URM WALLS: Walls around stair enclosures shall not consist of unbraced hollow clay tile or unreinforced masonry with a height-to-thickness ratio greater than 12-to-1. A height-to-thickness ratio of up to 15-to-1 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.10.1)
C	NC	N/A	STAIR DETAILS: In moment frame structures, the connection between the stairs and the structure shall not rely on shallow anchors in concrete. Alternatively, the stair details shall be capable of accommodating the drift calculated using the Quick Check procedure of Section 3.5.3.1 without including tension in the anchors. (Tier 2: Sec. 4.8.10.2)

Basic Nonstructural Component Checklist Sheet 4 of 4
BUILDING 36 – MATH WING

Building Contents and Furnishing

C	NC	N/A	TALL NARROW CONTENTS: Contents over 4 feet in height with a height-to-depth or height-to-width ratio greater than 3-to-1 shall be anchored to the floor slab or adjacent structural walls. A height-to-depth or height-to-width ratio of up to 4-to-1 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.11.1)

Mechanical and Electrical Equipment

C	NC	N/A	EMERGENCY POWER: Equipment used as part of an emergency power system shall be mounted to maintain continued operation after an earthquake. (Tier 2: Sec. 4.8.12.1)
C	NC	N/A	HAZARDOUS MATERIAL EQUIPMENT: HVAC or other equipment containing hazardous material shall not have damaged supply lines or unbraced isolation supports. (Tier 2:Sec. 4.8.12.2)
C	NC	N/A	DETERIORATION: There shall be no evidence of deterioration, damage, or corrosion in any of the anchorage or supports of mechanical or electrical equipment. (Tier 2: Sec. 4.8.12.3)
C	NC	N/A	ATTACHED EQUIPMENT: Equipment weighing over 20 lb that is attached to ceilings, walls, or other supports 4 feet above the floor level shall be braced. (Tier 2: Sec. 4.8.12.4)

Piping

C	NC	N/A	FIRE SUPPRESSION PIPING: Fire suppression piping shall be anchored and braced in accordance with NFPA-13 (NFPA, 1996). (Tier 2: Sec. 4.8.13.1)
C	NC	N/A	FLEXIBLE COUPLINGS: Fluid, gas, and fire suppression piping shall have flexible couplings. (Tier 2: Sec. 4.8.13.2)

Hazardous Materials Storage and Distribution

C	NC	N/A	TOXIC SUBSTANCES: Toxic and hazardous substances stored in breakable containers shall be restrained from falling by latched doors, shelf lips, wires, or other methods. (Tier 2: Sec. 4.8.15.1)

Intermediate Nonstructural Component Checklist Sheet 1 of 2
BUILDING 36 – MATH WING

Ceiling Systems

C	NC	N/A	LAY-IN TILES: Lay-in tiles used in ceiling panels located at exits and corridors shall be secured with clips. (Tier 2: Sec. 4.8.2.2)
C	NC	N/A	INTEGRATED CEILINGS: Integrated suspended ceilings at exits and corridors or weighing more than 2 pounds per square foot shall be laterally restrained with a minimum of four diagonal wires or rigid members attached to the structure above at a spacing equal to or less than 12 feet. (Tier 2: Sec. 4.8.2.3)
C	NC	N/A	SUSPENDED LATH AND PLASTER: Ceilings consisting of suspended lath and plaster or gypsum board shall be attached to resist seismic forces for every 12 square feet of area. (Tier 2: Sec. 4.8.2.4)

Light Fixtures

C	NC	N/A	INDEPENDENT SUPPORT: Light fixtures in suspended grid ceilings shall be supported independently of the ceiling suspension system by a minimum of two wires at diagonally opposite corners of the fixtures. (Tier 2: Sec. 4.8.3.2)

Cladding and Glazing

C	NC	N/A	GLAZING: Glazing in curtain walls and individual panes over 16 square feet in area, located up to a height of 10 feet above an exterior walking surface, shall have safety glazing. Such glazing located over 10 feet above an exterior walking surface shall be laminated annealed or laminated heat-strengthened safety glass or other glazing system that will remain in the frame when glass is cracked. (Tier 2: Sec. 4.8.4.8)

Parapets, Cornices, Ornamentation, and Appendages

C	NC	N/A	CONCRETE PARAPETS: Concrete parapets with height-to-thickness ratios greater than 2.5 shall have vertical reinforcement. (Tier 2: Sec. 4.8.8.3)

Intermediate Nonstructural Component Checklist Sheet 2 of 2
BUILDING 36 – MATH WING

C	NC	N/A	APPENDAGES: Cornices, parapets, signs, and other appendages that extend above the highest point of anchorage to the structure or cantilever from exterior wall faces and other exterior wall ornamentation shall be reinforced and anchored to the structural system at a spacing equal to or less than 10 feet for Life Safety and 6 feet for Immediate Occupancy. This requirement need not apply to parapets or cornices compliant with Section 4.8.8.1 or 4.8.8.3. (Tier 2: Sec. 4.8.8.4)

Masonry Chimneys

C	NC	N/A	ANCHORAGE: Masonry chimneys shall be anchored at each floor level and the roof. (Tier 2: Sec.4.8.9.2)

Mechanical and Electrical Equipment

C	NC	N/A	VIBRATION ISOLATORS: Equipment mounted on vibration isolators shall be equipped with restraints or snubbers. (Tier 2: Sec. 4.8.12.5)

Ducts

C	NC	N/A	STAIR AND SMOKE DUCTS: Stair pressurization and smoke control ducts shall be braced and shall have flexible connections at seismic joints. (Tier 2: Sec. 4.8.14.1)

6.6.3 BUILDING 37 – REPROGRAPHICS

Building Description

YEAR OF CONSTRUCTION: 1956
YEAR OF ALTERATIONS: 1987 – Cooling System Upgrade and Maintenance
1996 – Computer Lab Renovation
1997 – Ceiling and Lighting Seismic Retrofit
BUILDING TYPE: RM1, W2

GENERAL BUILDING DESCRIPTION: The current Reprographics building was constructed in 1956 per the original structural drawings. It is a one story reinforced masonry and wood frame building, approximately 15 feet high with a plan area of approximately 80 by 80 feet. There is a parapet around the perimeter of the building's roof and an exterior staircase for roof access. Exterior walkway canopies which connect adjacent buildings are supported by pipe posts and the exterior building walls. A 12 foot wide section of low roof is located at the NE end of the building. The building houses classrooms, copy and printing equipment, storage, mechanical equipment and restrooms.

The building appears to be in fair to good condition. The masonry walls appear to be in good condition; some exterior wood framing shows deterioration (picture Bldg37-13).

For exterior elevations and typical construction, see pictures Bldg37-01 to Bldg37-12.

VERTICAL STRUCTURAL SYSTEM: The building utilizes both reinforced masonry and wood stud load bearing walls. The foundation consists of caissons connected with grade beams supporting interior and exterior walls. The floor is concrete slab on grade and contains two locations of trenches which are covered by plywood and carpet. The plywood is deflecting noticeably in one location.

LATERAL STRUCTURAL SYSTEM: The building contains a dual lateral system. Reinforced masonry shear walls are used in the NE-SW direction. In the NW-SE direction, the system is plywood shear walls on the NE side and reinforced masonry walls on the SW side. The roof consists of plywood sheathing over roof rafters. A few areas of the roof are detailed on the drawings as blocked, while the majority of the roof is detailed as unblocked.

NON-STRUCTURAL SYSTEMS: The ceilings were observed to have been changed since the original drawings. It is assumed this was in conjunction with the ceiling and light seismic retrofits performed in 1997. The high and low roofs contained mechanical systems and equipment. A room at the low roof contains original heating and cooling systems which appear to be decommissioned (picture Bldg37-03). There is also high voltage electrical and data panels within this space.

List of Deficiencies

The following items have been found noncompliant in accordance with the requirements of ASCE31-03:

Structural

1. PROXIMITY OF ADJACENT BUILDINGS: The clear distance between the building and walkway canopies does not conform to the minimum limit; walkway canopies are connected between Buildings 35-39.
2. LOAD PATH, NO COLLECTORS: Collectors at the roof level to at least one reinforced masonry shear wall do not appear to be detailed on the available structural drawings and could not be viewed.
3. DETERIORATION OF WOOD: An exterior location of wood damage was viewed at a low roof door jamb. A joist at the NW corner was viewed to be torqued with slight splitting observe. (picture Bldg37-13). Otherwise, wood typically appears to be in good condition.
4. INADEQUATE WALL ANCHORAGE: Wall anchorage of masonry walls to diaphragm are not detailed in available structural drawings. From our knowledge of this type of construction, it is unlikely that existing wall ties or straps have adequate strength or stiffness to resist the out-of-plane connection force calculated with the ASCE 31-03 Tier 1 Quick Check procedure.
5. NO CROSS TIES: There are typically no cross ties between diaphragm chords.
6. UNBLOCKED DIAPHRAGM SPAN: The low roof unblocked plywood diaphragm appears to have a horizontal span of greater than 40 feet for Life Safety.

Non-structural

7. TALL NARROW CONTENTS: 2-3 filing cabinets are not anchored to the floor slab or wall.
8. MECHANICAL EQUIPMENT ANCHORAGE: Mechanical equipment on the roof is not anchored to the roof structure (picture Bldg37-14). Multiple mechanical equipment units on vibration isolators on the roof are not equipped with restraints or snubbers. In the equipment room located at the low roof, at least 1 boiler is not anchored. Note that equipment in this area is not in use.
9. NO CLIPS AT LAY-IN TILES: Lay-in tiles used in ceiling panels located at exits and corridors are not secured with clips.

Additional Observations

Moderate ponding was typically viewed at the high and low roofs (picture Bldg37-05).

BUILDING 37 – REPROGRAPHICS, PICTURES


Bldg37-01


Bldg37-02


Bldg37-03


Bldg37-04


Bldg37-05


Bldg37-06

Bldg37-09

Bldg37-10

Bldg37-11

Bldg37-12

Bldg37-13

Bldg37-14

Basic Structural Checklist for Building Type RM1: Reinforced Masonry Bearing Walls with Flexible Diaphragms

BUILDING 37 – REPROGRAPHICS Sheet 1 of 3

Building System

C	NC	N/A	LOAD PATH: The Structure shall contain a minimum of one complete load path for Life Safety and Immediate Occupancy for seismic force effects from any horizontal direction that serves to transfer the inertial forces from the mass to the foundation. (Tier 2: Sec. 4.3.1.1)
C	NC	N/A	ADJACENT BUILDINGS: The clear distance between the building being evaluated and any adjacent building shall be greater than 4 percent of the height of the shorter building for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.1.2)
C	NC	N/A	MEZZANINES: Interior mezzanine levels shall be braced independently from the main structure, or shall be anchored to the lateral-force-resisting elements of the main structure. (Tier 2: Sec. 4.3.1.3)
C	NC	N/A	WEAK STORY: The strength of the lateral-force-resisting system in any story shall not be less than 80 percent of the strength in an adjacent story, above or below, for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.1)
C	NC	N/A	SOFT STORY: The stiffness of the lateral-force-resisting system in any story shall not be less than 70 percent of the lateral-force-resisting system stiffness in an adjacent story above or below, or less than 8- percent of the average lateral-force-resisting system stiffness of the three stories above or below for Life Safety an Immediate Occupancy. (Tier 2: Sec. 4.3.2.2)
C	NC	N/A	GEOMETRY: There shall be no changes in horizontal dimension of the lateral-force-resisting system of more than 30 percent in a story relative to adjacent stories for Life Safety and Immediate Occupancy, excluding one-story penthouses and mezzanines. (Tier 2: Sec. 4.3.2.3)
C	NC	N/A	VERTICAL DISCONTINUITIES: All vertical elements in the lateral-force-resisting system shall be continuous to the foundation. (Tier 2: Sec. 4.3.2.4)

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C	NC	N/A	MASS: There shall be no change in effective mass more than 50 percent from one story to the next Life safety and Immediate Occupancy. Light roofs, penthouses, and mezzanines need not be considered. (Tier 2: Sec. 4.3.2.5)
C	NC	N/A	DETERIORATION OF WOOD: There shall be no signs of decay, shrinkage, splitting, fire damage, or sagging in any of the wood members, and none of the metal connection hardware shall be deteriorated, broken, or loose. (Tier 2: Sec. 4.3.3.1)
C	NC	N/A	MASONRY UNITS: There shall be no visible deterioration of masonry units. (Tier 2: Sec. 4.3.3.7)
C	NC	N/A	MASONRY JOINTS: The mortar shall not be easily scraped away from the joints by hand with a metal tool, and there shall be no areas of eroded mortar. (Tier 2: Sec. 4.3.3.8)
C	NC	N/A	REINFORCED MASONRY WALL CRACKS: All existing diagonal cracks in wall elements shall be less than 118 inch for Life Safety and 1/16 inch for Immediate Occupancy, shall not be concentrated in one location, and shall not form an X pattern. (Tier 2: Sec. 4.3.3.10)

Lateral-Force-Resisting System

C	NC	N/A	REDUNDANCY: The number of lines of shear walls in each principal direction shall be greater than or equal to 2 for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.1.1)
C	NC	N/A	SHEAR STRESS CHECK: The shear stress in I.be reinforced masonry shear walls, calculated using the Quick Check procedure of Section 3.5.3.3, shall be less than 70 psi for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.4.1)

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C	NC	N/A	REINFORCING STEEL: The total vertical and horizontal reinforcing steel ratio in reinforced masonry walls shall be greater than 0.002 for Life Safety and Immediate Occupancy of the wall with the minimum of 0.0007 for Life Safety and Immediate Occupancy in either of the two directions; the spacing of reinforcing steel shall be less than 48 inches for Life Safety and Immediate Occupancy; and all vertical bars shall extend to the top of the walls. (Tier 2: Sec. 4.4.2.4.2)

Connections

C	NC	N/A	WALL ANCHORAGE: Exterior concrete or masonry walls that are dependent on the diaphragm for lateral support shall be anchored for out-of-plane forces at each diaphragm level with steel anchors, reinforcing dowels, or straps that are developed into the diaphragm. Connections shall have adequate strength to resist the connection force calculated in the Quick Check procedure of Section 3.5.3. 7. (Tier 2: Sec. 4.6.1.1)
C	NC	N/A	WOOD LEDGERS: The connection between the wall panels and the diaphragm shall not induce cross-grain bending or tension in the wood ledgers. (Tier 2: Sec. 4.6.1.2)
C	NC	N/A	TRANSFER TO SHEAR WALLS: Diaphragms shall be connected for transfer of loads to the shear walls for Life Safety and the connections shall be able to develop the lesser of the shear strength of the walls or diaphragms for Immediate Occupancy. (Tier 2: Sec. 4.6.2.1)
C	NC	N/A	FOUNDATION DOWELS: Wall reinforcement shall be doweled into the foundation for Life Safety, and the dowels shall be able to develop the lesser of the strength of the walls or the uplift capacity of the foundation for Immediate Occupancy. (Tier 2: Sec. 4.6.3.5)
C	NC	N/A	GIRDER/COLUMN CONNECTION: There shall be a positive connection utilizing plates, connection hardware, or straps between the girder and the column support. (Tier 2: Sec. 4.6.4.1)

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Lateral-Force-Resisting System

C	NC	N/A	REINFORCING AT OPENINGS: All wall openings that interrupt rebar shall have trim reinforcing on all sides. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.4.3)
C	NC	N/A	PROPORTIONS: The height-to-thickness ratio of the shear walls at each story shall be less than 30. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.4.4)

Diaphragms

C	NC	N/A	CROSS TIES: There shall be continuous cross ties between diaphragm chords. (Tier 2: Sec. 4.5.1.2)
C	NC	N/A	OPENINGS AT SHEAR WALLS: Diaphragm openings immediately adjacent to the shear walls shall be less than 25 percent of the wall length for Life Safety and 15 percent of the wall length for Immediate Occupancy. (Tier 2: Sec. 4.5.1.4)
C	NC	N/A	OPENINGS AT EXTERIOR MASONRY SHEAR WALLS: Diaphragm openings immediately adjacent to exterior masonry shear walls shall not be greater than 8 feet long for Life Safety and 4 feet long for Immediate Occupancy. (Tier 2: Sec. 4.5.1.6)
C	NC	N/A	PLAN IRREGULARITIES: There shall be tensile capacity to develop the strength of the diaphragm at re-entrant comers or other locations of plan irregularities. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.7)
C	NC	N/A	DIAPHRAGM REINFORCEMENT AT OPENINGS: There shall be reinforcing around all diaphragm openings larger than 50 percent of the building width in either major plan dimension. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.8)

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C	NC	N/A	STRAIGHT SHEATHING: All straight sheathed diaphragms shall have aspect ratios less than 2-to-1 for Life Safety and 1-to-1 for Immediate Occupancy in the direction being considered. (Tier 2: Sec. 4.5.2.1)
C	NC	N/A	SPANS: All wood diaphragms with spans greater than 24 feet for Life Safety and 12 feet for Immediate Occupancy shall consist of wood structural panels or diagonal sheathing. (Tier 2: Sec. 4.5.2.2)
C	NC	N/A	UNBLOCKED DIAPHRAGMS: All diagonally sheathed or unblocked wood structural panel diaphragms shall have horizontal spans less than 40 feet for Life Safety and 30 feet for Immediate Occupancy and shall have aspect ratios less than or equal to 4-to-1 for Life Safety and 3-to-J for Immediate Occupancy. (Tier 2: Sec. 4.5.2.3)
C	NC	N/A	NON-CONCRETE FILLED DIAPHRAGMS: Untopped metal deck diaphragms or metal deck diaphragms with fill other than concrete shall consist of horizontal spans of less than 40 feet and shall have span/depth ratios less than 4-to-1. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.3.1)
C	NC	N/A	OTHER DIAPHRAGMS: The diaphragm shall not consist of a system other than wood, metal deck, concrete, or horizontal bracing. (Tier 2: Sec. 4.5. 7.1)

Connections

C	NC*	N/A	STIFFNESS OF WALL ANCHORS: Anchors of concrete or masonry walls to wood structural elements shall be installed taut and shall be stiff enough to limit the relative movement between the wall and the diaphragm to no greater than 1/8 inch prior to engagement of the anchors. (Tier 2:Sec. 4.6.1.4)

* Item not visible during site visit, statement completed based on general knowledge of construction type.

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Building System

C	NC	N/A	LOAD PATH: The structure shall contain a minimum of one complete load path for Life Safety and Immediate Occupancy for seismic force effects from any horizontal direction that serves to transfer the inertial forces from the mass to the foundation. (Tier 2: Sec. 4.3.1.1)
C	NC	N/A	MEZZANINES: Interior mezzanine levels shall be braced independently from the main structure, or shall be anchored to the lateral-force-resisting elements of the main structure. (Tier 2:Sec. 4.3. 1.3)
C	NC	N/A	WEAK STORY: The strength of the lateral-force-resisting system in any story shall not be less than 80 percent of the strength in an adjacent story, above or below, for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.1)
C	NC	N/A	SOFT STORY: The stiffness of the lateral-force-resisting system in any story shall not be less than 70 percent of the lateral-force-resisting system stiffness in an adjacent story above or below, or less than 80 percent of the average lateral-force-resisting system stiffness of the three stories above or below for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.2)
C	NC	N/A	GEOMETRY: There shall be no changes in horizontal dimension of the lateral-force-resisting system of more than 30 percent in a story relative to adjacent stories for Life Safety and Immediate Occupancy, excluding one-story penthouses and mezzanines. (Tier 2: Sec. 4.3.2.3)
C	NC	N/A	VERTICAL DISCONTINUITIES: All vertical elements in the lateral-force-resisting system shall be continuous to the foundation. (Tier 2: Sec. 4.3.2.4)
C	NC	N/A	MASS: There shall be no change in effective mass more than 50 percent from one story to the next for Life Safety and Immediate Occupancy. Light roofs, penthouses, and mezzanines need not be considered. (Tier 2: Sec. 4.3.2.5)

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C	NC	N/A	DETERIORATION OF WOOD: There shall be no signs of decay, shrinkage, splitting, fire damage, or sagging in any of the wood members, and none of the metal connection hardware shall be deteriorated, broken, or loose. (Tier 2: Sec. 4.3.3. 1)
C	NC	N/A	WOOD STRUCTURAL PANEL SHEAR WALL FASTENERS: There shall be no more than 15 percent of inadequate fastening such as overdriven fasteners, omitted blocking, excessive fastening spacing, or inadequate edge distance. TI1is statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.3.3.2)

Lateral-Force-Resisting System

C	NC	N/A	REDUNDANCY: The number of lines of shear walls in each principal direction shall be greater than or equal to 2 for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.1.1)
C	NC	N/A	SHEAR STRESS CHECK: The shear stress in the shear walls, calculated using the Quick Check procedure of Section 3.5.3.3, shall be less than the following values for Life Safety and Immediate Occupancy (Tier 2: Sec. 4.4.2. 7.1): Structural panel sheathing 1,000 plf Diagonal sheathing 700 plf Straight sheathing 100 plf All other conditions 100 plf
C	NC	N/A	STUCCO (EXTERIOR PLASTER) SHEAR WALLS: Multi-story buildings shall not rely on exterior stucco walls as the primary lateral-force-resisting system. (Tier 2: Sec. 4.4.2.7.2)
C	NC	N/A	GYPSUM WALLBOARD OR PLASTER SHEAR WALLS: Interior plaster or gypsum wallboard shall not be used as shear walls on buildings over one story in height with the exception of the uppermost level of a multi-story building. (Tier 2: Sec. 4.4.2.7.3)

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C	NC	N/A	NARROW WOOD SHEAR WALLS: Narrow wood shear walls with an aspect ratio greater than 2-to-1 for Life Safety and 1.5-to-1 for Immediate Occupancy shall not be used to resist lateral forces developed in the building in levels of moderate and high seismicity. Narrow wood shear walls with an aspect ratio greater than 2-to-I for Immediate Occupancy shall not be used to resist lateral forces developed in the building in levels of low seismicity. (Tier 2: Sec. 4.4.2.7.4)
C	NC	N/A	WALLS CONNECTED THROUGH FLOORS: Shear walls shall have interconnection between stories to transfer overturning and shear forces through the floor. (Tier 2: Sec. 4.4.2.7.5)
C	NC	N/A	HILLSIDE SITE: For structures that are taller on at least one side by more than one-half story due to a sloping site, all shear walls on the downhill slope shall have an aspect ratio less than 1-to-1 for Life Safety and 1-to-2 for Immediate Occupancy. (Tier 2: Sec. 4.4.2.7.6)
C	NC	N/A	CRIPPLE WALLS: Cripple walls below first-floor-level shear walls shall be braced to the foundation with wood structural panels. (Tier 2: Sec. 4.4.2. 7. 7)
C	NC	N/A	OPENINGS: Walls with openings greater than 80 percent of the length shall be braced with wood structural panel shear walls with aspect ratios of not more than 1.5-to-1 or shall be supported by adjacent construction through positive tics capable of transferring the lateral forces. (Tier 2: Sec. 4.4.2.7.8)

Connections

C	NC	N/A	WOOD POSTS: There shall be a positive connection of wood posts to the foundation. (Tier 2: Sec. 4.6.3.3)
C	NC	N/A	WOOD SILLS: All wood sills shall be bolted to the foundation. (Tier 2: Sec. 4.6.3.4)

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C	NC	N/A	GIRDER/COLUMN CONNECTION: There shall be a positive connection utilizing plates, connection hardware, or straps between the girder and the column support. (Tier 2: Sec. 4.6.4.1)

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Lateral-Force-Resisting System

C	NC	N/A	HOLD-DOWN ANCHORS: All shear walls shall have hold-down anchors constructed per acceptable construction practices, attached to the end studs. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.7.9)

Diaphragms

C	NC	N/A	DIAPHRAGM CONTINUITY: The diaphragms shall not be composed of split-level floors and shall not have expansion joints. (Tier 2: Sec. 4.5.1.1)
C	NC	N/A	ROOF CHORD CONTINUITY: All chord elements shall be continuous, regardless of changes in roof elevation. (Tier 2: Sec. 4.5.1.3)
C	NC	N/A	PLAN IRREGULARITIES: There shall be tensile capacity to develop the strength of the diaphragm at re-entrant comers or other locations of plan irregularities. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.7)
C	NC	N/A	DIAPHRAGM REINFORCEMENT AT OPENINGS: There shall be reinforcing around all diaphragm openings larger than 50 percent of the building width in either major plan dimension. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.8)
C	NC	N/A	STRAIGHT SHEATHING: All straight sheathed diaphragms shall have aspect ratios less than 2-to-1 for Life Safety and 1-to-1 for Immediate Occupancy in the direction being considered. (Tier 2: Sec. 4.5.2.1)
C	NC	N/A	SPANS: All wood diaphragms with spans greater than 24 feet for Life Safety and 12 feet for Immediate Occupancy shall consist of wood structural panels or diagonal sheathing. Wood commercial and industrial buildings may have rod-braced systems. (Tier 2: Sec. 4.5.2.2)

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C	NC	N/A	UNBLOCKED DIAPHRAGMS: All diagonally sheathed or unblocked wood structural panel diaphragms shall have horizontal spans less than 40 feet for Life Safety and 30 feet for Immediate Occupancy and shall have aspect ratios less than or equal to 4-to-1 for Life Safety and 3-to-1 for Immediate Occupancy. (Tier 2: Sec. 4.5.2.3)
C	NC	N/A	OTHER DIAPHRAGMS: The diaphragm shall not consist of a system other than wood, metal deck, concrete, or horizontal bracing. (Tier 2: Sec. 4.5.7.1)

Connections

C	NC	N/A	WOOD SILL BOLTS: Sill bolts shall be spaced at 6 feet or less for Life Safety and 4 feet or less for Immediate Occupancy, with proper edge and end di stance provided for wood and concrete. (Tier 2: Sec. 4.6.3.9)

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Partitions

C	NC	N/A	UNREINFORCED MASONRY: Unreinforced masonry or hollow clay tile partitions shall be braced at a spacing equal to or less than 10 feet in levels of low or moderate seismicity and 6 feet in levels of high seismicity. (Tier 2: Sec. 4.8.1.1)

Ceiling Systems

C	NC	N/A	SUPPORT: The integrated suspended ceiling system shall not be used to laterally support the tops of gypsum board, masonry, or hollow clay tile partitions. Gypsum board partitions need not be evaluated where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier2: Sec. 4.8.2.1)

Light Fixtures

C	NC	N/A	EMERGENCY LIGHTING: Emergency lighting shall be anchored or braced to prevent falling during an earthquake. (Tier 2: Sec. 4.8.3.1)

Cladding and Glazing

C	NC	N/A	CLADDING ANCHORS: Cladding components weighing more than 10 psf shall be mechanically anchored to the exterior wall framing at a spacing equal to or less than 4 feet. A spacing of up to 6 feet is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.1)
C	NC	N/A	DETERIORATION: There shall be no evidence of deterioration, damage or corrosion in any of the connection elements. (Tier 2: Sec. 4.8.4.2)
C	NC	N/A	CLADDING ISOLATION: For moment frame buildings of steel or concrete, panel connections shall be detailed to accommodate a story drift ratio of 0.02. Panel connection detailing for a story drift ratio of 0.01 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.3)

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C	**NC**	**N/A**	MULTI-STORY PANELS: For multi-story panels attached at each floor level, panel connections shall be detailed to accommodate a story drift ratio of 0.02. Panel connection detailing for a story drift ratio of 0.01 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.4)
C	**NC**	**N/A**	BEARING CONNECTIONS: Where bearing connections are required, there shall be a minimum of two bearing connections for each wall panel. (Tier 2: Sec. 4.8.4.5)
C	**NC**	**N/A**	INSERTS: Where inserts are used in concrete connections, the inserts shall be anchored to reinforcing steel or other positive anchorage. (Tier 2: Sec. 4.8.4.6)
C	**NC**	**N/A**	PANEL CONNECTIONS: Exterior cladding panels shall be anchored out-of-plane with a minimum of 4 connections for each wall panel. Two connections per wall panel are permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.7)

Masonry Veneer

C	**NC**	**N/A**	SHELF ANGLES: Masonry veneer shall be supported by shelf angles or other elements at each floor 30 feet or more above ground for Life Safety and at each floor above the first floor for Immediate Occupancy. (Tier 2: Sec. 4.8.5.1)
C	**NC**	**N/A**	TIES: Masonry veneer shall be connected to the back-up with corrosion-resistant ties. The ties shall have a spacing equal to or less than 24 inches with a minimum of one tie for every 2-2/3 square feet. A spacing of up to 36 inches is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.5.2)
C	**NC**	**N/A**	WEAKENED PLANES: Masonry veneer shall be anchored to the back-up adjacent to weakened planes, such as at the locations of flashing. (Tier 2: Sec. 4.8.5.3)
C	**NC**	**N/A**	DETERIORATION: There shall be no evidence of deterioration, damage, or corrosion in any of the connection elements. (Tier 2: Sec. 4.8.5.4)

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Parapets, Cornices, Ornamentation, and Appendages

C	NC	N/A	URM PARAPETS: There shall be no laterally unsupported unreinforced masonry parapets or cornices with height-to-thickness ratios greater than 1.5. A height-to-thickness ratio of up to 2.5 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.8.1)
C	NC	N/A	CANOPIES: Canopies located at building exits shall be anchored to the structural framing at a spacing of 6 feet or less. An anchorage spacing of up to 10 feet is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.8.2)

Masonry Chimneys

C	NC	N/A	URM CHIMNEYS: No unreinforced masonry chimney shall extend above the roof surface more than twice the least dimension of the chimney. A height above the roof surface of up to three times the least dimension of the chimney is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.9.1)

Stairs

C	NC	N/A	URM WALLS: Walls around stair enclosures shall not consist of unbraced hollow clay tile or unreinforced masonry with a height-to-thickness ratio greater than 12-to-1. A height-to-thickness ratio of up to 15-to-1 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.10.1)
C	NC	N/A	STAIR DETAILS: In moment frame structures, the connection between the stairs and the structure shall not rely on shallow anchors in concrete. Alternatively, the stair details shall be capable of accommodating the drift calculated using the Quick Check procedure of Section 3.5.3.1 without including tension in the anchors. (Tier 2: Sec. 4.8.10.2)

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Building Contents and Furnishing

C	NC	N/A	TALL NARROW CONTENTS: Contents over 4 feet in height with a height-to-depth or height-to-width ratio greater than 3-to-1 shall be anchored to the floor slab or adjacent structural walls. A height-to-depth or height-to-width ratio of up to 4-to-1 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.11.1)

Mechanical and Electrical Equipment

C	NC	N/A	EMERGENCY POWER: Equipment used as part of an emergency power system shall be mounted to maintain continued operation after an earthquake. (Tier 2: Sec. 4.8.12.1)
C	NC	N/A	HAZARDOUS MATERIAL EQUIPMENT: HVAC or other equipment containing hazardous material shall not have damaged supply lines or unbraced isolation supports. (Tier 2:Sec. 4.8.12.2)
C	NC	N/A	DETERIORATION: There shall be no evidence of deterioration, damage, or corrosion in any of the anchorage or supports of mechanical or electrical equipment. (Tier 2: Sec. 4.8.12.3)
C	NC	N/A	ATTACHED EQUIPMENT: Equipment weighing over 20 lb that is attached to ceilings, walls, or other supports 4 feet above the floor level shall be braced. (Tier 2: Sec. 4.8.12.4)

Piping

C	NC	N/A	FIRE SUPPRESSION PIPING: Fire suppression piping shall be anchored and braced in accordance with NFPA-13 (NFPA, 1996). (Tier 2: Sec. 4.8.13.1)
C	NC	N/A	FLEXIBLE COUPLINGS: Fluid, gas, and fire suppression piping shall have flexible couplings. (Tier 2: Sec. 4.8.13.2)

Hazardous Materials Storage and Distribution

C	NC	N/A	TOXIC SUBSTANCES: Toxic and hazardous substances stored in breakable containers shall be restrained from falling by latched doors, shelf lips, wires, or other methods. (Tier 2: Sec. 4.8.15.1)

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Ceiling Systems

C	NC	N/A	LAY-IN TILES: Lay-in tiles used in ceiling panels located at exits and corridors shall be secured with clips. (Tier 2: Sec. 4.8.2.2)
C	NC	N/A	INTEGRATED CEILINGS: Integrated suspended ceilings at exits and corridors or weighing more than 2 pounds per square foot shall be laterally restrained with a minimum of four diagonal wires or rigid members attached to the structure above at a spacing equal to or less than 12 feet. (Tier 2: Sec. 4.8.2.3)
C	N	N/A	SUSPENDED LATH AND PLASTER: Ceilings consisting of suspended lath and plaster or gypsum board shall be attached to resist seismic forces for every 12 square feet of area. (Tier 2: Sec. 4.8.2.4)

Light Fixtures

C	NC	N/A	INDEPENDENT SUPPORT: Light fixtures in suspended grid ceilings shall be supported independently of the ceiling suspension system by a minimum of two wires at diagonally opposite corners of the fixtures. (Tier 2: Sec. 4.8.3.2)

Cladding and Glazing

C	NC	N/A	GLAZING: Glazing in curtain walls and individual panes over 16 square feet in area, located up to a height of 10 feet above an exterior walking surface, shall have safety glazing. Such glazing located over 10 feet above an exterior walking surface shall be laminated annealed or laminated heat-strengthened safety glass or other glazing system that will remain in the frame when glass is cracked. (Tier 2: Sec. 4.8.4.8)

Parapets, Cornices, Ornamentation, and Appendages

C	NC	N/A	CONCRETE PARAPETS: Concrete parapets with height-to-thickness ratios greater than 2.5 shall have vertical reinforcement. (Tier 2: Sec. 4.8.8.3)

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C	NC	N/A	APPENDAGES: Cornices, parapets, signs, and other appendages that extend above the highest point of anchorage to the structure or cantilever from exterior wall faces and other exterior wall ornamentation shall be reinforced and anchored to the structural system at a spacing equal to or less than 10 feet for Life Safety and 6 feet for Immediate Occupancy. This requirement need not apply to parapets or cornices compliant with Section 4.8.8.1 or 4.8.8.3. (Tier 2: Sec. 4.8.8.4)

Masonry Chimneys

C	NC	N/A	ANCHORAGE: Masonry chimneys shall be anchored at each floor level and the roof. (Tier 2: Sec.4.8.9.2)

Mechanical and Electrical Equipment

C	NC	N/A	VIBRATION ISOLATORS: Equipment mounted on vibration isolators shall be equipped with restraints or snubbers. (Tier 2: Sec. 4.8.12.5)

Ducts

C	NC	N/A	STAIR AND SMOKE DUCTS: Stair pressurization and smoke control ducts shall be braced and shall have flexible connections at seismic joints. (Tier 2: Sec. 4.8.14.1)

6.6.4 BUILDING 38 – SMALL OFFICE ADDITION

Building Description

YEAR OF CONSTRUCTION: 1956
YEAR OF ALTERATIONS: 1997 – Light and Ceiling Seismic Retrofit
BUILDING TYPE: W2 (The building does not strictly adhere to any of the typical wood building types. The type chosen most closely matches existing building characteristics.)

GENERAL BUILDING DESCRIPTION: The Office Addition is a 1 story wood framed building, approximately 10 feet high, and 13 feet wide by 32 feet long. It houses offices and appears to be in good condition with no signs of major deterioration.

For exterior elevations and typical construction, see pictures Bldg38-01 to Bldg38-04.

VERTICAL STRUCTURAL SYSTEM: The vertical system consists of wood roof rafters spanning between wood stud walls. The foundation is a conventional system with continuous concrete footings at each load bearing wall location. The floor is slab on grade.

LATERAL STRUCTURAL SYSTEM: The lateral system is plywood sheathed roof diaphragm with plywood sheathed shear walls.

NON-STRUCTURAL SYSTEMS: Mechanical units are located on the roof of the building. Acoustical ceilings and lights are attached directly to roof rafters.

For non-structural systems and items present within the building, see pictures Bldg38-05 to Bldg38-06.

List of Deficiencies

The following items have been found noncompliant in accordance with the requirements of ASCE31-03:

Structural

1. REDUNDANCY: The longitudinal direction only contains 1 line of plywood shear walls. The north exterior wall has no lateral system from the roof diaphragm to the foundation.
2. OPENINGS: North wall has windows along entire length, and no wood structural panel shear walls are present for bracing.

Non-structural

3. TALL NARROW CONTENTS: At least 1 bookshelf over 4 feet in height is not anchored to the floor or wall (picture Bldg38-06).
4. MECHANICAL EQUIPMENT ANCHORAGE: Mechanical equipment on the roof is not anchored to the roof structure.

BUILDING 38 – SMALL OFFICE ADDITION, PICTURES


Bldg38-01


Bldg38-02


Bldg38-03


Bldg38-04


Bldg38-05


Bldg38-06

Basic Structural Checklist for Building Type W2: Wood Frames, Commercial and Industrial
BUILDING 38 – SMALL OFFICE ADDITION Sheet 1 of 4

Building System

C	NC	N/A	LOAD PATH: The structure shall contain a minimum of one complete load path for Life Safety and Immediate Occupancy for seismic force effects from any horizontal direction that serves to transfer the inertial forces from the mass to the foundation. (Tier 2: Sec. 4.3.1.1)
C	NC	N/A	MEZZANINES: Interior mezzanine levels shall be braced independently from the main structure, or shall be anchored to the lateral-force-resisting elements of the main structure. (Tier 2:Sec. 4.3. 1.3)
C	NC	N/A	WEAK STORY: The strength of the lateral-force-resisting system in any story shall not be less than 80 percent of the strength in an adjacent story, above or below, for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.1)
C	NC	N/A	SOFT STORY: The stiffness of the lateral-force-resisting system in any story shall not be less than 70 percent of the lateral-force-resisting system stiffness in an adjacent story above or below, or less than 80 percent of the average lateral-force-resisting system stiffness of the three stories above or below for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.2)
C	NC	N/A	GEOMETRY: There shall be no changes in horizontal dimension of the lateral-force-resisting system of more than 30 percent in a story relative to adjacent stories for Life Safety and Immediate Occupancy, excluding one-story penthouses and mezzanines. (Tier 2: Sec. 4.3.2.3)
C	NC	N/A	VERTICAL DISCONTINUITIES: All vertical elements in the lateral-force-resisting system shall be continuous to the foundation. (Tier 2: Sec. 4.3.2.4)
C	NC	N/A	MASS: There shall be no change in effective mass more than 50 percent from one story to the next for Life Safety and Immediate Occupancy. Light roofs, penthouses, and mezzanines need not be considered. (Tier 2: Sec. 4.3.2.5)

Basic Structural Checklist for Building Type W2: Wood Frames, Commercial and Industrial
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C	NC	N/A	DETERIORATION OF WOOD: There shall be no signs of decay, shrinkage, splitting, fire damage, or sagging in any of the wood members, and none of the metal connection hardware shall be deteriorated, broken, or loose. (Tier 2: Sec. 4.3.3. 1)
C *	NC	N/A	WOOD STRUCTURAL PANEL SHEAR WALL FASTENERS: There shall be no more than 15 percent of inadequate fastening such as overdriven fasteners, omitted blocking, excessive fastening spacing, or inadequate edge distance. TI1is statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.3.3.2)

Lateral-Force-Resisting System

C	NC	N/A	REDUNDANCY: The number of lines of shear walls in each principal direction shall be greater than or equal to 2 for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.1.1)
C	NC	N/A	SHEAR STRESS CHECK: The shear stress in the shear walls, calculated using the Quick Check procedure of Section 3.5.3.3, shall be less than the following values for Life Safety and Immediate Occupancy (Tier 2: Sec. 4.4.2. 7.1): Structural panel sheathing 1,000 plf Diagonal sheathing 700 plf Straight sheathing 100 plf All other conditions 100 plf
C	NC	N/A	STUCCO (EXTERIOR PLASTER) SHEAR WALLS: Multi-story buildings shall not rely on exterior stucco walls as the primary lateral-force-resisting system. (Tier 2: Sec. 4.4.2.7.2)
C	NC	N/A	GYPSUM WALLBOARD OR PLASTER SHEAR WALLS: Interior plaster or gypsum wallboard shall not be used as shear walls on buildings over one story in height with the exception of the uppermost level of a multi-story building. (Tier 2: Sec. 4.4.2.7.3)

Basic Structural Checklist for Building Type W2: Wood Frames, Commercial and Industrial
BUILDING 38 – SMALL OFFICE ADDITION Sheet 3 of 4

C	NC	N/A	NARROW WOOD SHEAR WALLS: Narrow wood shear walls with an aspect ratio greater than 2-to-1 for Life Safety and 1.5-to-1 for Immediate Occupancy shall not be used to resist lateral forces developed in the building in levels of moderate and high seismicity. Narrow wood shear walls with an aspect ratio greater than 2-to-I for Immediate Occupancy shall not be used to resist lateral forces developed in the building in levels of low seismicity. (Tier 2: Sec. 4.4.2.7.4)
C	NC	N/A	WALLS CONNECTED THROUGH FLOORS: Shear walls shall have interconnection between stories to transfer overturning and shear forces through the floor. (Tier 2: Sec. 4.4.2.7.5)
C	NC	N/A	HILLSIDE SITE: For structures that are taller on at least one side by more than one-half story due to a sloping site, all shear walls on the downhill slope shall have an aspect ratio less than 1-to-1 for Life Safety and 1-to-2 for Immediate Occupancy. (Tier 2: Sec. 4.4.2.7.6)
C	NC	N/A	CRIPPLE WALLS: Cripple walls below first-floor-level shear walls shall be braced to the foundation with wood structural panels. (Tier 2: Sec. 4.4.2. 7. 7)
C	NC	N/A	OPENINGS: Walls with openings greater than 80 percent of the length shall be braced with wood structural panel shear walls with aspect ratios of not more than 1.5-to-1 or shall be supported by adjacent construction through positive ties capable of transferring the lateral forces. (Tier 2: Sec. 4.4.2.7.8)

Connections

C	NC	N/A	WOOD POSTS: There shall be a positive connection of wood posts to the foundation. (Tier 2: Sec. 4.6.3.3)
C	NC	N/A	WOOD SILLS: All wood sills shall be bolted to the foundation. (Tier 2: Sec. 4.6.3.4)

Basic Structural Checklist for Building Type W2: Wood Frames, Commercial and Industrial
BUILDING 38 – SMALL OFFICE ADDITION Sheet 4 of 4

C	**NC**	**N/A**	GIRDER/COLUMN CONNECTION: There shall be a positive connection utilizing plates, connection hardware, or straps between the girder and the column support. (Tier 2: Sec. 4.6.4.1)

***** Item not visible during site visit, statement completed based on general knowledge of construction type.

Supplemental Structural Checklist for Building Type W2: Wood Frames, Commercial and Industrial

BUILDING 38 – SMALL OFFICE ADDITION Sheet 1 of 2

Lateral-Force-Resisting System

C	NC	N/A	HOLD-DOWN ANCHORS: All shear walls shall have hold-down anchors constructed per acceptable construction practices, attached to the end studs. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.7.9)

Diaphragms

C	NC	N/A	DIAPHRAGM CONTINUITY: The diaphragms shall not be composed of split-level floors and shall not have expansion joints. (Tier 2: Sec. 4.5.1.1)
C	NC	N/A	ROOF CHORD CONTINUITY: All chord elements shall be continuous, regardless of changes in roof elevation. (Tier 2: Sec. 4.5.1.3)
C	NC	N/A	PLAN IRREGULARITIES: There shall be tensile capacity to develop the strength of the diaphragm at re-entrant comers or other locations of plan irregularities. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.7)
C	NC	N/A	DIAPHRAGM REINFORCEMENT AT OPENINGS: There shall be reinforcing around all diaphragm openings larger than 50 percent of the building width in either major plan dimension. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.8)
C	NC	N/A	STRAIGHT SHEATHING: All straight sheathed diaphragms shall have aspect ratios less than 2-to-1 for Life Safety and 1-to-1 for Immediate Occupancy in the direction being considered. (Tier 2: Sec. 4.5.2.1)
C	NC	N/A	SPANS: All wood diaphragms with spans greater than 24 feet for Life Safety and 12 feet for Immediate Occupancy shall consist of wood structural panels or diagonal sheathing. Wood commercial and industrial buildings may have rod-braced systems. (Tier 2: Sec. 4.5.2.2)

Supplemental Structural Checklist for Building Type W2: Wood Frames, Commercial and Industrial
BUILDING 38 – SMALL OFFICE ADDITION Sheet 2 of 2

C	**NC**	**N/A**	UNBLOCKED DIAPHRAGMS: All diagonally sheathed or unblocked wood structural panel diaphragms shall have horizontal spans less than 40 feet for Life Safety and 30 feet for Immediate Occupancy and shall have aspect ratios less than or equal to 4-to-1 for Life Safety and 3-to-1 for Immediate Occupancy. (Tier 2: Sec. 4.5.2.3)
C	**NC**	**N/A**	OTHER DIAPHRAGMS: The diaphragm shall not consist of a system other than wood, metal deck, concrete, or horizontal bracing. (Tier 2: Sec. 4.5.7.1)

Connections

C	**NC**	**N/A**	WOOD SILL BOLTS: Sill bolts shall be spaced at 6 feet or less for Life Safety and 4 feet or less for Immediate Occupancy, with proper edge and end di stance provided for wood and concrete. (Tier 2: Sec. 4.6.3.9)

Basic Nonstructural Component Checklist
BUILDING 38 – SMALL OFFICE ADDITION

Partitions

C	NC	N/A	UNREINFORCED MASONRY: Unreinforced masonry or hollow clay tile partitions shall be braced at a spacing equal to or less than 10 feet in levels of low or moderate seismicity and 6 feet in levels of high seismicity. (Tier 2: Sec. 4.8.1.1)

Ceiling Systems

C	NC	N/A	SUPPORT: The integrated suspended ceiling system shall not be used to laterally support the tops of gypsum board, masonry, or hollow clay tile partitions. Gypsum board partitions need not be evaluated where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier2: Sec. 4.8.2.1)

Light Fixtures

C	NC	N/A	EMERGENCY LIGHTING: Emergency lighting shall be anchored or braced to prevent falling during an earthquake. (Tier 2: Sec. 4.8.3.1)

Cladding and Glazing

C	NC	N/A	CLADDING ANCHORS: Cladding components weighing more than 10 psf shall be mechanically anchored to the exterior wall framing at a spacing equal to or less than 4 feet. A spacing of up to 6 feet is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.1)
C	NC	N/A	DETERIORATION: There shall be no evidence of deterioration, damage or corrosion in any of the connection elements. (Tier 2: Sec. 4.8.4.2)
C	NC	N/A	CLADDING ISOLATION: For moment frame buildings of steel or concrete, panel connections shall be detailed to accommodate a story drift ratio of 0.02. Panel connection detailing for a story drift ratio of 0.01 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.3)

Basic Nonstructural Component Checklist Sheet 2 of 4
BUILDING 38 – SMALL OFFICE ADDITION

C	NC	N/A	MULTI-STORY PANELS: For multi-story panels attached at each floor level, panel connections shall be detailed to accommodate a story drift ratio of 0.02. Panel connection detailing for a story drift ratio of 0.01 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.4)
C	NC	N/A	BEARING CONNECTIONS: Where bearing connections are required, there shall be a minimum of two bearing connections for each wall panel. (Tier 2: Sec. 4.8.4.5)
C	NC	N/A	INSERTS: Where inserts are used in concrete connections, the inserts shall be anchored to reinforcing steel or other positive anchorage. (Tier 2: Sec. 4.8.4.6)
C	NC	N/A	PANEL CONNECTIONS: Exterior cladding panels shall be anchored out-of-plane with a minimum of 4 connections for each wall panel. Two connections per wall panel are permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.7)

Masonry Veneer

C	NC	N/A	SHELF ANGLES: Masonry veneer shall be supported by shelf angles or other elements at each floor 30 feet or more above ground for Life Safety and at each floor above the first floor for Immediate Occupancy. (Tier 2: Sec. 4.8.5.1)
C	NC	N/A	TIES: Masonry veneer shall be connected to the back-up with corrosion-resistant ties. The ties shall have a spacing equal to or less than 24 inches with a minimum of one tie for every 2-2/3 square feet. A spacing of up to 36 inches is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.5.2)
C	NC	N/A	WEAKENED PLANES: Masonry veneer shall be anchored to the back-up adjacent to weakened planes, such as at the locations of flashing. (Tier 2: Sec. 4.8.5.3)
C	NC	N/A	DETERIORATION: There shall be no evidence of deterioration, damage, or corrosion in any of the connection elements. (Tier 2: Sec. 4.8.5.4)

Basic Nonstructural Component Checklist
BUILDING 38 – SMALL OFFICE ADDITION

Sheet 3 of 4

Parapets, Cornices, Ornamentation, and Appendages

C	NC	N/A	URM PARAPETS: There shall be no laterally unsupported unreinforced masonry parapets or cornices with height-to-thickness ratios greater than 1.5. A height-to-thickness ratio of up to 2.5 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.8.1)
C	NC	N/A	CANOPIES: Canopies located at building exits shall be anchored to the structural framing at a spacing of 6 feet or less. An anchorage spacing of up to 10 feet is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.8.2)

Masonry Chimneys

C	NC	N/A	URM CHIMNEYS: No unreinforced masonry chimney shall extend above the roof surface more than twice the least dimension of the chimney. A height above the roof surface of up to three times the least dimension of the chimney is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.9.1)

Stairs

C	NC	N/A	URM WALLS: Walls around stair enclosures shall not consist of unbraced hollow clay tile or unreinforced masonry with a height-to-thickness ratio greater than 12-to-1. A height-to-thickness ratio of up to 15-to-1 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.10.1)
C	NC	N/A	STAIR DETAILS: In moment frame structures, the connection between the stairs and the structure shall not rely on shallow anchors in concrete. Alternatively, the stair details shall be capable of accommodating the drift calculated using the Quick Check procedure of Section 3.5.3.1 without including tension in the anchors. (Tier 2: Sec. 4.8.10.2)

Basic Nonstructural Component Checklist Sheet 4 of 4
BUILDING 38 – SMALL OFFICE ADDITION

Building Contents and Furnishing

C	NC	N/A	TALL NARROW CONTENTS: Contents over 4 feet in height with a height-to-depth or height-to-width ratio greater than 3-to-1 shall be anchored to the floor slab or adjacent structural walls. A height-to-depth or height-to-width ratio of up to 4-to-1 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.11.1)

Mechanical and Electrical Equipment

C	NC	N/A	EMERGENCY POWER: Equipment used as part of an emergency power system shall be mounted to maintain continued operation after an earthquake. (Tier 2: Sec. 4.8.12.1)
C	NC	N/A	HAZARDOUS MATERIAL EQUIPMENT: HVAC or other equipment containing hazardous material shall not have damaged supply lines or unbraced isolation supports. (Tier 2:Sec. 4.8.12.2)
C	NC	N/A	DETERIORATION: There shall be no evidence of deterioration, damage, or corrosion in any of the anchorage or supports of mechanical or electrical equipment. (Tier 2: Sec. 4.8.12.3)
C	NC	N/A	ATTACHED EQUIPMENT: Equipment weighing over 20 lb that is attached to ceilings, walls, or other supports 4 feet above the floor level shall be braced. (Tier 2: Sec. 4.8.12.4)

Piping

C	NC	N/A	FIRE SUPPRESSION PIPING: Fire suppression piping shall be anchored and braced in accordance with NFPA-13 (NFPA, 1996). (Tier 2: Sec. 4.8.13.1)
C	NC	N/A	FLEXIBLE COUPLINGS: Fluid, gas, and fire suppression piping shall have flexible couplings. (Tier 2: Sec. 4.8.13.2)

Hazardous Materials Storage and Distribution

C	NC	N/A	TOXIC SUBSTANCES: Toxic and hazardous substances stored in breakable containers shall be restrained from falling by latched doors, shelf lips, wires, or other methods. (Tier 2: Sec. 4.8.15.1)

Intermediate Nonstructural Component Checklist Sheet 1 of 2
BUILDING 38 – SMALL OFFICE ADDITION

Ceiling Systems

C	NC	N/A	LAY-IN TILES: Lay-in tiles used in ceiling panels located at exits and corridors shall be secured with clips. (Tier 2: Sec. 4.8.2.2)
C	NC	N/A	INTEGRATED CEILINGS: Integrated suspended ceilings at exits and corridors or weighing more than 2 pounds per square foot shall be laterally restrained with a minimum of four diagonal wires or rigid members attached to the structure above at a spacing equal to or less than 12 feet. (Tier 2: Sec. 4.8.2.3)
C	NC	N/A	SUSPENDED LATH AND PLASTER: Ceilings consisting of suspended lath and plaster or gypsum board shall be attached to resist seismic forces for every 12 square feet of area. (Tier 2: Sec. 4.8.2.4)

Light Fixtures

C	NC	N/A	INDEPENDENT SUPPORT: Light fixtures in suspended grid ceilings shall be supported independently of the ceiling suspension system by a minimum of two wires at diagonally opposite corners of the fixtures. (Tier 2: Sec. 4.8.3.2)

Cladding and Glazing

C	NC	N/A	GLAZING: Glazing in curtain walls and individual panes over 16 square feet in area, located up to a height of 10 feet above an exterior walking surface, shall have safety glazing. Such glazing located over 10 feet above an exterior walking surface shall be laminated annealed or laminated heat-strengthened safety glass or other glazing system that will remain in the frame when glass is cracked. (Tier 2: Sec. 4.8.4.8)

Parapets, Cornices, Ornamentation, and Appendages

C	NC	N/A	CONCRETE PARAPETS: Concrete parapets with height-to-thickness ratios greater than 2.5 shall have vertical reinforcement. (Tier 2: Sec. 4.8.8.3)

Intermediate Nonstructural Component Checklist Sheet 2 of 2
BUILDING 38 – SMALL OFFICE ADDITION

C	**NC**	**N/A**	APPENDAGES: Cornices, parapets, signs, and other appendages that extend above the highest point of anchorage to the structure or cantilever from exterior wall faces and other exterior wall ornamentation shall be reinforced and anchored to the structural system at a spacing equal to or less than 10 feet for Life Safety and 6 feet for Immediate Occupancy. This requirement need not apply to parapets or cornices compliant with Section 4.8.8.1 or 4.8.8.3. (Tier 2: Sec. 4.8.8.4)

Masonry Chimneys

C	**NC**	**N/A**	ANCHORAGE: Masonry chimneys shall be anchored at each floor level and the roof. (Tier 2: Sec.4.8.9.2)

Mechanical and Electrical Equipment

C	**NC**	**N/A**	VIBRATION ISOLATORS: Equipment mounted on vibration isolators shall be equipped with restraints or snubbers. (Tier 2: Sec. 4.8.12.5)

Ducts

C	**NC**	**N/A**	STAIR AND SMOKE DUCTS: Stair pressurization and smoke control ducts shall be braced and shall have flexible connections at seismic joints. (Tier 2: Sec. 4.8.14.1)

6.6.5 BUILDING 39 – PLANETARIUM

Building Description

YEAR OF CONSTRUCTION: 1955
YEAR OF ALTERATIONS: unknown – Greenhouse and Pool Removal
unknown – Building Additions
BUILDING TYPE: C2, W2, RM1

GENERAL BUILDING DESCRIPTION: The Planetarium Building is a structure with a total of 2,380 square feet and consists of five areas:

1. A 24 foot diameter reinforced concrete dome measuring 20 feet high at the dome center with reinforced concrete shear walls standing 10 feet high.
2. A 12 feet wide by 48 feet long reinforced masonry room adjoining the dome to the north
3. Two new additions consisting of wood frame construction
4. A third new addition consisting of reinforced masonry construction.

The building is used as a classroom and for storage.

For exterior elevations and typical construction, see pictures Bldg39-01 to Bldg39-06.

VERTICAL STRUCTURAL SYSTEM: The dome area is entirely reinforced concrete construction while the wood and reinforced masonry wall areas consist of wood framed roofs. The original drawings show the foundation to be caissons connected with grade beams at the building perimeter. The building floor is slab on grade. Because no drawings are available for the majority of the additions and the exact structural detailing is mostly nonvisible, assumptions have been made based on viewable construction style and detailing.

LATERAL STRUCTURAL SYSTEM: The dome is a rigid diaphragm supported by concrete shear walls. The reinforced masonry areas contain reinforced masonry shear walls and wood diaphragms. The undocumented masonry walls are assumed to be detailed similarly to the original masonry walls. The wood framed areas contain wood shear walls and wood diaphragms. It is assumed the diaphragm and walls are composed of either diagonal or structural panel sheathing. Additional assumptions are noted in the checklists.

NON-STRUCTURAL SYSTEMS: Much of the roof areas support mechanical units, some on roof curbs and some on vibration isolators, all of which appear to be in good condition, but are unanchored to the roof. For non-structural systems and items present within the building, see pictures Bldg39-07 to Bldg39-11.

List of Deficiencies

The following items have been found noncompliant in accordance with the requirements of ASCE31-03:

Structural

1. PROXIMITY OF ADJACENT BUILDINGS: Reinforced masonry building directly abuts the reinforced concrete dome structure. Additionally, a walkway canopy is directly attached and also connects to Buildings 35-38.
2. INADEQUATE WALL ANCHORAGE: Wall anchorages of masonry walls to the diaphragm do not have the adequate strength or stiffness to resist the out-of-plane connection force calculated by the ASCE 31-03 Tier 1 Quick Check Procedure.
3. CROSS-TIES INADEQUATE: Continuous cross-ties between diaphragm chords are inadequate at areas of reinforced masonry walls.

Non-structural

4. TALL NARROW CONTENTS: A row of lockers in a storage area is unanchored.
5. MECHANICAL EQUIPMENT ANCHORAGE: Mechanical equipment on the roof is not anchored to the structure. See picture Bldg39-11.

Additional Observations

A considerable amount of ponding was observed on a portion of the walkway canopy connected to the structure (picture Bldg39-08).

BUILDING 39 – PLANETARIUM, PICTURES

Bldg39-01

Bldg39-02

Bldg39-03

Bldg39-04

Bldg39-05

Bldg39-06

Bldg39-07

Bldg39-08

Bldg39-09

Bldg39-10

Bldg39-11

Basic Structural Checklist for Building Type C2: Concrete Shear Walls with Stiff Diaphragms
BUILDING 39 –PLANETARIUM DOME Sheet 1 of 3

Building System

C	NC	N/A	LOAD PATH: The structure shall contain a minimum of one complete load path for Life Safety and Immediate Occupancy for seismic force effects from any horizontal direction that serves to transfer the inertial forces from the mass to the foundation. (Tier 2: Sec. 4.3.1.1)
C	NC	N/A	MEZZANINES: Interior mezzanine levels shall be braced independently from the main structure, or shall be anchored to the lateral-force-resisting elements of the main structure. (Tier 2: Sec. 4.3.1.3)
C	NC	N/A	WEAK STORY: The strength of the lateral-force-resisting system in any story shall not be less than 80 percent of the strength in an adjacent story, above or below, for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.1)
C	NC	N/A	SOFT STORY: The stiffness of the lateral-force-resisting system in any story shall not be less than 70 percent of the lateral-force-resisting system stiffness in an adjacent story above or below, or less than 80 percent of the average lateral-force-resisting system stiffness of the three stories above or below for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.2)
C	NC	N/A	GEOMETRY: There shall be no changes in horizontal dimension of the lateral-force-resisting system of more than 30 percent in a story relative to adjacent stories for Life Safety and Immediate Occupancy, excluding one-story penthouses and mezzanines. (Tier 2: Sec. 4.3.2.3)
C	NC	N/A	VERTICAL DISCONTINUITIES: All vertical elements in the lateral-force-resisting system shall be continuous to the foundation. (Tier 2: Sec. 4.3.2.4)
C	NC	N/A	MASS: There shall be no change in effective mass more than 50 percent from one story to the next for Life Safety and Immediate Occupancy. Light roofs, penthouses, and mezzanines need not be considered. (Tier 2: Sec. 4.3.2.5)

Basic Structural Checklist for Building Type C2: Concrete Shear Walls with Stiff Diaphragms
BUILDING 39 – PLANETARIUM DOME Sheet 2 of 3

C	NC	N/A	TORSION: The estimated distance between the story center of mass and the story center of rigidity shall be less than 20 percent of the building width in either plan dimension for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.6)
C	NC	N/A	DETERIORATION OF CONCRETE: There shall be no visible deterioration of concrete or reinforcing steel in any of the vertical- or lateral-force-resisting elements. (Tier 2: Sec. 4.3.3.4)
C	NC	N/A	POST-TENSIONING ANCHORS: There shall be no evidence of corrosion or spalling in the vicinity of post-tensioning or end fittings. Coil anchors shall not have been used. (Tier 2: Sec. 4.3.3.5)
C	NC	N/A	CONCRETE WALL CRACKS: All existing diagonal cracks in wall elements shall be less than 118 inch for Life Safety and 1/16 inch for Immediate Occupancy, shall not be concentrated in one location, and shall not form an X pattern. (Tier 2: Sec. 4.3.3.9)

Lateral-Force-Resisting System

C	NC	N/A	COMPLETE FRAMES: Steel or concrete frames classified as secondary components shall form a complete vertical-load-carrying system. (Tier 2: Sec. 4.4.1.6.1)
C	NC	N/A	REDUNDANCY: The number of lines of shear walls in each principal direction shall be greater than or equal to 2 for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.1.1)
C	NC	N/A	SHEAR STRESS CHECK: The shear stress in the concrete shear walls, calculated using the Quick Check procedure of Section 3.5.3.3, shall be less than the greater of 100 psi or 2*sqrt(f’c) for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.2.1)
C	NC	N/A	REINFORCING STEEL: The ratio of reinforcing steel area to gross concrete area shall be not less than 0.0015 in the vertical direction and 0.0025 in the horizontal direction for Life Safety and Immediate Occupancy. The spacing of reinforcing steel shall be equal to or less than 18 inches for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.2.2)

Basic Structural Checklist for Building Type C2: Concrete Shear Walls with Stiff Diaphragms
BUILDING 39 – PLANETARIUM DOME Sheet 3 of 3

Connections

C	NC	N/A	TRANSFER TO SHEAR WALLS: Diaphragms shall be connected for transfer of loads to the shear walls for Life Safety and the connections shall be able to develop the lesser of the shear strength of the walls or diaphragms for Immediate Occupancy. (Tier 2: Sec. 4.6.2.1)
C	NC	N/A	FOUNDATION DOWELS: Wall reinforcement shall be doweled into the foundation for Life Safety, and the dowels shall be able to develop the lesser of the strength of the walls or the uplift capacity of the foundation for Immediate Occupancy. (Tier 2: Sec. 4.6.3.5)

Supplemental Structural Checklist for Building Type C2: Concrete Shear Walls with Stiff Diaphragms
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Lateral-Force-Resisting System

C	NC	N/A	DEFLECTION COMPATIBILITY: Secondary components shall have the shear capacity to develop the flexural strength of the components for Life Safety and shall meet the requirements of Sections 4.4.1.4.9, 4.4.1.4.10, 4.4.1.4.11, 4.4.1.4.12 and 4.4.1.4.15 for Immediate Occupancy. (Tier 2: Sec. 4.4.1.6.2)
C	NC	N/A	FLAT SLABS: Flat slabs/plates not part of lateral-force-resisting system shall have continuous bottom steel through the column joints for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.1.6.3)
C	NC	N/A	COUPLING BEAMS: The stirrups in coupling beams over means of egress shall be spaced at or less than d/2 and shall be anchored into the confined core of the beam with hooks of 135° or more for Life Safety. All coupling beams shall comply with the requirements above and shall have the capacity in shear to develop the uplift capacity of the adjacent wall for Immediate Occupancy. (Tier 2: Sec. 4.4.2.2.3)
C	NC	N/A	OVERTURNING: All shear walls shall have aspect ratios less than 4-to-1. Wall piers need not be considered. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.2.4)
C	NC	N/A	CONFINEMENT REINFORCING: For shear walls with aspect ratios greater than 2-to-1, the boundary elements shall be confined with spirals or ties with spacing less than $8d_b$.This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.2.5)
C	NC	N/A	REINFORCING AT OPENINGS: There shall be added trim reinforcement around all wall openings with a dimension greater than three times the thickness of the wall. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.2.6)

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C	**NC**	**N/A**	WALL THICKNESS: Thickness of bearing walls shall not be less than 1/25 the unsupported height or length, whichever is shorter, nor less than 4 inches. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.2.7)

Diaphragms

C	**NC**	**N/A**	DIAPHRAGM CONTINUITY: The diaphragms shall not be composed of split-level floors and shall not have expansion joints. (Tier 2: Sec. 4.5.1.1)
C	**NC**	**N/A**	OPENINGS AT SHEAR WALLS: Diaphragm openings immediately adjacent to the shear walls shall be less than 25 percent of the wall length for Life Safety and 15 percent of the wall length for Immediate Occupancy. (Tier 2: Sec. 4.5.1.4)
C	**NC**	**N/A**	PLAN IRREGULARITIES: There shall be tensile capacity to develop the strength of the diaphragm at re-entrant comers or other locations of plan irregularities. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.7)
C	**NC**	**N/A**	DIAPHRAGM REINFORCEMENT AT OPENINGS: There shall be reinforcing around all diaphragm openings larger than 50 percent of the building width in either major plan dimension. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.8)

Connections

C	**NC**	**N/A**	UPLIFT AT PILE CAPS: Pile caps shall have top reinforcement and piles shall be anchored to the pile caps for Life Safety, and the pile cap reinforcement and pile anchorage shall be able to develop the tensile capacity of the piles for Immediate Occupancy. (Tier 2: Sec. 4.6.3.10)

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Building System

C	NC	N/A	LOAD PATH: The Structure shall contain a minimum of one complete load path for Life Safety and Immediate Occupancy for seismic force effects from any horizontal direction that serves to transfer the inertial forces from the mass to the foundation. (Tier 2: Sec. 4.3.1.1)
C	NC	N/A	ADJACENT BUILDINGS: The clear distance between the building being evaluated and any adjacent building shall be greater than 4 percent of the height of the shorter building for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.1.2)
C	NC	N/A	MEZZANINES: Interior mezzanine levels shall be braced independently from the main structure, or shall be anchored to the lateral-force-resisting elements of the main structure. (Tier 2: Sec. 4.3.1.3)
C	NC	N/A	WEAK STORY: The strength of the lateral-force-resisting system in any story shall not be less than 80 percent of the strength in an adjacent story, above or below, for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.1)
C	NC	N/A	SOFT STORY: The stiffness of the lateral-force-resisting system in any story shall not be less than 70 percent of the lateral-force-resisting system stiffness in an adjacent story above or below, or less than 8- percent of the average lateral-force-resisting system stiffness of the three stories above or below for Life Safety an Immediate Occupancy. (Tier 2: Sec. 4.3.2.2)
C	NC	N/A	GEOMETRY: There shall be no changes in horizontal dimension of the lateral-force-resisting system of more than 30 percent in a story relative to adjacent stories for Life Safety and Immediate Occupancy, excluding one-story penthouses and mezzanines. (Tier 2: Sec. 4.3.2.3)
C	NC	N/A	VERTICAL DISCONTINUITIES: All vertical elements in the lateral-force-resisting system shall be continuous to the foundation. (Tier 2: Sec. 4.3.2.4)

Basic Structural Checklist for Building Type RM1: Reinforced Masonry Bearing Walls with Flexible Diaphragms
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C	NC	N/A	MASS: There shall be no change in effective mass more than 50 percent from one story to the next Life safety and Immediate Occupancy. Light roofs, penthouses, and mezzanines need not be considered. (Tier 2: Sec. 4.3.2.5)
C	NC	N/A	DETERIORATION OF WOOD: There shall be no signs of decay, shrinkage, splitting, fire damage, or sagging in any of the wood members, and none of the metal connection hardware shall be deteriorated, broken, or loose. (Tier 2: Sec. 4.3.3.1)
C	NC	N/A	MASONRY UNITS: There shall be no visible deterioration of masonry units. (Tier 2: Sec. 4.3.3.7)
C	NC	N/A	MASONRY JOINTS: The mortar shall not be easily scraped away from the joints by hand with a metal tool, and there shall be no areas of eroded mortar. (Tier 2: Sec. 4.3.3.8)
C	NC	N/A	REINFORCED MASONRY WALL CRACKS: All existing diagonal cracks in wall elements shall be less than 118 inch for Life Safety and 1/16 inch for Immediate Occupancy, shall not be concentrated in one location, and shall not form an X pattern. (Tier 2: Sec. 4.3.3.10)

Lateral-Force-Resisting System

C	NC	N/A	REDUNDANCY: The number of lines of shear walls in each principal direction shall be greater than or equal to 2 for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.1.1)
C	NC	N/A	SHEAR STRESS CHECK: The shear stress in I.be reinforced masonry shear walls, calculated using the Quick Check procedure of Section 3.5.3.3, shall be less than 70 psi for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.4.1)

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C	NC	N/A	REINFORCING STEEL: The total vertical and horizontal reinforcing steel ratio in reinforced masonry walls shall be greater than 0.002 for Life Safety and Immediate Occupancy of the wall with the minimum of 0.0007 for Life Safety and Immediate Occupancy in either of the two directions; the spacing of reinforcing steel shall be less than 48 inches for Life Safety and Immediate Occupancy; and all vertical bars shall extend to the top of the walls. (Tier 2: Sec. 4.4.2.4.2)

Connections

C	NC	N/A	WALL ANCHORAGE: Exterior concrete or masonry walls that are dependent on the diaphragm for lateral support shall be anchored for out-of-plane forces at each diaphragm level with steel anchors, reinforcing dowels, or straps that are developed into the diaphragm. Connections shall have adequate strength to resist the connection force calculated in the Quick Check procedure of Section 3.5.3. 7. (Tier 2: Sec. 4.6.1.1)
C	NC	N/A	WOOD LEDGERS: The connection between the wall panels and the diaphragm shall not induce cross-grain bending or tension in the wood ledgers. (Tier 2: Sec. 4.6.1.2)
C	NC	N/A	TRANSFER TO SHEAR WALLS: Diaphragms shall be connected for transfer of loads to the shear walls for Life Safety and the connections shall be able to develop the lesser of the shear strength of the walls or diaphragms for Immediate Occupancy. (Tier 2: Sec. 4.6.2.1)
C	NC	N/A	FOUNDATION DOWELS: Wall reinforcement shall be doweled into the foundation for Life Safety, and the dowels shall be able to develop the lesser of the strength of the walls or the uplift capacity of the foundation for Immediate Occupancy. (Tier 2: Sec. 4.6.3.5)
C	NC	N/A	GIRDER/COLUMN CONNECTION: There shall be a positive connection utilizing plates, connection hardware, or straps between the girder and the column support. (Tier 2: Sec. 4.6.4.1)

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Lateral-Force-Resisting System

C	NC	N/A	REINFORCING AT OPENINGS: All wall openings that interrupt rebar shall have trim reinforcing on all sides. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.4.3)
C	NC	N/A	PROPORTIONS: The height-to-thickness ratio of the shear walls at each story shall be less than 30. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.4.4)

Diaphragms

C	NC	N/A	CROSS TIES: There shall be continuous cross ties between diaphragm chords. (Tier 2: Sec. 4.5.1.2)
C	NC	N/A	OPENINGS AT SHEAR WALLS: Diaphragm openings immediately adjacent to the shear walls shall be less than 25 percent of the wall length for Life Safety and 15 percent of the wall length for Immediate Occupancy. (Tier 2: Sec. 4.5.1.4)
C	NC	N/A	OPENINGS AT EXTERIOR MASONRY SHEAR WALLS: Diaphragm openings immediately adjacent to exterior masonry shear walls shall not be greater than 8 feet long for Life Safety and 4 feet long for Immediate Occupancy. (Tier 2: Sec. 4.5.1.6)
C	NC	N/A	PLAN IRREGULARITIES: There shall be tensile capacity to develop the strength of the diaphragm at re-entrant comers or other locations of plan irregularities. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.7)
C	NC	NA	DIAPHRAGM REINFORCEMENT AT OPENINGS: There shall be reinforcing around all diaphragm openings larger than 50 percent of the building width in either major plan dimension. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.8)

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C	NC	N/A	STRAIGHT SHEATHING: All straight sheathed diaphragms shall have aspect ratios less than 2-to-1 for Life Safety and 1-to-1 for Immediate Occupancy in the direction being considered. (Tier 2: Sec. 4.5.2.1)
C	NC	N/A	SPANS: All wood diaphragms with spans greater than 24 feet for Life Safety and 12 feet for Immediate Occupancy shall consist of wood structural panels or diagonal sheathing. (Tier 2: Sec. 4.5.2.2)
C	NC	N/A	UNBLOCKED DIAPHRAGMS: All diagonally sheathed or unblocked wood structural panel diaphragms shall have horizontal spans less than 40 feet for Life Safety and 30 feet for Immediate Occupancy and shall have aspect ratios less than or equal to 4-to-1 for Life Safety and 3-to-J for Immediate Occupancy. (Tier 2: Sec. 4.5.2.3)
C	NC	N/A	NON-CONCRETE FILLED DIAPHRAGMS: Untopped metal deck diaphragms or metal deck diaphragms with fill other than concrete shall consist of horizontal spans of less than 40 feet and shall have span/depth ratios less than 4-to-1. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.3.1)
C	NC	N/A	OTHER DIAPHRAGMS: The diaphragm shall not consist of a system other than wood, metal deck, concrete, or horizontal bracing. (Tier 2: Sec. 4.5. 7.1)

Connections

C	NC	N/A	STIFFNESS OF WALL ANCHORS: Anchors of concrete or masonry walls to wood structural elements shall be installed taut and shall be stiff enough to limit the relative movement between the wall and the diaphragm to no greater than 1/8 inch prior to engagement of the anchors. (Tier 2:Sec. 4.6.1.4)

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Building System

C	NC	N/A	LOAD PATH: The structure shall contain a minimum of one complete load path for Life Safety and Immediate Occupancy for seismic force effects from any horizontal direction that serves to transfer the inertial forces from the mass to the foundation. (Tier 2: Sec. 4.3.1.1)
C	NC	N/A	MEZZANINES: Interior mezzanine levels shall be braced independently from the main structure, or shall be anchored to the lateral-force-resisting elements of the main structure. (Tier 2:Sec. 4.3. 1.3)
C	NC	N/A	WEAK STORY: The strength of the lateral-force-resisting system in any story shall not be less than 80 percent of the strength in an adjacent story, above or below, for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.1)
C	NC	N/A	SOFT STORY: The stiffness of the lateral-force-resisting system in any story shall not be less than 70 percent of the lateral-force-resisting system stiffness in an adjacent story above or below, or less than 80 percent of the average lateral-force-resisting system stiffness of the three stories above or below for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.2)
C	NC	N/A	GEOMETRY: There shall be no changes in horizontal dimension of the lateral-force-resisting system of more than 30 percent in a story relative to adjacent stories for Life Safety and Immediate Occupancy, excluding one-story penthouses and mezzanines. (Tier 2: Sec. 4.3.2.3)
C	NC	N/A	VERTICAL DISCONTINUITIES: All vertical elements in the lateral-force-resisting system shall be continuous to the foundation. (Tier 2: Sec. 4.3.2.4)
C	NC	N/A	MASS: There shall be no change in effective mass more than 50 percent from one story to the next for Life Safety and Immediate Occupancy. Light roofs, penthouses, and mezzanines need not be considered. (Tier 2: Sec. 4.3.2.5)

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C	NC	N/A	DETERIORATION OF WOOD: There shall be no signs of decay, shrinkage, splitting, fire damage, or sagging in any of the wood members, and none of the metal connection hardware shall be deteriorated, broken, or loose. (Tier 2: Sec. 4.3.3. 1)
C	NC	N/A	WOOD STRUCTURAL PANEL SHEAR WALL FASTENERS: There shall be no more than 15 percent of inadequate fastening such as overdriven fasteners, omitted blocking, excessive fastening spacing, or inadequate edge distance. TI1is statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.3.3.2)

Lateral-Force-Resisting System

C	NC	N/A	REDUNDANCY: The number of lines of shear walls in each principal direction shall be greater than or equal to 2 for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.1.1)
C *	NC	N/A	SHEAR STRESS CHECK: The shear stress in the shear walls, calculated using the Quick Check procedure of Section 3.5.3.3, shall be less than the following values for Life Safety and Immediate Occupancy (Tier 2: Sec. 4.4.2. 7.1): Structural panel sheathing 1,000 plf Diagonal sheathing 700 plf Straight sheathing 100 plf All other conditions 100 plf
C	NC	N/A	STUCCO (EXTERIOR PLASTER) SHEAR WALLS: Multi-story buildings shall not rely on exterior stucco walls as the primary lateral-force-resisting system. (Tier 2: Sec. 4.4.2.7.2)
C	NC	N/A	GYPSUM WALLBOARD OR PLASTER SHEAR WALLS: Interior plaster or gypsum wallboard shall not be used as shear walls on buildings over one story in height with the exception of the uppermost level of a multi-story building. (Tier 2: Sec. 4.4.2.7.3)

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C	NC	N/A	NARROW WOOD SHEAR WALLS: Narrow wood shear walls with an aspect ratio greater than 2-to-1 for Life Safety and 1.5-to-1 for Immediate Occupancy shall not be used to resist lateral forces developed in the building in levels of moderate and high seismicity. Narrow wood shear walls with an aspect ratio greater than 2-to-I for Immediate Occupancy shall not be used to resist lateral forces developed in the building in levels of low seismicity. (Tier 2: Sec. 4.4.2.7.4)
C	NC	N/A	WALLS CONNECTED THROUGH FLOORS: Shear walls shall have interconnection between stories to transfer overturning and shear forces through the floor. (Tier 2: Sec. 4.4.2.7.5)
C	NC	N/A	HILLSIDE SITE: For structures that are taller on at least one side by more than one-half story due to a sloping site, all shear walls on the downhill slope shall have an aspect ratio less than 1-to-1 for Life Safety and 1-to-2 for Immediate Occupancy. (Tier 2: Sec. 4.4.2.7.6)
C	NC	N/A	CRIPPLE WALLS: Cripple walls below first-floor-level shear walls shall be braced to the foundation with wood structural panels. (Tier 2: Sec. 4.4.2. 7. 7)
C	NC	N/A	OPENINGS: Walls with openings greater than 80 percent of the length shall be braced with wood structural panel shear walls with aspect ratios of not more than 1.5-to-1 or shall be supported by adjacent construction through positive tics capable of transferring the lateral forces. (Tier 2: Sec. 4.4.2.7.8)

Connections

C	NC	N/A	WOOD POSTS: There shall be a positive connection of wood posts to the foundation. (Tier 2: Sec. 4.6.3.3)
C *	NC	N/A	WOOD SILLS: All wood sills shall be bolted to the foundation. (Tier 2: Sec. 4.6.3.4)

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C	**NC**	**N/A**	GIRDER/COLUMN CONNECTION: There shall be a positive connection utilizing plates, connection hardware, or straps between the girder and the column support. (Tier 2: Sec. 4.6.4.1)

***** Item not visible during site visit, statement completed based on general knowledge of construction type.

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Lateral-Force-Resisting System

C	NC	N/A	HOLD-DOWN ANCHORS: All shear walls shall have hold-down anchors constructed per acceptable construction practices, attached to the end studs. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.7.9)

Diaphragms

C	NC	N/A	DIAPHRAGM CONTINUITY: The diaphragms shall not be composed of split-level floors and shall not have expansion joints. (Tier 2: Sec. 4.5.1.1)
C	NC	N/A	ROOF CHORD CONTINUITY: All chord elements shall be continuous, regardless of changes in roof elevation. (Tier 2: Sec. 4.5.1.3)
C	NC	N/A	PLAN IRREGULARITIES: There shall be tensile capacity to develop the strength of the diaphragm at re-entrant comers or other locations of plan irregularities. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.7)
C	NC	N/A	DIAPHRAGM REINFORCEMENT AT OPENINGS: There shall be reinforcing around all diaphragm openings larger than 50 percent of the building width in either major plan dimension. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.8)
C*	NC	N/A	STRAIGHT SHEATHING: All straight sheathed diaphragms shall have aspect ratios less than 2-to-1 for Life Safety and 1-to-1 for Immediate Occupancy in the direction being considered. (Tier 2: Sec. 4.5.2.1)
C*	NC	N/A	SPANS: All wood diaphragms with spans greater than 24 feet for Life Safety and 12 feet for Immediate Occupancy shall consist of wood structural panels or diagonal sheathing. Wood commercial and industrial buildings may have rod-braced systems. (Tier 2: Sec. 4.5.2.2)

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C	NC	N/A	UNBLOCKED DIAPHRAGMS: All diagonally sheathed or unblocked wood structural panel diaphragms shall have horizontal spans less than 40 feet for Life Safety and 30 feet for Immediate Occupancy and shall have aspect ratios less than or equal to 4-to-1 for Life Safety and 3-to-1 for Immediate Occupancy. (Tier 2: Sec. 4.5.2.3)
C	NC	N/A	OTHER DIAPHRAGMS: The diaphragm shall not consist of a system other than wood, metal deck, concrete, or horizontal bracing. (Tier 2: Sec. 4.5.7.1)

Connections

C *	NC	N/A	WOOD SILL BOLTS: Sill bolts shall be spaced at 6 feet or less for Life Safety and 4 feet or less for Immediate Occupancy, with proper edge and end di stance provided for wood and concrete. (Tier 2: Sec. 4.6.3.9)

* Item not visible during site visit, statement completed based on general knowledge of construction type.

Basic Nonstructural Component Checklist
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Partitions

C	NC	N/A	UNREINFORCED MASONRY: Unreinforced masonry or hollow clay tile partitions shall be braced at a spacing equal to or less than 10 feet in levels of low or moderate seismicity and 6 feet in levels of high seismicity. (Tier 2: Sec. 4.8.1.1)

Ceiling Systems

C	NC	N/A	SUPPORT: The integrated suspended ceiling system shall not be used to laterally support the tops of gypsum board, masonry, or hollow clay tile partitions. Gypsum board partitions need not be evaluated where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier2: Sec. 4.8.2.1)

Light Fixtures

C	NC	N/A	EMERGENCY LIGHTING: Emergency lighting shall be anchored or braced to prevent falling during an earthquake. (Tier 2: Sec. 4.8.3.1)

Cladding and Glazing

C	NC	N/A	CLADDING ANCHORS: Cladding components weighing more than 10 psf shall be mechanically anchored to the exterior wall framing at a spacing equal to or less than 4 feet. A spacing of up to 6 feet is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.1)
C	NC	N/A	DETERIORATION: There shall be no evidence of deterioration, damage or corrosion in any of the connection elements. (Tier 2: Sec. 4.8.4.2)
C	NC	N/A	CLADDING ISOLATION: For moment frame buildings of steel or concrete, panel connections shall be detailed to accommodate a story drift ratio of 0.02. Panel connection detailing for a story drift ratio of 0.01 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.3)

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C	NC	N/A	MULTI-STORY PANELS: For multi-story panels attached at each floor level, panel connections shall be detailed to accommodate a story drift ratio of 0.02. Panel connection detailing for a story drift ratio of 0.01 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.4)
C	NC	N/A	BEARING CONNECTIONS: Where bearing connections are required, there shall be a minimum of two bearing connections for each wall panel. (Tier 2: Sec. 4.8.4.5)
C	NC	N/A	INSERTS: Where inserts are used in concrete connections, the inserts shall be anchored to reinforcing steel or other positive anchorage. (Tier 2: Sec. 4.8.4.6)
C	NC	N/A	PANEL CONNECTIONS: Exterior cladding panels shall be anchored out-of-plane with a minimum of 4 connections for each wall panel. Two connections per wall panel are permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.7)

Masonry Veneer

C	NC	N/A	SHELF ANGLES: Masonry veneer shall be supported by shelf angles or other elements at each floor 30 feet or more above ground for Life Safety and at each floor above the first floor for Immediate Occupancy. (Tier 2: Sec. 4.8.5.1)
C	NC	N/A	TIES: Masonry veneer shall be connected to the back-up with corrosion-resistant ties. The ties shall have a spacing equal to or less than 24 inches with a minimum of one tie for every 2-2/3 square feet. A spacing of up to 36 inches is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.5.2)
C	NC	N/A	WEAKENED PLANES: Masonry veneer shall be anchored to the back-up adjacent to weakened planes, such as at the locations of flashing. (Tier 2: Sec. 4.8.5.3)
C	NC	N/A	DETERIORATION: There shall be no evidence of deterioration, damage, or corrosion in any of the connection elements. (Tier 2: Sec. 4.8.5.4)

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BUILDING 39 – PLANETARIUM

Parapets, Cornices, Ornamentation, and Appendages

C	NC	N/A	URM PARAPETS: There shall be no laterally unsupported unreinforced masonry parapets or cornices with height-to-thickness ratios greater than 1.5. A height-to-thickness ratio of up to 2.5 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.8.1)
C	NC	N/A	CANOPIES: Canopies located at building exits shall be anchored to the structural framing at a spacing of 6 feet or less. An anchorage spacing of up to 10 feet is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.8.2)

Masonry Chimneys

C	NC	N/A	URM CHIMNEYS: No unreinforced masonry chimney shall extend above the roof surface more than twice the least dimension of the chimney. A height above the roof surface of up to three times the least dimension of the chimney is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.9.1)

Stairs

C	NC	N/A	URM WALLS: Walls around stair enclosures shall not consist of unbraced hollow clay tile or unreinforced masonry with a height-to-thickness ratio greater than 12-to-1. A height-to-thickness ratio of up to 15-to-1 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.10.1)
C	NC	N/A	STAIR DETAILS: In moment frame structures, the connection between the stairs and the structure shall not rely on shallow anchors in concrete. Alternatively, the stair details shall be capable of accommodating the drift calculated using the Quick Check procedure of Section 3.5.3.1 without including tension in the anchors. (Tier 2: Sec. 4.8.10.2)

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Building Contents and Furnishing

C	NC	N/A	TALL NARROW CONTENTS: Contents over 4 feet in height with a height-to-depth or height-to-width ratio greater than 3-to-1 shall be anchored to the floor slab or adjacent structural walls. A height-to-depth or height-to-width ratio of up to 4-to-1 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.11.1)

Mechanical and Electrical Equipment

C	NC	N/A	EMERGENCY POWER: Equipment used as part of an emergency power system shall be mounted to maintain continued operation after an earthquake. (Tier 2: Sec. 4.8.12.1)
C	NC	N/A	HAZARDOUS MATERIAL EQUIPMENT: HVAC or other equipment containing hazardous material shall not have damaged supply lines or unbraced isolation supports. (Tier 2:Sec. 4.8.12.2)
C	NC	N/A	DETERIORATION: There shall be no evidence of deterioration, damage, or corrosion in any of the anchorage or supports of mechanical or electrical equipment. (Tier 2: Sec. 4.8.12.3)
C	NC	N/A	ATTACHED EQUIPMENT: Equipment weighing over 20 lb that is attached to ceilings, walls, or other supports 4 feet above the floor level shall be braced. (Tier 2: Sec. 4.8.12.4)

Piping

C	NC	N/A	FIRE SUPPRESSION PIPING: Fire suppression piping shall be anchored and braced in accordance with NFPA-13 (NFPA, 1996). (Tier 2: Sec. 4.8.13.1)
C	NC	N/A	FLEXIBLE COUPLINGS: Fluid, gas, and fire suppression piping shall have flexible couplings. (Tier 2: Sec. 4.8.13.2)

Hazardous Materials Storage and Distribution

C	NC	N/A	TOXIC SUBSTANCES: Toxic and hazardous substances stored in breakable containers shall be restrained from falling by latched doors, shelf lips, wires, or other methods. (Tier 2: Sec. 4.8.15.1)

Intermediate Nonstructural Component Checklist Sheet 1 of 2
BUILDING 39 – PLANETARIUM

Ceiling Systems

C	**NC**	**N/A**	LAY-IN TILES: Lay-in tiles used in ceiling panels located at exits and corridors shall be secured with clips. (Tier 2: Sec. 4.8.2.2)
C	**NC**	**N/A**	INTEGRATED CEILINGS: Integrated suspended ceilings at exits and corridors or weighing more than 2 pounds per square foot shall be laterally restrained with a minimum of four diagonal wires or rigid members attached to the structure above at a spacing equal to or less than 12 feet. (Tier 2: Sec. 4.8.2.3)
C	**NC**	**N/A**	SUSPENDED LATH AND PLASTER: Ceilings consisting of suspended lath and plaster or gypsum board shall be attached to resist seismic forces for every 12 square feet of area. (Tier 2: Sec. 4.8.2.4)

Light Fixtures

C	**NC**	**N/A**	INDEPENDENT SUPPORT: Light fixtures in suspended grid ceilings shall be supported independently of the ceiling suspension system by a minimum of two wires at diagonally opposite corners of the fixtures. (Tier 2: Sec. 4.8.3.2)

Cladding and Glazing

C	**NC**	**N/A**	GLAZING: Glazing in curtain walls and individual panes over 16 square feet in area, located up to a height of 10 feet above an exterior walking surface, shall have safety glazing. Such glazing located over 10 feet above an exterior walking surface shall be laminated annealed or laminated heat-strengthened safety glass or other glazing system that will remain in the frame when glass is cracked. (Tier 2: Sec. 4.8.4.8)

Parapets, Cornices, Ornamentation, and Appendages

C	**NC**	**N/A**	CONCRETE PARAPETS: Concrete parapets with height-to-thickness ratios greater than 2.5 shall have vertical reinforcement. (Tier 2: Sec. 4.8.8.3)

Intermediate Nonstructural Component Checklist Sheet 2 of 2
BUILDING 39 – PLANETARIUM

C	NC	N/A	APPENDAGES: Cornices, parapets, signs, and other appendages that extend above the highest point of anchorage to the structure or cantilever from exterior wall faces and other exterior wall ornamentation shall be reinforced and anchored to the structural system at a spacing equal to or less than 10 feet for Life Safety and 6 feet for Immediate Occupancy. This requirement need not apply to parapets or cornices compliant with Section 4.8.8.1 or 4.8.8.3. (Tier 2: Sec. 4.8.8.4)

Masonry Chimneys

C	NC	N/A	ANCHORAGE: Masonry chimneys shall be anchored at each floor level and the roof. (Tier 2: Sec.4.8.9.2)

Mechanical and Electrical Equipment

C	NC	N/A	VIBRATION ISOLATORS: Equipment mounted on vibration isolators shall be equipped with restraints or snubbers. (Tier 2: Sec. 4.8.12.5)

Ducts

C	NC	N/A	STAIR AND SMOKE DUCTS: Stair pressurization and smoke control ducts shall be braced and shall have flexible connections at seismic joints. (Tier 2: Sec. 4.8.14.1)

6.7 BUILDINGS 93, 105 & 110

6.7.1 BUILDING 93 – POOL STADIUM

Building Description

YEAR OF CONSTRUCTION: 1953 (Structural drawings not available)
YEAR OF ALTERATIONS: 1992 – Pool Remodel & Equipment Maintenance
BUILDING TYPE: C1, C2

GENERAL BUILDING DESCRIPTION: The Pool Stadium consists of two in-ground pools and a reinforced concrete bleacher structure within the pool complex. The original architectural drawings are dated 1953, and no structural drawings are available. Pumps and other mechanical equipment are located at the underside of the bleacher structure. Minimal, mostly aesthetic work was done to the pool and the pool equipment located beneath the stadium in 1992.

The concrete pools appeared to be in good condition. The slab on grade surrounding the pools typically has minor to moderate cracking throughout.

The bleacher structure is approximately 14 feet high, 60 feet long and 24 feet wide. An adjacent canopy structure and partition wall is located to the west end of the bleachers and these are not attached to the bleachers structure. An approximately 12 feet wide by 4 feet deep pit area below grade consisting of concrete walls with a concrete slab is located along the east side beneath the bleachers. The concrete bleachers and pit area are typically in fair to good condition with minor spalling at the underside.

For exterior elevations and typical construction, see pictures Bldg93-01 to Bldg93-11.

VERTICAL STRUCTURAL SYSTEM: The Stadium is supported by three concrete columns at the west side. Girders span in the E-W direction from each column to the ground level on the east edge. The foundation is slab on grade. Due to the nature of the drawings available, details of the footing system is unknown, although an available original calculation sheet indicates caisson foundations at the column bents.

LATERAL STRUCTURAL SYSTEM: The lateral force resisting system is assumed to be a concrete shear wall at the east edge of the structure, where the pitch of the structure meets the foundation. This wall runs N-S and takes the lateral force in that direction. For the E-W direction, the lateral force resisting system is unclear. Due to the column geometry, it is assumed the structure likely has been designed utilizing 3 concrete bent moment frames in this direction.

NON-STRUCTURAL SYSTEMS: The primary location of the pool equipment is beneath the Stadium bleachers. The equipment consists of the chemical dosing system for the pool as well as ventilation ducts and equipment. There are several storage tanks, pumps, chemical dosers, and electrical boxes and cabinets located throughout this space. Some of the equipment and piping is out of commission.

For non-structural systems and items present within the building, see pictures Bldg93-17 to Bldg93-22.

List of Deficiencies

The following items have been found noncompliant in accordance with the requirements of ASCE31-03:

Structural

1. PROXIMITY OF ADJACENT BUILDINGS: The clear distance between the bleachers and canopy at the west end is less than 4 percent of the height. This can result in pounding at this location during a seismic event.
2. TORSIONAL IRREGULARITY: The estimated distance between the story center of mass and the story center of rigidity in the N-S direction is greater than 20 percent of the bleacher width.
3. DETERIORATION OF CONCRETE: The underside of reinforced concrete bleacher risers typically exhibits minor spalling with exposed rebar (picture Bldg93-13). Spalling was viewed at one overhead eye-bolt anchor location (picture Bldg93-14). At the joint with the canopy at west end, the underside of concrete bleacher slab exhibits major efflorescence along entire length, which is evidence of joint leakage (picture Bldg93-12).

Non-structural

4. STAIR ANCHORAGE: Ship's ladder into the pit area is not anchored at the top or bottom. Support relies on bracket connection at top concrete curb and rests on concrete slab below with no positive connection (picture Bldg93-20).
5. MECHANICAL AND ELECTRICAL EQUIPMENT ANCHORAGE: An electrical cabinet is not anchored to the concrete slab or wall (picture Bldg93-22). In the pit area, the concrete pad at one location of pump anchorage has failed (picture Bldg93-21).
6. NO BRACING AT ATTACHED EQUIPMENT: One large tank is hanging from the concrete bleachers without bracing.
7. NO FLEXIBLE COUPLINGS AT GAS TANK PIPES: Piping to one large tank appearing to store gas does not have flexible couplings. It appears as if this tank is no longer in use (picture Bldg93-19).

Additional Observations

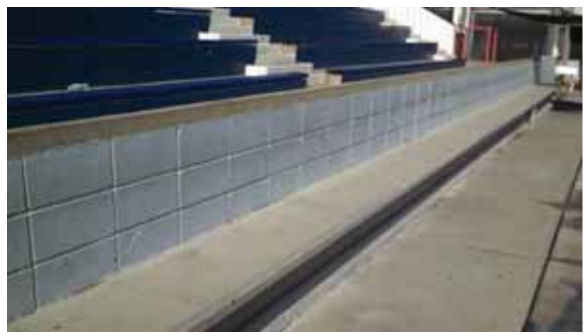
Hazardous materials stored in flexible containers, including Muriatic Acid (picture Bldg93-17), did not appear to be anchored to the slab.

BUILDING 93 – POOL STADIUM, PICTURES


Bldg93-01


Bldg93-02


Bldg93-03


Bldg93-04


Bldg93-05


Bldg93-06

Bldg93-07

Bldg93-08

Bldg93-09

Bldg93-10

Bldg93-11

Bldg93-12


Bldg93-13


Bldg93-14


Bldg93-15


Bldg93-16


Bldg93-17


Bldg93-18

Bldg93-19

Bldg93-20

Bldg93-21

Bldg93-22

Basic Structural Checklist for Building Type C1: Concrete Moment Frames
BUILDING 93 – POOL STADIUM Sheet 1 of 3

Building System

C	NC	N/A	LOAD PATH: The structure shall contain a minimum of one complete load path for Life Safety and Immediate Occupancy for seismic force effects from any horizontal direction that serves to transfer the inertial forces from the mass to the foundation. (Tier 2: Sec. 4.3.1.1)
C	NC	NA	ADJACENT BUILDINGS: The clear distance between the building being evaluated and any adjacent building shall be greater than 4 percent of the height of the shorter building for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.1.2)
C	NC	N/A	MEZZANINES: Interior mezzanine levels shall be braced independently from the main structure, or shall be anchored to the lateral-force-resisting elements of the main structure. (Tier 2: Sec. 4.3.1.3)
C	NC	N/A	WEAK STORY: The strength of the lateral-force-resisting system in any story shall not be less than 80 percent of the strength in an adjacent story, above or below, for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.1)
C	NC	N/A	SOFT STORY: The stiffness of the lateral-force-resisting system in any story shall not be less than 70 percent of the lateral-force-resisting system stiffness in an adjacent story above or below, or less than 80 percent of the average lateral-force-resisting system stiffness of the three stories above or below for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.2)
C	NC	N/A	GEOMETRY: There shall be no changes in horizontal dimension of the lateral-force-resisting system of more than 30 percent in a story relative to adjacent stories for Life Safety and Immediate Occupancy, excluding one-story penthouses and mezzanines. (Tier 2: Sec. 4.3.2.3)
C	NC	N/A	VERTICAL DISCONTINUITIES: All vertical elements in the lateral-force-resisting system shall be continuous to the foundation. (Tier 2: Sec. 4.3.2.4)

Basic Structural Checklist for Building Type C1: Concrete Moment Frames
BUILDING 93 – POOL STADIUM Sheet 2 of 3

C	**NC**	**N/A**	MASS: There shall be no change in effective mass more than 50 percent from one story to the next for Life Safety and Immediate Occupancy. Light roofs, penthouses, and mezzanines need not be considered. (Tier 2: Sec. 4.3.2.5)
C	**NC**	**N/A**	TORSION: The estimated distance between the story center of mass and the story center of rigidity shall be less than 20 percent of the building width in either plan dimension for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.6)
C	**NC**	**N/A**	DETERIORATION OF CONCRETE: There shall be no visible deterioration of concrete or reinforcing steel in any of the vertical- or lateral-force-resisting elements. (Tier 2: Sec. 4.3.3.4)
C	**NC**	**N/A**	POST-TENSIONING ANCHORS: There shall be no evidence of corrosion or spalling in the vicinity of post-tensioning or end fittings. Coil anchors shall not have been used. (Tier 2: Sec. 4.3.3.5)

Lateral-Force-Resisting System

C	**NC**	**N/A**	REDUNDANCY: The number of lines of moment frames in each principal direction shall be greater than or equal to 2 for Life Safety and Immediate Occupancy. The number of bays of moment frames in each line shall be greater than or equal to 2 for Life Safety and 3 for Immediate Occupancy. (Tier 2: Sec. 4.4.1.1.1)
C	**NC**	**N/A**	INTERFERING WALLS: All concrete and masonry infill walls placed in moment frames shall be isolated from structural elements. (Tier 2: Sec. 4.4.1.2.1)
C	**NC**	**N/A**	SHEAR STRESS CHECK: The shear stress in the concrete columns, calculated using the Quick Check procedure of Section 3.5.3.2, shall be less than the greater of 100 psi or $2\sqrt{f'_c}$ for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.1.4.1)

Basic Structural Checklist for Building Type C1: Concrete Moment Frames
BUILDING 93 – POOL STADIUM Sheet 3 of 3

C	NC	N/A	AXIAL STRESS CHECK: The axial stress due to gravity loads in columns subjected to overturning forces shall be less than $0.1f'_c$ for Life Safety and Immediate Occupancy. Alternatively, the axial stresses due to overturning forces alone, calculated using the Quick Check procedure of Section 3.5.3.6, shall be less than $0.3f'_c$ for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.1.4.2)

Connections

C *	NC	N/A	CONCRETE COLUMNS: All concrete columns shall be doweled into the foundation for Life Safety, and the dowels shall be able to develop the tensile capacity of reinforcement in columns of lateral-force-resisting system for Immediate Occupancy. (Tier 2: Sec. 4.6.3.2)

* Item not visible during site visit, statement completed based on general knowledge of construction type.

Supplemental Structural Checklist for Building Type C1: Concrete Moment Frames
BUILDING 93 – POOL STADIUM Sheet 1 of 3

Lateral-Force-Resisting System

C	NC	N/A	FLAT SLAB FRAMES: The lateral-force-resisting system shall not be a frame consisting of columns and a flat slab/plate without beams. (Tier 2: Sec. 4.4.1.4.3)
C	NC	N/A	PRESTRESSED FRAME ELEMENTS: The lateral-force-resisting frames shall not include any prestressed or post-tensioned elements where the average prestress exceeds the lesser of 700 psi or f'_c / 6 at potential hinge locations. The average prestress shall be calculated in accordance with the Quick Check procedure of Section 3.5.3.8. (Tier 2: Sec. 4.4.1.4.4)
C	NC	N/A	CAPTIVE COLUMNS: There shall be no columns at a level with height/depth ratios less than 50 percent of the nominal height/depth ratio of the typical columns at that level for Life Safety and 75 percent for Immediate Occupancy. (Tier 2: Sec. 4.4.1.4.5)
C *	NC	N/A	NO SHEAR FAILURES: The shear capacity of frame members shall be able to develop the moment capacity at the ends of the members. (Tier 2: Sec. 4.4.1.4.6)
C *	NC	N/A	STRONG COLUMN/WEAK BEAM: The sum of the moment capacity of the columns shall be 20 percent greater than that of the beams at frame joints. (Tier 2: Sec. 4.4.1.4.7)
C *	NC	N/A	BEAM BARS: At least two longitudinal top and two longitudinal bottom bars shall extend continuously throughout the length of each frame beam. At least 25 percent of the longitudinal bars provided at the joints for either positive or negative moment shall be continuous throughout the length of the members for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.1.4.8)
C *	NC	N/A	COLUMN-BAR SPLICES: All column bar lap splice lengths shall be greater than *35db* for Life Safety and *50db* for Immediate Occupancy, and shall be enclosed by ties spaced at or less than 8d,, for Life Safety and Immediate Occupancy. Alternatively, column bars shall be spliced with mechanical couplers with a capacity of at least 1.25 times the nominal yield strength of the spliced bar. (Tier 2: Sec. 4.4.1.4.9)

Supplemental Structural Checklist for Building Type C1: Concrete Moment Frames
BUILDING 93 – POOL STADIUM Sheet 2 of 3

C *	NC	N/A	BEAM-BAR SPLICES: The lap splices or mechanical couplers for longitudinal beam reinforcing shall not be located within $l_b/4$ of the joints and shall not be located in the vicinity of potential plastic hinge locations. (Tier 2: Sec. 4.4.1.4.10)
C *	NC	N/A	COLUMN-TIE SPACING: Frame columns shall have ties spaced at or less than *d/4* for Life Safety and Immediate Occupancy throughout their length and at or less than $8d_b$ for Life Safety and Immediate Occupancy at all potential plastic hinge locations. (Tier 2: Sec. 4.4.1.4.11)
C *	NC	N/A	STIRRUP SPACING: All beams shall have stirrups spaced at or less than *d/2* for Life Safety and Immediate Occupancy throughout their length. At potential plastic hinge locations, stirrups shall be spaced at or less than the minimum of $8d_b$ or *d/4* for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.1.4.12)
C *	NC	N/A	JOINT REINFORCING: Beam-column joints shall have ties spaced at or less than $8d_b$ for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.1.4.13)
C	NC	N/A	JOINT ECCENTRICITY: There shall be no eccentricities larger than 20 percent of the smallest column plan dimension between girder and column centerlines. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.1.4.14)
C	NC	N/A	STIRRUP AND TIE HOOKS: The beam stirrups and column ties shall be anchored into the member cores with hooks of 135° or more. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.1.4.15)
C *	NC	N/A	DEFLECTION COMPATIBILITY: Secondary components shall have the shear capacity to develop the flexural strength of the components for Life Safety and shall meet the requirements of Sections 4.4.1.4.9, 4.4.1.4.10, 4.4.1.4.11, 4.4.1.4.12 and 4.4.1.4.15 for Immediate Occupancy. (Tier 2: Sec. 4.4.1 .6.2)
C	NC	N/A	FLAT SLABS: Flat slabs/plates not part of lateral-force-resisting system shall have continuous bottom steel through the column joints for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.1 .6.3)

Supplemental Structural Checklist for Building Type C1: Concrete Moment Frames
BUILDING 93 – POOL STADIUM Sheet 3 of 3

Diaphragms

C	NC	N/A	DIAPHRAGM CONTINUITY: The diaphragms shall not be composed of split-level floors and shall not have expansion joints. (Tier 2: Sec. 4.5.1 .1)
C	NC	N/A	PLAN IRREGULARITIES: There shall be tensile capacity to develop the strength of the diaphragm at re-entrant comers or other locations of plan irregularities. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.7)
C	NC	N/A	DIAPHRAGM REINFORCEMENT AT OPENINGS: There shall be reinforcing around all diaphragm openings larger than 50 percent of the building width in either major plan dimension. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2:Sec. 4.5.1.8)

Connections

C *	NC	N/A	UPLIFT AT PILE CAPS: Pile caps shall have top reinforcement and piles shall be anchored to the pile caps for Life Safety, and the pile cap reinforcement and pile anchorage shall be able to develop the tensile capacity of the piles for Immediate Occupancy. (Tier 2: Sec. 4.6.3.10)

* Item not visible during site visit, statement completed based on general knowledge of construction type.

Basic Structural Checklist for Building Type C2: Concrete Shear Walls with Stiff Diaphragms
BUILDING 93 – POOL STADIUM Sheet 1 of 3

Building System

C	NC	N/A	LOAD PATH: The structure shall contain a minimum of one complete load path for Life Safety and Immediate Occupancy for seismic force effects from any horizontal direction that serves to transfer the inertial forces from the mass to the foundation. (Tier 2: Sec. 4.3.1.1)
C	NC	N/A	MEZZANINES: Interior mezzanine levels shall be braced independently from the main structure, or shall be anchored to the lateral-force-resisting elements of the main structure. (Tier 2: Sec. 4.3.1.3)
C	NC	N/A	WEAK STORY: The strength of the lateral-force-resisting system in any story shall not be less than 80 percent of the strength in an adjacent story, above or below, for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.1)
C	NC	N/A	SOFT STORY: The stiffness of the lateral-force-resisting system in any story shall not be less than 70 percent of the lateral-force-resisting system stiffness in an adjacent story above or below, or less than 80 percent of the average lateral-force-resisting system stiffness of the three stories above or below for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.2)
C	NC	N/A	GEOMETRY: There shall be no changes in horizontal dimension of the lateral-force-resisting system of more than 30 percent in a story relative to adjacent stories for Life Safety and Immediate Occupancy, excluding one-story penthouses and mezzanines. (Tier 2: Sec. 4.3.2.3)
C	NC	N/A	VERTICAL DISCONTINUITIES: All vertical elements in the lateral-force-resisting system shall be continuous to the foundation. (Tier 2: Sec. 4.3.2.4)
C	NC	N/A	MASS: There shall be no change in effective mass more than 50 percent from one story to the next for Life Safety and Immediate Occupancy. Light roofs, penthouses, and mezzanines need not be considered. (Tier 2: Sec. 4.3.2.5)

Basic Structural Checklist for Building Type C2: Concrete Shear Walls with Stiff Diaphragms
BUILDING 93 – POOL STADIUM Sheet 2 of 3

C	NC	N/A	TORSION: The estimated distance between the story center of mass and the story center of rigidity shall be less than 20 percent of the building width in either plan dimension for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.6)
C	NC	N/A	DETERIORATION OF CONCRETE: There shall be no visible deterioration of concrete or reinforcing steel in any of the vertical- or lateral-force-resisting elements. (Tier 2: Sec. 4.3.3.4)
C	NC	N/A	POST-TENSIONING ANCHORS: There shall be no evidence of corrosion or spalling in the vicinity of post-tensioning or end fittings. Coil anchors shall not have been used. (Tier 2: Sec. 4.3.3.5)
C	NC	N/A	CONCRETE WALL CRACKS: All existing diagonal cracks in wall elements shall be less than 1/8 inch for Life Safety and 1/16 inch for Immediate Occupancy, shall not be concentrated in one location, and shall not form an X pattern. (Tier 2: Sec. 4.3.3.9)

Lateral-Force-Resisting System

C	NC	N/A	COMPLETE FRAMES: Steel or concrete frames classified as secondary components shall form a complete vertical-load-carrying system. (Tier 2: Sec. 4.4.1.6.1)
C	NC	N/A	REDUNDANCY: The number of lines of shear walls in each principal direction shall be greater than or equal to 2 for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.1.1)
C	NC	N/A	SHEAR STRESS CHECK: The shear stress in the concrete shear walls, calculated using the Quick Check procedure of Section 3.5.3.3, shall be less than the greater of 100 psi or 2*sqrt(f'c) for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.2.1)
C *	NC	N/A	REINFORCING STEEL: The ratio of reinforcing steel area to gross concrete area shall be not less than 0.0015 in the vertical direction and 0.0025 in the horizontal direction for Life Safety and Immediate Occupancy. The spacing of reinforcing steel shall be equal to or less than 18 inches for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.2.2)

Basic Structural Checklist for Building Type C2: Concrete Shear Walls with Stiff Diaphragms
BUILDING 93 – POOL STADIUM Sheet 3 of 3

Connections

C *	NC	N/A	TRANSFER TO SHEAR WALLS: Diaphragms shall be connected for transfer of loads to the shear walls for Life Safety and the connections shall be able to develop the lesser of the shear strength of the walls or diaphragms for Immediate Occupancy. (Tier 2: Sec. 4.6.2.1)
C *	NC	N/A	FOUNDATION DOWELS: Wall reinforcement shall be doweled into the foundation for Life Safety, and the dowels shall be able to develop the lesser of the strength of the walls or the uplift capacity of the foundation for Immediate Occupancy. (Tier 2: Sec. 4.6.3.5)

* Item not visible during site visit, statement completed based on general knowledge of construction type.

Supplemental Structural Checklist for Building Type C2: Concrete Shear Walls with Stiff Diaphragms

BUILDING 93 – POOL STADIUM Sheet 1 of 2

Lateral-Force-Resisting System

C *	NC	N/A	DEFLECTION COMPATIBILITY: Secondary components shall have the shear capacity to develop the flexural strength of the components for Life Safety and shall meet the requirements of Sections 4.4.1.4.9, 4.4.1.4.10, 4.4.1.4.11, 4.4.1.4.12 and 4.4.1.4.15 for Immediate Occupancy. (Tier 2: Sec. 4.4.1.6.2)
C	NC	N/A	FLAT SLABS: Flat slabs/plates not part of lateral-force-resisting system shall have continuous bottom steel through the column joints for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.1.6.3)
C	NC	N/A	COUPLING BEAMS: The stirrups in coupling beams over means of egress shall be spaced at or less than d/2 and shall be anchored into the confined core of the beam with hooks of 135° or more for Life Safety. All coupling beams shall comply with the requirements above and shall have the capacity in shear to develop the uplift capacity of the adjacent wall for Immediate Occupancy. (Tier 2: Sec. 4.4.2.2.3)
C	NC	N/A	OVERTURNING: All shear walls shall have aspect ratios less than 4-to-1. Wall piers need not be considered. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.2.4)
C	NC	N/A	CONFINEMENT REINFORCING: For shear walls with aspect ratios greater than 2-to-1, the boundary elements shall be confined with spirals or ties with spacing less than $8d_b$.This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.2.5)
C	NC	N/A	REINFORCING AT OPENINGS: There shall be added trim reinforcement around all wall openings with a dimension greater than three times the thickness of the wall. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.2.6)

Supplemental Structural Checklist for Building Type C2: Concrete Shear Walls with Stiff Diaphragms
BUILDING 93 – POOL STADIUM Sheet 2 of 2

C	NC	N/A	WALL THICKNESS: Thickness of bearing walls shall not be less than 1/25 the unsupported height or length, whichever is shorter, nor less than 4 inches. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.2.7)

Diaphragms

C	NC	N/A	DIAPHRAGM CONTINUITY: The diaphragms shall not be composed of split-level floors and shall not have expansion joints. (Tier 2: Sec. 4.5.1.1)
C	NC	N/A	OPENINGS AT SHEAR WALLS: Diaphragm openings immediately adjacent to the shear walls shall be less than 25 percent of the wall length for Life Safety and 15 percent of the wall length for Immediate Occupancy. (Tier 2: Sec. 4.5.1.4)
C	NC	N/A	PLAN IRREGULARITIES: There shall be tensile capacity to develop the strength of the diaphragm at re-entrant comers or other locations of plan irregularities. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.7
C	NC	N/A	DIAPHRAGM REINFORCEMENT AT OPENINGS: There shall be reinforcing around all diaphragm openings larger than 50 percent of the building width in either major plan dimension. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.8)

Connections

C *	NC	N/A	UPLIFT AT PILE CAPS: Pile caps shall have top reinforcement and piles shall be anchored to the pile caps for Life Safety, and the pile cap reinforcement and pile anchorage shall be able to develop the tensile capacity of the piles for Immediate Occupancy. (Tier 2: Sec. 4.6.3.10)

* Item not visible during site visit, statement completed based on general knowledge of construction type.

Basic Nonstructural Component Checklist Sheet 1 of 4
BUILDING 93 – POOL STADIUM

Partitions

C	NC	N/A	UNREINFORCED MASONRY: Unreinforced masonry or hollow clay tile partitions shall be braced at a spacing equal to or less than 10 feet in levels of low or moderate seismicity and 6 feet in levels of high seismicity. (Tier 2: Sec. 4.8.1.1)

Ceiling Systems

C	NC	N/A	SUPPORT: The integrated suspended ceiling system shall not be used to laterally support the tops of gypsum board, masonry, or hollow clay tile partitions. Gypsum board partitions need not be evaluated where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier2: Sec. 4.8.2.1)

Light Fixtures

C	NC	N/A	EMERGENCY LIGHTING: Emergency lighting shall be anchored or braced to prevent falling during an earthquake. (Tier 2: Sec. 4.8.3.1)

Cladding and Glazing

C	NC	N/A	CLADDING ANCHORS: Cladding components weighing more than 10 psf shall be mechanically anchored to the exterior wall framing at a spacing equal to or less than 4 feet. A spacing of up to 6 feet is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.1)
C	NC	N/A	DETERIORATION: There shall be no evidence of deterioration, damage or corrosion in any of the connection elements. (Tier 2: Sec. 4.8.4.2)
C	NC	N/A	CLADDING ISOLATION: For moment frame buildings of steel or concrete, panel connections shall be detailed to accommodate a story drift ratio of 0.02. Panel connection detailing for a story drift ratio of 0.01 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.3)

Basic Nonstructural Component Checklist Sheet 2 of 4
BUILDING 93 – POOL STADIUM

C	**NC**	**N/A**	MULTI-STORY PANELS: For multi-story panels attached at each floor level, panel connections shall be detailed to accommodate a story drift ratio of 0.02. Panel connection detailing for a story drift ratio of 0.01 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.4)
C	**NC**	**N/A**	BEARING CONNECTIONS: Where bearing connections are required, there shall be a minimum of two bearing connections for each wall panel. (Tier 2: Sec. 4.8.4.5)
C	**NC**	**N/A**	INSERTS: Where inserts are used in concrete connections, the inserts shall be anchored to reinforcing steel or other positive anchorage. (Tier 2: Sec. 4.8.4.6)
C	**NC**	**N/A**	PANEL CONNECTIONS: Exterior cladding panels shall be anchored out-of-plane with a minimum of 4 connections for each wall panel. Two connections per wall panel are permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.7)

Masonry Veneer

C	**NC**	**N/A**	SHELF ANGLES: Masonry veneer shall be supported by shelf angles or other elements at each floor 30 feet or more above ground for Life Safety and at each floor above the first floor for Immediate Occupancy. (Tier 2: Sec. 4.8.5.1)
C	**NC**	**N/A**	TIES: Masonry veneer shall be connected to the back-up with corrosion-resistant ties. The ties shall have a spacing equal to or less than 24 inches with a minimum of one tie for every 2-2/3 square feet. A spacing of up to 36 inches is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.5.2)
C	**NC**	**N/A**	WEAKENED PLANES: Masonry veneer shall be anchored to the back-up adjacent to weakened planes, such as at the locations of flashing. (Tier 2: Sec. 4.8.5.3)
C	**NC**	**N/A**	DETERIORATION: There shall be no evidence of deterioration, damage, or corrosion in any of the connection elements. (Tier 2: Sec. 4.8.5.4)

Basic Nonstructural Component Checklist Sheet 3 of 4
BUILDING 93 – POOL STADIUM

Parapets, Cornices, Ornamentation, and Appendages

C	NC	N/A	URM PARAPETS: There shall be no laterally unsupported unreinforced masonry parapets or cornices with height-to-thickness ratios greater than 1.5. A height-to-thickness ratio of up to 2.5 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.8.1)
C	NC	N/A	CANOPIES: Canopies located at building exits shall be anchored to the structural framing at a spacing of 6 feet or less. An anchorage spacing of up to 10 feet is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.8.2)

Masonry Chimneys

C	NC	N/A	URM CHIMNEYS: No unreinforced masonry chimney shall extend above the roof surface more than twice the least dimension of the chimney. A height above the roof surface of up to three times the least dimension of the chimney is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.9.1)

Stairs

C	NC	N/A	URM WALLS: Walls around stair enclosures shall not consist of unbraced hollow clay tile or unreinforced masonry with a height-to-thickness ratio greater than 12-to-1. A height-to-thickness ratio of up to 15-to-1 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.10.1)
C	NC	N/A	STAIR DETAILS: In moment frame structures, the connection between the stairs and the structure shall not rely on shallow anchors in concrete. Alternatively, the stair details shall be capable of accommodating the drift calculated using the Quick Check procedure of Section 3.5.3.1 without including tension in the anchors. (Tier 2: Sec. 4.8.10.2)

Basic Nonstructural Component Checklist Sheet 4 of 4
BUILDING 93 – POOL STADIUM

Building Contents and Furnishing

C	NC	N/A	TALL NARROW CONTENTS: Contents over 4 feet in height with a height-to-depth or height-to-width ratio greater than 3-to-1 shall be anchored to the floor slab or adjacent structural walls. A height-to-depth or height-to-width ratio of up to 4-to-1 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.11.1)

Mechanical and Electrical Equipment

C	NC	N/A	EMERGENCY POWER: Equipment used as part of an emergency power system shall be mounted to maintain continued operation after an earthquake. (Tier 2: Sec. 4.8.12.1)
C	NC	N/A	HAZARDOUS MATERIAL EQUIPMENT: HVAC or other equipment containing hazardous material shall not have damaged supply lines or unbraced isolation supports. (Tier 2:Sec. 4.8.12.2)
C	NC	N/A	DETERIORATION: There shall be no evidence of deterioration, damage, or corrosion in any of the anchorage or supports of mechanical or electrical equipment. (Tier 2: Sec. 4.8.12.3)
C	NC	N/A	ATTACHED EQUIPMENT: Equipment weighing over 20 lb that is attached to ceilings, walls, or other supports 4 feet above the floor level shall be braced. (Tier 2: Sec. 4.8.12.4)

Piping

C	NC	N/A	FIRE SUPPRESSION PIPING: Fire suppression piping shall be anchored and braced in accordance with NFPA-13 (NFPA, 1996). (Tier 2: Sec. 4.8.13.1)
C	NC	N/A	FLEXIBLE COUPLINGS: Fluid, gas, and fire suppression piping shall have flexible couplings. (Tier 2: Sec. 4.8.13.2)

Hazardous Materials Storage and Distribution

C	NC	N/A	TOXIC SUBSTANCES: Toxic and hazardous substances stored in breakable containers shall be restrained from falling by latched doors, shelf lips, wires, or other methods. (Tier 2: Sec. 4.8.15.1)

Intermediate Nonstructural Component Checklist Sheet 1 of 2
BUILDING 93 – POOL STADIUM

Ceiling Systems

C	NC	N/A	LAY-IN TILES: Lay-in tiles used in ceiling panels located at exits and corridors shall be secured with clips. (Tier 2: Sec. 4.8.2.2)
C	NC	N/A	INTEGRATED CEILINGS: Integrated suspended ceilings at exits and corridors or weighing more than 2 pounds per square foot shall be laterally restrained with a minimum of four diagonal wires or rigid members attached to the structure above at a spacing equal to or less than 12 feet. (Tier 2: Sec. 4.8.2.3)
C	NC	N/A	SUSPENDED LATH AND PLASTER: Ceilings consisting of suspended lath and plaster or gypsum board shall be attached to resist seismic forces for every 12 square feet of area. (Tier 2: Sec. 4.8.2.4)

Light Fixtures

C	NC	N/A	INDEPENDENT SUPPORT: Light fixtures in suspended grid ceilings shall be supported independently of the ceiling suspension system by a minimum of two wires at diagonally opposite corners of the fixtures. (Tier 2: Sec. 4.8.3.2)

Cladding and Glazing

C	NC	N/A	GLAZING: Glazing in curtain walls and individual panes over 16 square feet in area, located up to a height of 10 feet above an exterior walking surface, shall have safety glazing. Such glazing located over 10 feet above an exterior walking surface shall be laminated annealed or laminated heat-strengthened safety glass or other glazing system that will remain in the frame when glass is cracked. (Tier 2: Sec. 4.8.4.8)

Parapets, Cornices, Ornamentation, and Appendages

C	NC	N/A	CONCRETE PARAPETS: Concrete parapets with height-to-thickness ratios greater than 2.5 shall have vertical reinforcement. (Tier 2: Sec. 4.8.8.3)

Intermediate Nonstructural Component Checklist Sheet 2 of 2
BUILDING 93 – POOL STADIUM

C	NC	N/A	APPENDAGES: Cornices, parapets, signs, and other appendages that extend above the highest point of anchorage to the structure or cantilever from exterior wall faces and other exterior wall ornamentation shall be reinforced and anchored to the structural system at a spacing equal to or less than 10 feet for Life Safety and 6 feet for Immediate Occupancy. This requirement need not apply to parapets or cornices compliant with Section 4.8.8.1 or 4.8.8.3. (Tier 2: Sec. 4.8.8.4)

Masonry Chimneys

C	NC	N/A	ANCHORAGE: Masonry chimneys shall be anchored at each floor level and the roof. (Tier 2: Sec.4.8.9.2)

Mechanical and Electrical Equipment

C	NC	N/A	VIBRATION ISOLATORS: Equipment mounted on vibration isolators shall be equipped with restraints or snubbers. (Tier 2: Sec. 4.8.12.5)

Ducts

C	NC	N/A	STAIR AND SMOKE DUCTS: Stair pressurization and smoke control ducts shall be braced and shall have flexible connections at seismic joints. (Tier 2: Sec. 4.8.14.1)

6.7.2 BUILDING 105 – LeBARD STADIUM, EAST & WEST PRESS BOXES

Building Description

YEAR OF CONSTRUCTION:	1954 – Stadium and E. Press Box unknown – W. Press Box
YEAR OF ALTERATIONS:	2000 & 2004 – Stadium ADA Upgrades
BUILDING TYPE:	W2, C2 (The east and west press box buildings do not strictly adhere to any of the typical wood building types. The type chosen most closely matches existing building characteristics.)

GENERAL BUILDING DESCRIPTION: The Stadium site consists of bleachers constructed on earthen berms at either side of the playing field. The original structural drawings dated circa 1954 depict one press box on the east side of the stadium atop the east, home-side bleachers. Field observations revealed an additional press box structure atop the west, visitors' bleachers; no structural drawings are available for this building.

For exterior elevations and typical construction of the East Press Box and Bleachers, see pictures Bldg105E-01 to Bldg105E-18. For the West Press Box and Bleachers, see pictures Bldg105W-01 to Bldg105W-12.

BLEACHERS STRUCTURAL SYSTEM: Both bleachers are slab on grade, reinforced concrete construction. Both are approximately 31 feet high and 74 feet deep. The west bleacher is 270 feet wide and the east bleacher is 207 feet wide. A concrete fence wall is located along the top of both bleachers. Concrete retaining walls and ramps were added as part of stadium upgrades in 2000 and 2004. The bleachers are in fair condition with minor to moderate spalling evident throughout.

Note the bleachers are not categorized as a building type and checklists were not completed for them. They were viewed in the field to determine their condition as a part of this evaluation.

EAST PRESS BOX STRUCTURAL SYSTEM: The East Press Box is a one story, wood framed structure. It is 13 feet high, 38 feet long, and 8 feet wide. The lateral force resisting system is a plywood roof diaphragm with plywood shear walls. It is supported by a reinforced concrete podium that is approximately 4 feet high consisting of a concrete slab and concrete walls on continuous conventional footings. The press box framing appears to be in fair condition. The concrete podium is in fair condition with locations of moderate spalling and cracking.

WEST PRESS BOX STRUCTURAL SYSTEM: The West Press Box is a one story, wood framed structure. It is 11 feet high, 24 feet long, and 7 feet wide and supported by the concrete bleacher slab. The lateral force resisting system is a plywood roof diaphragm with one plywood shear wall in each direction. Anchorage to the slab appears to be post-installed. The press box framing appears to be in fair condition.

NON-STRUCTURAL SYSTEMS: The East Press Box contains lights at the roof level which are anchored to guardrails. The West Press Box contains speakers which are minimally anchored to the roof structure (picture Bldg105W-05).

List of Deficiencies

The following items have been found noncompliant in accordance with the requirements of ASCE31-03:

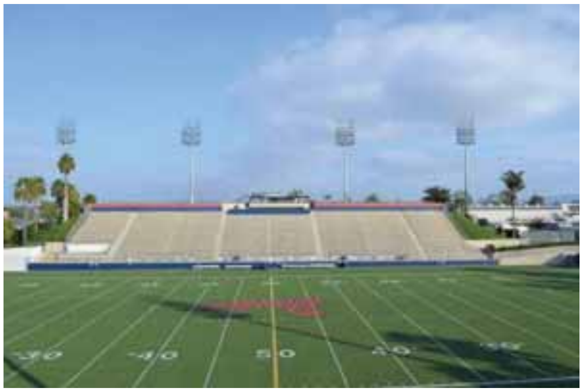
Structural

1. EAST & WEST PRESS BOXES, REDUNDANCY: The longitudinal direction only contains one line of plywood shear walls in each press box. The transverse direction only contains one line of plywood shear walls in the west press box only.
2. EAST & WEST PRESS BOXES, OPENINGS: The west wall (East Press Box) and east wall (West Press Box) has windows along entire length, and no wood structural panel shear walls are present for bracing.
3. WEST PRESS BOX, NARROW WOOD SHEAR WALLS & SHEAR OVERSTRESS: The shear wall in the transverse direction has an aspect ratio greater than 2-to-1 and has a shear stress of over 1,000 plf, both maximum limits for Life Safety.
4. CONCRETE BLEACHERS & CONCRETE PODIUM, DETERIORATION OF CONCRETE: Minor to moderate spalling with exposed rebar was typically viewed at the bleacher risers and at the south stairs of the East Press Box concrete podium (pictures Bldg105E-13 to Bldg105E-15).
5. CONCRETE PODIUM, OPENINGS AT SHEAR WALLS: Diaphragm openings in the concrete slab immediately adjacent to the east concrete wall account for approximately 50% of the wall length. Due to the low seismic shear being transferred to this concrete wall, this deficiency appears to be minor (picture Bldg105E-10).

Non-structural

6. EAST & WEST PRESS BOXES, SPEAKERS AT PRESS BOXES NOT ADEQUATELY ANCHORED: Bracing of speakers at the roof consists of wires or cords connected to guardrails or conduit and do not appear to be braced adequately (pictures Bldg105E-18 & Bldg105W-05).

BUILDING 105 – EAST BLEACHERS AND PRESS BOX, PICTURES



Bldg105E-01

Bldg105E-02

Bldg105E-03

Bldg105E-04

Bldg105E-05

Bldg105E-06


Bldg105E-07


Bldg105E-08


Bldg105E-09


Bldg105E-10


Bldg105E-11


Bldg105E-12

Bldg105E-13

Bldg105E-14

Bldg105E-15

Bldg105E-16

Bldg105E-17

Bldg105E-18

BUILDING 105 – WEST BLEACHERS AND PRESS BOX, PICTURES


Bldg105W-01


Bldg105W-02


Bldg105W-03


Bldg105W-04


Bldg105W-05


Bldg105W-06

Bldg105W-07

Bldg105W-08

Bldg105W-09

Bldg105W-10

Bldg105W-11

Bldg105W-12

Basic Structural Checklist for Building Type W2: Wood Frames, Commercial and Industrial

BUILDING 105E – EAST PRESS BOX Sheet 1 of 4

Building System

C	NC	N/A	LOAD PATH: The structure shall contain a minimum of one complete load path for Life Safety and Immediate Occupancy for seismic force effects from any horizontal direction that serves to transfer the inertial forces from the mass to the foundation. (Tier 2: Sec. 4.3.1.1)
C	NC	N/A	MEZZANINES: Interior mezzanine levels shall be braced independently from the main structure, or shall be anchored to the lateral-force-resisting elements of the main structure. (Tier 2:Sec. 4.3. 1.3)
C	NC	N/A	WEAK STORY: The strength of the lateral-force-resisting system in any story shall not be less than 80 percent of the strength in an adjacent story, above or below, for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.1)
C	NC	N/A	SOFT STORY: The stiffness of the lateral-force-resisting system in any story shall not be less than 70 percent of the lateral-force-resisting system stiffness in an adjacent story above or below, or less than 80 percent of the average lateral-force-resisting system stiffness of the three stories above or below for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.2)
C	NC	N/A	GEOMETRY: There shall be no changes in horizontal dimension of the lateral-force-resisting system of more than 30 percent in a story relative to adjacent stories for Life Safety and Immediate Occupancy, excluding one-story penthouses and mezzanines. (Tier 2: Sec. 4.3.2.3)
C	NC	N/A	VERTICAL DISCONTINUITIES: All vertical elements in the lateral-force-resisting system shall be continuous to the foundation. (Tier 2: Sec. 4.3.2.4)
C	NC	N/A	MASS: There shall be no change in effective mass more than 50 percent from one story to the next for Life Safety and Immediate Occupancy. Light roofs, penthouses, and mezzanines need not be considered. (Tier 2: Sec. 4.3.2.5)

Basic Structural Checklist for Building Type W2: Wood Frames, Commercial and Industrial
BUILDING 105E – EAST PRESS BOX Sheet 2 of 4

C	NC	N/A	DETERIORATION OF WOOD: There shall be no signs of decay, shrinkage, splitting, fire damage, or sagging in any of the wood members, and none of the metal connection hardware shall be deteriorated, broken, or loose. (Tier 2: Sec. 4.3.3. 1)
C	NC	N/A	WOOD STRUCTURAL PANEL SHEAR WALL FASTENERS: There shall be no more than 15 percent of inadequate fastening such as overdriven fasteners, omitted blocking, excessive fastening spacing, or inadequate edge distance. TI1is statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.3.3.2)

Lateral-Force-Resisting System

C	NC	N/A	REDUNDANCY: The number of lines of shear walls in each principal direction shall be greater than or equal to 2 for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.1.1)
C	NC	N/A	SHEAR STRESS CHECK: The shear stress in the shear walls, calculated using the Quick Check procedure of Section 3.5.3.3, shall be less than the following values for Life Safety and Immediate Occupancy (Tier 2: Sec. 4.4.2. 7.1): Structural panel sheathing 1,000 plf Diagonal sheathing 700 plf Straight sheathing 100 plf All other conditions 100 plf
C	NC	N/A	STUCCO (EXTERIOR PLASTER) SHEAR WALLS: Multi-story buildings shall not rely on exterior stucco walls as the primary lateral-force-resisting system. (Tier 2: Sec. 4.4.2.7.2)
C	NC	N/A	GYPSUM WALLBOARD OR PLASTER SHEAR WALLS: Interior plaster or gypsum wallboard shall not be used as shear walls on buildings over one story in height with the exception of the uppermost level of a multi-story building. (Tier 2: Sec. 4.4.2.7.3)

Basic Structural Checklist for Building Type W2: Wood Frames, Commercial and Industrial
BUILDING 105E – EAST PRESS BOX Sheet 3 of 4

C	NC	N/A	NARROW WOOD SHEAR WALLS: Narrow wood shear walls with an aspect ratio greater than 2-to-1 for Life Safety and 1.5-to-1 for Immediate Occupancy shall not be used to resist lateral forces developed in the building in levels of moderate and high seismicity. Narrow wood shear walls with an aspect ratio greater than 2-to-I for Immediate Occupancy shall not be used to resist lateral forces developed in the building in levels of low seismicity. (Tier 2: Sec. 4.4.2.7.4)
C	NC	N/A	WALLS CONNECTED THROUGH FLOORS: Shear walls shall have interconnection between stories to transfer overturning and shear forces through the floor. (Tier 2: Sec. 4.4.2.7.5)
C	NC	N/A	HILLSIDE SITE: For structures that are taller on at least one side by more than one-half story due to a sloping site, all shear walls on the downhill slope shall have an aspect ratio less than 1-to-1 for Life Safety and 1-to-2 for Immediate Occupancy. (Tier 2: Sec. 4.4.2.7.6)
C	NC	N/A	CRIPPLE WALLS: Cripple walls below first-floor-level shear walls shall be braced to the foundation with wood structural panels. (Tier 2: Sec. 4.4.2. 7. 7)
C	NC	N/A	OPENINGS: Walls with openings greater than 80 percent of the length shall be braced with wood structural panel shear walls with aspect ratios of not more than 1.5-to-1 or shall be supported by adjacent construction through positive tics capable of transferring the lateral forces. (Tier 2: Sec. 4.4.2.7.8)

Connections

C	NC	N/A	WOOD POSTS: There shall be a positive connection of wood posts to the foundation. (Tier 2: Sec. 4.6.3.3)
C	NC	N/A	WOOD SILLS: All wood sills shall be bolted to the foundation. (Tier 2: Sec. 4.6.3.4)

Basic Structural Checklist for Building Type W2: Wood Frames, Commercial and Industrial
BUILDING 105E – EAST PRESS BOX Sheet 4 of 4

C	NC	N/A	GIRDER/COLUMN CONNECTION: There shall be a positive connection utilizing plates, connection hardware, or straps between the girder and the column support. (Tier 2: Sec. 4.6.4.1)

Supplemental Structural Checklist for Building Type W2: Wood Frames, Commercial and Industrial
BUILDING 105E – EAST PRESS BOX Sheet 1 of 2

Lateral-Force-Resisting System

C	NC	N/A	HOLD-DOWN ANCHORS: All shear walls shall have hold-down anchors constructed per acceptable construction practices, attached to the end studs. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.7.9)

Diaphragms

C	NC	N/A	DIAPHRAGM CONTINUITY: The diaphragms shall not be composed of split-level floors and shall not have expansion joints. (Tier 2: Sec. 4.5.1.1)
C	NC	N/A	ROOF CHORD CONTINUITY: All chord elements shall be continuous, regardless of changes in roof elevation. (Tier 2: Sec. 4.5.1.3)
C	NC	N/A	PLAN IRREGULARITIES: There shall be tensile capacity to develop the strength of the diaphragm at re-entrant comers or other locations of plan irregularities. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.7)
C	NC	N/A	DIAPHRAGM REINFORCEMENT AT OPENINGS: There shall be reinforcing around all diaphragm openings larger than 50 percent of the building width in either major plan dimension. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.8)
C	NC	N/A	STRAIGHT SHEATHING: All straight sheathed diaphragms shall have aspect ratios less than 2-to-1 for Life Safety and 1-to-1 for Immediate Occupancy in the direction being considered. (Tier 2: Sec. 4.5.2.1)
C	NC	N/A	SPANS: All wood diaphragms with spans greater than 24 feet for Life Safety and 12 feet for Immediate Occupancy shall consist of wood structural panels or diagonal sheathing. Wood commercial and industrial buildings may have rod-braced systems. (Tier 2: Sec. 4.5.2.2)

Supplemental Structural Checklist for Building Type W2: Wood Frames, Commercial and Industrial
BUILDING 105E – EAST PRESS BOX Sheet 2 of 2

C	NC	N/A	UNBLOCKED DIAPHRAGMS: All diagonally sheathed or unblocked wood structural panel diaphragms shall have horizontal spans less than 40 feet for Life Safety and 30 feet for Immediate Occupancy and shall have aspect ratios less than or equal to 4-to-1 for Life Safety and 3-to-1 for Immediate Occupancy. (Tier 2: Sec. 4.5.2.3)
C	NC	N/A	OTHER DIAPHRAGMS: The diaphragm shall not consist of a system other than wood, metal deck, concrete, or horizontal bracing. (Tier 2: Sec. 4.5.7.1)

Connections

C	NC	N/A	WOOD SILL BOLTS: Sill bolts shall be spaced at 6 feet or less for Life Safety and 4 feet or less for Immediate Occupancy, with proper edge and end distance provided for wood and concrete. (Tier 2: Sec. 4.6.3.9)

Basic Structural Checklist for Building Type C2: Concrete Shear Walls with Stiff Diaphragms
BUILDING 105E – EAST PRESS BOX PODIUM Sheet 1 of 3

Building System

C	NC	N/A	LOAD PATH: The structure shall contain a minimum of one complete load path for Life Safety and Immediate Occupancy for seismic force effects from any horizontal direction that serves to transfer the inertial forces from the mass to the foundation. (Tier 2: Sec. 4.3.1.1)
C	NC	N/A	MEZZANINES: Interior mezzanine levels shall be braced independently from the main structure, or shall be anchored to the lateral-force-resisting elements of the main structure. (Tier 2: Sec. 4.3.1.3)
C	NC	N/A	WEAK STORY: The strength of the lateral-force-resisting system in any story shall not be less than 80 percent of the strength in an adjacent story, above or below, for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.1)
C	NC	N/A	SOFT STORY: The stiffness of the lateral-force-resisting system in any story shall not be less than 70 percent of the lateral-force-resisting system stiffness in an adjacent story above or below, or less than 80 percent of the average lateral-force-resisting system stiffness of the three stories above or below for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.2)
C	NC	N/A	GEOMETRY: There shall be no changes in horizontal dimension of the lateral-force-resisting system of more than 30 percent in a story relative to adjacent stories for Life Safety and Immediate Occupancy, excluding one-story penthouses and mezzanines. (Tier 2: Sec. 4.3.2.3)
C	NC	N/A	VERTICAL DISCONTINUITIES: All vertical elements in the lateral-force-resisting system shall be continuous to the foundation. (Tier 2: Sec. 4.3.2.4)
C	NC	N/A	MASS: There shall be no change in effective mass more than 50 percent from one story to the next for Life Safety and Immediate Occupancy. Light roofs, penthouses, and mezzanines need not be considered. (Tier 2: Sec. 4.3.2.5)

Basic Structural Checklist for Building Type C2: Concrete Shear Walls with Stiff Diaphragms
BUILDING 105E – EAST PRESS BOX PODIUM Sheet 2 of 3

C	NC	N/A	TORSION: The estimated distance between the story center of mass and the story center of rigidity shall be less than 20 percent of the building width in either plan dimension for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.6)
C	NC	N/A	DETERIORATION OF CONCRETE: There shall be no visible deterioration of concrete or reinforcing steel in any of the vertical- or lateral-force-resisting elements. (Tier 2: Sec. 4.3.3.4)
C	NC	N/A	POST-TENSIONING ANCHORS: There shall be no evidence of corrosion or spalling in the vicinity of post-tensioning or end fittings. Coil anchors shall not have been used. (Tier 2: Sec. 4.3.3.5)
C	NC	N/A	CONCRETE WALL CRACKS: All existing diagonal cracks in wall elements shall be less than 118 inch for Life Safety and 1/16 inch for Immediate Occupancy, shall not be concentrated in one location, and shall not form an X pattern. (Tier 2: Sec. 4.3.3.9)

Lateral-Force-Resisting System

C	NC	N/A	COMPLETE FRAMES: Steel or concrete frames classified as secondary components shall form a complete vertical-load-carrying system. (Tier 2: Sec. 4.4.1.6.1)
C	NC	N/A	REDUNDANCY: The number of lines of shear walls in each principal direction shall be greater than or equal to 2 for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.1.1)
C	NC	N/A	SHEAR STRESS CHECK: The shear stress in the concrete shear walls, calculated using the Quick Check procedure of Section 3.5.3.3, shall be less than the greater of 100 psi or 2*sqrt(f'c) for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.2.1)
C	NC	N/A	REINFORCING STEEL: The ratio of reinforcing steel area to gross concrete area shall be not less than 0.0015 in the vertical direction and 0.0025 in the horizontal direction for Life Safety and Immediate Occupancy. The spacing of reinforcing steel shall be equal to or less than 18 inches for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.2.2)

Basic Structural Checklist for Building Type C2: Concrete Shear Walls with Stiff Diaphragms
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Connections

C	NC	N/A	TRANSFER TO SHEAR WALLS: Diaphragms shall be connected for transfer of loads to the shear walls for Life Safety and the connections shall be able to develop the lesser of the shear strength of the walls or diaphragms for Immediate Occupancy. (Tier 2: Sec. 4.6.2.1)
C	NC	N/A	FOUNDATION DOWELS: Wall reinforcement shall be doweled into the foundation for Life Safety, and the dowels shall be able to develop the lesser of the strength of the walls or the uplift capacity of the foundation for Immediate Occupancy. (Tier 2: Sec. 4.6.3.5)

Supplemental Structural Checklist for Building Type C2: Concrete Shear Walls with Stiff Diaphragms

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Lateral-Force-Resisting System

C	NC	N/A	DEFLECTION COMPATIBILITY: Secondary components shall have the shear capacity to develop the flexural strength of the components for Life Safety and shall meet the requirements of Sections 4.4.1.4.9, 4.4.1.4.10, 4.4.1.4.11, 4.4.1.4.12 and 4.4.1.4.15 for Immediate Occupancy. (Tier 2: Sec. 4.4.1.6.2)
C	NC	N/A	FLAT SLABS: Flat slabs/plates not part of lateral-force-resisting system shall have continuous bottom steel through the column joints for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.1.6.3)
C	NC	N/A	COUPLING BEAMS: The stirrups in coupling beams over means of egress shall be spaced at or less than d/2 and shall be anchored into the confined core of the beam with hooks of 135° or more for Life Safety. All coupling beams shall comply with the requirements above and shall have the capacity in shear to develop the uplift capacity of the adjacent wall for Immediate Occupancy. (Tier 2: Sec. 4.4.2.2.3)
C	NC	N/A	OVERTURNING: All shear walls shall have aspect ratios less than 4-to-1. Wall piers need not be considered. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.2.4)
C	NC	N/A	CONFINEMENT REINFORCING: For shear walls with aspect ratios greater than 2-to-1, the boundary elements shall be confined with spirals or ties with spacing less than $8d_b$.This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.2.5)
C	NC	N/A	REINFORCING AT OPENINGS: There shall be added trim reinforcement around all wall openings with a dimension greater than three times the thickness of the wall. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.2.6)

Supplemental Structural Checklist for Building Type C2: Concrete Shear Walls with Stiff Diaphragms
BUILDING 105E – EAST PRESS BOX PODIUM Sheet 2 of 2

C	NC	N/A	WALL THICKNESS: Thickness of bearing walls shall not be less than 1/25 the unsupported height or length, whichever is shorter, nor less than 4 inches. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.2.7)

Diaphragms

C	NC	N/A	DIAPHRAGM CONTINUITY: The diaphragms shall not be composed of split-level floors and shall not have expansion joints. (Tier 2: Sec. 4.5.1.1)
C	NC	N/A	OPENINGS AT SHEAR WALLS: Diaphragm openings immediately adjacent to the shear walls shall be less than 25 percent of the wall length for Life Safety and 15 percent of the wall length for Immediate Occupancy. (Tier 2: Sec. 4.5.1.4)
C	NC	N/A	PLAN IRREGULARITIES: There shall be tensile capacity to develop the strength of the diaphragm at re-entrant comers or other locations of plan irregularities. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.7)
C	NC	N/A	DIAPHRAGM REINFORCEMENT AT OPENINGS: There shall be reinforcing around all diaphragm openings larger than 50 percent of the building width in either major plan dimension. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.8)

Connections

C	NC	N/A	UPLIFT AT PILE CAPS: Pile caps shall have top reinforcement and piles shall be anchored to the pile caps for Life Safety, and the pile cap reinforcement and pile anchorage shall be able to develop the tensile capacity of the piles for Immediate Occupancy. (Tier 2: Sec. 4.6.3.10)

Basic Nonstructural Component Checklist
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Partitions

C	NC	N/A	UNREINFORCED MASONRY: Unreinforced masonry or hollow clay tile partitions shall be braced at a spacing equal to or less than 10 feet in levels of low or moderate seismicity and 6 feet in levels of high seismicity. (Tier 2: Sec. 4.8.1.1)

Ceiling Systems

C	NC	N/A	SUPPORT: The integrated suspended ceiling system shall not be used to laterally support the tops of gypsum board, masonry, or hollow clay tile partitions. Gypsum board partitions need not be evaluated where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier2: Sec. 4.8.2.1)

Light Fixtures

C	NC	N/A	EMERGENCY LIGHTING: Emergency lighting shall be anchored or braced to prevent falling during an earthquake. (Tier 2: Sec. 4.8.3.1)

Cladding and Glazing

C	NC	N/A	CLADDING ANCHORS: Cladding components weighing more than 10 psf shall be mechanically anchored to the exterior wall framing at a spacing equal to or less than 4 feet. A spacing of up to 6 feet is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.1)
C	NC	N/A	DETERIORATION: There shall be no evidence of deterioration, damage or corrosion in any of the connection elements. (Tier 2: Sec. 4.8.4.2)
C	NC	N/A	CLADDING ISOLATION: For moment frame buildings of steel or concrete, panel connections shall be detailed to accommodate a story drift ratio of 0.02. Panel connection detailing for a story drift ratio of 0.01 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.3)

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C	NC	N/A	MULTI-STORY PANELS: For multi-story panels attached at each floor level, panel connections shall be detailed to accommodate a story drift ratio of 0.02. Panel connection detailing for a story drift ratio of 0.01 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.4)
C	NC	N/A	BEARING CONNECTIONS: Where bearing connections are required, there shall be a minimum of two bearing connections for each wall panel. (Tier 2: Sec. 4.8.4.5)
C	NC	N/A	INSERTS: Where inserts are used in concrete connections, the inserts shall be anchored to reinforcing steel or other positive anchorage. (Tier 2: Sec. 4.8.4.6)
C	NC	N/A	PANEL CONNECTIONS: Exterior cladding panels shall be anchored out-of-plane with a minimum of 4 connections for each wall panel. Two connections per wall panel are permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.7)

Masonry Veneer

C	NC	N/A	SHELF ANGLES: Masonry veneer shall be supported by shelf angles or other elements at each floor 30 feet or more above ground for Life Safety and at each floor above the first floor for Immediate Occupancy. (Tier 2: Sec. 4.8.5.1)
C	NC	N/A	TIES: Masonry veneer shall be connected to the back-up with corrosion-resistant ties. The ties shall have a spacing equal to or less than 24 inches with a minimum of one tie for every 2-2/3 square feet. A spacing of up to 36 inches is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.5.2)
C	NC	N/A	WEAKENED PLANES: Masonry veneer shall be anchored to the back-up adjacent to weakened planes, such as at the locations of flashing. (Tier 2: Sec. 4.8.5.3)
C	NC	N/A	DETERIORATION: There shall be no evidence of deterioration, damage, or corrosion in any of the connection elements. (Tier 2: Sec. 4.8.5.4)

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BUILDING 105E – EAST PRESS BOX

Parapets, Cornices, Ornamentation, and Appendages

C	NC	N/A	URM PARAPETS: There shall be no laterally unsupported unreinforced masonry parapets or cornices with height-to-thickness ratios greater than 1.5. A height-to-thickness ratio of up to 2.5 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.8.1)
C	NC	N/A	CANOPIES: Canopies located at building exits shall be anchored to the structural framing at a spacing of 6 feet or less. An anchorage spacing of up to 10 feet is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.8.2)

Masonry Chimneys

C	NC	N/A	URM CHIMNEYS: No unreinforced masonry chimney shall extend above the roof surface more than twice the least dimension of the chimney. A height above the roof surface of up to three times the least dimension of the chimney is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.9.1)

Stairs

C	NC	N/A	URM WALLS: Walls around stair enclosures shall not consist of unbraced hollow clay tile or unreinforced masonry with a height-to-thickness ratio greater than 12-to-1. A height-to-thickness ratio of up to 15-to-1 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.10.1)
C	NC	N/A	STAIR DETAILS: In moment frame structures, the connection between the stairs and the structure shall not rely on shallow anchors in concrete. Alternatively, the stair details shall be capable of accommodating the drift calculated using the Quick Check procedure of Section 3.5.3.1 without including tension in the anchors. (Tier 2: Sec. 4.8.10.2)

Basic Nonstructural Component Checklist Sheet 4 of 4
BUILDING 105E – EAST PRESS BOX

Building Contents and Furnishing

C	NC	N/A	TALL NARROW CONTENTS: Contents over 4 feet in height with a height-to-depth or height-to-width ratio greater than 3-to-1 shall be anchored to the floor slab or adjacent structural walls. A height-to-depth or height-to-width ratio of up to 4-to-1 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.11.1)

Mechanical and Electrical Equipment

C	NC	N/A	EMERGENCY POWER: Equipment used as part of an emergency power system shall be mounted to maintain continued operation after an earthquake. (Tier 2: Sec. 4.8.12.1)
C	NC	N/A	HAZARDOUS MATERIAL EQUIPMENT: HVAC or other equipment containing hazardous material shall not have damaged supply lines or unbraced isolation supports. (Tier 2:Sec. 4.8.12.2)
C	NC	N/A	DETERIORATION: There shall be no evidence of deterioration, damage, or corrosion in any of the anchorage or supports of mechanical or electrical equipment. (Tier 2: Sec. 4.8.12.3)
C	NC	N/A	ATTACHED EQUIPMENT: Equipment weighing over 20 lb that is attached to ceilings, walls, or other supports 4 feet above the floor level shall be braced. (Tier 2: Sec. 4.8.12.4)

Piping

C	NC	N/A	FIRE SUPPRESSION PIPING: Fire suppression piping shall be anchored and braced in accordance with NFPA-13 (NFPA, 1996). (Tier 2: Sec. 4.8.13.1)
C	NC	N/A	FLEXIBLE COUPLINGS: Fluid, gas, and fire suppression piping shall have flexible couplings. (Tier 2: Sec. 4.8.13.2)

Hazardous Materials Storage and Distribution

C	NC	N/A	TOXIC SUBSTANCES: Toxic and hazardous substances stored in breakable containers shall be restrained from falling by latched doors, shelf lips, wires, or other methods. (Tier 2: Sec. 4.8.15.1)

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BUILDING 105E – EAST PRESS BOX

Ceiling Systems

C	NC	N/A	LAY-IN TILES: Lay-in tiles used in ceiling panels located at exits and corridors shall be secured with clips. (Tier 2: Sec. 4.8.2.2)
C	NC	N/A	INTEGRATED CEILINGS: Integrated suspended ceilings at exits and corridors or weighing more than 2 pounds per square foot shall be laterally restrained with a minimum of four diagonal wires or rigid members attached to the structure above at a spacing equal to or less than 12 feet. (Tier 2: Sec. 4.8.2.3)
C	NC	N/A	SUSPENDED LATH AND PLASTER: Ceilings consisting of suspended lath and plaster or gypsum board shall be attached to resist seismic forces for every 12 square feet of area. (Tier 2: Sec. 4.8.2.4)

Light Fixtures

C	NC	N/A	INDEPENDENT SUPPORT: Light fixtures in suspended grid ceilings shall be supported independently of the ceiling suspension system by a minimum of two wires at diagonally opposite corners of the fixtures. (Tier 2: Sec. 4.8.3.2)

Cladding and Glazing

C	NC	N/A	GLAZING: Glazing in curtain walls and individual panes over 16 square feet in area, located up to a height of 10 feet above an exterior walking surface, shall have safety glazing. Such glazing located over 10 feet above an exterior walking surface shall be laminated annealed or laminated heat-strengthened safety glass or other glazing system that will remain in the frame when glass is cracked. (Tier 2: Sec. 4.8.4.8)

Parapets, Cornices, Ornamentation, and Appendages

C	NC	N/A	CONCRETE PARAPETS: Concrete parapets with height-to-thickness ratios greater than 2.5 shall have vertical reinforcement. (Tier 2: Sec. 4.8.8.3)

Intermediate Nonstructural Component Checklist Sheet 2 of 2
BUILDING 105E – EAST PRESS BOX

C	**NC**	**N/A**	APPENDAGES: Cornices, parapets, signs, and other appendages that extend above the highest point of anchorage to the structure or cantilever from exterior wall faces and other exterior wall ornamentation shall be reinforced and anchored to the structural system at a spacing equal to or less than 10 feet for Life Safety and 6 feet for Immediate Occupancy. This requirement need not apply to parapets or cornices compliant with Section 4.8.8.1 or 4.8.8.3. (Tier 2: Sec. 4.8.8.4)

Masonry Chimneys

C	**NC**	**N/A**	ANCHORAGE: Masonry chimneys shall be anchored at each floor level and the roof. (Tier 2: Sec.4.8.9.2)

Mechanical and Electrical Equipment

C	**NC**	**N/A**	VIBRATION ISOLATORS: Equipment mounted on vibration isolators shall be equipped with restraints or snubbers. (Tier 2: Sec. 4.8.12.5)

Ducts

C	**NC**	**N/A**	STAIR AND SMOKE DUCTS: Stair pressurization and smoke control ducts shall be braced and shall have flexible connections at seismic joints. (Tier 2: Sec. 4.8.14.1)

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BUILDING 105W – WEST PRESS BOX Sheet 1 of 4

Building System

C	NC	N/A	LOAD PATH: The structure shall contain a minimum of one complete load path for Life Safety and Immediate Occupancy for seismic force effects from any horizontal direction that serves to transfer the inertial forces from the mass to the foundation. (Tier 2: Sec. 4.3.1.1)
C	NC	N/A	MEZZANINES: Interior mezzanine levels shall be braced independently from the main structure, or shall be anchored to the lateral-force-resisting elements of the main structure. (Tier 2:Sec. 4.3. 1.3)
C	NC	N/A	WEAK STORY: The strength of the lateral-force-resisting system in any story shall not be less than 80 percent of the strength in an adjacent story, above or below, for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.1)
C	NC	N/A	SOFT STORY: The stiffness of the lateral-force-resisting system in any story shall not be less than 70 percent of the lateral-force-resisting system stiffness in an adjacent story above or below, or less than 80 percent of the average lateral-force-resisting system stiffness of the three stories above or below for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.2)
C	NC	N/A	GEOMETRY: There shall be no changes in horizontal dimension of the lateral-force-resisting system of more than 30 percent in a story relative to adjacent stories for Life Safety and Immediate Occupancy, excluding one-story penthouses and mezzanines. (Tier 2: Sec. 4.3.2.3)
C	NC	N/A	VERTICAL DISCONTINUITIES: All vertical elements in the lateral-force-resisting system shall be continuous to the foundation. (Tier 2: Sec. 4.3.2.4)
C	NC	N/A	MASS: There shall be no change in effective mass more than 50 percent from one story to the next for Life Safety and Immediate Occupancy. Light roofs, penthouses, and mezzanines need not be considered. (Tier 2: Sec. 4.3.2.5)

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C	NC	N/A	DETERIORATION OF WOOD: There shall be no signs of decay, shrinkage, splitting, fire damage, or sagging in any of the wood members, and none of the metal connection hardware shall be deteriorated, broken, or loose. (Tier 2: Sec. 4.3.3. 1)
C	NC	N/A	WOOD STRUCTURAL PANEL SHEAR WALL FASTENERS: There shall be no more than 15 percent of inadequate fastening such as overdriven fasteners, omitted blocking, excessive fastening spacing, or inadequate edge distance. TI1is statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.3.3.2)

Lateral-Force-Resisting System

C	NC	N/A	REDUNDANCY: The number of lines of shear walls in each principal direction shall be greater than or equal to 2 for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.1.1)
C	NC	N/A	SHEAR STRESS CHECK: The shear stress in the shear walls, calculated using the Quick Check procedure of Section 3.5.3.3, shall be less than the following values for Life Safety and Immediate Occupancy (Tier 2: Sec. 4.4.2. 7.1): Structural panel sheathing 1,000 plf Diagonal sheathing 700 plf Straight sheathing 100 plf All other conditions 100 plf
C	NC	N/A	STUCCO (EXTERIOR PLASTER) SHEAR WALLS: Multi-story buildings shall not rely on exterior stucco walls as the primary lateral-force-resisting system. (Tier 2: Sec. 4.4.2.7.2)
C	NC	N/A	GYPSUM WALLBOARD OR PLASTER SHEAR WALLS: Interior plaster or gypsum wallboard shall not be used as shear walls on buildings over one story in height with the exception of the uppermost level of a multi-story building. (Tier 2: Sec. 4.4.2.7.3)

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C	NC	N/A	NARROW WOOD SHEAR WALLS: Narrow wood shear walls with an aspect ratio greater than 2-to-1 for Life Safety and 1.5-to-1 for Immediate Occupancy shall not be used to resist lateral forces developed in the building in levels of moderate and high seismicity. Narrow wood shear walls with an aspect ratio greater than 2-to-I for Immediate Occupancy shall not be used to resist lateral forces developed in the building in levels of low seismicity. (Tier 2: Sec. 4.4.2.7.4)
C	NC	N/A	WALLS CONNECTED THROUGH FLOORS: Shear walls shall have interconnection between stories to transfer overturning and shear forces through the floor. (Tier 2: Sec. 4.4.2.7.5)
C	NC	N/A	HILLSIDE SITE: For structures that are taller on at least one side by more than one-half story due to a sloping site, all shear walls on the downhill slope shall have an aspect ratio less than 1-to-1 for Life Safety and 1-to-2 for Immediate Occupancy. (Tier 2: Sec. 4.4.2.7.6)
C *	NC	N/A	CRIPPLE WALLS: Cripple walls below first-floor-level shear walls shall be braced to the foundation with wood structural panels. (Tier 2: Sec. 4.4.2. 7. 7)
C	NC	N/A	OPENINGS: Walls with openings greater than 80 percent of the length shall be braced with wood structural panel shear walls with aspect ratios of not more than 1.5-to-1 or shall be supported by adjacent construction through positive tics capable of transferring the lateral forces. (Tier 2: Sec. 4.4.2.7.8)

Connections

C *	NC	N/A	WOOD POSTS: There shall be a positive connection of wood posts to the foundation. (Tier 2: Sec. 4.6.3.3)
C	NC	N/A	WOOD SILLS: All wood sills shall be bolted to the foundation. (Tier 2: Sec. 4.6.3.4)

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C	NC	N/A	GIRDER/COLUMN CONNECTION: There shall be a positive connection utilizing plates, connection hardware, or straps between the girder and the column support. (Tier 2: Sec. 4.6.4.1)

* Item not visible during site visit, statement completed based on general knowledge of construction type.

Supplemental Structural Checklist for Building Type W2: Wood Frames, Commercial and Industrial

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Lateral-Force-Resisting System

C	NC	N/A	HOLD-DOWN ANCHORS: All shear walls shall have hold-down anchors constructed per acceptable construction practices, attached to the end studs. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.7.9)

Diaphragms

C	NC	N/A	DIAPHRAGM CONTINUITY: The diaphragms shall not be composed of split-level floors and shall not have expansion joints. (Tier 2: Sec. 4.5.1.1)
C *	NC	N/A	ROOF CHORD CONTINUITY: All chord elements shall be continuous, regardless of changes in roof elevation. (Tier 2: Sec. 4.5.1.3)
C	NC	N/A	PLAN IRREGULARITIES: There shall be tensile capacity to develop the strength of the diaphragm at re-entrant comers or other locations of plan irregularities. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.7)
C	NC	N/A	DIAPHRAGM REINFORCEMENT AT OPENINGS: There shall be reinforcing around all diaphragm openings larger than 50 percent of the building width in either major plan dimension. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.8)
C	NC	N/A	STRAIGHT SHEATHING: All straight sheathed diaphragms shall have aspect ratios less than 2-to-1 for Life Safety and 1-to-1 for Immediate Occupancy in the direction being considered. (Tier 2: Sec. 4.5.2.1)
C	NC	N/A	SPANS: All wood diaphragms with spans greater than 24 feet for Life Safety and 12 feet for Immediate Occupancy shall consist of wood structural panels or diagonal sheathing. Wood commercial and industrial buildings may have rod-braced systems. (Tier 2: Sec. 4.5.2.2)

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BUILDING 105W – WEST PRESS BOX Sheet 2 of 2

C	NC	N/A	UNBLOCKED DIAPHRAGMS: All diagonally sheathed or unblocked wood structural panel diaphragms shall have horizontal spans less than 40 feet for Life Safety and 30 feet for Immediate Occupancy and shall have aspect ratios less than or equal to 4-to-1 for Life Safety and 3-to-1 for Immediate Occupancy. (Tier 2: Sec. 4.5.2.3)
C	NC	N/A	OTHER DIAPHRAGMS: The diaphragm shall not consist of a system other than wood, metal deck, concrete, or horizontal bracing. (Tier 2: Sec. 4.5.7.1)

Connections

C	NC	N/A	WOOD SILL BOLTS: Sill bolts shall be spaced at 6 feet or less for Life Safety and 4 feet or less for Immediate Occupancy, with proper edge and end di stance provided for wood and concrete. (Tier 2: Sec. 4.6.3.9)

✱ Item not visible during site visit, statement completed based on general knowledge of construction type.

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BUILDING 105W – WEST PRESS BOX

Partitions

C	NC	N/A	UNREINFORCED MASONRY: Unreinforced masonry or hollow clay tile partitions shall be braced at a spacing equal to or less than 10 feet in levels of low or moderate seismicity and 6 feet in levels of high seismicity. (Tier 2: Sec. 4.8.1.1)

Ceiling Systems

C	NC	N/A	SUPPORT: The integrated suspended ceiling system shall not be used to laterally support the tops of gypsum board, masonry, or hollow clay tile partitions. Gypsum board partitions need not be evaluated where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier2: Sec. 4.8.2.1)

Light Fixtures

C	NC	N/A	EMERGENCY LIGHTING: Emergency lighting shall be anchored or braced to prevent falling during an earthquake. (Tier 2: Sec. 4.8.3.1)

Cladding and Glazing

C	NC	N/A	CLADDING ANCHORS: Cladding components weighing more than 10 psf shall be mechanically anchored to the exterior wall framing at a spacing equal to or less than 4 feet. A spacing of up to 6 feet is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.1)
C	NC	N/A	DETERIORATION: There shall be no evidence of deterioration, damage or corrosion in any of the connection elements. (Tier 2: Sec. 4.8.4.2)
C	NC	N/A	CLADDING ISOLATION: For moment frame buildings of steel or concrete, panel connections shall be detailed to accommodate a story drift ratio of 0.02. Panel connection detailing for a story drift ratio of 0.01 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.3)

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C	NC	N/A	MULTI-STORY PANELS: For multi-story panels attached at each floor level, panel connections shall be detailed to accommodate a story drift ratio of 0.02. Panel connection detailing for a story drift ratio of 0.01 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.4)
C	NC	N/A	BEARING CONNECTIONS: Where bearing connections are required, there shall be a minimum of two bearing connections for each wall panel. (Tier 2: Sec. 4.8.4.5)
C	NC	N/A	INSERTS: Where inserts are used in concrete connections, the inserts shall be anchored to reinforcing steel or other positive anchorage. (Tier 2: Sec. 4.8.4.6)
C	NC	N/A	PANEL CONNECTIONS: Exterior cladding panels shall be anchored out-of-plane with a minimum of 4 connections for each wall panel. Two connections per wall panel are permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.7)

Masonry Veneer

C	NC	N/A	SHELF ANGLES: Masonry veneer shall be supported by shelf angles or other elements at each floor 30 feet or more above ground for Life Safety and at each floor above the first floor for Immediate Occupancy. (Tier 2: Sec. 4.8.5.1)
C	NC	N/A	TIES: Masonry veneer shall be connected to the back-up with corrosion-resistant ties. The ties shall have a spacing equal to or less than 24 inches with a minimum of one tie for every 2-2/3 square feet. A spacing of up to 36 inches is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.5.2)
C	NC	N/A	WEAKENED PLANES: Masonry veneer shall be anchored to the back-up adjacent to weakened planes, such as at the locations of flashing. (Tier 2: Sec. 4.8.5.3)
C	NC	N/A	DETERIORATION: There shall be no evidence of deterioration, damage, or corrosion in any of the connection elements. (Tier 2: Sec. 4.8.5.4)

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BUILDING 105W – WEST PRESS BOX

Parapets, Cornices, Ornamentation, and Appendages

C	NC	N/A	URM PARAPETS: There shall be no laterally unsupported unreinforced masonry parapets or cornices with height-to-thickness ratios greater than 1.5. A height-to-thickness ratio of up to 2.5 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.8.1)
C	NC	N/A	CANOPIES: Canopies located at building exits shall be anchored to the structural framing at a spacing of 6 feet or less. An anchorage spacing of up to 10 feet is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.8.2)

Masonry Chimneys

C	NC	N/A	URM CHIMNEYS: No unreinforced masonry chimney shall extend above the roof surface more than twice the least dimension of the chimney. A height above the roof surface of up to three times the least dimension of the chimney is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.9.1)

Stairs

C	NC	N/A	URM WALLS: Walls around stair enclosures shall not consist of unbraced hollow clay tile or unreinforced masonry with a height-to-thickness ratio greater than 12-to-1. A height-to-thickness ratio of up to 15-to-1 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.10.1)
C	NC	N/A	STAIR DETAILS: In moment frame structures, the connection between the stairs and the structure shall not rely on shallow anchors in concrete. Alternatively, the stair details shall be capable of accommodating the drift calculated using the Quick Check procedure of Section 3.5.3.1 without including tension in the anchors. (Tier 2: Sec. 4.8.10.2)

Basic Nonstructural Component Checklist
BUILDING 105W – WEST PRESS BOX

Building Contents and Furnishing

C	NC	N/A	TALL NARROW CONTENTS: Contents over 4 feet in height with a height-to-depth or height-to-width ratio greater than 3-to-1 shall be anchored to the floor slab or adjacent structural walls. A height-to-depth or height-to-width ratio of up to 4-to-1 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.11.1)

Mechanical and Electrical Equipment

C	NC	N/A	EMERGENCY POWER: Equipment used as part of an emergency power system shall be mounted to maintain continued operation after an earthquake. (Tier 2: Sec. 4.8.12.1)
C	NC	N/A	HAZARDOUS MATERIAL EQUIPMENT: HVAC or other equipment containing hazardous material shall not have damaged supply lines or unbraced isolation supports. (Tier 2:Sec. 4.8.12.2)
C	NC	N/A	DETERIORATION: There shall be no evidence of deterioration, damage, or corrosion in any of the anchorage or supports of mechanical or electrical equipment. (Tier 2: Sec. 4.8.12.3)
C	NC	N/A	ATTACHED EQUIPMENT: Equipment weighing over 20 lb that is attached to ceilings, walls, or other supports 4 feet above the floor level shall be braced. (Tier 2: Sec. 4.8.12.4)

Piping

C	NC	N/A	FIRE SUPPRESSION PIPING: Fire suppression piping shall be anchored and braced in accordance with NFPA-13 (NFPA, 1996). (Tier 2: Sec. 4.8.13.1)
C	NC	N/A	FLEXIBLE COUPLINGS: Fluid, gas, and fire suppression piping shall have flexible couplings. (Tier 2: Sec. 4.8.13.2)

Hazardous Materials Storage and Distribution

C	NC	N/A	TOXIC SUBSTANCES: Toxic and hazardous substances stored in breakable containers shall be restrained from falling by latched doors, shelf lips, wires, or other methods. (Tier 2: Sec. 4.8.15.1)

Intermediate Nonstructural Component Checklist Sheet 1 of 2
BUILDING 105W – WEST PRESS BOX

Ceiling Systems

C	NC	N/A	LAY-IN TILES: Lay-in tiles used in ceiling panels located at exits and corridors shall be secured with clips. (Tier 2: Sec. 4.8.2.2)
C	NC	N/A	INTEGRATED CEILINGS: Integrated suspended ceilings at exits and corridors or weighing more than 2 pounds per square foot shall be laterally restrained with a minimum of four diagonal wires or rigid members attached to the structure above at a spacing equal to or less than 12 feet. (Tier 2: Sec. 4.8.2.3)
C	NC	N/A	SUSPENDED LATH AND PLASTER: Ceilings consisting of suspended lath and plaster or gypsum board shall be attached to resist seismic forces for every 12 square feet of area. (Tier 2: Sec. 4.8.2.4)

Light Fixtures

C	NC	N/A	INDEPENDENT SUPPORT: Light fixtures in suspended grid ceilings shall be supported independently of the ceiling suspension system by a minimum of two wires at diagonally opposite corners of the fixtures. (Tier 2: Sec. 4.8.3.2)

Cladding and Glazing

C	NC	N/A	GLAZING: Glazing in curtain walls and individual panes over 16 square feet in area, located up to a height of 10 feet above an exterior walking surface, shall have safety glazing. Such glazing located over 10 feet above an exterior walking surface shall be laminated annealed or laminated heat-strengthened safety glass or other glazing system that will remain in the frame when glass is cracked. (Tier 2: Sec. 4.8.4.8)

Parapets, Cornices, Ornamentation, and Appendages

C	NC	N/A	CONCRETE PARAPETS: Concrete parapets with height-to-thickness ratios greater than 2.5 shall have vertical reinforcement. (Tier 2: Sec. 4.8.8.3)

Intermediate Nonstructural Component Checklist Sheet 2 of 2
BUILDING 105W – WEST PRESS BOX

C	NC	N/A	APPENDAGES: Cornices, parapets, signs, and other appendages that extend above the highest point of anchorage to the structure or cantilever from exterior wall faces and other exterior wall ornamentation shall be reinforced and anchored to the structural system at a spacing equal to or less than 10 feet for Life Safety and 6 feet for Immediate Occupancy. This requirement need not apply to parapets or cornices compliant with Section 4.8.8.1 or 4.8.8.3. (Tier 2: Sec. 4.8.8.4)

Masonry Chimneys

C	NC	N/A	ANCHORAGE: Masonry chimneys shall be anchored at each floor level and the roof. (Tier 2: Sec.4.8.9.2)

Mechanical and Electrical Equipment

C	NC	N/A	VIBRATION ISOLATORS: Equipment mounted on vibration isolators shall be equipped with restraints or snubbers. (Tier 2: Sec. 4.8.12.5)

Ducts

C	NC	N/A	STAIR AND SMOKE DUCTS: Stair pressurization and smoke control ducts shall be braced and shall have flexible connections at seismic joints. (Tier 2: Sec. 4.8.14.1)

6.7.3 BUILDING 110 – FIELD HOUSE

Building Description

YEAR OF CONSTRUCTION: 1955
YEAR OF ALTERATIONS: 2007 – Door & Window Additions
BUILDING TYPE: W2

GENERAL BUILDING DESCRIPTION: The Field House was constructed in 1955 per the original structural drawings. It is a one story wood frame building located at the south end of the stadium playing field. It is approximately 12 feet high, 168 feet long and 28 feet wide. The building appears to be in fair condition, although there is general wood deterioration throughout the structure, primarily in exterior locations.

For exterior elevations and typical construction, see pictures Bldg110-01 to Bldg110-12.

VERTICAL STRUCTURAL SYSTEM: The building is typical wood construction with wood stud walls, beams, and posts. The roof is constructed with diagonal sheathing spanning roof rafters supported at stud walls and on an interior steel beam. Steel columns and wood posts support the steel beam. The roof cantilevers out from the exterior walls around the entire building. The foundation is a conventional system; there are continuous footings at stud walls and pad footings at interior columns. The floor is slab on grade on imported fill.

LATERAL STRUCTURAL SYSTEM: The lateral resisting system consists of diagonal sheathing as the roof diaphragm with diagonally sheathed wood shear walls.

NON-STRUCTURAL SYSTEMS: A mechanical unit is supported on the roof with ducts supported from the roof rafters (picture Bldg110-12). No ceiling is present in the building. Light fixtures are directly connected to roof rafters.

For non-structural systems and items present within the building, see pictures Bldg110-13 to Bldg110-18.

List of Deficiencies

The following items have been found noncompliant in accordance with the requirements of ASCE31-03:

Structural

1. DETERIORATION OF WOOD: Signs of moderate decay and splitting is typically visible in the wood members, most notably in exterior locations.
2. DIAPHRAGM SPAN: Diagonally sheathed diaphragm has one horizontal span which is 60 feet, more than the 40 feet limit for Life Safety.

Non-structural

3. TALL NARROW CONTENTS: One cabinet, one refrigerator and multiple storage racks are not anchored to the floor or wall (pictures Bldg110-16 to Bldg110-18).

Additional Observations

Moderate ponding was typically viewed at the roof level.

BUILDING 110 – FIELD HOUSE, PICTURES

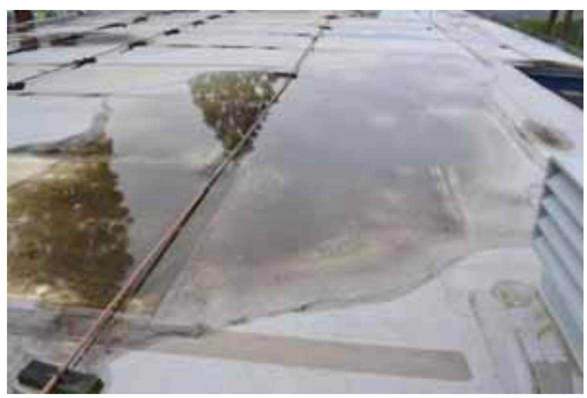
Bldg110-01

Bldg110-02

Bldg110-03

Bldg110-04

Bldg110-05



Bldg110-06

Bldg110-07

Bldg110-08

Bldg110-09

Bldg110-10

Bldg110-11

Bldg110-12


Bldg110-13


Bldg110-14


Bldg110-15


Bldg110-16


Bldg110-17


Bldg110-18

Basic Structural Checklist for Building Type W2: Wood Frames, Commercial and Industrial
BUILDING 110 – Field House Sheet 1 of 4

Building System

C	NC	N/A	LOAD PATH: The structure shall contain a minimum of one complete load path for Life Safety and Immediate Occupancy for seismic force effects from any horizontal direction that serves to transfer the inertial forces from the mass to the foundation. (Tier 2: Sec. 4.3.1.1)
C	NC	N/A	MEZZANINES: Interior mezzanine levels shall be braced independently from the main structure, or shall be anchored to the lateral-force-resisting elements of the main structure. (Tier 2:Sec. 4.3. 1.3)
C	NC	N/A	WEAK STORY: The strength of the lateral-force-resisting system in any story shall not be less than 80 percent of the strength in an adjacent story, above or below, for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.1)
C	NC	N/A	SOFT STORY: The stiffness of the lateral-force-resisting system in any story shall not be less than 70 percent of the lateral-force-resisting system stiffness in an adjacent story above or below, or less than 80 percent of the average lateral-force-resisting system stiffness of the three stories above or below for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.2)
C	NC	N/A	GEOMETRY: There shall be no changes in horizontal dimension of the lateral-force-resisting system of more than 30 percent in a story relative to adjacent stories for Life Safety and Immediate Occupancy, excluding one-story penthouses and mezzanines. (Tier 2: Sec. 4.3.2.3)
C	NC	N/A	VERTICAL DISCONTINUITIES: All vertical elements in the lateral-force-resisting system shall be continuous to the foundation. (Tier 2: Sec. 4.3.2.4)
C	NC	N/A	MASS: There shall be no change in effective mass more than 50 percent from one story to the next for Life Safety and Immediate Occupancy. Light roofs, penthouses, and mezzanines need not be considered. (Tier 2: Sec. 4.3.2.5)

Basic Structural Checklist for Building Type W2: Wood Frames, Commercial and Industrial
BUILDING 110 – Field House Sheet 2 of 4

C	NC	N/A	DETERIORATION OF WOOD: There shall be no signs of decay, shrinkage, splitting, fire damage, or sagging in any of the wood members, and none of the metal connection hardware shall be deteriorated, broken, or loose. (Tier 2: Sec. 4.3.3. 1)
C	NC	N/A	WOOD STRUCTURAL PANEL SHEAR WALL FASTENERS: There shall be no more than 15 percent of inadequate fastening such as overdriven fasteners, omitted blocking, excessive fastening spacing, or inadequate edge distance. TI1is statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.3.3.2)

Lateral-Force-Resisting System

C	NC	N/A	REDUNDANCY: The number of lines of shear walls in each principal direction shall be greater than or equal to 2 for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.1.1)
C	NC	N/A	SHEAR STRESS CHECK: The shear stress in the shear walls, calculated using the Quick Check procedure of Section 3.5.3.3, shall be less than the following values for Life Safety and Immediate Occupancy (Tier 2: Sec. 4.4.2. 7.1): Structural panel sheathing 1,000 plf Diagonal sheathing 700 plf Straight sheathing 100 plf All other conditions 100 plf
C	NC	N/A	STUCCO (EXTERIOR PLASTER) SHEAR WALLS: Multi-story buildings shall not rely on exterior stucco walls as the primary lateral-force-resisting system. (Tier 2: Sec. 4.4.2.7.2)
C	NC	N/A	GYPSUM WALLBOARD OR PLASTER SHEAR WALLS: Interior plaster or gypsum wallboard shall not be used as shear walls on buildings over one story in height with the exception of the uppermost level of a multi-story building. (Tier 2: Sec. 4.4.2.7.3)

Basic Structural Checklist for Building Type W2: Wood Frames, Commercial and Industrial
BUILDING 110 – Field House Sheet 3 of 4

C	NC	N/A	NARROW WOOD SHEAR WALLS: Narrow wood shear walls with an aspect ratio greater than 2-to-1 for Life Safety and 1.5-to-1 for Immediate Occupancy shall not be used to resist lateral forces developed in the building in levels of moderate and high seismicity. Narrow wood shear walls with an aspect ratio greater than 2-to-I for Immediate Occupancy shall not be used to resist lateral forces developed in the building in levels of low seismicity. (Tier 2: Sec. 4.4.2.7.4)
C	NC	N/A	WALLS CONNECTED THROUGH FLOORS: Shear walls shall have interconnection between stories to transfer overturning and shear forces through the floor. (Tier 2: Sec. 4.4.2.7.5)
C	NC	N/A	HILLSIDE SITE: For structures that are taller on at least one side by more than one-half story due to a sloping site, all shear walls on the downhill slope shall have an aspect ratio less than 1-to-1 for Life Safety and 1-to-2 for Immediate Occupancy. (Tier 2: Sec. 4.4.2.7.6)
C	NC	N/A	CRIPPLE WALLS: Cripple walls below first-floor-level shear walls shall be braced to the foundation with wood structural panels. (Tier 2: Sec. 4.4.2.7.7)
C	NC	N/A	OPENINGS: Walls with openings greater than 80 percent of the length shall be braced with wood structural panel shear walls with aspect ratios of not more than 1.5-to-1 or shall be supported by adjacent construction through positive tics capable of transferring the lateral forces. (Tier 2: Sec. 4.4.2.7.8)

Connections

C	NC	N/A	WOOD POSTS: There shall be a positive connection of wood posts to the foundation. (Tier 2: Sec. 4.6.3.3)
C	NC	N/A	WOOD SILLS: All wood sills shall be bolted to the foundation. (Tier 2: Sec. 4.6.3.4)

Basic Structural Checklist for Building Type W2: Wood Frames, Commercial and Industrial
BUILDING 110 – Field House Sheet 4 of 4

C	NC	N/A	GIRDER/COLUMN CONNECTION: There shall be a positive connection utilizing plates, connection hardware, or straps between the girder and the column support. (Tier 2: Sec. 4.6.4.1)

Supplemental Structural Checklist for Building Type W2: Wood Frames, Commercial and Industrial
BUILDING 110 – Field House Sheet 1 of 2

Lateral-Force-Resisting System

C	NC	N/A	HOLD-DOWN ANCHORS: All shear walls shall have hold-down anchors constructed per acceptable construction practices, attached to the end studs. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.7.9)

Diaphragms

C	NC	N/A	DIAPHRAGM CONTINUITY: The diaphragms shall not be composed of split-level floors and shall not have expansion joints. (Tier 2: Sec. 4.5.1.1)
C	NC	N/A	ROOF CHORD CONTINUITY: All chord elements shall be continuous, regardless of changes in roof elevation. (Tier 2: Sec. 4.5.1.3)
C	NC	N/A	PLAN IRREGULARITIES: There shall be tensile capacity to develop the strength of the diaphragm at re-entrant comers or other locations of plan irregularities. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.7)
C	NC	N/A	DIAPHRAGM REINFORCEMENT AT OPENINGS: There shall be reinforcing around all diaphragm openings larger than 50 percent of the building width in either major plan dimension. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.8)
C	NC	N/A	STRAIGHT SHEATHING: All straight sheathed diaphragms shall have aspect ratios less than 2-to-1 for Life Safety and 1-to-1 for Immediate Occupancy in the direction being considered. (Tier 2: Sec. 4.5.2.1)
C	NC	N/A	SPANS: All wood diaphragms with spans greater than 24 feet for Life Safety and 12 feet for Immediate Occupancy shall consist of wood structural panels or diagonal sheathing. Wood commercial and industrial buildings may have rod-braced systems. (Tier 2: Sec. 4.5.2.2)

Supplemental Structural Checklist for Building Type W2: Wood Frames, Commercial and Industrial
BUILDING 110 – Field House Sheet 2 of 2

C	NC	N/A	UNBLOCKED DIAPHRAGMS: All diagonally sheathed or unblocked wood structural panel diaphragms shall have horizontal spans less than 40 feet for Life Safety and 30 feet for Immediate Occupancy and shall have aspect ratios less than or equal to 4-to-1 for Life Safety and 3-to-1 for Immediate Occupancy. (Tier 2: Sec. 4.5.2.3)
C	NC	N/A	OTHER DIAPHRAGMS: The diaphragm shall not consist of a system other than wood, metal deck, concrete, or horizontal bracing. (Tier 2: Sec. 4.5.7.1)

Connections

C	NC	N/A	WOOD SILL BOLTS: Sill bolts shall be spaced at 6 feet or less for Life Safety and 4 feet or less for Immediate Occupancy, with proper edge and end di stance provided for wood and concrete. (Tier 2: Sec. 4.6.3.9)

Basic Nonstructural Component Checklist Sheet 1 of 4
BUILDING 110 – FIELD HOUSE

Partitions

C	NC	N/A	UNREINFORCED MASONRY: Unreinforced masonry or hollow clay tile partitions shall be braced at a spacing equal to or less than 10 feet in levels of low or moderate seismicity and 6 feet in levels of high seismicity. (Tier 2: Sec. 4.8.1.1)

Ceiling Systems

C	NC	N/A	SUPPORT: The integrated suspended ceiling system shall not be used to laterally support the tops of gypsum board, masonry, or hollow clay tile partitions. Gypsum board partitions need not be evaluated where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier2: Sec. 4.8.2.1)

Light Fixtures

C	NC	N/A	EMERGENCY LIGHTING: Emergency lighting shall be anchored or braced to prevent falling during an earthquake. (Tier 2: Sec. 4.8.3.1)

Cladding and Glazing

C	NC	N/A	CLADDING ANCHORS: Cladding components weighing more than 10 psf shall be mechanically anchored to the exterior wall framing at a spacing equal to or less than 4 feet. A spacing of up to 6 feet is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.1)
C	NC	N/A	DETERIORATION: There shall be no evidence of deterioration, damage or corrosion in any of the connection elements. (Tier 2: Sec. 4.8.4.2)
C	NC	N/A	CLADDING ISOLATION: For moment frame buildings of steel or concrete, panel connections shall be detailed to accommodate a story drift ratio of 0.02. Panel connection detailing for a story drift ratio of 0.01 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.3)

Basic Nonstructural Component Checklist Sheet 2 of 4
BUILDING 110 – FIELD HOUSE

C	**NC**	**N/A**	MULTI-STORY PANELS: For multi-story panels attached at each floor level, panel connections shall be detailed to accommodate a story drift ratio of 0.02. Panel connection detailing for a story drift ratio of 0.01 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.4)
C	**NC**	**N/A**	BEARING CONNECTIONS: Where bearing connections are required, there shall be a minimum of two bearing connections for each wall panel. (Tier 2: Sec. 4.8.4.5)
C	**NC**	**N/A**	INSERTS: Where inserts are used in concrete connections, the inserts shall be anchored to reinforcing steel or other positive anchorage. (Tier 2: Sec. 4.8.4.6)
C	**NC**	**N/A**	PANEL CONNECTIONS: Exterior cladding panels shall be anchored out-of-plane with a minimum of 4 connections for each wall panel. Two connections per wall panel are permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.7)

Masonry Veneer

C	**NC**	**N/A**	SHELF ANGLES: Masonry veneer shall be supported by shelf angles or other elements at each floor 30 feet or more above ground for Life Safety and at each floor above the first floor for Immediate Occupancy. (Tier 2: Sec. 4.8.5.1)
C	**NC**	**N/A**	TIES: Masonry veneer shall be connected to the back-up with corrosion-resistant ties. The ties shall have a spacing equal to or less than 24 inches with a minimum of one tie for every 2-2/3 square feet. A spacing of up to 36 inches is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.5.2)
C	**NC**	**N/A**	WEAKENED PLANES: Masonry veneer shall be anchored to the back-up adjacent to weakened planes, such as at the locations of flashing. (Tier 2: Sec. 4.8.5.3)
C	**NC**	**N/A**	DETERIORATION: There shall be no evidence of deterioration, damage, or corrosion in any of the connection elements. (Tier 2: Sec. 4.8.5.4)

Basic Nonstructural Component Checklist
BUILDING 110 – FIELD HOUSE

Sheet 3 of 4

Parapets, Cornices, Ornamentation, and Appendages

C	NC	N/A	URM PARAPETS: There shall be no laterally unsupported unreinforced masonry parapets or cornices with height-to-thickness ratios greater than 1.5. A height-to-thickness ratio of up to 2.5 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.8.1)
C	NC	N/A	CANOPIES: Canopies located at building exits shall be anchored to the structural framing at a spacing of 6 feet or less. An anchorage spacing of up to 10 feet is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.8.2)

Masonry Chimneys

C	NC	N/A	URM CHIMNEYS: No unreinforced masonry chimney shall extend above the roof surface more than twice the least dimension of the chimney. A height above the roof surface of up to three times the least dimension of the chimney is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.9.1)

Stairs

C	NC	N/A	URM WALLS: Walls around stair enclosures shall not consist of unbraced hollow clay tile or unreinforced masonry with a height-to-thickness ratio greater than 12-to-1. A height-to-thickness ratio of up to 15-to-1 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.10.1)
C	NC	N/A	STAIR DETAILS: In moment frame structures, the connection between the stairs and the structure shall not rely on shallow anchors in concrete. Alternatively, the stair details shall be capable of accommodating the drift calculated using the Quick Check procedure of Section 3.5.3.1 without including tension in the anchors. (Tier 2: Sec. 4.8.10.2)

Basic Nonstructural Component Checklist
BUILDING 110 – FIELD HOUSE

Sheet 4 of 4

Building Contents and Furnishing

C	NC	N/A	TALL NARROW CONTENTS: Contents over 4 feet in height with a height-to-depth or height-to-width ratio greater than 3-to-1 shall be anchored to the floor slab or adjacent structural walls. A height-to-depth or height-to-width ratio of up to 4-to-1 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.11.1)

Mechanical and Electrical Equipment

C	NC	N/A	EMERGENCY POWER: Equipment used as part of an emergency power system shall be mounted to maintain continued operation after an earthquake. (Tier 2: Sec. 4.8.12.1)
C	NC	N/A	HAZARDOUS MATERIAL EQUIPMENT: HVAC or other equipment containing hazardous material shall not have damaged supply lines or unbraced isolation supports. (Tier 2:Sec. 4.8.12.2)
C	NC	N/A	DETERIORATION: There shall be no evidence of deterioration, damage, or corrosion in any of the anchorage or supports of mechanical or electrical equipment. (Tier 2: Sec. 4.8.12.3)
C	NC	N/A	ATTACHED EQUIPMENT: Equipment weighing over 20 lb that is attached to ceilings, walls, or other supports 4 feet above the floor level shall be braced. (Tier 2: Sec. 4.8.12.4)

Piping

C	NC	N/A	FIRE SUPPRESSION PIPING: Fire suppression piping shall be anchored and braced in accordance with NFPA-13 (NFPA, 1996). (Tier 2: Sec. 4.8.13.1)
C	NC	N/A	FLEXIBLE COUPLINGS: Fluid, gas, and fire suppression piping shall have flexible couplings. (Tier 2: Sec. 4.8.13.2)

Hazardous Materials Storage and Distribution

C	NC	N/A	TOXIC SUBSTANCES: Toxic and hazardous substances stored in breakable containers shall be restrained from falling by latched doors, shelf lips, wires, or other methods. (Tier 2: Sec. 4.8.15.1)

Intermediate Nonstructural Component Checklist Sheet 1 of 2
BUILDING 110 – FIELD HOUSE

Ceiling Systems

C	NC	N/A	LAY-IN TILES: Lay-in tiles used in ceiling panels located at exits and corridors shall be secured with clips. (Tier 2: Sec. 4.8.2.2)
C	NC	N/A	INTEGRATED CEILINGS: Integrated suspended ceilings at exits and corridors or weighing more than 2 pounds per square foot shall be laterally restrained with a minimum of four diagonal wires or rigid members attached to the structure above at a spacing equal to or less than 12 feet. (Tier 2: Sec. 4.8.2.3)
C	NC	N/A	SUSPENDED LATH AND PLASTER: Ceilings consisting of suspended lath and plaster or gypsum board shall be attached to resist seismic forces for every 12 square feet of area. (Tier 2: Sec. 4.8.2.4)

Light Fixtures

C	NC	N/A	INDEPENDENT SUPPORT: Light fixtures in suspended grid ceilings shall be supported independently of the ceiling suspension system by a minimum of two wires at diagonally opposite corners of the fixtures. (Tier 2: Sec. 4.8.3.2)

Cladding and Glazing

C	NC	N/A	GLAZING: Glazing in curtain walls and individual panes over 16 square feet in area, located up to a height of 10 feet above an exterior walking surface, shall have safety glazing. Such glazing located over 10 feet above an exterior walking surface shall be laminated annealed or laminated heat-strengthened safety glass or other glazing system that will remain in the frame when glass is cracked. (Tier 2: Sec. 4.8.4.8)

Parapets, Cornices, Ornamentation, and Appendages

C	NC	N/A	CONCRETE PARAPETS: Concrete parapets with height-to-thickness ratios greater than 2.5 shall have vertical reinforcement. (Tier 2: Sec. 4.8.8.3)

Intermediate Nonstructural Component Checklist Sheet 2 of 2
BUILDING 110 – FIELD HOUSE

C	NC	N/A	APPENDAGES: Cornices, parapets, signs, and other appendages that extend above the highest point of anchorage to the structure or cantilever from exterior wall faces and other exterior wall ornamentation shall be reinforced and anchored to the structural system at a spacing equal to or less than 10 feet for Life Safety and 6 feet for Immediate Occupancy. This requirement need not apply to parapets or cornices compliant with Section 4.8.8.1 or 4.8.8.3. (Tier 2: Sec. 4.8.8.4)

Masonry Chimneys

C	NC	N/A	ANCHORAGE: Masonry chimneys shall be anchored at each floor level and the roof. (Tier 2: Sec.4.8.9.2)

Mechanical and Electrical Equipment

C	NC	N/A	VIBRATION ISOLATORS: Equipment mounted on vibration isolators shall be equipped with restraints or snubbers. (Tier 2: Sec. 4.8.12.5)

Ducts

C	NC	N/A	STAIR AND SMOKE DUCTS: Stair pressurization and smoke control ducts shall be braced and shall have flexible connections at seismic joints. (Tier 2: Sec. 4.8.14.1)

7. RECOMMENDATIONS

Recommendations for the buildings included in the evaluation are based on the ASCE 31-03 Tier 1 screening information outlined previously, and are contingent on completion of ASCE 31-03 Tier 2 and ASCE 41-06 Evaluations. These recommendations are intended to summarize potential mitigation schemes for noncompliant items identified in the Tier 1 checklists completed in Section 6. Note that the additional evaluations listed above may indicate additional noncompliant items not included in these report findings.

Generally, non-compliant items noted are correctable and their mitigation appears to be economically feasible.

Priority of Mitigation / Repairs

The following is a prioritized list for structural repairs based on immediate seriousness of the deficiency.

1. Repair or replacement of major damage in the following locations.
   a. Building 9 – Canopy wood support beam at mechanical unit exhibits major deterioration. See Appendix A for location.
   b. Building 13 – Cantilevered canopy wood support purlins exhibit major damage and deterioration. See Appendix A for location.
2. Building 35, deficient steel moment frames along the northeast exterior wall combined with no lateral system along the southwest exterior wall.
3. Retrofit of concrete or masonry wall to wood diaphragm connection using wall anchors. This condition is typical in Buildings 2, 4, 8, 9, 37 and 39.
4. Retrofit of steel moment frame systems. Retrofit may consist of new moment frames, braced frames or wood shear walls as appropriate for the revised building layout. Deficient steel moment frames are present in Buildings 8, 9 and 36. Building 35 also has deficient steel moment frames, and this is addressed in item 2 above.
5. Retrofit of other structural items listed below.
6. Retrofit of non-structural items listed below.

Description of Typical Mitigation / Repair / Retrofit

Typical recommended types of repairs with descriptions are as follows:

REPAIR OF DETERIORATION OR DAMAGE – Deteriorated and damaged wood, masonry or concrete damage will be repaired or replaced using standard construction methods. The

Secretary of the Interior Standards will be used to guide the preservation and repair of defining features.

Damaged wood members would be replaced as required. For concrete repair, damaged and deteriorated concrete will be removed to sound concrete, reinforcing steel cleaned, epoxy dowels added as required, all prior to placement of structural concrete grout repair material.

PROXIMITY OF EXISTING BUILDINGS –

Canopies Supported by Multiple Buildings – In several locations, canopies are supported on walls of adjacent free-standing structures with no seismic joints, which is noncompliant. This occurs at Buildings 7 & 8, 8 & 9, 12 & 13 and 35, 36 & 37. In such instances, new canopy support should be provided parallel to one of the existing building's walls using a parallel steel beam supported on steel tube cantilever columns spaced at 8 feet on center maximum. Cantilever columns will be supported on new concrete footings.

Canopies with Inadequate Seismic Joint – At one canopy between Buildings 2 & 4, the existing seismic joint is noncompliant. For this condition, the existing seismic joint should be increased to conform to current code provisions.

Additions with Noncompliant Seismic Joints – In several instances, previous additions to existing buildings were constructed with connection of the addition diaphragm to the existing structure and with an inadequate seismic joint between existing and added walls. This condition will be investigated further during subsequent evaluations. Mitigation may consist of additional engineering, connection of the two walls, or other methods.

WALL ANCHORAGES AT REINFORCED MASONRY AND CONCRETE WALLS TO WOOD DIAPHRAGMS – Wall anchorage ties to be provided at all reinforced masonry or concrete walls at 4 feet spacing maximum on center. These anchorages typically consist of threaded rods anchored to the wall attached to steel angles, straps or holdowns which attach to the wood roof using solid blocking, lag screws and framing clips. See Appendix B for example details.

ANCHORAGE OF PRECAST WALLS TO FOUNDATION – It does not appear as if anchorage at these locations exists. Mitigation may consist of (A) documentation of existing anchorage at these locations, or (B) providing new anchors at these locations as required by engineering analysis. The new anchors would likely be added by removing existing concrete, installing new reinforcing dowels, and repairing with structural grout. Anchors would likely be at 16 inches on center maximum.

NONCOMPLIANT STEEL MOMENT FRAMES – At locations of noncompliant steel moment frames, provide new steel moment frames, steel braced frames or plywood shear walls along the wall length as required by engineering analysis. See Appendix A and B for additional information.

NONCOMPLIANT STEEL BRACED FRAMES – At locations of noncompliant steel braced frames consisting of tension rod bracing, replace tension rods and connections with code compliant bracing and gusset plates. Additionally, retrofit existing columns, beam and column anchorage as required by engineering analysis. Braces would consist of double angles or similar.

CONTINUITY TIES AT WOOD DIAPHRAGMS – Continuity ties are code required and provide a continuous load path across the diaphragm width. Cross ties consisting of steel straps, angles or channels would be provided at discontinuous steel and wood members at column locations in each direction, or at 24 feet maximum on center spacing. See Appendix B for an example detail.

COLLECTORS AT WOOD DIAPHRAGMS – Collectors, or drag members, are provided to transfer diaphragm loads to lateral force resisting shear walls, moment frames or braced frames. Where collectors are not present, new drag members would be provided. One common type of drag member consists of steel strapping, angles or channels with lag screws at wood rafters or blocking, and adequate anchorage using post-installed anchors, welding or other means to the masonry shear wall or steel frame.

WOOD DIAPHRAGM SPAN – In cases noted, non-compliant diaphragm span lengths will likely be mitigated through engineering and no retrofit of this condition would then be required.

In the case where mitigation through engineering is not possible, which we currently deem unlikely, possible retrofit efforts which would mitigate the condition include (A) addition of new plywood sheathing over existing diagonal or straight sheathing, or (B) addition of nailing at existing plywood sheathing to increase its capacity as required by engineering analysis.

ANCHORAGE OF MECHANICAL EQUIPMENT – Adequate anchorage to the roof structure or concrete slab or pad to be provided. This would likely be accomplished utilizing steel angles, wood blocking, lag screws, and other wood framing and connections at existing wood roof construction. At concrete construction, steel angles with post-installed anchors would likely be used. Anchorages should be located at each unit corner, minimum.

BRACING OF APPENDAGES AND NON-STRUCTURAL ITEMS – Adequate bracing of signs or other appendages to be provided. This type of bracing typically consists of steel, clips, angles or tubes with bolted connections, or other anchorage as required by geometry or material. This type of mitigation would also apply to the Interior Mezzanine Bracing at Building 2.

Anticipated Repairs by Building

1. Buildings 2 & 4
   a. Building 2 – Stage and Auditorium
      STRUCTURAL:
      i. Proximity of adjacent buildings
      ii. Interior mezzanine bracing
      iii. Wall anchorages
      iv. Wood diaphragm cross ties
      v. Wood diaphragm span – this item can likely be mitigated through engineering
      vi. No top reinforcing in 2 pile caps
      NON-STRUCTURAL:
      vii. Ceiling support / lay-in tile clips
      viii. Light fixture support in ceilings
      ix. Equipment anchorage
      x. Anchorage of tall narrow contents
      xi. Flexible pipe couplings / fire suppression bracing
   b. Building 2 - Drama Workshop
      STRUCTURAL:
      i. Proximity of adjacent buildings
      ii. Interior mezzanine bracing
      iii. Wall anchorages
      NON-STRUCTURAL:
      iv. Appendages bracing
      v. Anchorage of tall narrow contents
      vi. Flexible pipe couplings / fire suppression bracing
   c. Building 4 – Music
      STRUCTURAL:
      i. Wall anchorages
      NON-STRUCTURAL:
      ii. Ceiling support / lay-in tile clips
      iii. Light fixture support in ceilings
2. Buildings 7, 8 & 9
   a. Building 7 – Student Success Center
      STRUCTURAL:
      i. Proximity of adjacent buildings

ii. Steel braced frames
iii. Precast wall foundation anchorage

NON-STRUCTURAL:

iv. Equipment anchorage
v. Anchorage of tall narrow contents
vi. Flexible pipe couplings / fire suppression bracing

b. Building 8 – Classrooms and Labs

STRUCTURAL:

i. Deterioration
ii. Proximity of adjacent buildings – canopy attached to more than 1 independent building
iii. Steel braced frames
iv. Steel moment frames
v. Wall anchorage
vi. Precast wall foundation anchorage

NON-STRUCTURAL:

vii. Equipment anchorage
viii. Anchorage of tall narrow contents
ix. Flexible pipe couplings / fire suppression bracing

c. Building 9 – Classrooms and Labs

STRUCTURAL:

i. Deterioration
ii. Proximity of adjacent buildings – canopy attached to more than 1 independent building
iii. Steel moment frames
iv. Wall anchorage
v. Wood diaphragm cross ties
vi. Precast wall foundation anchorage

NON-STRUCTURAL:

vii. Appendages bracing
viii. Equipment anchorage

3. <u>Buildings 12 & 13 – Business Education</u>

a. Building 12 – Business Education

STRUCTURAL:

i. Deterioration
ii. Proximity of adjacent buildings – canopy attached to more than 1 independent building

NON-STRUCTURAL:

iii. Appendages bracing
iv. Equipment anchorage

b. Building 13 – Business Education
   STRUCTURAL:
   i. Deterioration
   ii. Proximity of adjacent buildings – canopy attached to more than 1 independent building
   NON-STRUCTURAL:
   iii. Appendages bracing
   iv. Equipment anchorage
   v. Anchorage of tall narrow contents

4. <u>Buildings 35 to 39</u>
   a. Building 35 - East Math Wing
      STRUCTURAL:
      i. Deterioration
      ii. Proximity of adjacent buildings – canopy attached to more than 1 independent building
      iii. No lateral force resisting system along southwest exterior wall
      iv. Steel moment frames
      v. Wood diaphragm cross ties
      vi. Wood diaphragm span – this item can likely be mitigated through engineering
      NON-STRUCTURAL:
      vii. Light fixture support in ceilings
      viii. Appendages bracing
      ix. Equipment anchorage
      x. Anchorage of tall narrow contents
   b. Building 36 - West Math Wing
      STRUCTURAL:
      i. Proximity of adjacent buildings – canopy attached to more than 1 independent building
      ii. Steel moment frames
      iii. Wood diaphragm cross ties
      iv. Wood diaphragm span – this item can likely be mitigated through engineering
      NON-STRUCTURAL:
      v. Appendages bracing
      vi. Equipment anchorage
   c. Building 37 – Reprographics
      STRUCTURAL:
      i. Deterioration

ii. Proximity of adjacent buildings – canopy attached to more than 1 independent building
iii. Wall anchorage
iv. Wood diaphragm cross ties
v. Wood diaphragm drags
vi. Wood diaphragm span at lower roof

NON-STRUCTURAL:

vii. Ceiling support / lay-in tile clips
viii. Equipment anchorage
ix. Anchorage of tall narrow contents

d. Building 38 - Small Office Addition

STRUCTURAL:

i. No lateral force resisting system along northwest exterior wall

NON-STRUCTURAL:

ii. Equipment anchorage
iii. Anchorage of tall narrow contents

e. Building 39 – Planetarium

STRUCTURAL:

i. Proximity of adjacent buildings
ii. Wall anchorage
iii. Wood diaphragm cross ties

NON-STRUCTURAL:

iv. Equipment anchorage
v. Anchorage of tall narrow contents

5. <u>Buildings 93, 105 & 110</u>

a. Building 93 – Pool Stadium

STRUCTURAL:

i. Deterioration of concrete in pool stadium bleachers
ii. Proximity of adjacent canopy structure
iii. Torsional irregularity - this item can likely be mitigated through engineering

NON-STRUCTURAL:

iv. Equipment anchorage
v. Flexible pipe couplings / fire suppression bracing

b. Building 105 – LeBard Stadium with Press Boxes

STRUCTURAL:

i. Deterioration of concrete in stadium bleachers and East Press Box podium
ii. No lateral force resisting system along East Press Box west edge

iii. Only one wood shear wall is present in each direction in West Press Box. Note that the West Press Box may not be a permitted structure

NON-STRUCTURAL:

iv. Appendages bracing at East and West Press Boxes.

c. Building 110 – Field House

STRUCTURAL:

i. Deterioration of wood in exterior locations
ii. Wood diaphragm span – this item can likely be mitigated through engineering

NON-STRUCTURAL:

iii. Anchorage of tall narrow contents

See the Tier 1 Screening Building Matrix in Section 3 for additional information.

8. CONCLUSION AND LIMITATIONS

We have exercised every effort to observe the visible construction and non-structural components at each building. However, there are items that were not visible or not easily identifiable. Should you or any members of your staff note additional items not listed in this report, please notify us as soon as possible so that it can be observed and documented.

Our professional services have been performed with the intent to meet the degree of care and skill ordinarily exercised by reputable structural engineers practicing in this or similar localities. No other warranty, expressed or implied, is made as to the professional advice or opinions included in this report.

We conducted neither structural analyses beyond what is specified in ASCE 31-03 for Tier 1 screening, nor physical materials testing, to confirm strength or quality of structural materials. These activities are outside the scope and intent of this project. Although limited in scope, our evaluation and this report should be sufficient to provide the information you require and to determine direction for future evaluations, if appropriate.

APPENDIX A

EXISTING DRAWINGS, PLAN VIEWS W/ MAJOR NONCOMPLIANT STRUCTURAL ITEMS

APPENDIX A LEGEND:

INDICATES LATERAL FORCE RESISTING WALL OR FRAME, BEARING OR NONBEARING

INDICATES BEARING WALL OR GRAVITY COLUMN

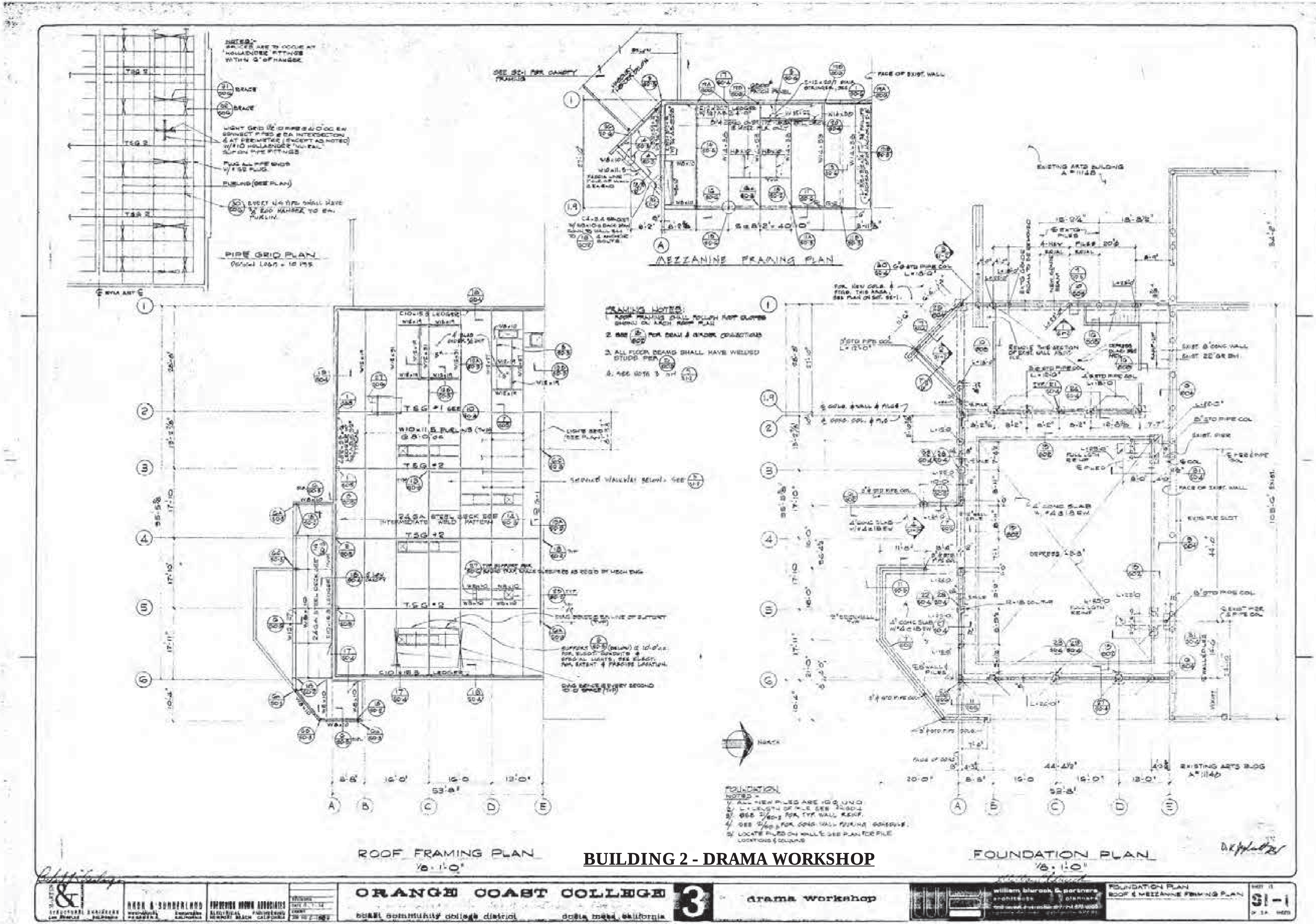
ITEMS IN RED INDICATE MAJOR NONCOMPLIANT STRUCTURAL ITEMS

ITEMS IN BLUE INDICATE LOCATIONS OF LIKELY MITIGATION

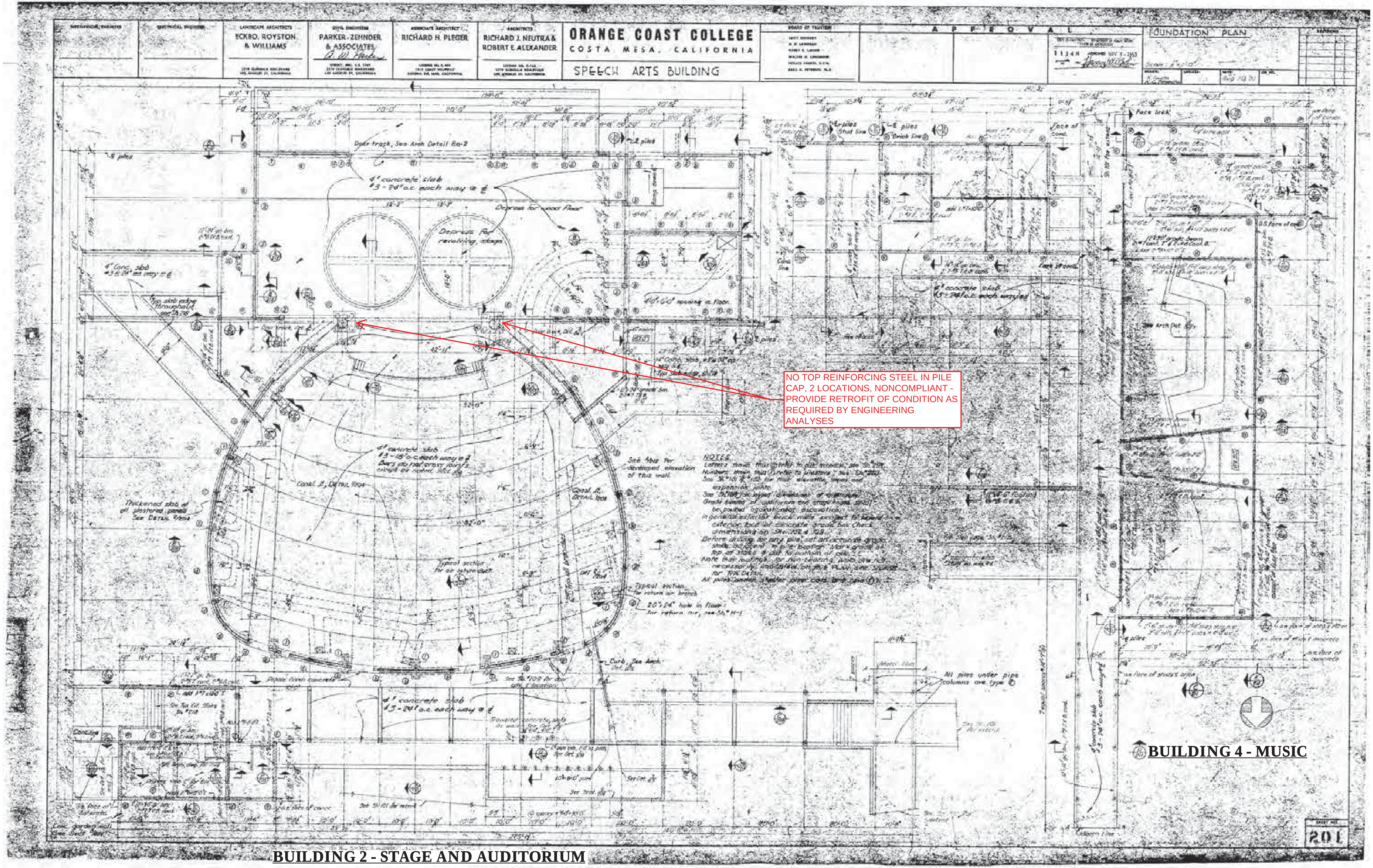
ORANGE COAST COLLEGE CAMPUS MAP

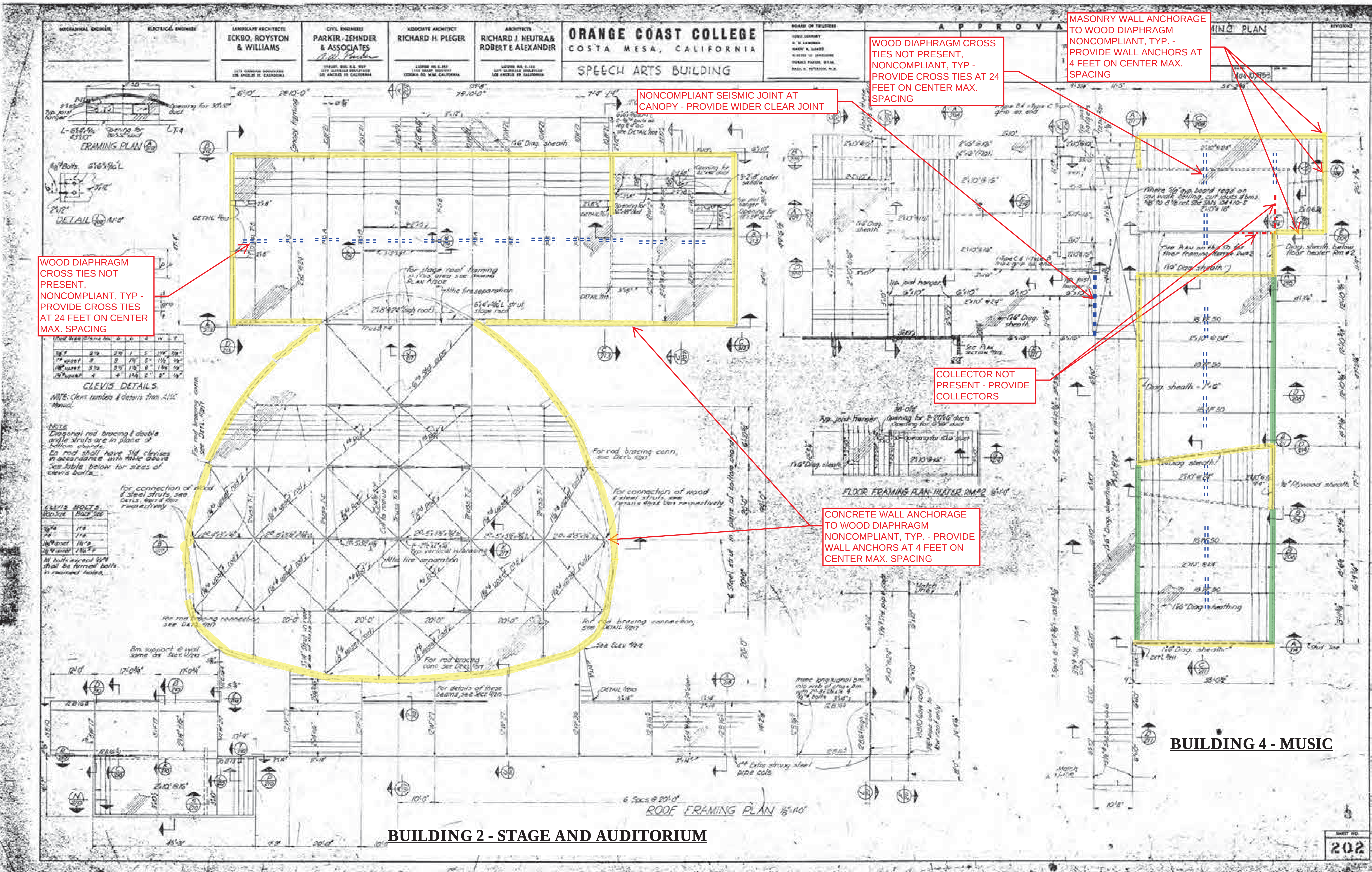
2701 Fairview Rd. Costa Mesa CA 92626 • 714-432-0202

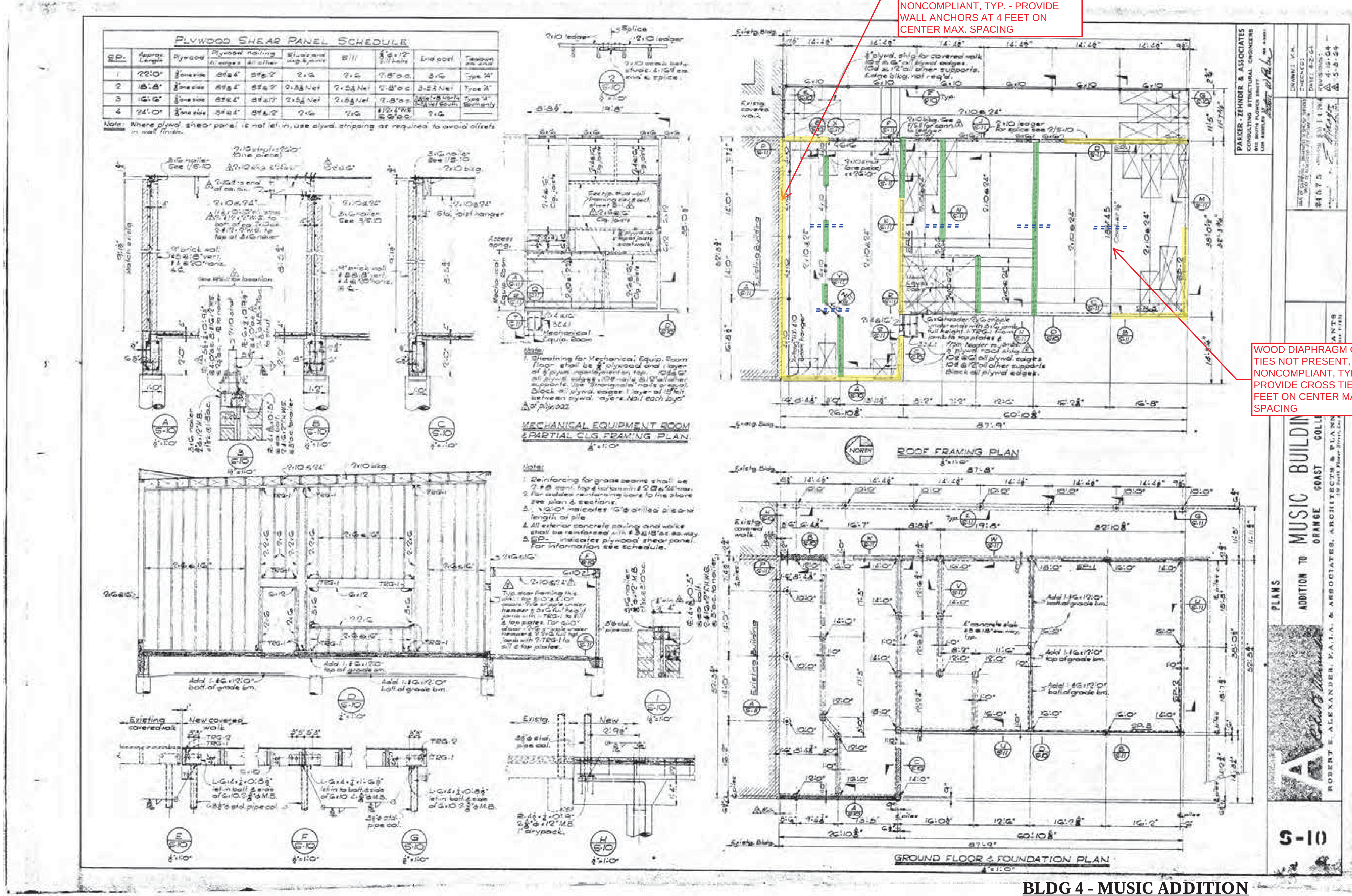
Scan code with your Smartphone to download map



BUILDING 2 - DRAMA WORKSHOP


ECKBO, ROYSTON & WILLIAMS
PARKER-ZEHNDER & ASSOCIATES
RICHARD H. PLEGER
RICHARD J. NEUTRA & ROBERT E. ALEXANDER
ORANGE COAST COLLEGE
COSTA MESA, CALIFORNIA
SPEECH ARTS BUILDING
APPROVAL
FOUNDATION PLAN
NO TOP REINFORCING STEEL IN PILE CAP, 2 LOCATIONS, NONCOMPLIANT - PROVIDE RETROFIT OF CONDITION AS REQUIRED BY ENGINEERING ANALYSES
NOTES
BUILDING 4 - MUSIC
BUILDING 2 - STAGE AND AUDITORIUM
201

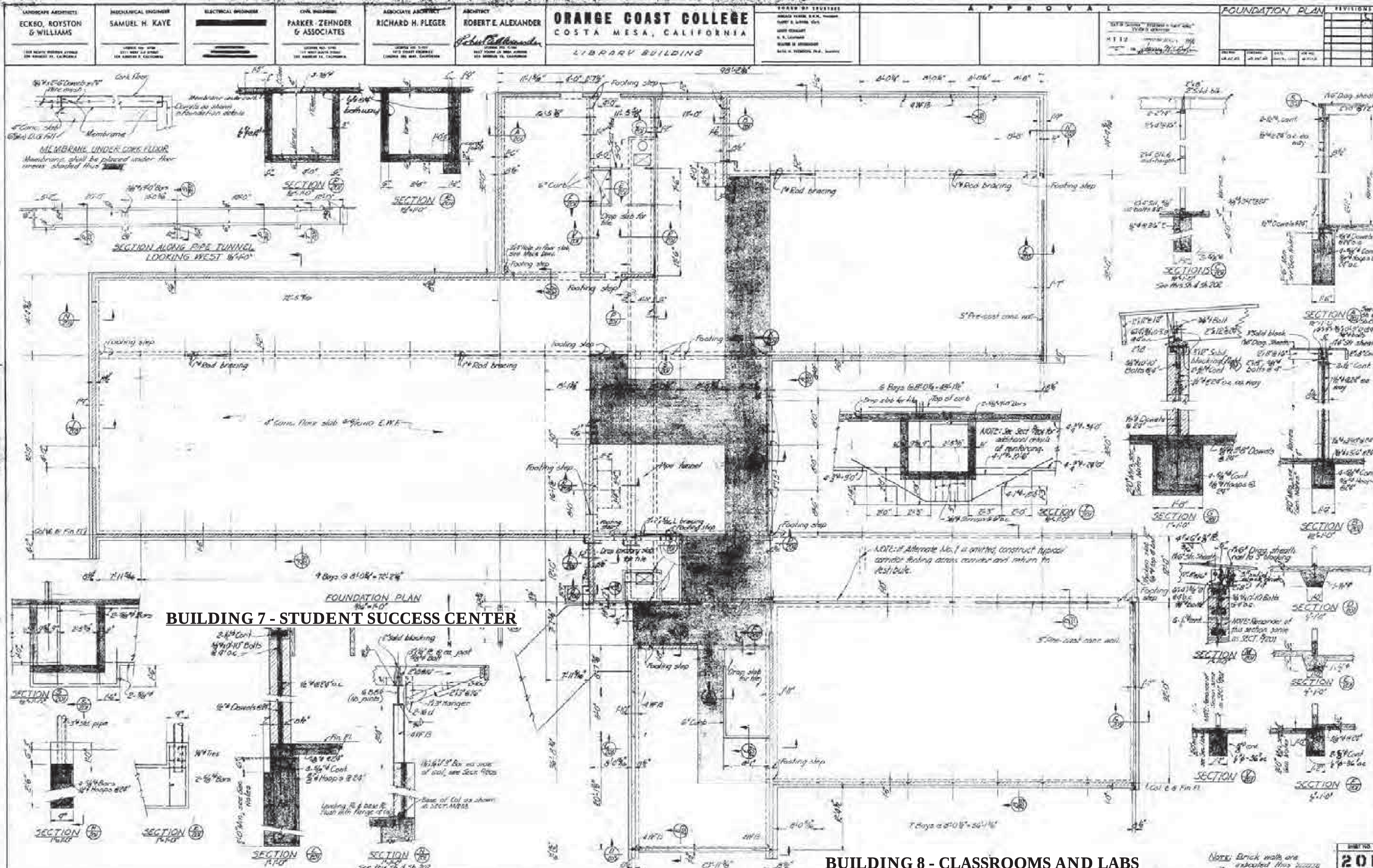

ORANGE COAST COLLEGE
COSTA MESA, CALIFORNIA
SPEECH ARTS BUILDING
ECKBO, ROYSTON & WILLIAMS
PARKER-ZEHNDER & ASSOCIATES
RICHARD H. PLEGER
RICHARD J. NEUTRA & ROBERT E. ALEXANDER
WOOD DIAPHRAGM CROSS TIES NOT PRESENT, NONCOMPLIANT, TYP - PROVIDE CROSS TIES AT 24 FEET ON CENTER MAX. SPACING
MASONRY WALL ANCHORAGE TO WOOD DIAPHRAGM NONCOMPLIANT, TYP. - PROVIDE WALL ANCHORS AT 4 FEET ON CENTER MAX. SPACING
NONCOMPLIANT SEISMIC JOINT AT CANOPY - PROVIDE WIDER CLEAR JOINT
WOOD DIAPHRAGM CROSS TIES NOT PRESENT, NONCOMPLIANT, TYP - PROVIDE CROSS TIES AT 24 FEET ON CENTER MAX. SPACING
COLLECTOR NOT PRESENT - PROVIDE COLLECTORS
CONCRETE WALL ANCHORAGE TO WOOD DIAPHRAGM NONCOMPLIANT, TYP. - PROVIDE WALL ANCHORS AT 4 FEET ON CENTER MAX. SPACING
FRAMING PLAN
DETAIL
CLEVIS DETAILS
CLEVIS BOLTS
FLOOR FRAMING PLAN-HEATER RM#2
ROOF FRAMING PLAN
BUILDING 4 - MUSIC
BUILDING 2 - STAGE AND AUDITORIUM
202



REINFORCED MASONRY WALL ANCHORAGE TO WOOD DIAPHRAGM NONCOMPLIANT, TYP. - PROVIDE WALL ANCHORS AT 4 FEET ON CENTER MAX. SPACING

WOOD DIAPHRAGM CROSS TIES NOT PRESENT, NONCOMPLIANT, TYP - PROVIDE CROSS TIES AT 24 FEET ON CENTER MAX. SPACING

BLDG 4 - MUSIC ADDITION



BUILDING 7 - STUDENT SUCCESS CENTER

BUILDING 8 - CLASSROOMS AND LABS

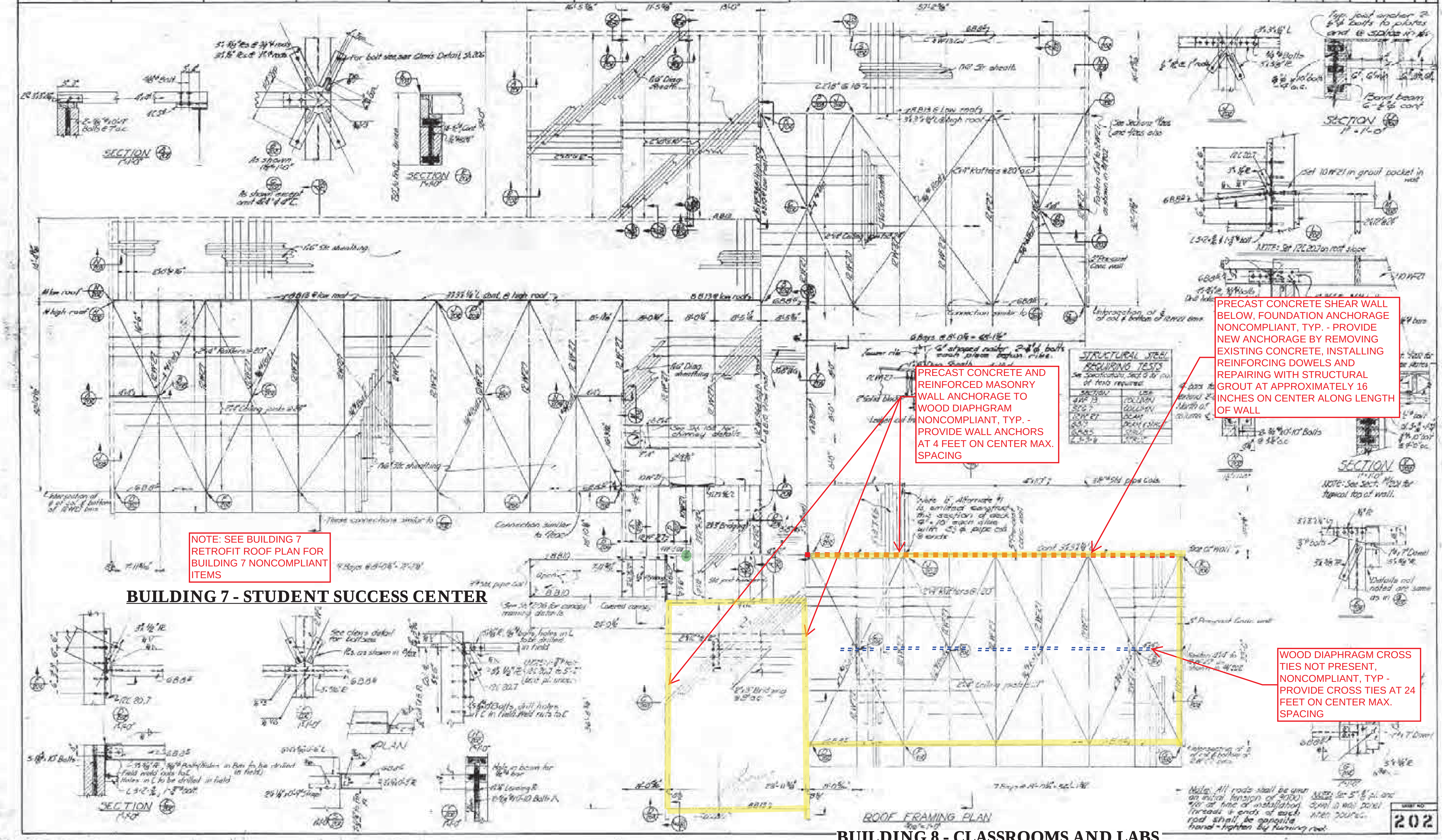
LANDSCAPE ARCHITECTS	MECHANICAL ENGINEER	ELECTRICAL ENGINEERS	CIVIL ENGINEERS	ASSOCIATE ARCHITECT	ARCHITECT
ECKBO, ROYSTON & WILLIAMS	SAMUEL H. KAYE	[redacted]	PARKER-ZEHNDER & ASSOCIATES	RICHARD H. PLEGER	ROBERT E. ALEXANDER

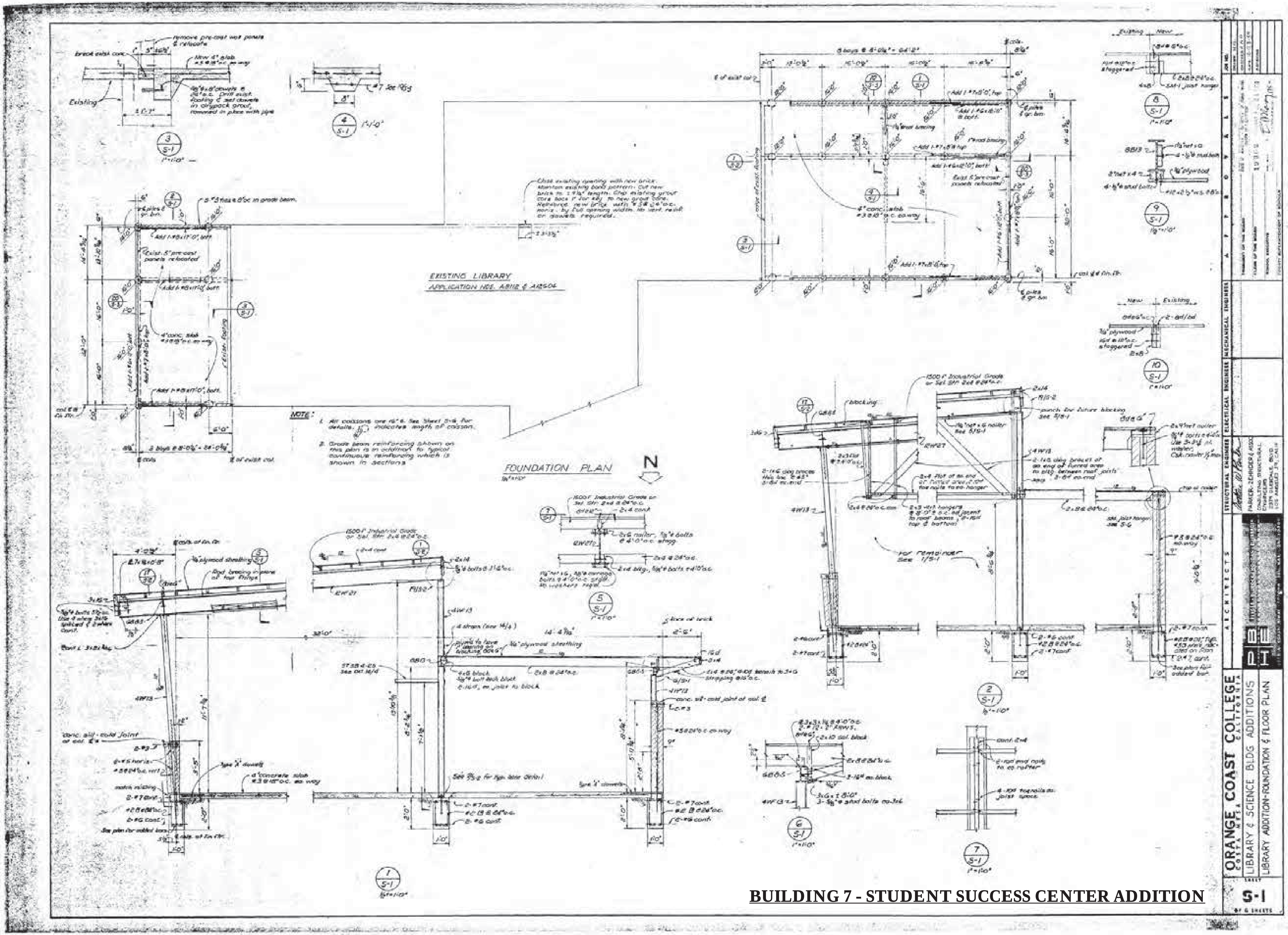
ORANGE COAST COLLEGE

COSTA MESA, CALIFORNIA

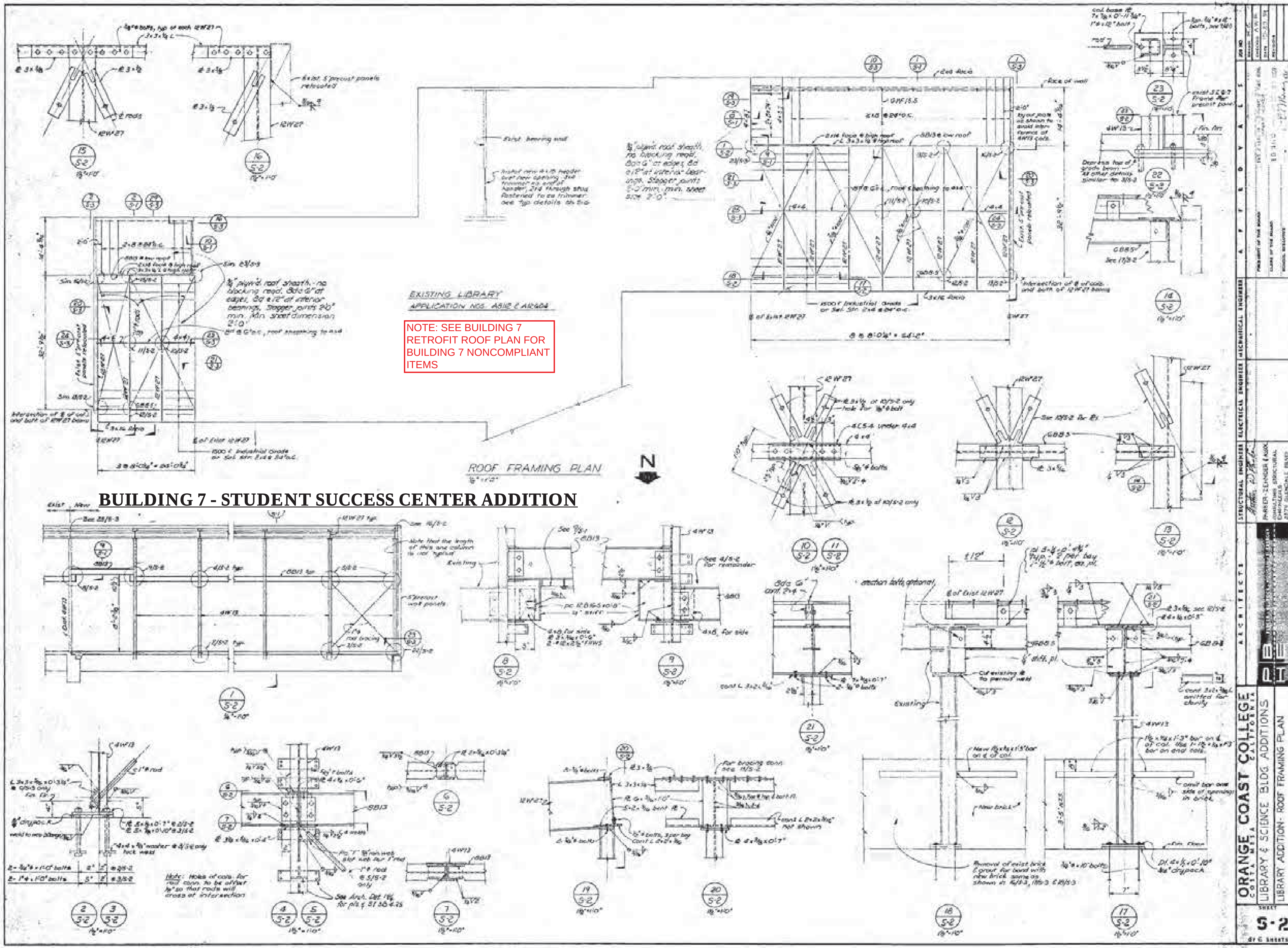
APPROVAL

ROOF FRAMING PLAN & DETAILS





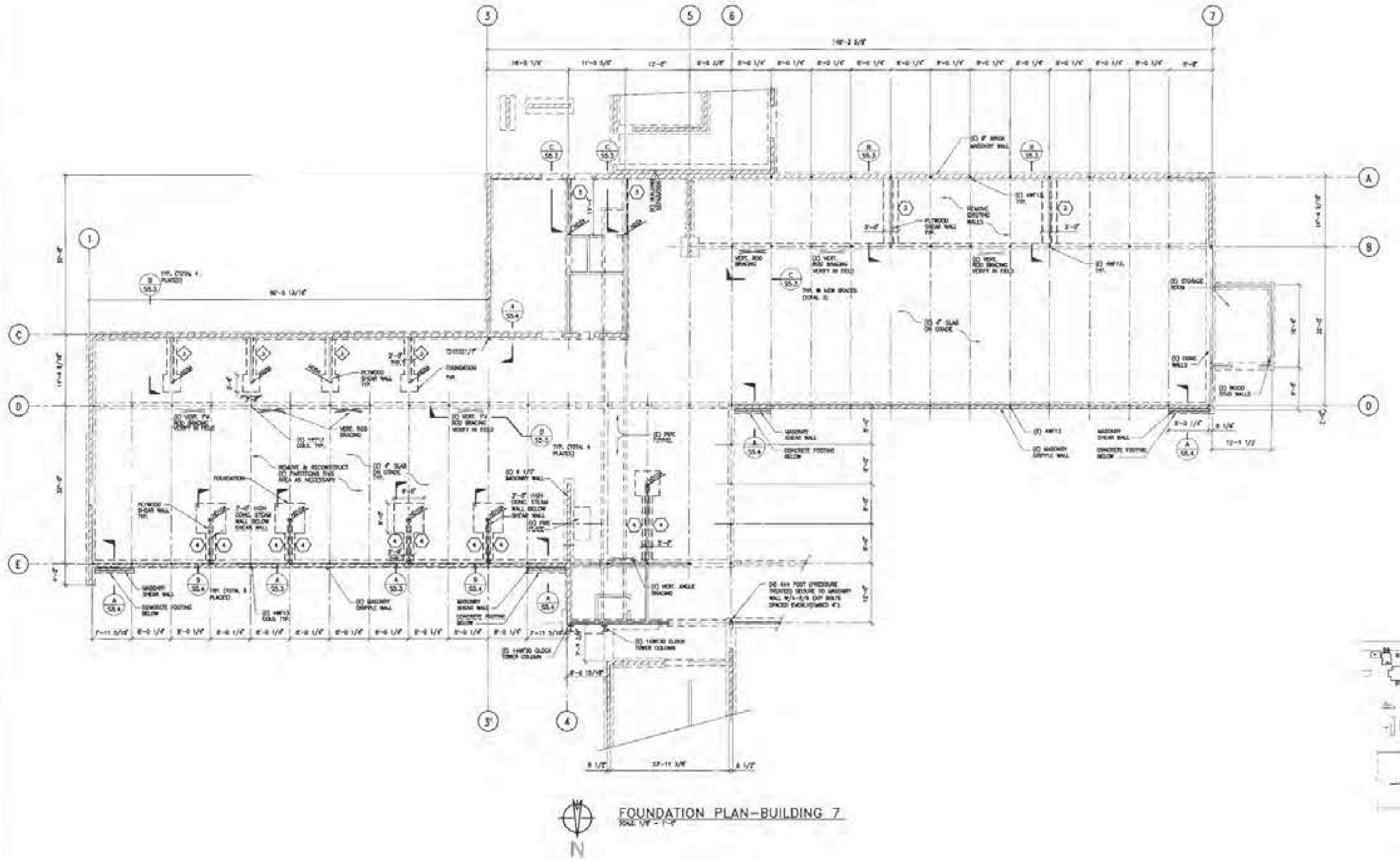
BUILDING 7 - STUDENT SUCCESS CENTER ADDITION



BUILDING 7 - STUDENT SUCCESS CENTER ADDITION
NOTE: SEE BUILDING 7 RETROFIT ROOF PLAN FOR BUILDING 7 NONCOMPLIANT ITEMS
EXISTING LIBRARY
APPLICATION NOS. A8112 & A12604
ROOF FRAMING PLAN
N
ORANGE COAST COLLEGE
COSTA MESA CALIFORNIA
LIBRARY & SCIENCE BLDG. ADDITIONS
LIBRARY ADDITION - ROOF FRAMING PLAN
S-2

SHEET NOTES

1. ALL NEW SHEAR WALLS ARE AT EXISTING WALL LOCATIONS. DEMOLISH AND REBUILD WALLS PER DETAILS.



BUILDING 7 - STUDENT SUCCESS CENTER RETROFIT

NO.	DATE	REVISION	DRAWN	DESIGN	CHECK	APPROVED
F	6/14/99	BID DOCUMENTS				
E	5/04/99	DSA RESUBMITTAL	HJH	OC	TL	DM
D	4/14/99	DSA COMMENTS	HJH	OC	TL	DM
C	12/4/98	DSA SUBMITTAL	HJH	OC	TL	DM
B	11/25/98	90% SUBMITTAL	HJH	OC	TL	DM
A	11/02/98	60% SUBMITTAL	HJH	OC	TL	DM

THE BENTLEY COMPANY

BENTLEY

JOB-NO: 98-10636 FILE: S5-1

Coast Community College District

ORANGE COAST COLLEGE

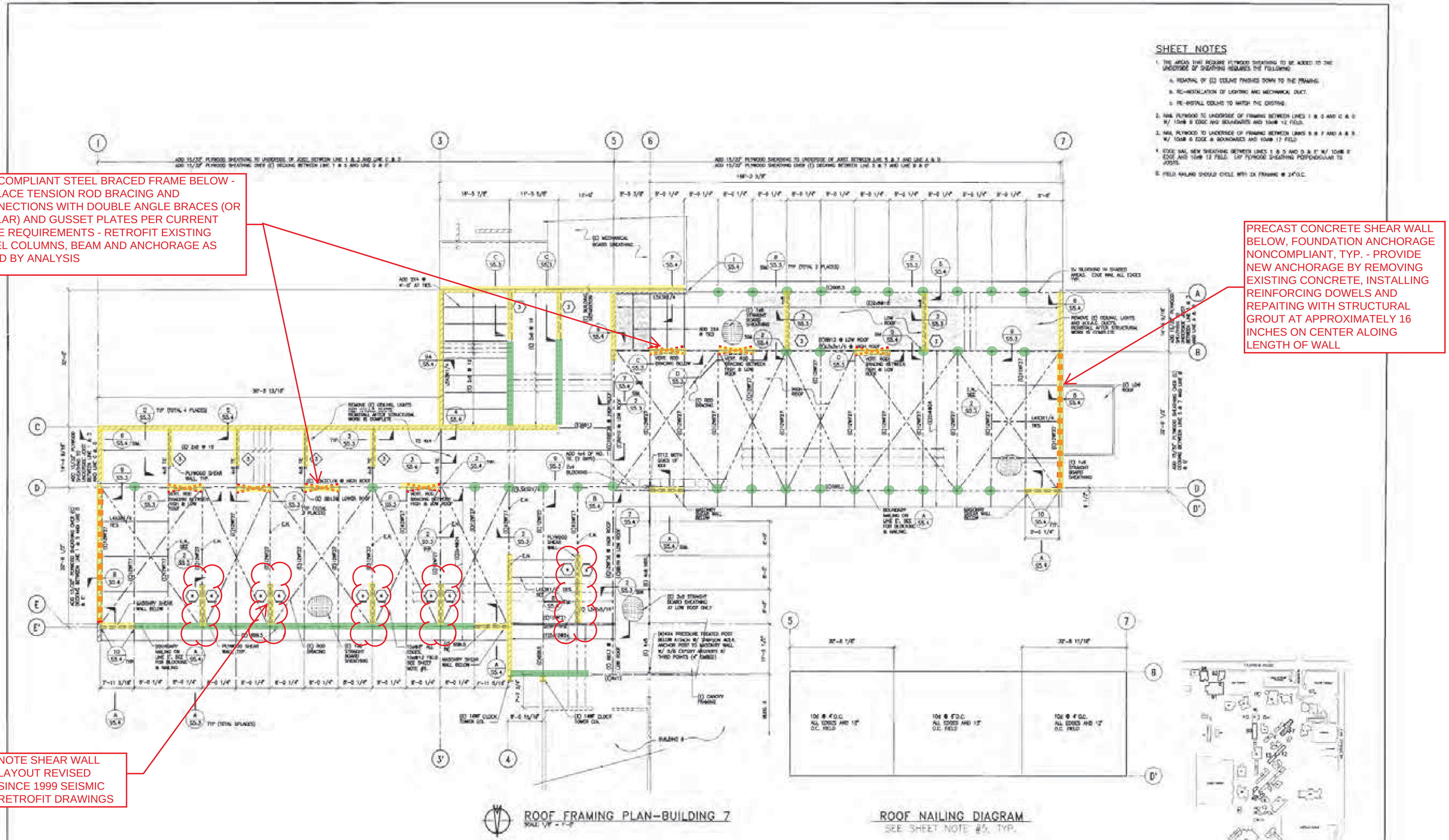
Project: ORANGE COAST COLLEGE SEISMIC RETROFIT OF BUILDING 7

DRAWING TITLE: FOUNDATION PLAN - BLDG 7

SCALE: AS NOTED

DRAWING NO: S5.1

REV: F



BUILDING 7 - STUDENT SUCCESS CENTER RETROFIT

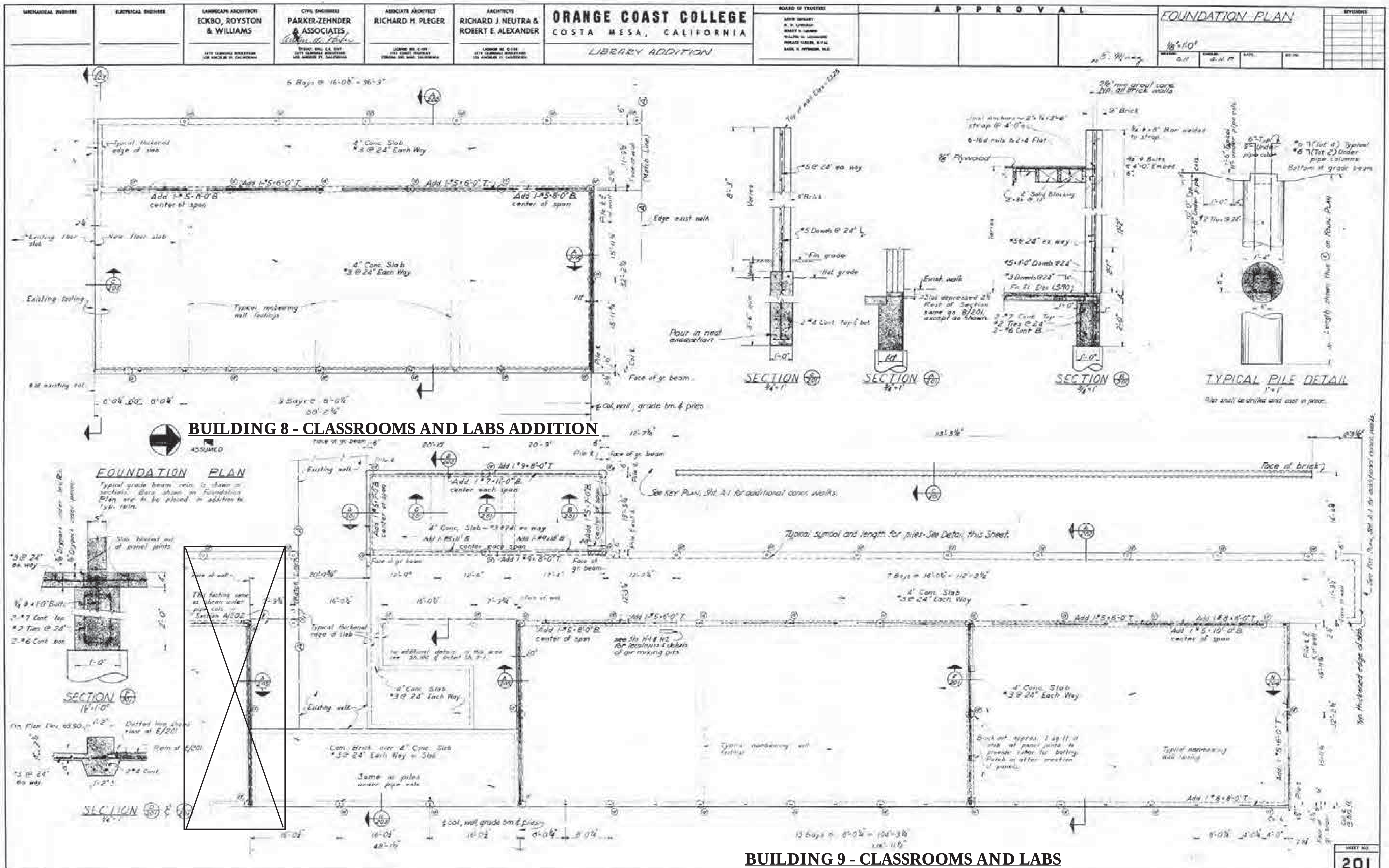
NO.	DATE	REVISION	DRAWN	DESIGN	CHECK	APPROVED
F	5/14/99	BID DOCUMENTS				
E	5/04/99	DSA RESUBMITTAL	HJH	OC	TL	DM
D	4/14/99	DSA COMMENTS	HJH	OC	TL	DM
C	12/4/98	DSA SUBMITTAL	HJH	OC	TL	DM
B	11/25/98	90% SUBMITTAL	HJH	OC	TL	DM
A	11/02/98	60% SUBMITTAL	HJH	OC	TL	DM

The Bentley Company
BENTLEY
JOB–NO: 98–10656 FILE: S5–2

Coast Community College District

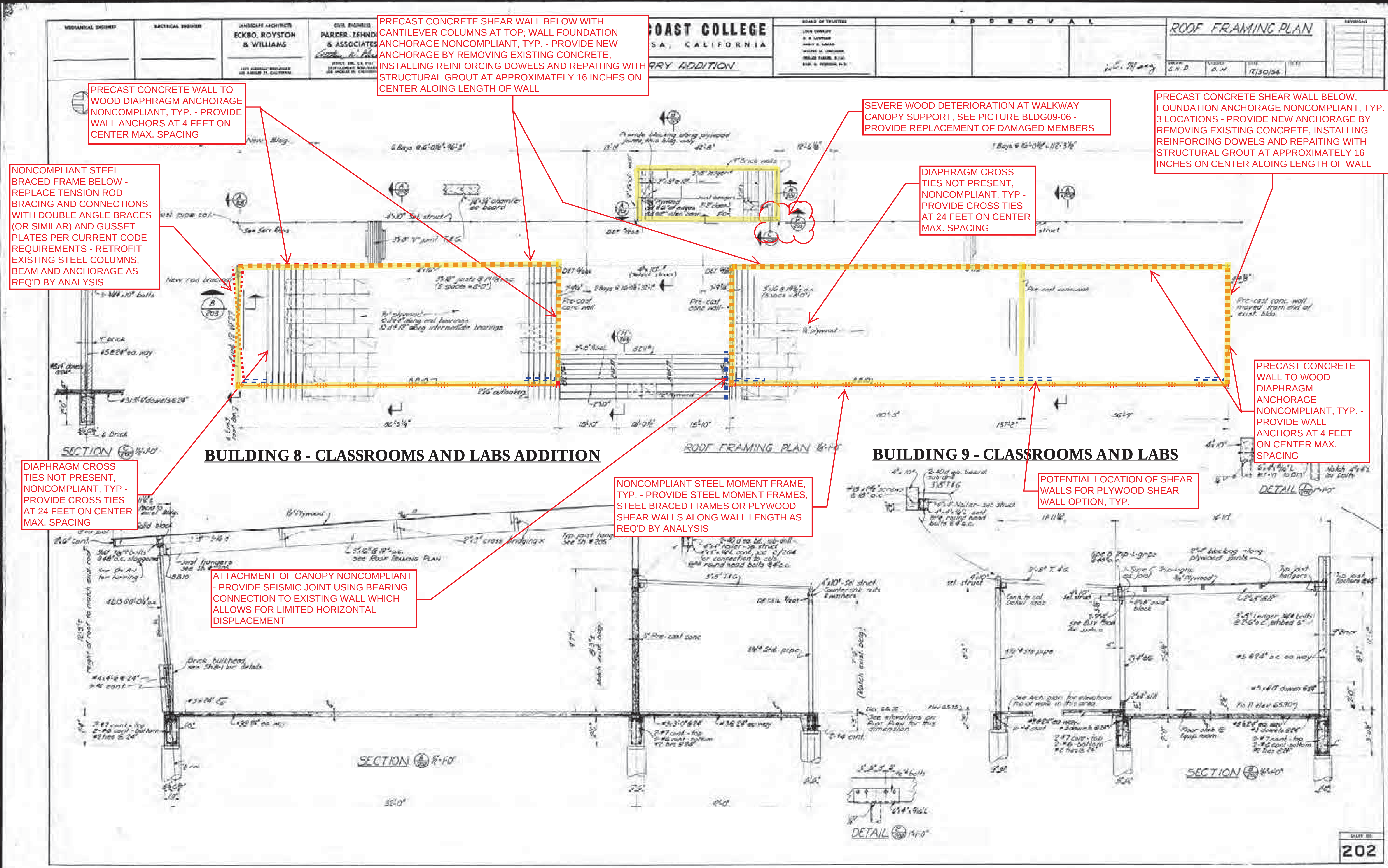
ORANGE COAST COLLEGE

Project: ORANGE COAST COLLEGE SEISMIC RETROFIT OF BUILDING 7
DRAWING TITLE: FRAMING PLAN – BUILDING 7
SCALE: AS NOTED
DRAWING NO: S5.2
REV. F



BUILDING 8 - CLASSROOMS AND LABS ADDITION

BUILDING 9 - CLASSROOMS AND LABS


PRECAST CONCRETE SHEAR WALL BELOW WITH CANTILEVER COLUMNS AT TOP; WALL FOUNDATION ANCHORAGE NONCOMPLIANT, TYP. - PROVIDE NEW ANCHORAGE BY REMOVING EXISTING CONCRETE, INSTALLING REINFORCING DOWELS AND REPAITING WITH STRUCTURAL GROUT AT APPROXIMATELY 16 INCHES ON CENTER ALOING LENGTH OF WALL
PRECAST CONCRETE WALL TO WOOD DIAPHRAGM ANCHORAGE NONCOMPLIANT, TYP. - PROVIDE WALL ANCHORS AT 4 FEET ON CENTER MAX. SPACING
NONCOMPLIANT STEEL BRACED FRAME BELOW - REPLACE TENSION ROD BRACING AND CONNECTIONS WITH DOUBLE ANGLE BRACES (OR SIMILAR) AND GUSSET PLATES PER CURRENT CODE REQUIREMENTS - RETROFIT EXISTING STEEL COLUMNS, BEAM AND ANCHORAGE AS REQ'D BY ANALYSIS
SEVERE WOOD DETERIORATION AT WALKWAY CANOPY SUPPORT, SEE PICTURE BLDG09-06 - PROVIDE REPLACEMENT OF DAMAGED MEMBERS
PRECAST CONCRETE SHEAR WALL BELOW, FOUNDATION ANCHORAGE NONCOMPLIANT, TYP. 3 LOCATIONS - PROVIDE NEW ANCHORAGE BY REMOVING EXISTING CONCRETE, INSTALLING REINFORCING DOWELS AND REPAITING WITH STRUCTURAL GROUT AT APPROXIMATELY 16 INCHES ON CENTER ALOING LENGTH OF WALL
DIAPHRAGM CROSS TIES NOT PRESENT, NONCOMPLIANT, TYP - PROVIDE CROSS TIES AT 24 FEET ON CENTER MAX. SPACING
BUILDING 8 - CLASSROOMS AND LABS ADDITION
BUILDING 9 - CLASSROOMS AND LABS
PRECAST CONCRETE WALL TO WOOD DIAPHRAGM ANCHORAGE NONCOMPLIANT, TYP. - PROVIDE WALL ANCHORS AT 4 FEET ON CENTER MAX. SPACING
DIAPHRAGM CROSS TIES NOT PRESENT, NONCOMPLIANT, TYP - PROVIDE CROSS TIES AT 24 FEET ON CENTER MAX. SPACING
NONCOMPLIANT STEEL MOMENT FRAME, TYP. - PROVIDE STEEL MOMENT FRAMES, STEEL BRACED FRAMES OR PLYWOOD SHEAR WALLS ALONG WALL LENGTH AS REQ'D BY ANALYSIS
POTENTIAL LOCATION OF SHEAR WALLS FOR PLYWOOD SHEAR WALL OPTION, TYP.
ATTACHMENT OF CANOPY NONCOMPLIANT - PROVIDE SEISMIC JOINT USING BEARING CONNECTION TO EXISTING WALL WHICH ALLOWS FOR LIMITED HORIZONTAL DISPLACEMENT
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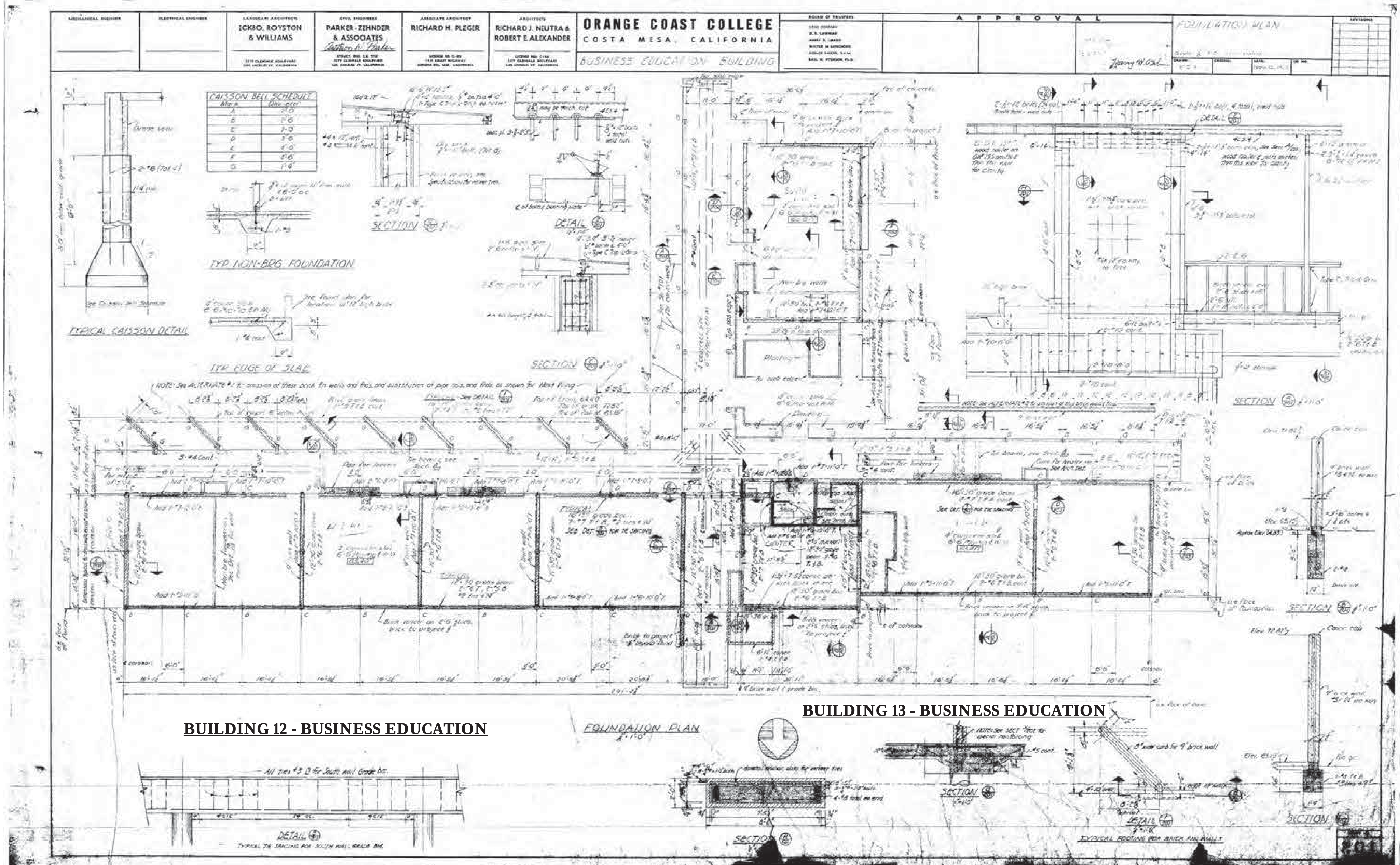
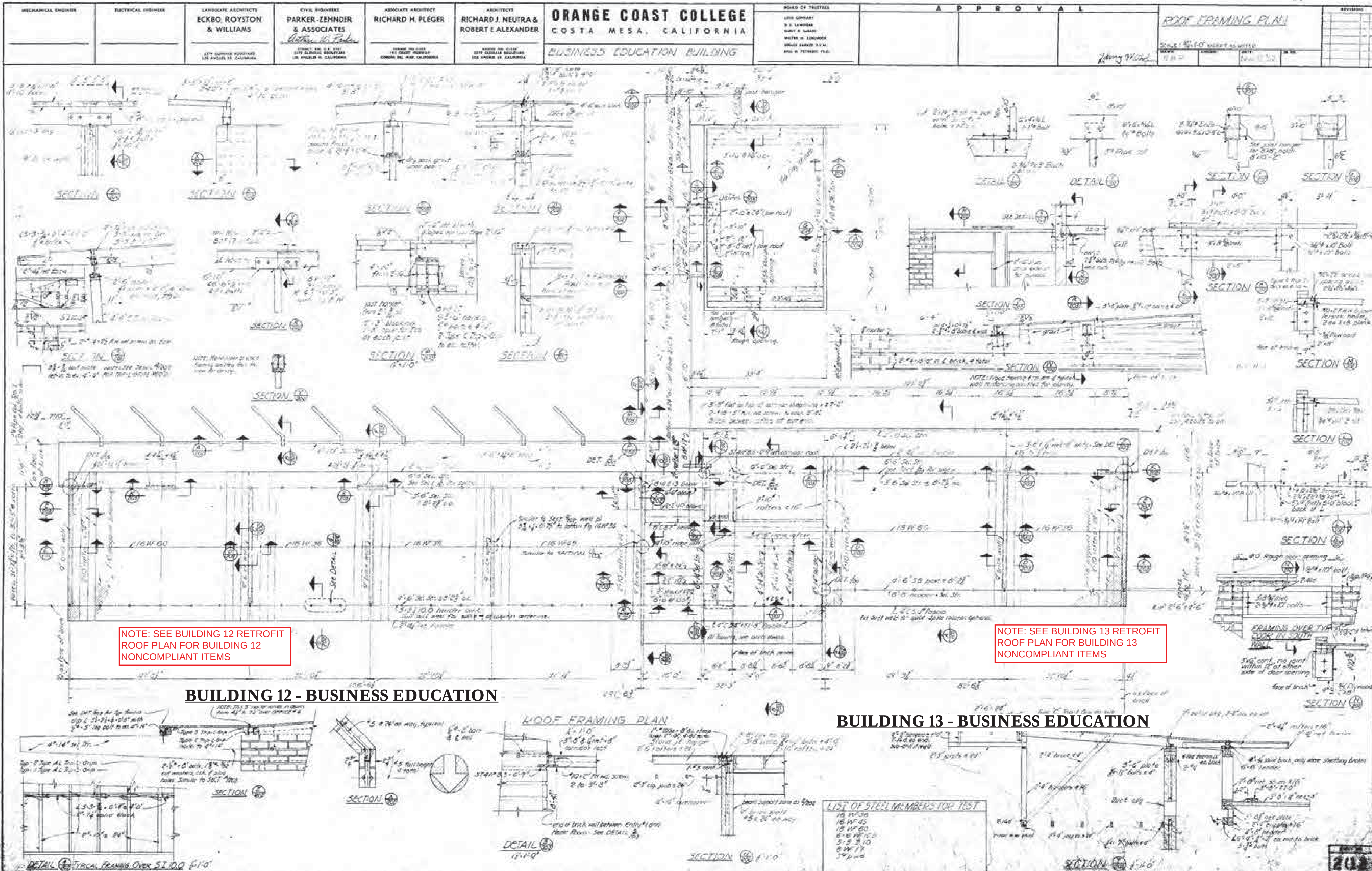
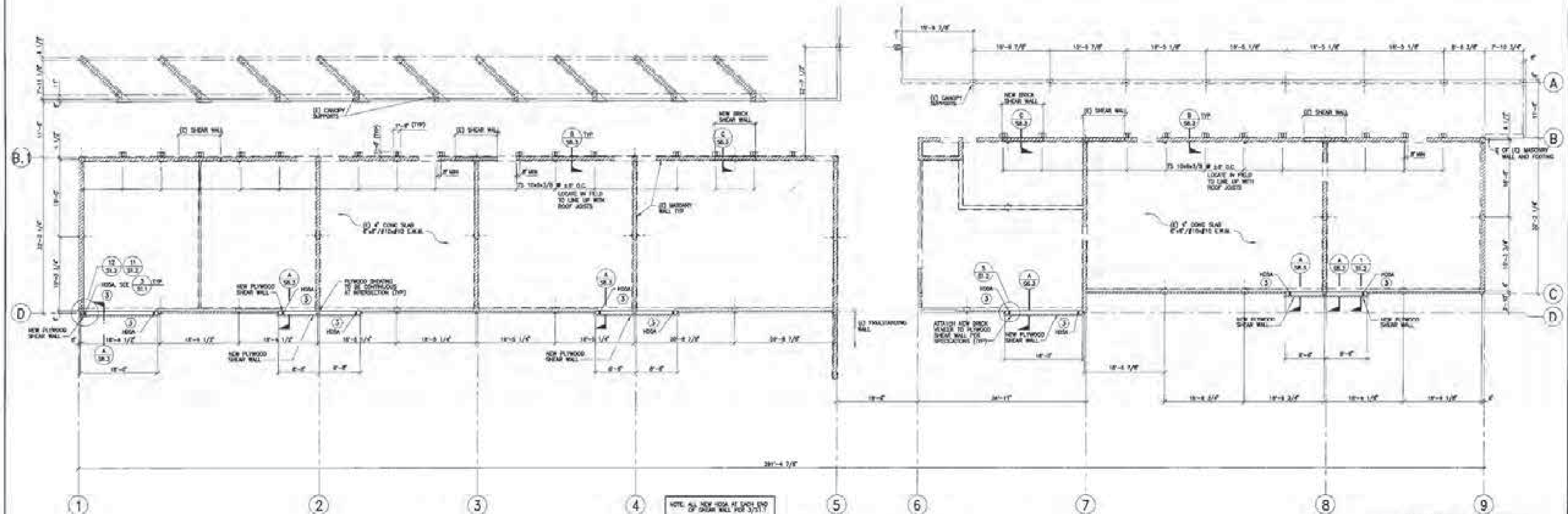
ECKBO, ROYSTON & WILLIAMS
COAST COLLEGE
ROOF FRAMING PLAN
SECTION
DETAIL
202


MECHANICAL ENGINEER
ELECTRICAL ENGINEER
LANDSCAPE ARCHITECTS
ECKBO, ROYSTON & WILLIAMS
CIVIL ENGINEERS
PARKER-ZEHNDER & ASSOCIATES
ASSOCIATE ARCHITECT
RICHARD H. PLEGER
ARCHITECTS
RICHARD J. NEUTRA & ROBERT E. ALEXANDER
ORANGE COAST COLLEGE
COSTA MESA, CALIFORNIA
BUSINESS EDUCATION BUILDING
BOARD OF TRUSTEES
APPROVAL
FOUNDATION PLAN
CAISSON BELL SCHEDULE
TYPICAL CAISSON DETAIL
TYP NON-BRG FOUNDATION
TYP EDGE OF SLAB
SECTION
DETAIL
FOUNDATION PLAN
BUILDING 12 - BUSINESS EDUCATION
BUILDING 13 - BUSINESS EDUCATION
TYPICAL TIE SPACING FOR SOUTH WALL GRADE BM.
TYPICAL FOOTING FOR BRICK FIN WALLS



MECHANICAL ENGINEER
ELECTRICAL ENGINEER
LANDSCAPE ARCHITECTS
ECKBO, ROYSTON & WILLIAMS
CIVIL ENGINEERS
PARKER-ZEHNDER & ASSOCIATES
ASSOCIATE ARCHITECT
RICHARD H. PLEGER
ARCHITECTS
RICHARD J. NEUTRA & ROBERT E. ALEXANDER
ORANGE COAST COLLEGE
COSTA MESA, CALIFORNIA
BUSINESS EDUCATION BUILDING
BOARD OF TRUSTEES
APPROVAL
ROOF FRAMING PLAN
NOTE: SEE BUILDING 12 RETROFIT ROOF PLAN FOR BUILDING 12 NONCOMPLIANT ITEMS
NOTE: SEE BUILDING 13 RETROFIT ROOF PLAN FOR BUILDING 13 NONCOMPLIANT ITEMS
BUILDING 12 - BUSINESS EDUCATION
BUILDING 13 - BUSINESS EDUCATION
ROOF FRAMING PLAN
LIST OF STEEL MEMBERS FOR TEST
SECTION
DETAIL
202



BUILDING 12 - BUSINESS EDUCATION RETROFIT

BUILDING 13 - BUSINESS EDUCATION RETROFIT

FOUNDATION PLAN—BUILDINGS 12 AND 13
SCALE: 1/8" = 1'-0"

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F	6/24/99	DSA RESUBMITTAL				
E	5/7/99	BID DOCUMENTS	DV	TL	PK	DM
D	4/14/99	DSA COMMENTS	DV	TL	PK	DM
C	12/8/98	DSA SUBMITTAL	BF	TL	TL	DM
B	11/25/98	90% SUBMITTAL	BF	TL	TL	DM
A	11/02/98	60% SUBMITTAL	BF	TL	TL	DM

THE BENTLEY COMPANY
BENTLEY
JOB-NO: 98-10658 FILE: 12-FND1

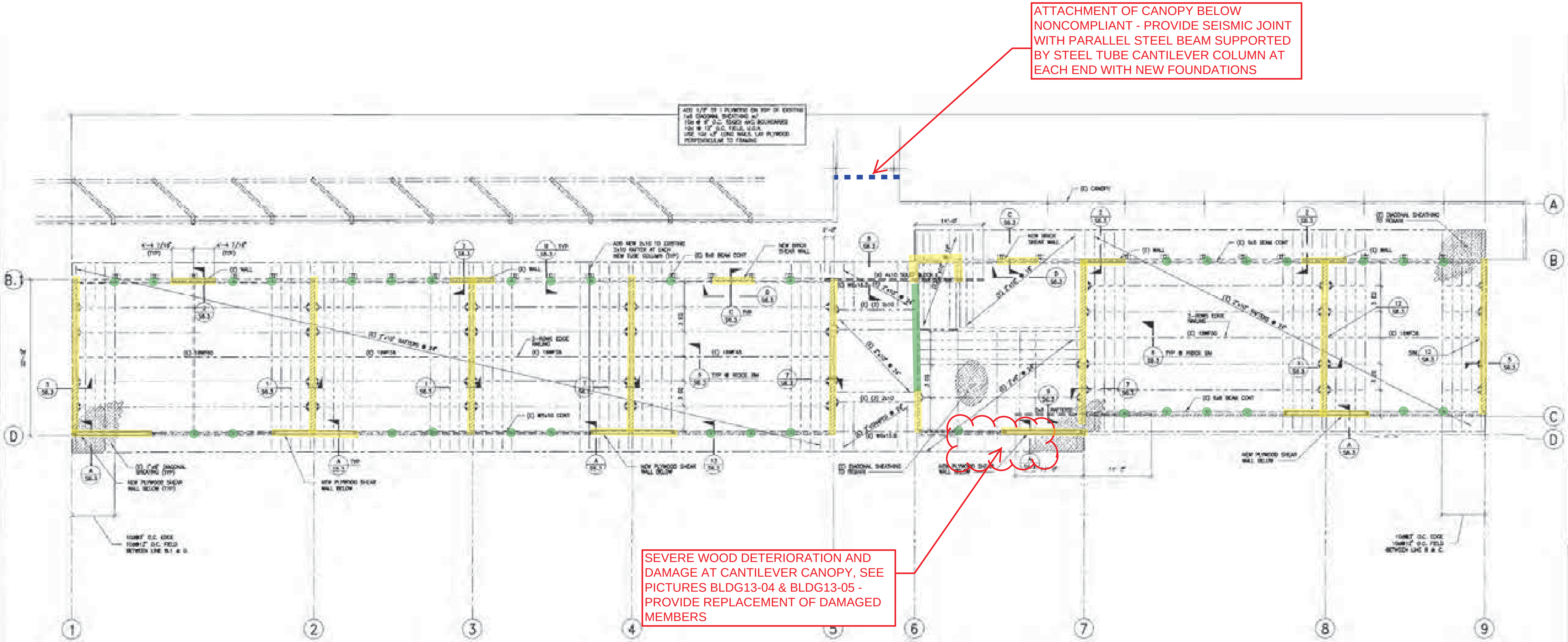
Coast Community College District

ORANGE COAST COLLEGE

Project: ORANGE COAST COLLEGE SEISMIC RETROFIT OF BUILDINGS 12, 13, 80

DRAWING TITLE: FOUNDATION PLAN – BUILDINGS 12 AND 13

SCALE: AS NOTED | DRAWING NO: S6.1 | REV. F



BUILDING 13 - BUSINESS EDUCATION RETROFIT

BUILDING 12 - BUSINESS EDUCATION RETROFIT

ROOF FRAMING PLAN—BUILDINGS 12 AND 13

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D	4/14/99	DSA COMMENTS	DV	TL	PK	DM
C	12/8/98	DSA SUBMITTAL	RF	TL	TL	DM
B	11/25/98	90% SUBMITTAL	RF	TL	TL	DM
A	11/02/98	60% SUBMITTAL	RF	TL	TL	DM

THE BENTLEY COMPANY

BENTLEY

JOB-NO: 98-10606 FILE: 12-FRM1

Coast Community College District

ORANGE COAST COLLEGE

Project: ORANGE COAST COLLEGE SEISMIC RETROFIT OF BUILDINGS 12, 13, 60

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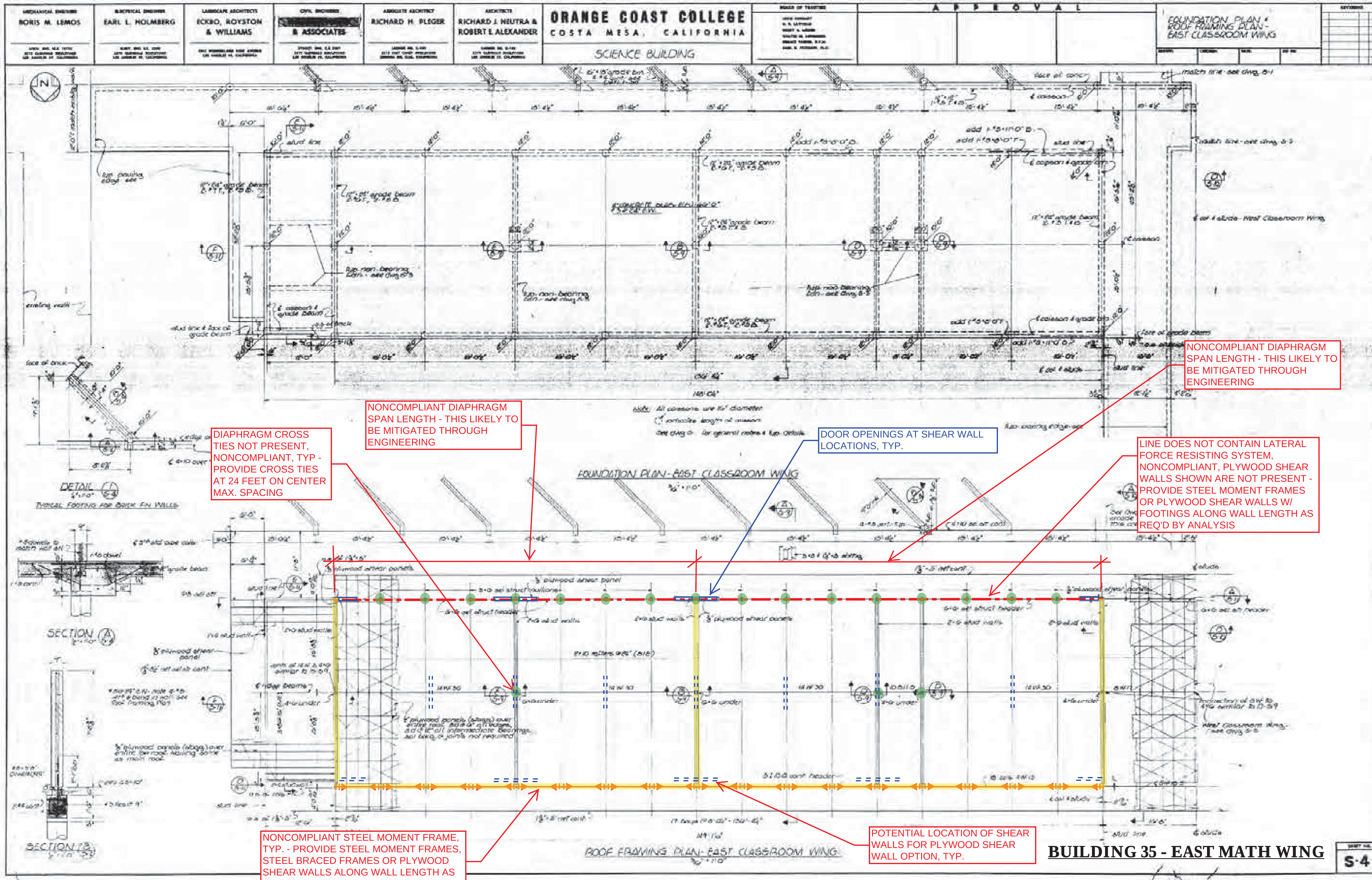
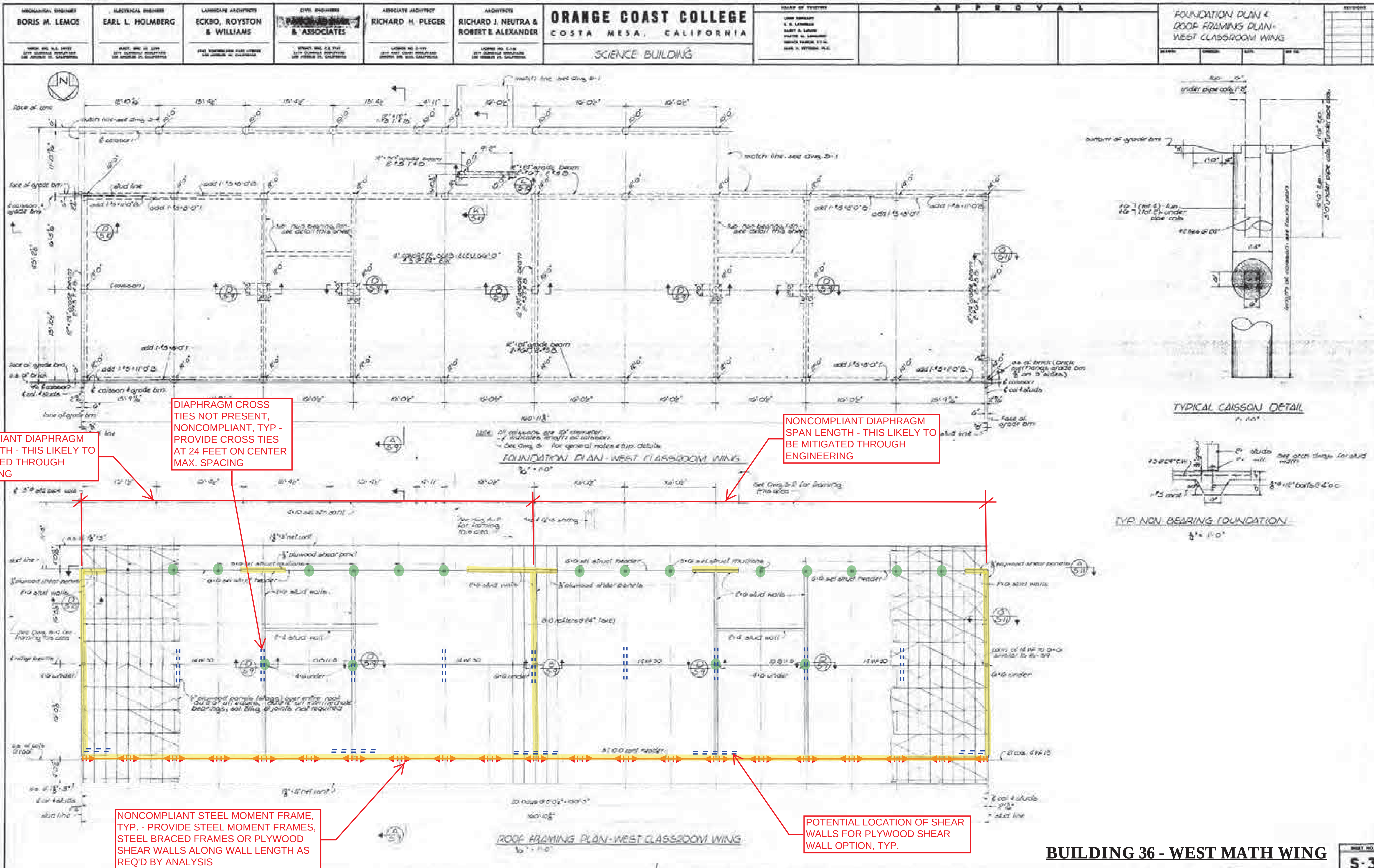
SCALE: AS NOTED

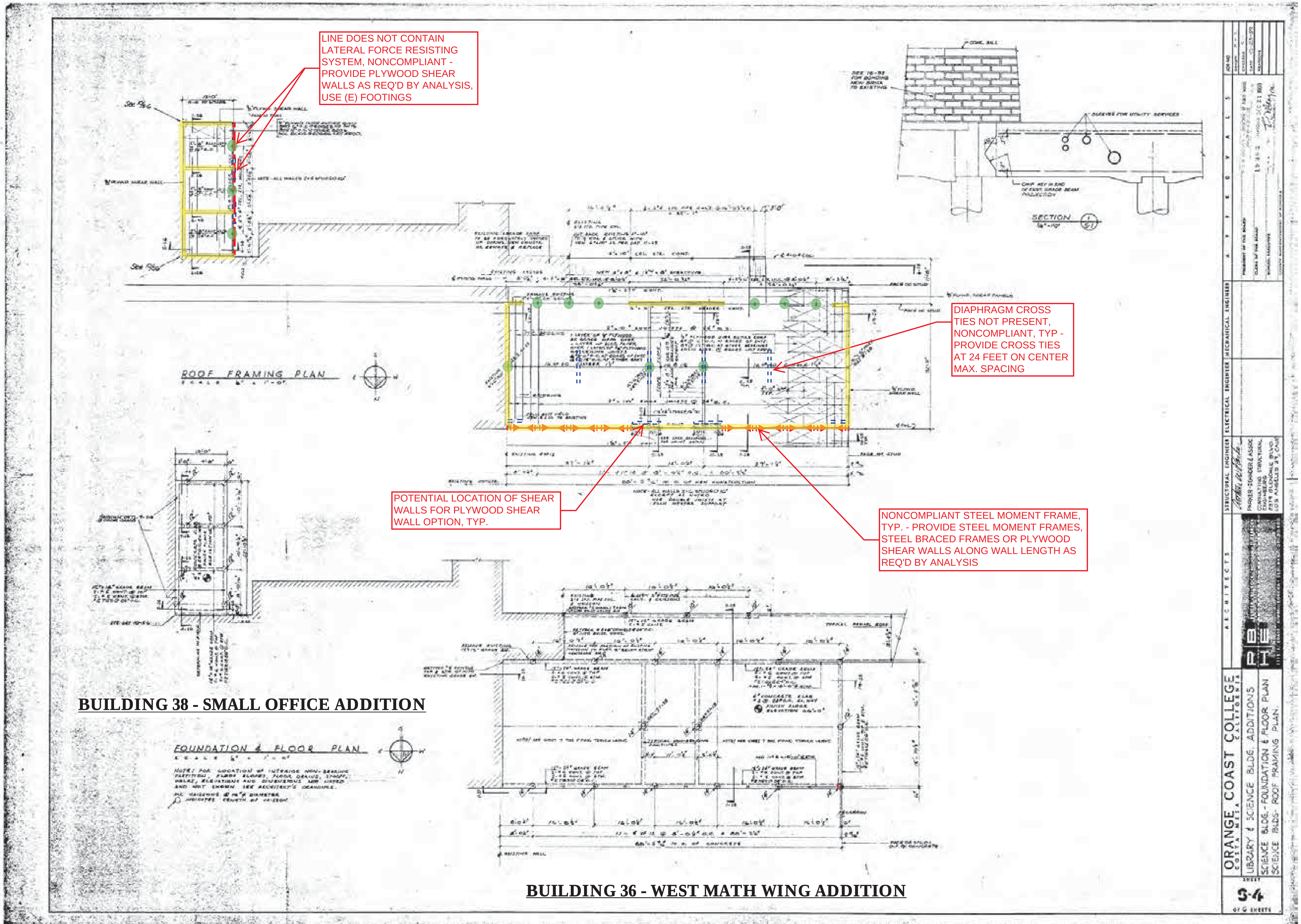
DRAWING NO: S6.2

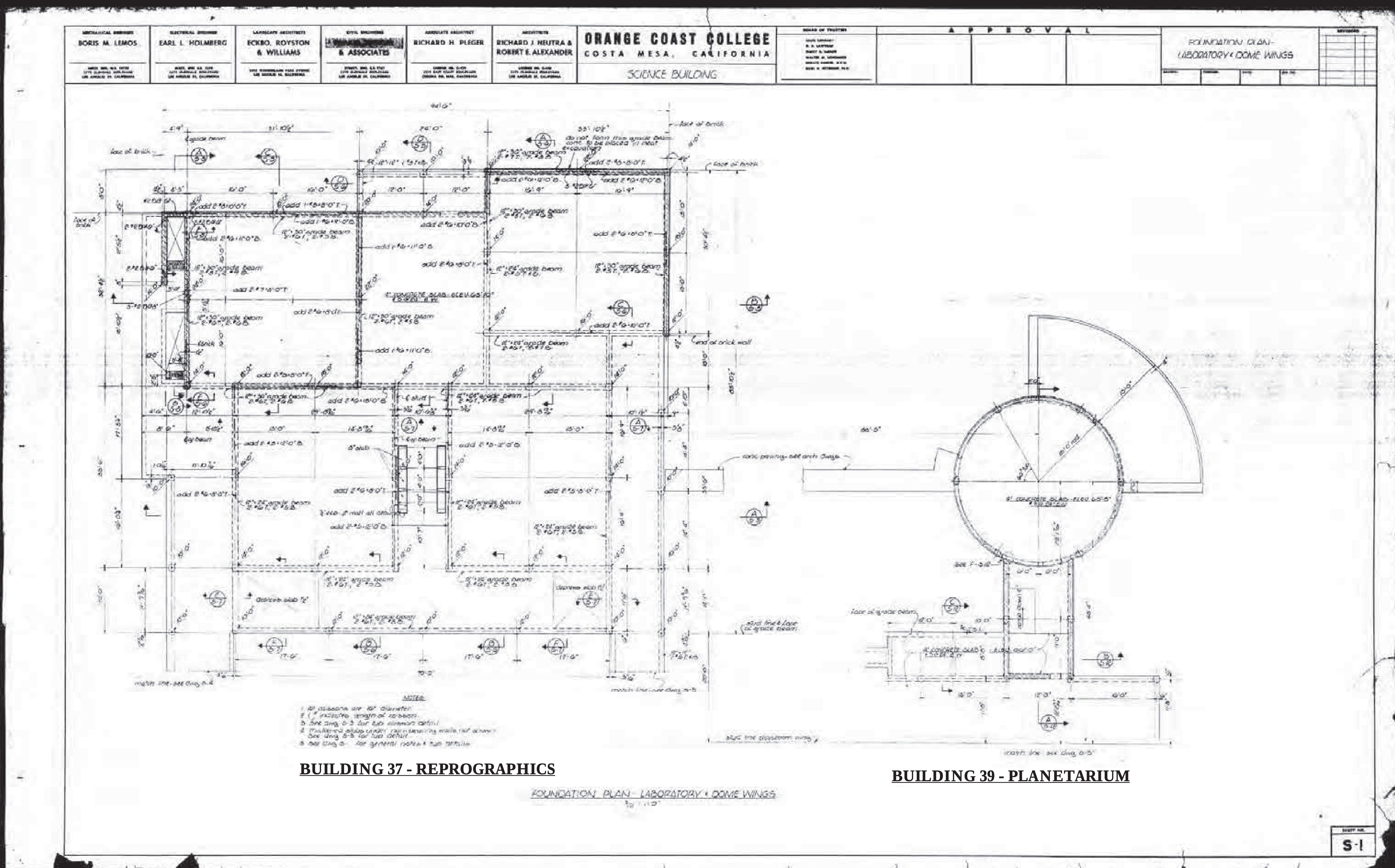
REV: F



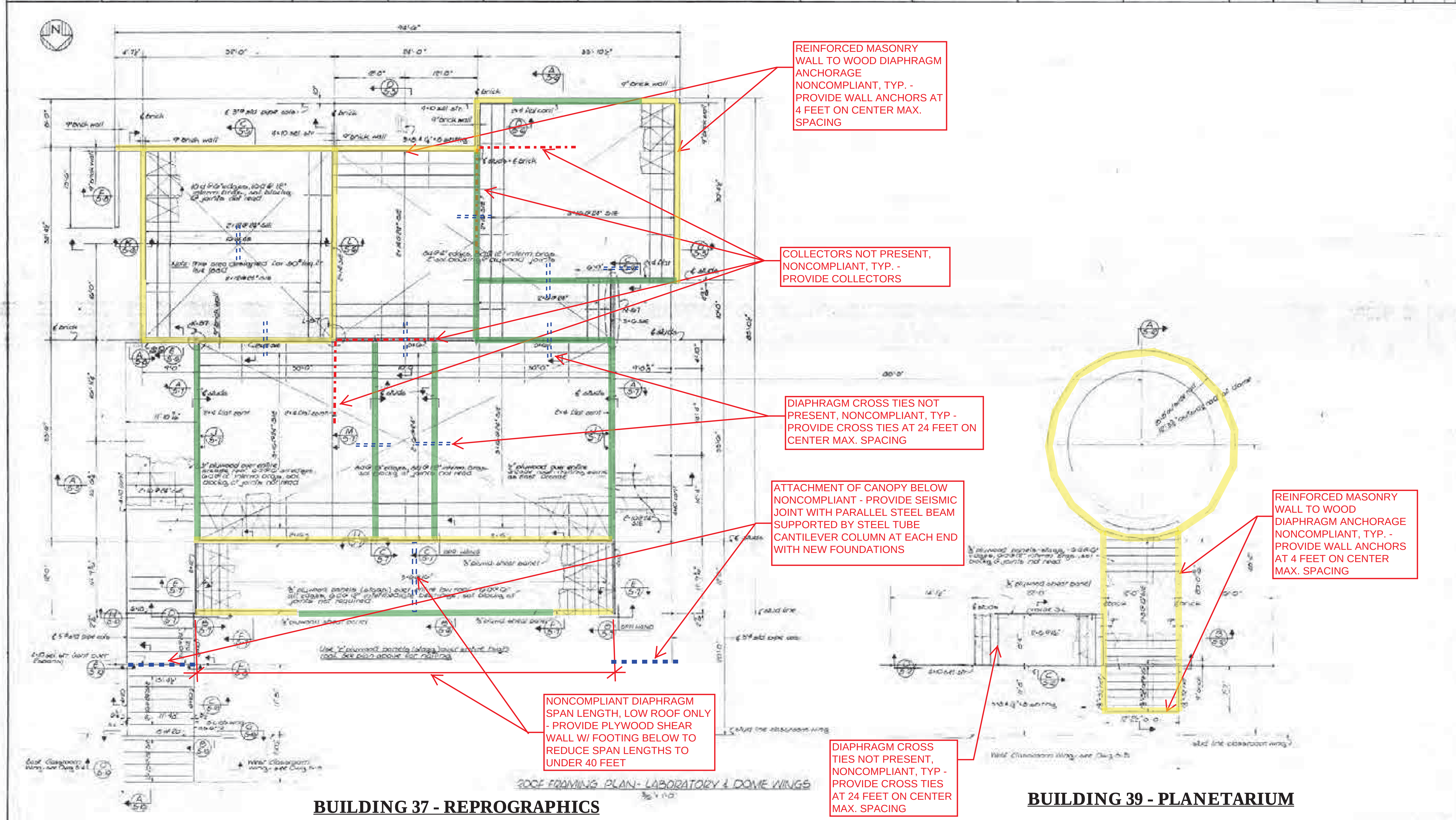
BUILDING 35 - EAST MATH WING


MECHANICAL ENGINEER
BORIS M. LEMOS
ELECTRICAL ENGINEER
EARL L. HOLMBERG
LANDSCAPE ARCHITECTS
ECKBO, ROYSTON & WILLIAMS
CIVIL ENGINEERS
& ASSOCIATES
ASSOCIATE ARCHITECT
RICHARD H. PLEGER
ARCHITECTS
RICHARD J. NEUTRA & ROBERT E. ALEXANDER
ORANGE COAST COLLEGE
COSTA MESA, CALIFORNIA
SCIENCE BUILDING
BOARD OF TRUSTEES
APPROVAL
FOUNDATION PLAN & ROOF FRAMING PLAN - WEST CLASSROOM WING
REVISIONS
FOUNDATION PLAN - WEST CLASSROOM WING
TYPICAL CAISSON DETAIL
TYP. NON BEARING FOUNDATION
ROOF FRAMING PLAN - WEST CLASSROOM WING
NONCOMPLIANT DIAPHRAGM SPAN LENGTH - THIS LIKELY TO BE MITIGATED THROUGH ENGINEERING
DIAPHRAGM CROSS TIES NOT PRESENT, NONCOMPLIANT, TYP - PROVIDE CROSS TIES AT 24 FEET ON CENTER MAX. SPACING
NONCOMPLIANT DIAPHRAGM SPAN LENGTH - THIS LIKELY TO BE MITIGATED THROUGH ENGINEERING
NONCOMPLIANT STEEL MOMENT FRAME, TYP. - PROVIDE STEEL MOMENT FRAMES, STEEL BRACED FRAMES OR PLYWOOD SHEAR WALLS ALONG WALL LENGTH AS REQ'D BY ANALYSIS
POTENTIAL LOCATION OF SHEAR WALLS FOR PLYWOOD SHEAR WALL OPTION, TYP.
BUILDING 36 - WEST MATH WING
S-3

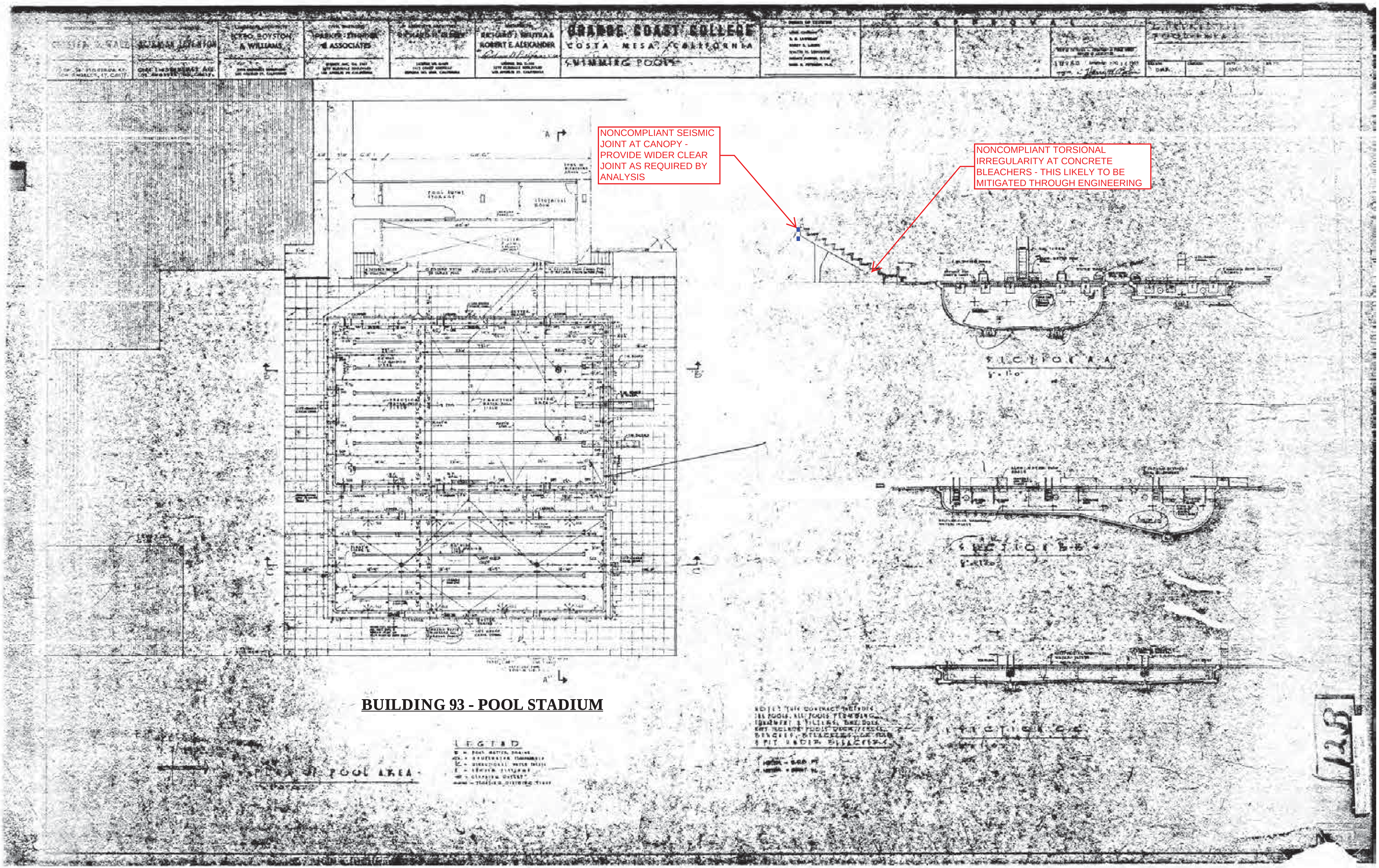

LINE DOES NOT CONTAIN LATERAL FORCE RESISTING SYSTEM, NONCOMPLIANT - PROVIDE PLYWOOD SHEAR WALLS AS REQ'D BY ANALYSIS, USE (E) FOOTINGS
ROOF FRAMING PLAN
DIAPHRAGM CROSS TIES NOT PRESENT, NONCOMPLIANT, TYP - PROVIDE CROSS TIES AT 24 FEET ON CENTER MAX. SPACING
POTENTIAL LOCATION OF SHEAR WALLS FOR PLYWOOD SHEAR WALL OPTION, TYP.
NONCOMPLIANT STEEL MOMENT FRAME, TYP. - PROVIDE STEEL MOMENT FRAMES, STEEL BRACED FRAMES OR PLYWOOD SHEAR WALLS ALONG WALL LENGTH AS REQ'D BY ANALYSIS
SECTION
BUILDING 38 - SMALL OFFICE ADDITION
FOUNDATION & FLOOR PLAN
BUILDING 36 - WEST MATH WING ADDITION
ORANGE COAST COLLEGE
COSTA MESA CALIFORNIA
LIBRARY & SCIENCE BLDG. ADDITIONS
SCIENCE BLDG. - FOUNDATION & FLOOR PLAN
SCIENCE BLDG. ROOF FRAMING PLAN
S-4


BORIS M. LEMOS
EARL L. HOLMBERG
ECKBO, ROYSTON & WILLIAMS
& ASSOCIATES
RICHARD H. PLEGER
RICHARD J. NEUTRA & ROBERT E. ALEXANDER
ORANGE COAST COLLEGE
COSTA MESA, CALIFORNIA
SCIENCE BUILDING
APPROVAL
FOUNDATION PLAN - LABORATORY & DOME WINGS
BUILDING 37 - REPROGRAPHICS
BUILDING 39 - PLANETARIUM
FOUNDATION PLAN - LABORATORY & DOME WINGS
S-1

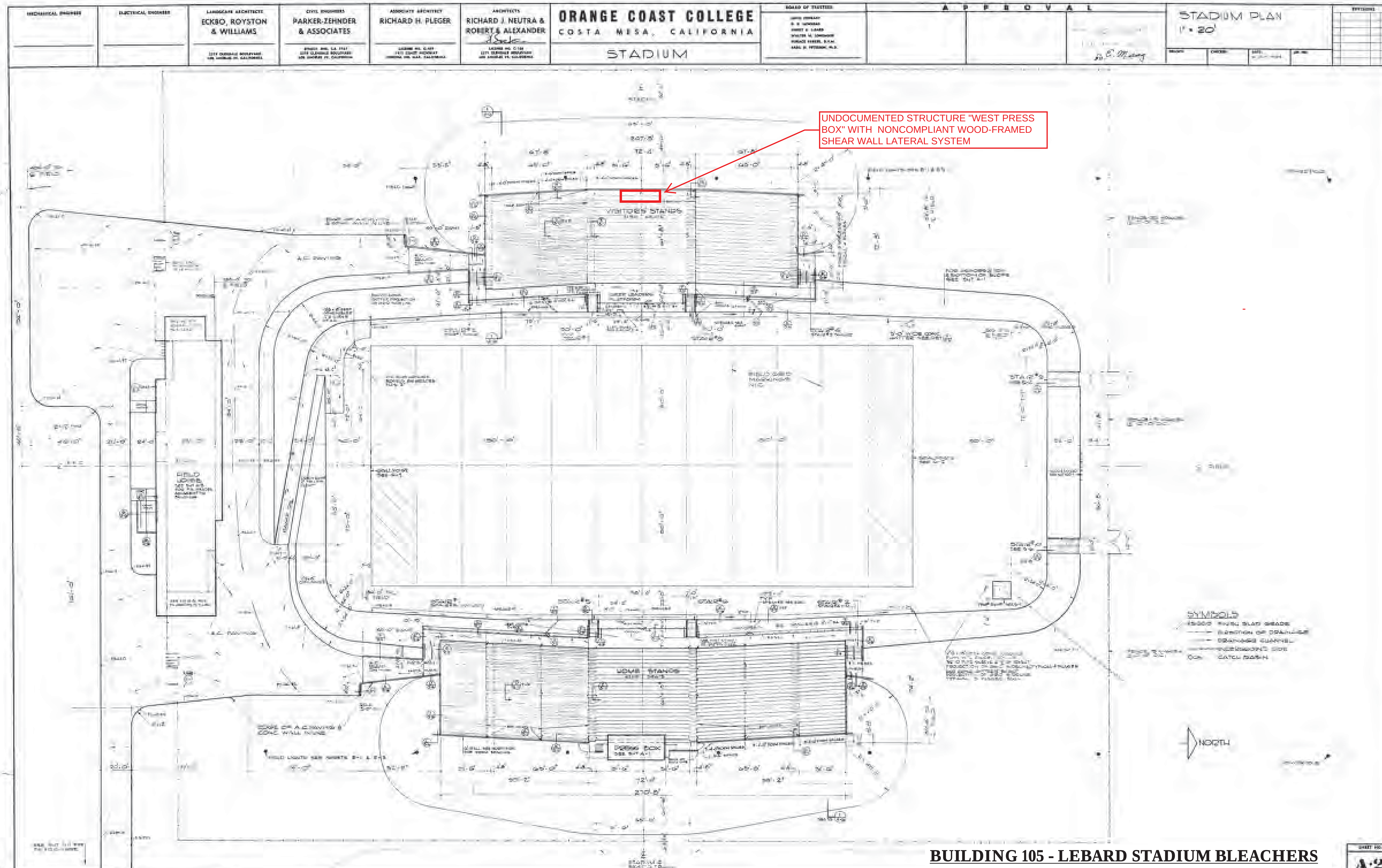
MECHANICAL ENGINEER	ELECTRICAL ENGINEER	LANDSCAPE ARCHITECTS	CIVIL ENGINEERS	ASSOCIATE ARCHITECT	ARCHITECTS		
BORIS M. LEMOS	EARL L. HOLMBERG	ECKBO, ROYSTON & WILLIAMS	[redacted] & ASSOCIATES	RICHARD H. PLEGER	RICHARD J. NEUTRA & ROBERT E. ALEXANDER	ORANGE COAST COLLEGE COSTA MESA, CALIFORNIA SCIENCE BUILDING	ROOF FRAMING PLAN - LABORATORY & DOME WINGS



S-2

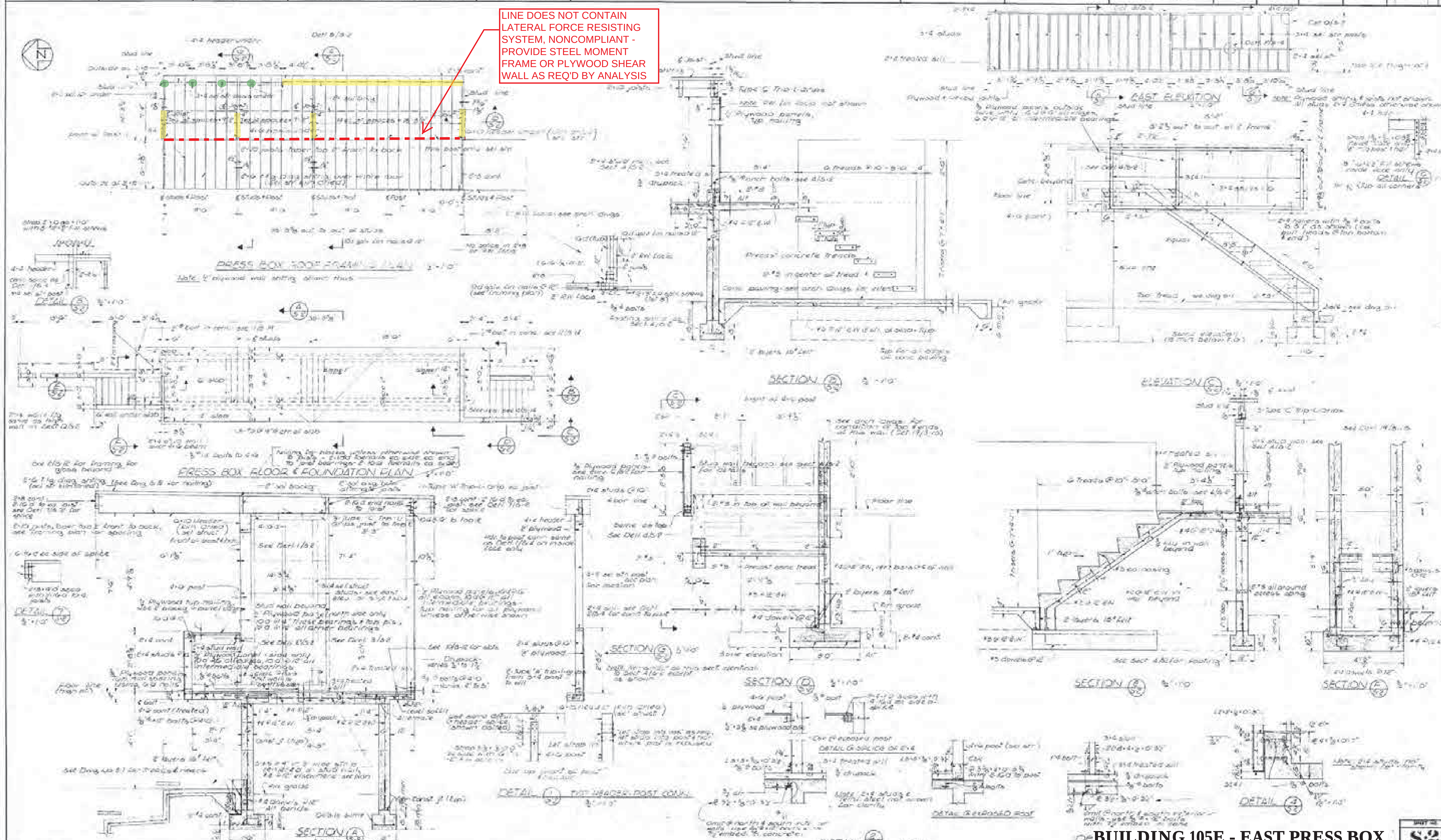


BUILDING 93 - POOL STADIUM



BUILDING 105 - LEBARD STADIUM BLEACHERS

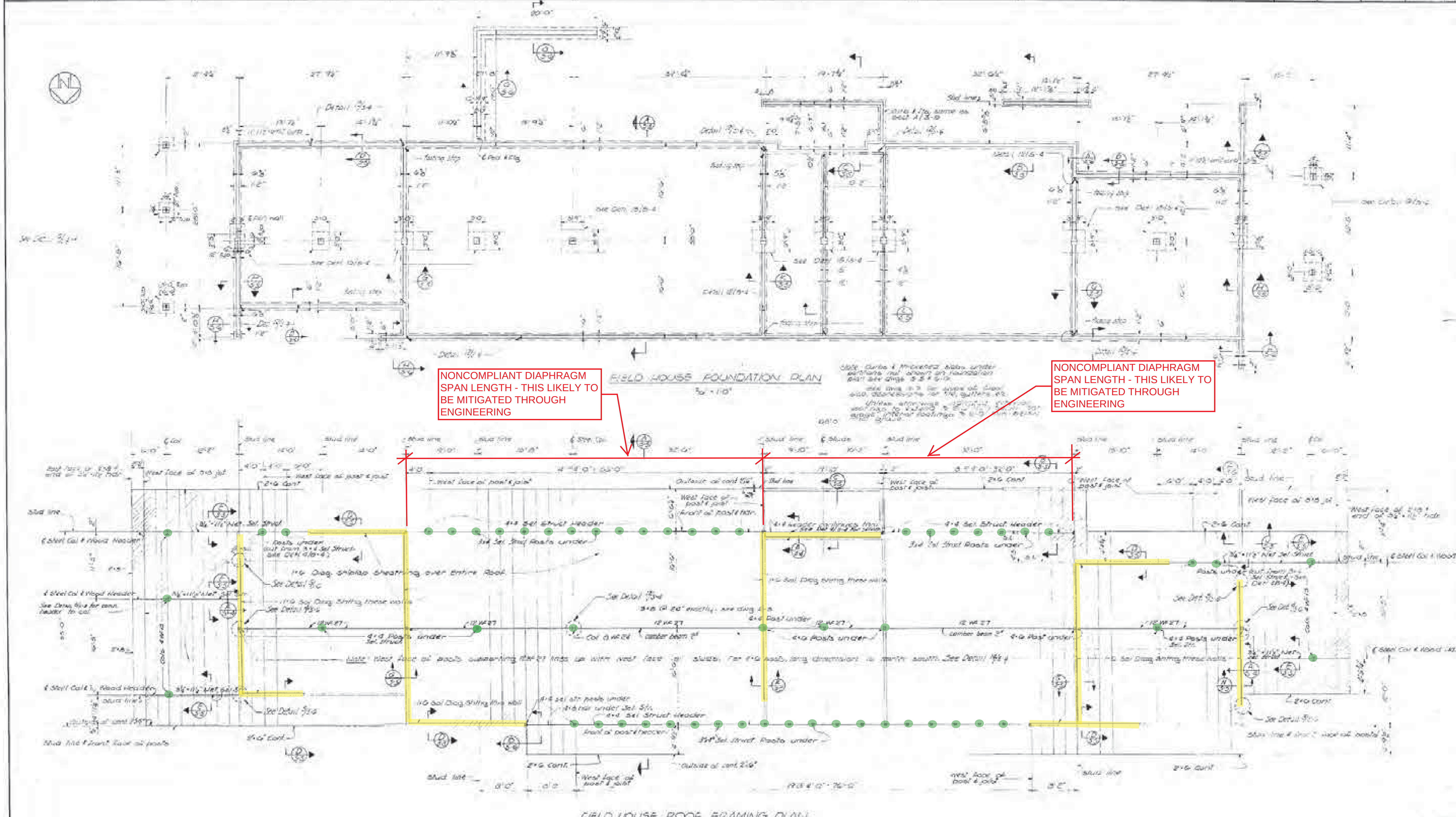
MECHANICAL ENGINEER	ELECTRICAL ENGINEER	LANDSCAPE ARCHITECTS	CIVIL ENGINEERS	ASSOCIATE ARCHITECT	ARCHITECTS		BOARD OF TRUSTEES	APPROVAL		
		ECKBO, ROYSTON & WILLIAMS	PARKER-ZEHNDER & ASSOCIATES	RICHARD H. PLEGER	RICHARD J. NEUTRA & ROBERT E. ALEXANDER	ORANGE COAST COLLEGE COSTA MESA, CALIFORNIA STADIUM			PRESS BOX PLANS & DETAILS	



BUILDING 105E - EAST PRESS BOX

S-2

MECHANICAL ENGINEER	ELECTRICAL ENGINEER	LANDSCAPE ARCHITECTS	CIVIL ENGINEERS	ASSOCIATE ARCHITECT	ARCHITECTS		BOARD OF TRUSTEES	APPROVAL	
		ECKBO, ROYSTON & WILLIAMS	PARKER-ZEHNDER & ASSOCIATES	RICHARD H. PLEGER	RICHARD J. NEUTRA & ROBERT E. ALEXANDER	**ORANGE COAST COLLEGE** COSTA MESA, CALIFORNIA — STADIUM			FIELDHOUSE FOUNDATION & ROOF FRAMING PLANS



BUILDING 110 - FIELD HOUSE

S-3

APPENDIX B

EXAMPLE DETAILS FOR MITIGATION OF DEFICIENCIES

CONCRETE REPAIR NOTES

A. WORK INCLUDED:

THE WORK AREA INCLUDES CONCRETE COLUMNS, SLABS, BEAMS & WALLS AS IDENTIFIED IN FIELD.

B. TEMPORARY SHORING SYSTEMS:

1. TEMPORARY SHORING SHALL BE INSTALLED PRIOR TO CUTTING AND CHIPPING ANY PORTION OF THE CONCRETE ELEMENTS, AS REQUIRED.

C. DEMOLITION:

1. EXECUTE DEMOLITION WORK TO ENSURE SAFETY OF PERSONS AND ADJACENT PROPERTY AGAINST DAMAGE BY FALLING DEBRIS OR OTHER CAUSES IN CONNECTION WITH THIS WORK. PROTECT FROM DAMAGE ANY OF THE EXISTING BUILDING OR EXISTING PARTS OF WORK TO REMAIN.
2. CUTTING AND DEMOLITION SHALL BE DONE BY METHODS WHICH WILL NOT JEOPARDIZE THE STRUCTURAL INTEGRITY OF THE BUILDING.
3. DO NOT CUT, ABRADE, OR OTHERWISE ALTER ANY STRUCTURAL MEMBER NOT DESIGNATED FOR DEMOLITION.
4. CHIP AWAY DEFECTIVE CONCRETE UNTIL SOUND CONCRETE IS REACHED OVER THE ENTIRE EXTENT OF CHIPPED AREA. THERE SHALL BE A ONE INCH CLEAR SPACE BELOW AND AROUND ANY EXPOSED REINFORCEMENT. WHERE THERE IS NO REINFORCEMENT, THE DEPTH OF THE CAVITY SHALL BE AT LEAST 1.5 INCHES. CHIP AWAY THE CONCRETE AT BOUNDARY EDGES OF THE PATCH AREA TO PROVIDE A MINIMUM DEPTH OF 1 INCH, MEASURED FROM THE FINISHED CONCRETE SURFACE.
5. CHIPPING, HAMMERING AND OTHER DEMOLITION PROCEDURES SHALL NOT DAMAGE EXISTING REINFORCING. EXISTING REINFORCING SHALL NOT BE CUT, BENT, KINKED, NICKED, REMOVED OR DAMAGED IN ANY WAY UNLESS IT IS TO BE REMOVED AND REPLACED.
6. REMOVE ALL CONCRETE ADHERING TO REINFORCING EXPOSED BY DEMOLITION. REMOVE CHAIRS WIRED TO REINFORCING OR OTHER LOOSE FIXTURES NOT REQUIRED FOR SUPPORT OF REINFORCING. REMOVE ALL DETERIORATED REBAR PER GENERAL NOTES AND REPAIR DETAILS.
7. ANY LARGE CRACKING AND/ OR DEEP VOIDS IN THE CONCRETE UNCOVERED DURING THE CHIPPING SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE STRUCTURAL ENGINEER. BEFORE PROCEEDING WITH WORK IN THIS AREA.

D. RUSTED REINFORCING STEEL:

1. ELIMINATE ALL CORRODED MATERIAL FROM EXISTING REINFORCEMENT UNTIL SOUND METAL IS EXPOSED. REMOVE THE CONCRETE COVER A MINIMUM OF 2 INCHES INTO "NON-RUSTED", SOUND REINFORCING STEEL AND SCRAPE OFF THE RUST WITH A WIRE BRUSH OR OTHER APPROVED MECHANICAL DEVICE.
2. REMOVE AND REPLACE ALL RUSTED REINFORCING STEEL WHEN THE CROSS-SECTION IS LESS THAN 90% OF THE ORIGINAL CROSS-SECTION AND/OR AS DIRECTED BY THE STRUCTURAL ENGINEER.
3. REPLACE REMOVED REINFORCING STEEL WITH BARS OF EQUIVALENT SIZE OR AREA, AND LAP SPLICE TO EXISTING UNRUSTED REINFORCING BARS AS INDICATED ON THE DRAWINGS. IF THE REMAINING EXPOSED LENGTH OF SOUND REINFORCING STEEL IS LESS THAN THE REQUIRED LAP LENGTH FOR THE BAR SIZE, SPLICE NEW BAR TO EXISTING BAR BY MECHANICAL COUPLER DEVICE. WELDING OF REINFORCING STEEL IS NOT PERMITTED.
4. THE STRUCTURAL ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY REINFORCEMENT THAT IS LESS THAN 90% OF THE CROSS-SECTION THAT HAS NOT BEEN SPECIFICALLY DESIGNATED FOR REMOVAL AND REPLACEMENT.
5. COAT ALL EXPOSED OR REPLACED REINFORCING BARS WITH SIKA ARMATEC 110, AS MANUFACTURED BY SIKA CORPORATION, LYNDHURST, N.J.

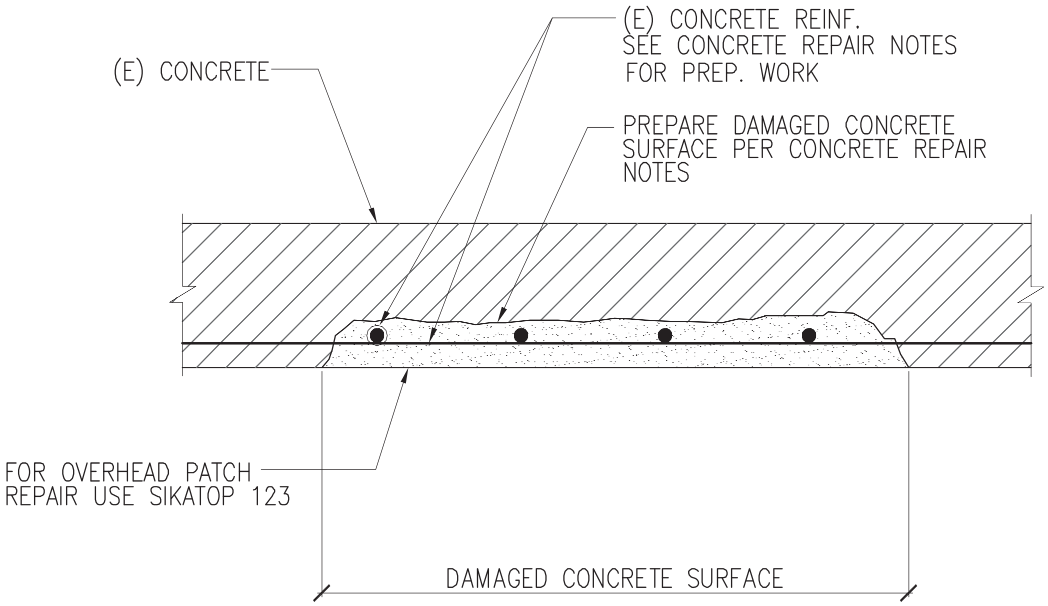
E. SURFACE PREPARATION FOR PATCHING DAMAGED AREAS:

1. THE SURFACE MUST BE MECHANICALLY PREPARED. AREAS TO BE PATCHED MUST BE CLEAN AND SOUND WITH ALL LOOSE AND DETERIORATED CONCRETE REMOVED. ALL LOOSE AND DETERIORATED CONCRETE SHALL BE REMOVED BY MECHANICAL MEANS. SAW CUT PERIMETER OF THE REPAIR AREA ½ INCH OR AS PERMITTED BY THE DEPTH OF THE REINFORCEMENT. CHIP CONCRETE SUBSTRATE TO OBTAIN A GOOD FRACTURED AGGREGATE SURFACE.
2. CHISEL OUT CONCRETE A MINIMUM OF 1 INCH BEYOND THE DEPTH OF THE BAR TO EXPOSE REINFORCING STEEL 360 DEGREES AROUND. ALL REINFORCEMENT SHALL BE EXPOSED A MINIMUM OF 2 INCHES INTO UN-CORRODED METAL.
3. ALL CORRODED MATERIAL SHOULD BE ELIMINATED FROM EXISTING REINFORCEMENT UNTIL SOUND METAL IS EXPOSED.
4. ALL SURFACES SHALL BE FREE OF DIRT, LAITANCE, CORROSION, OR OTHER CONTAMINATION. RINSE SURFACES WITH WATER AND LEAVE SURFACES IN DRY CONDITION PRIOR TO COMMENCING PATCHING PROCEDURES. CONTAIN WATER RUNOFF AND REMOVE ANY STANDING WATER RESULTING FROM THIS WORK.

F. PATCHING DAMAGED AREAS - AFTER COMPLETION OF SURFACE PREPARATION:

1. COAT ALL EXPOSED REINFORCEMENT AND PREPARED CONCRETE SURFACES WITH SIKA ARMATEC 110 (ANTI-CORROSION, BONDING BRIDGE) USING A STIFF-BRISTLE BRUSH OR HOPPER TYPE SPRAY PISTOL.
2. PATCH PARTIAL DEPTH CONCRETE DAMAGE WITH SIKATOP 123 (HAND APPLICATION) OR SIKATOP 111 (FORM, POUR OR PUMP) MORTARS WITHIN 24 HOURS AFTER APPLYING SIKA ARMATEC 110 COATING.
3. FOR HAND APPLIED MORTAR APPLY SIKATOP 123 IN LIFTS NOT TO EXCEED 1 ½ INCHES, SCORING THE TOP SURFACE OF EACH LIFT TO PRODUCE A ROUGHENED SURFACE FOR THE NEXT LIFT. ALLOW PRECEDING LIFTS TO REACH FINAL SET BEFORE APPLYING THE NEXT.
4. PATCH FULL DEPTH CONCRETE DAMAGE WITH TYPE "A" NORMAL WEIGHT CONCRETE, (SEE ABOVE). PLACE CONCRETE IN ACCORDANCE WITH ACI 301 AND ASTM C94.
5. USE INTERNAL VIBRATORS FOR THOROUGH CONSOLIDATION OF ALL CONCRETE. CONFORM TO THE RECOMMENDATIONS OF ACI 309.
6. PROTECT FRESHLY PLACED CONCRETE FROM PREMATURE DRYING, EXCESSIVE COLD OR HOT TEMPERATURES, AND MECHANICAL INJURY. CONFORM TO THE RECOMMENDATIONS OF ACI 308.

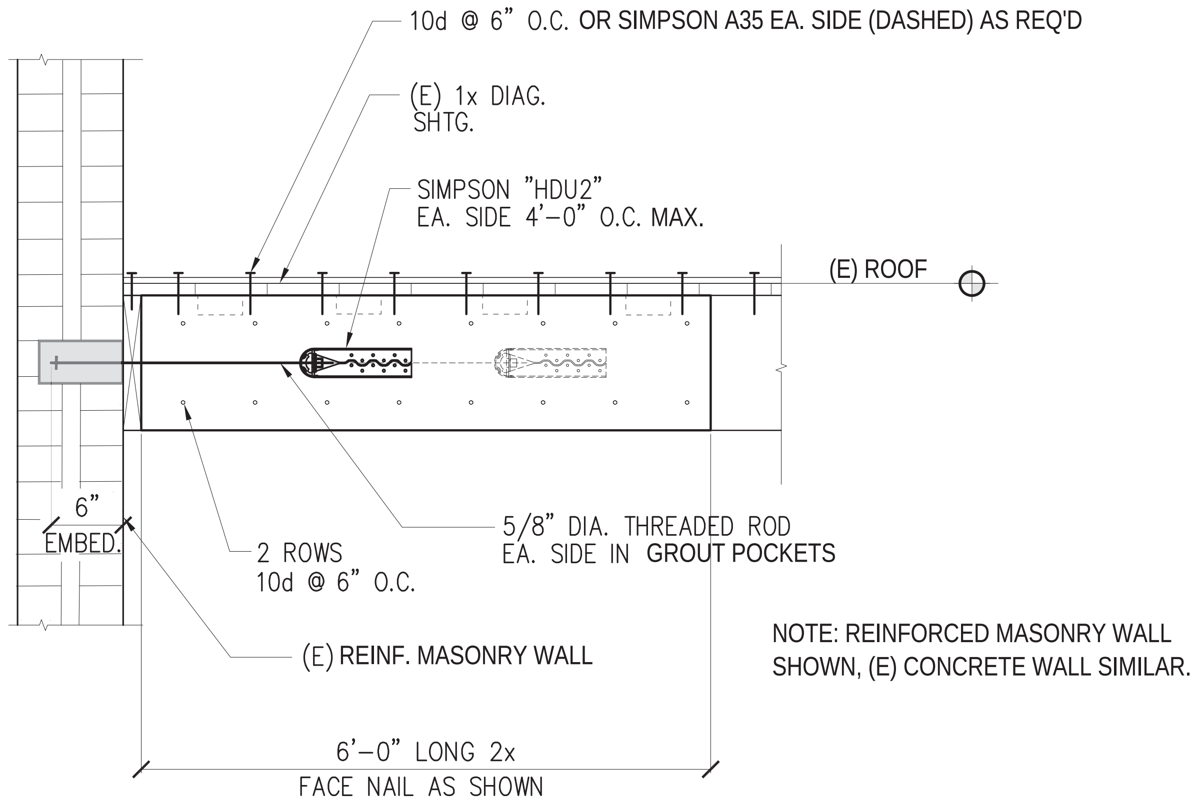
EXAMPLE CONCRETE REPAIR NOTES



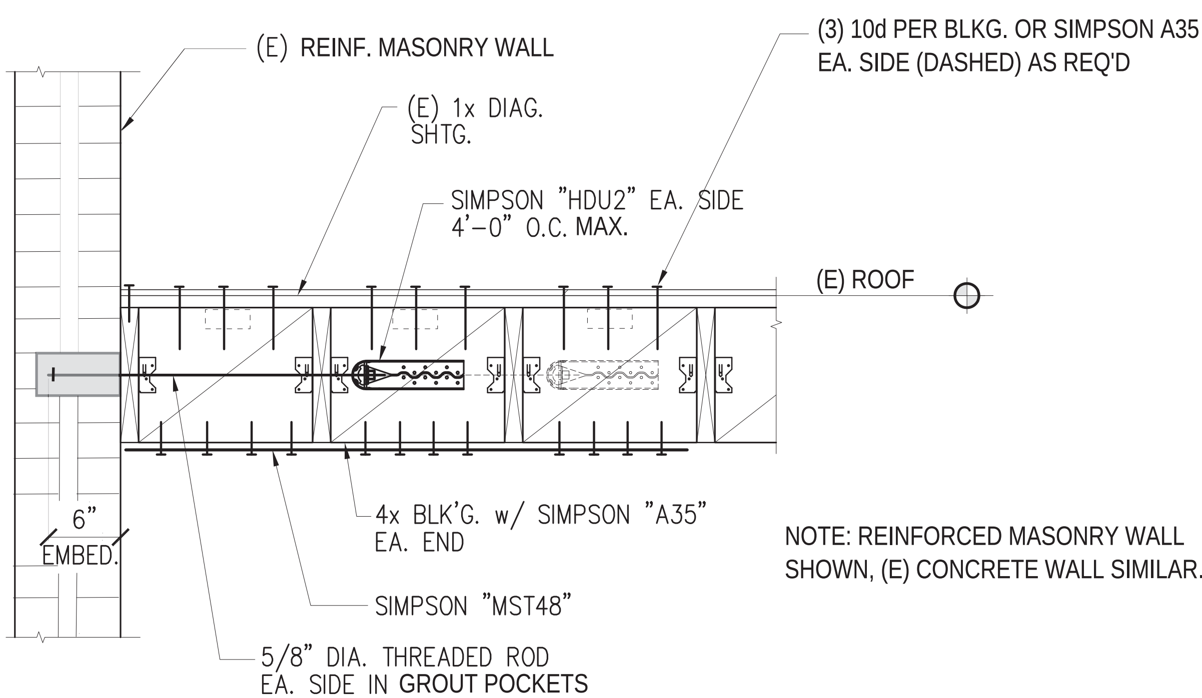
PARTIAL DEPTH REPAIRS NOTES:

1. CONTRACTOR TO COORDINATE AND FIELD VERIFY DAMAGED COLUMN, SLAB, BEAM & WALL LOCATIONS.
2. CONTRACTOR TO PREP. REINFORCING AND CONCRETE SURFACES PER CONCRETE REPAIR NOTES.

EXAMPLE TYP. CONCRETE REPAIR DETAIL

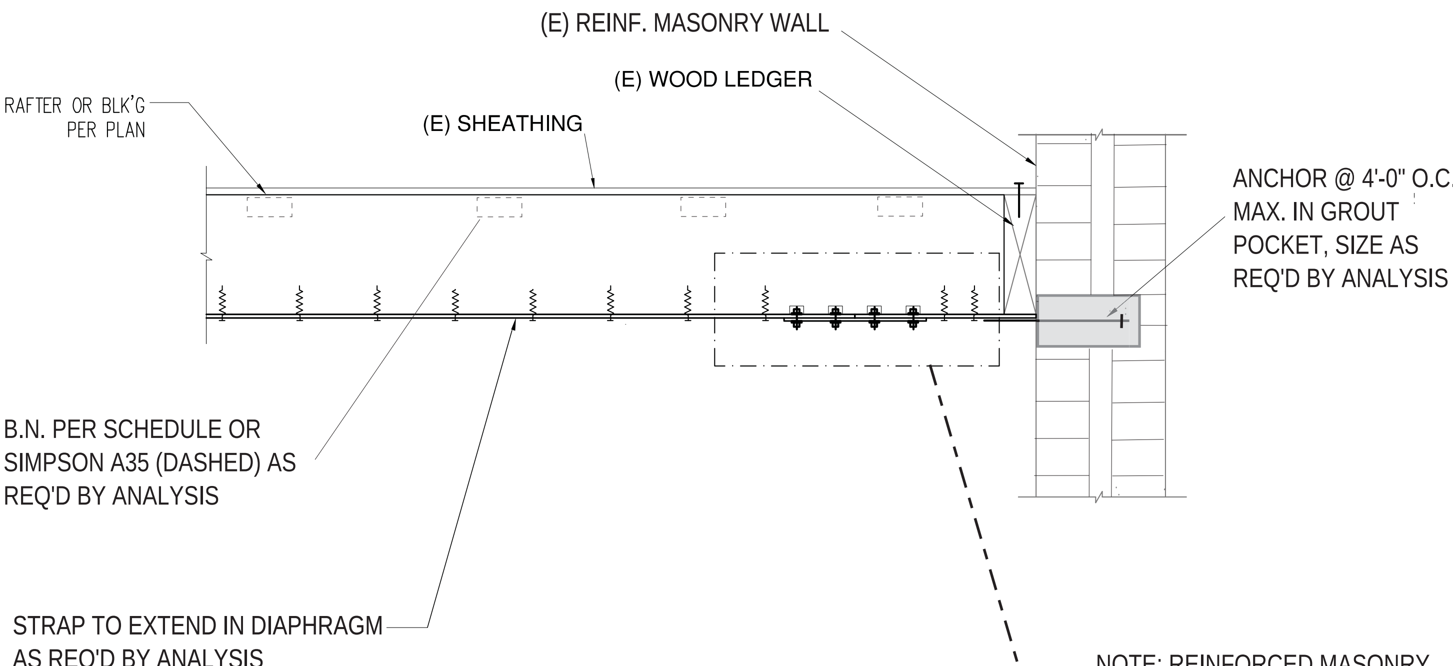


WALL PERP. TO RAFTERS



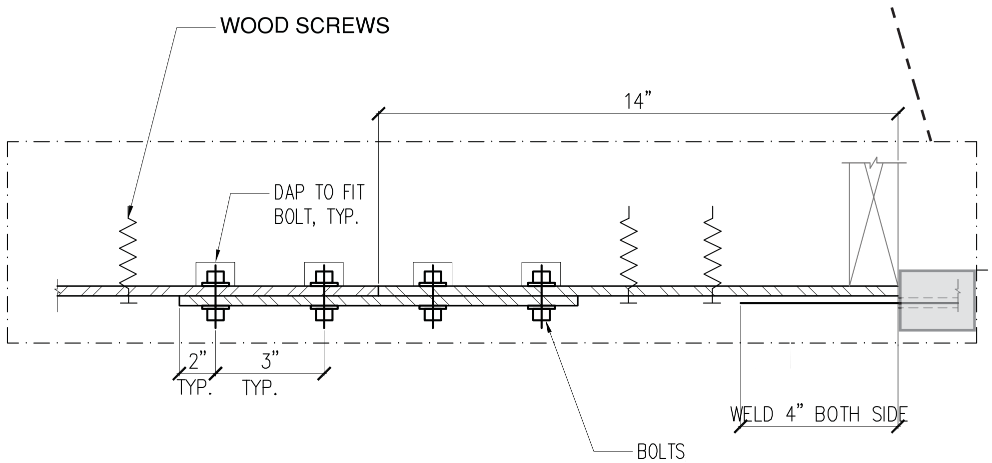
WALL PARALLEL TO RAFTERS

EXAMPLE WALL ANCHORAGE DETAIL - ALT. A



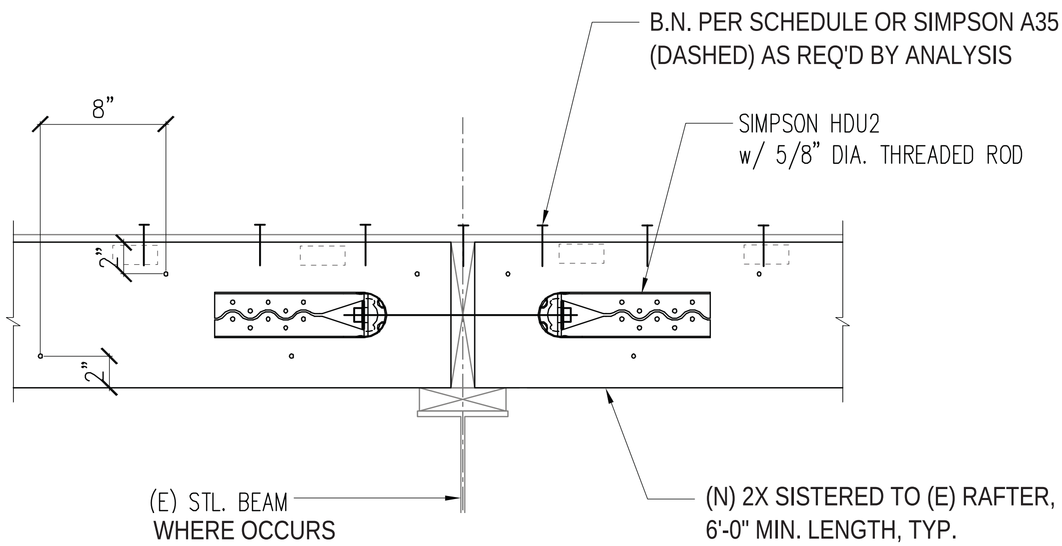
WALL PERP. TO RAFTERS

NOTE: REINFORCED MASONRY WALL SHOWN, (E) CONCRETE WALL SIMILAR.



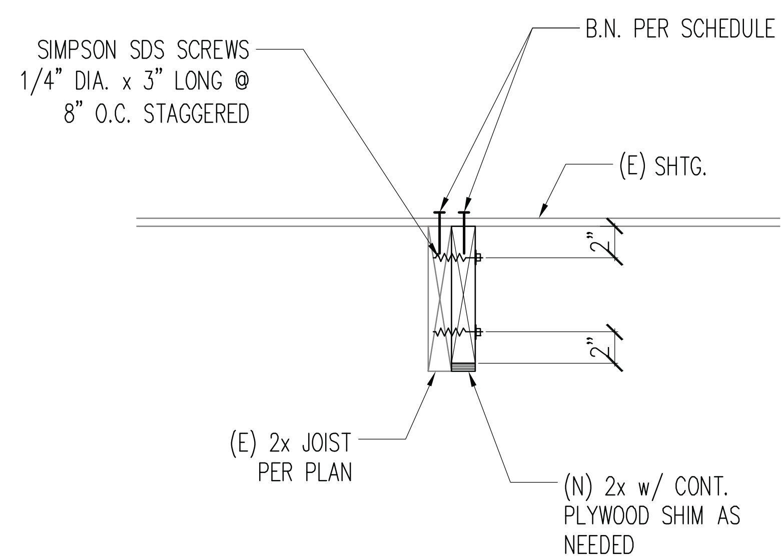
STRAP SPLICE DETAIL

EXAMPLE WALL ANCHORAGE DETAIL - ALT. B



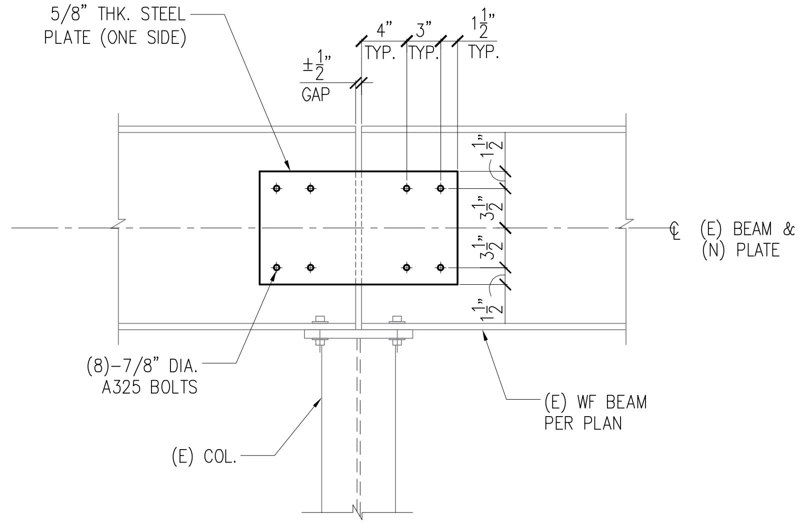
DETAIL

NOTE: CROSS TIES TO BE LOCATED AT 24'-0" O.C. MAX. IN EACH DIRECTION ALONG THE ENTIRE DIAPHRAGM LENGTH WHERE CONTINUOUS MEMBERS DO NOT OCCUR.



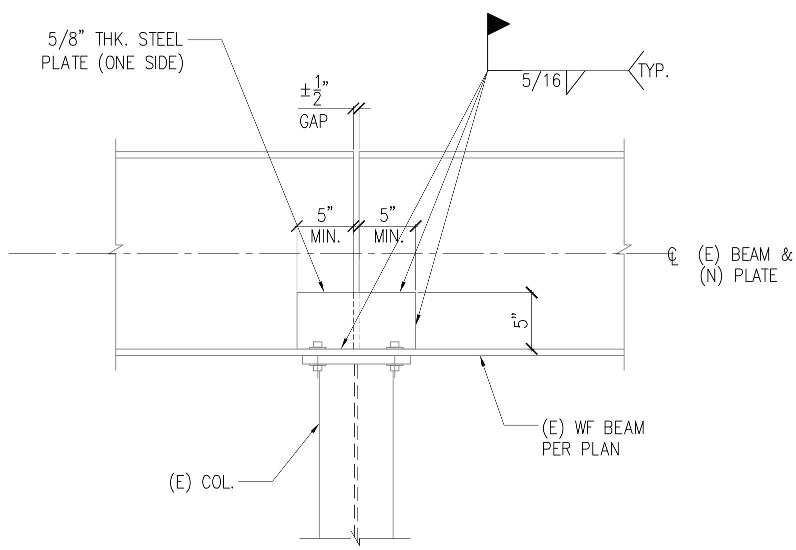
RAFTER SISTERING DETAIL

EXAMPLE CONTINUITY TIE DETAIL @ WOOD RAFTERS



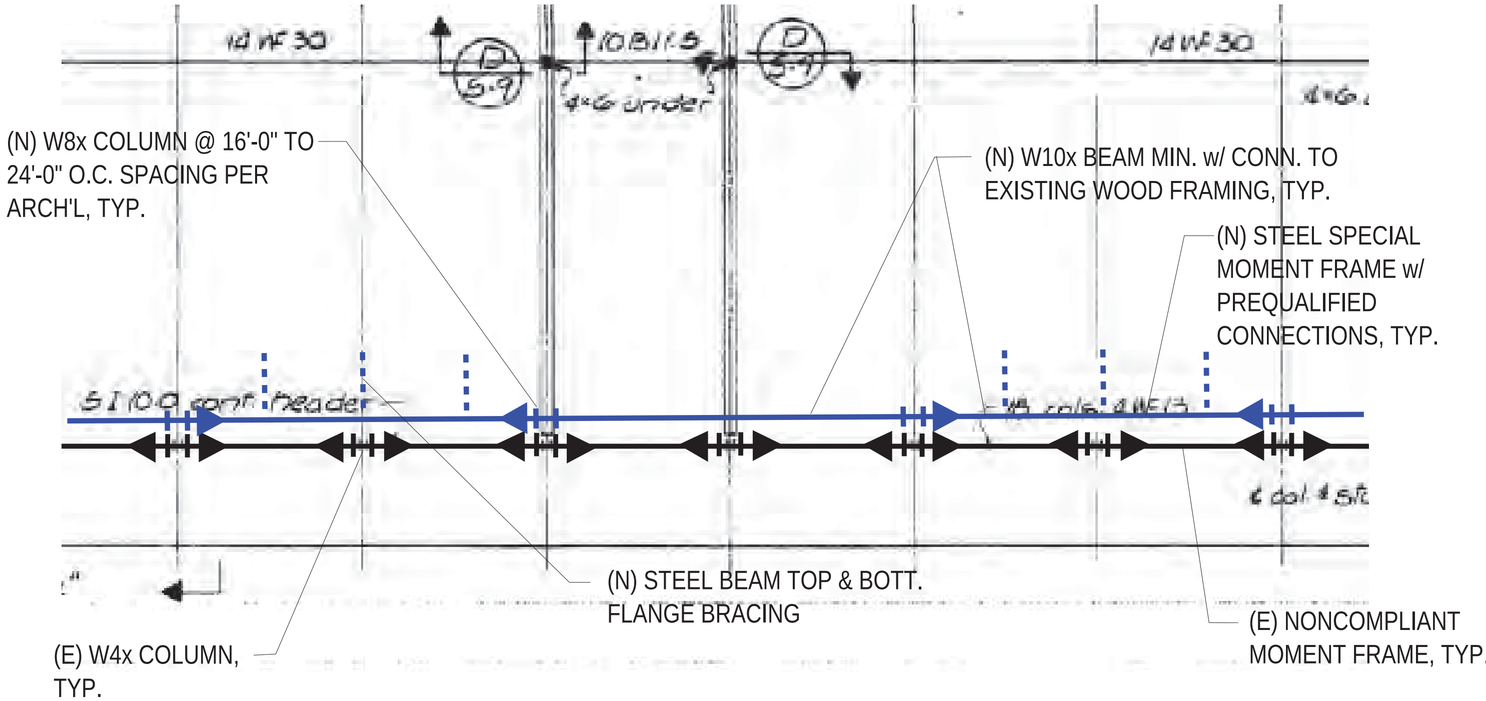
BOLTED CONN. - ALT A

NOTE: CROSS TIES TO BE LOCATED AT 24'-0" O.C. MAX. IN EACH DIRECTION ALONG THE ENTIRE DIAPHRAGM LENGTH WHERE CONTINUOUS MEMBERS DO NOT OCCUR.

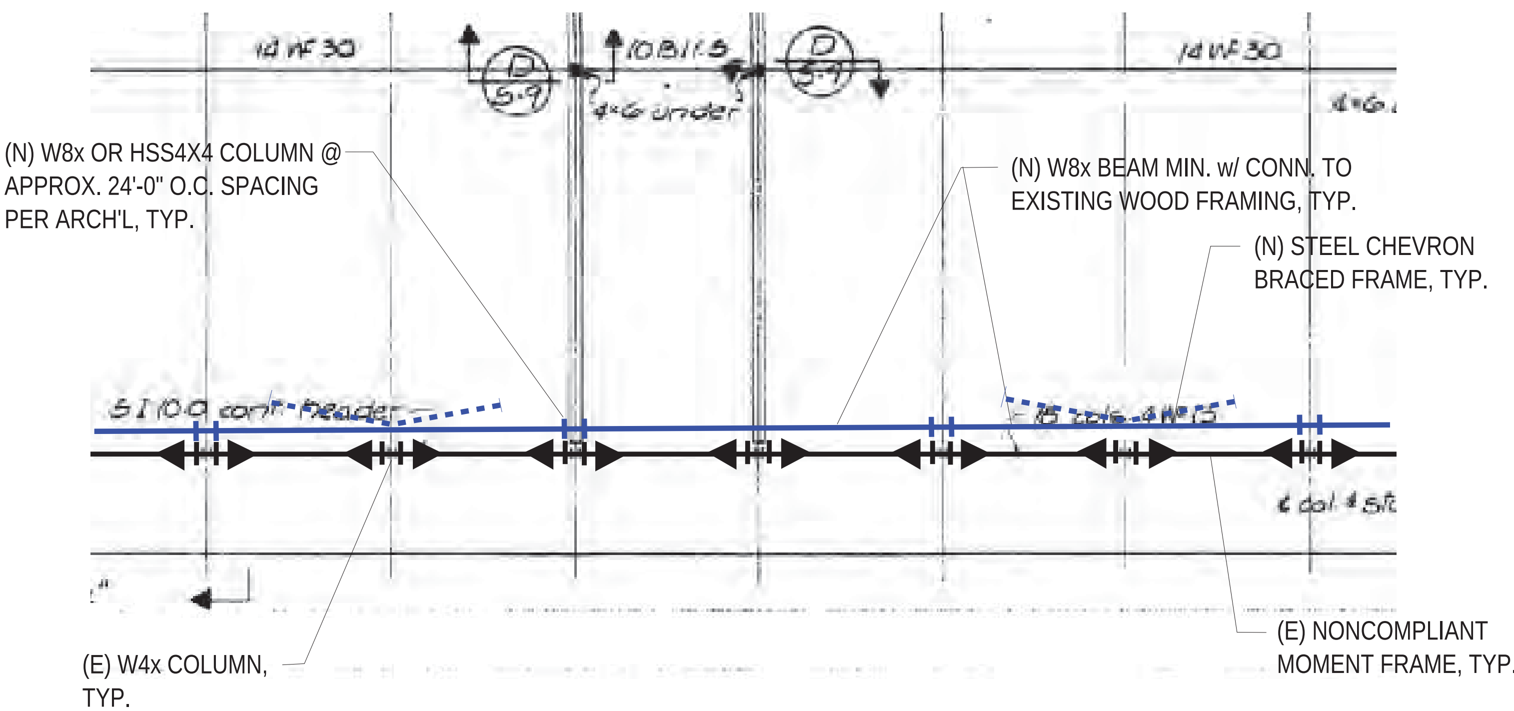


WELDED CONN. - ALT B

EXAMPLE CONTINUITY TIE DETAIL @ STEEL BEAMS

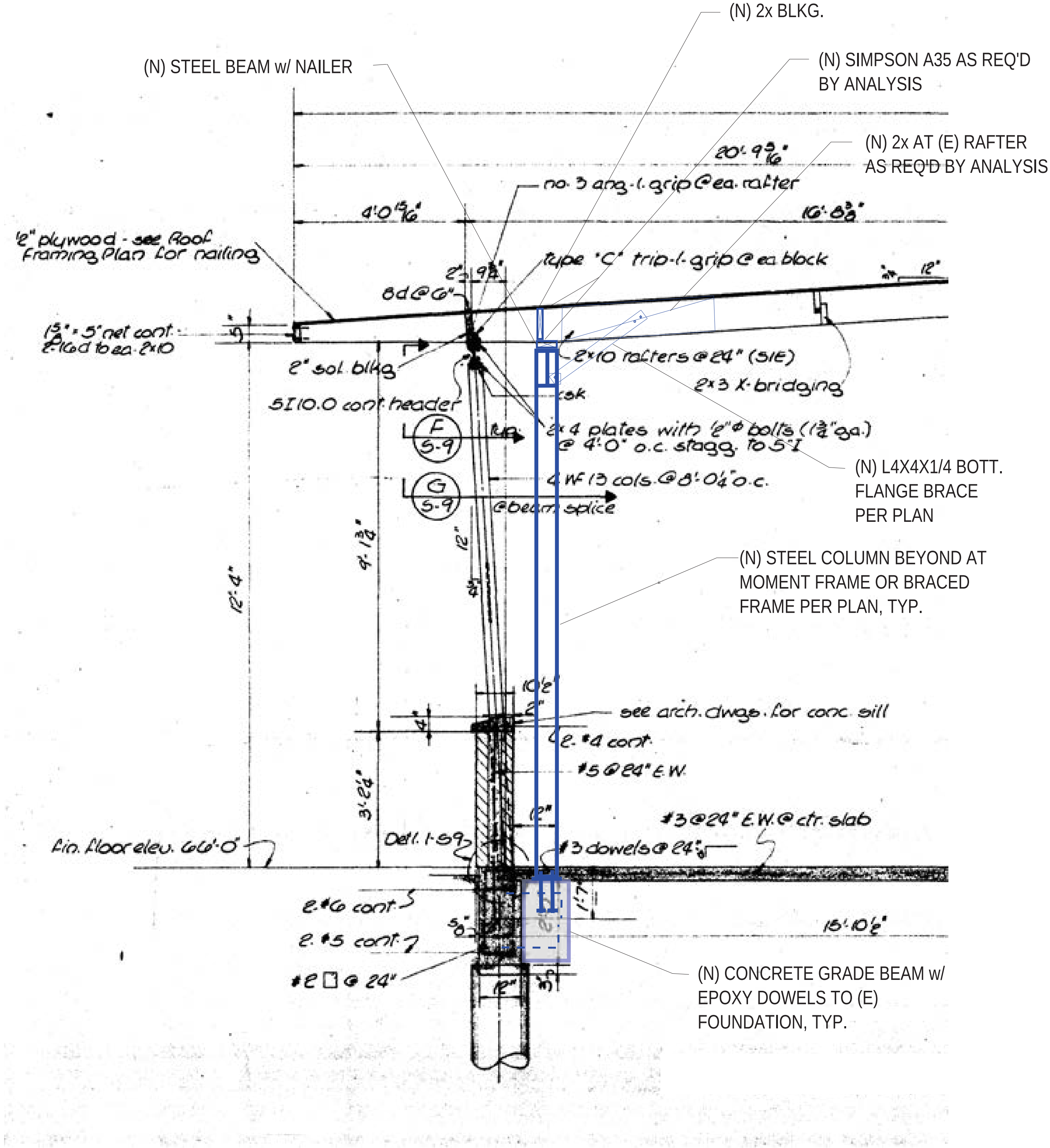


MOMENT FRAME OPTION



BRACED FRAME OPTION

SCHEMATIC MOMENT FRAME RETROFIT PLAN



SCHEMATIC MOMENT FRAME RETROFIT SECTION

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APPENDIX 4 | MECHANICAL, ELECTRICAL, AND PLUMBING ASSESSMENT

DESIGN WEST ENGINEERING

- Orange Coast College Potential Historic Structures – MEP Assessment Report
- Memo dated March 17, 2015 - Mechanical and Electrical Scope of Work for Buildings 7,8, and 9; 12,13, and 14; 35,36, and 37

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5151 Shoreham Place, Suite 240
San Diego, CA 92122
Tel: 619-330-6043
Email: cadd@designwesteng.com

275 W. Hospitality Lane, Suite 100
San Bernardino, CA 92408
Tel: 909-890-3700 Fax: 909-890-3770
Email: info@designwesteng.com

DESIGN WEST ENGINEERING

ORANGE COAST COLLEGE

POTENTIAL HISTORIC STRUCTURES - MEP ASSESSMENT REPORT

2/11/2015

Prepared for:

PAGE & TURNBULL
417 South Hill Street, Suite 211
Los Angeles, CA 90013

Prepared By:

DESIGN WEST ENGINEERING
275 West Hospitality Lane, Suite 100
San Bernardino, CA 92408
(909) 890-3700
DWE Project #14-411

MECHANICAL : ELECTRICAL : PLUMBING : ENERGY

Table of Contents

Project Overview

The purpose of this report is to describe and evaluate the existing mechanical, plumbing and electrical system for the Orange Coast College Buildings 2 and 4 , 8 & 9,12 & 13 ,35-39,93,105 and 110 to be included in the overall Historic Structure Report.

Faculty from Design West Engineering completed a survey of the buildings and collected equipment information on the existing systems based on visible name plate information and visual inspections. Field investigations were performed on January 13 and 14, 2015.

The evaluation will focus primarily on the electrical power systems, plumbing systems, and the Heating Ventilation and Air Conditioning (HVAC) systems. Other building systems will be analyzed and incorporated into the overall Historic Structure Report. The report will describe where certain assumptions have been made, so that if additional information becomes available, the data can be re-incorporated to achieve the most accurate results possible. The salient features of the evaluation are to the type of electrical, mechanical and plumbing equipment, the age of each major system component, the current health of that component and scheduled replacement or upgrades of the system and its major components along with recommendations for the future use of the buildings.

Mechanical Overview

Buildings 2 and 4

Building 2 – Theater

Building 2 has a mixture of HVAC equipment that serves the building. There is equipment located within a mezzanine that is accessed from the back of the stage and equipment on the roof. The equipment within the mezzanine appears to serve the main Auditorium and is a hydronic heating and cooling system. The mezzanine contains a boiler, hydronic heating pumps and two custom air handlers. The roof has a single multizone AHU, three Carrier DX heat pump units.

- The hydronic hot water boiler is a Lochinvar Copper Fin II, 1,440,000 BTU/H input with a 1 HP Bell & Grossest base mounted pump system circulation pump and two ½ hp boiler circulation pumps. During the time of the inspection, this equipment was not in operation, but the equipment appears to be in fair condition based on visual inspection.
- The custom 4-Pipe air handlers are Temptrol DH35PL 15 HP supply fan and a Temptrol DH17PL 7.5 HP supply fan. Chilled water is feed from a Trane chiller that is located within Building 3 (Music Building). During the time of the inspection, this equipment was not in operation, but the equipment appears to be in fair condition based on visual inspection.


Lochinvar Boiler within Mezzaine


Custom Air Handler within Mezzaine

- The multizone unit is a 4-Pipe Carrier 39TH39KA----QH7-B unit that receives its hot water from the boiler within the mezzanine and chilled water from the chiller within Building 3 (Music Building). This unit serves the area behind the stage, most likely the drama room and associated offices. To the south of the unit, the roof is not sloped correctly to the roof drain and there is standing water. Based on visual inspection, this unit has served beyond its useful life. The pipe insulation serving the unit is falling off is some areas, control valves appear to be old and show signs of rust, the ductwork on the roof appears to be in decent shape.


Multizone AHU on roof


Standing water next to Multizone Unit

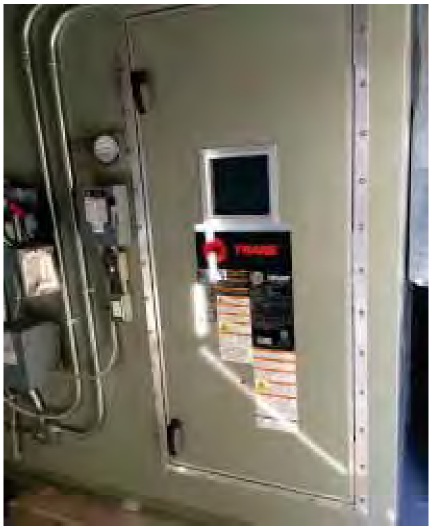
- The workshop room is served via a DX rooftop packaged unit, Carrier 50HJQ009---601. The unit is in fair condition, the coils are beginning to show signs of corrosion. The unit is approximately half way thru its useful life and should have another 5-10 years of service life.
- The costume workshop room is served via a DX rooftop packaged unit, Carrier 50HJQ007---521. The unit is in fair condition, the coils are beginning to show signs of corrosion. The unit is approximately half way thru its useful life and should have another 5-10 years of service life. The ductwork on the roof is in good condition
- The low roof next to the workshop room is served via a DX rooftop packaged unit, Carrier Unit, could not read label, and appears to be a 3 ton unit. The unit is in fair condition.


Typical DX Rooftop Packaged Unit

Building 3 – Music Building

Building 3 has a new HVAC system that was installed within the past year except for the cooling tower. The Air Handler is a Trane TCPAIB021V2M1022FD 7.5 HP VFD motor. The chiller is a Trane RTWD 150F with two 10 HP Taco base mounted end suction pumps. The boiler is a Lochnivar CHN0991 with a Taco 1935C1E1 circulation pump. The cooling tower is a RSD-15 3 HP pump fiberglass style tower. The cooling tower is in fair condition and does not appear to be a newly installed piece of equipment.

- The chiller within this building serves the Music Building and the Theater building. The boiler within this building only serves the Music Building



Trane AHU

Trane Chiller

Building 4 – Music Wing

Building 4 has a new HVAC system that was installed within the past year and is in good condition. The chiller is an air cooled Trane CGAM 080F with two 7.5 HP Taco base mounted end suction pumps. The boiler is a Lochnivar CHN401 with a Taco 1/3 hp circulation pump and 1.5 hp base mounted end suction system pump.

Trane Air cooled chiller

Boiler piping and equipment

4-Pipe Fan Coil

Buildings 7, 8 & 9

Building 7 – Student Success Center

Building 7 has a dedicated chiller, tower, boiler and Multizone AHU unit. The equipment within this building appears be old and past its life expectancy for the equipment.

- The hydronic hot water boiler is a Raypak Boiler, 546,000 BTU/H input with a 2 HP base mounted pump system circulation pump. Boiler is in fair condition
- The Air Handler is a custom 4-Pipe Multizone Trane Climate Changer.
- The chiller is a Trane CG-60D 60 ton chiller, with a 10 HP base mounted end suction pump. The pipe insulation has a lot of repair tape over the existing insulation and shows signs of leaking water.
- The cooling tower is a RSD-070 fiberglass cooling tower with a 1.5 hp fan motor.
- The building also has ceiling mounted fan coils that are tied to the chiller and boiler that are in Fair to good condition
- The building has an old Honeywell EMS system that should be replaced and updated with a newer current DDC system.

Raypak Boiler

Multizone AHU

Trane water cooled chiller, showing pipe insulation

Fiberglass cooling tower

Building 8 – Classroom and Lab

Building 8 has ductless split systems that serve the office area and Rooftop gas units (RTU) that serve the classrooms. There is one RTU per classroom.

- The ductless split systems consist of a wall mounted fan coil located within each office. The condensing unit is located on the roof. The systems appear to be in fair condition and are about half way thru the life expectancy of the equipment
- The RTU units for the classrooms are located above the walkway foyer and are side discharge ductwork within the classroom. The RTU's range from 3 – 5 ton units and are in Fair condition.

Building 9 – Classroom

Building 9 is similar to building 8 classrooms with Rooftop gas units (RTU) that serve the classrooms. There is one RTU per classroom. The units are in Fair condition.

Ductless wall mounted Fan Coil

Ductwork within the classroom

Buildings 12 & 13 Business Education Wing

Buildings 12 and 13 are classroom buildings that are served by a roof top package unit, one per classroom.

- The RTU units for the classrooms are Carrier Gas Electric units located above the walkway foyer and are side discharge ductwork within the classroom. The RTU's range from 3 – 5 ton units and are in Fair condition. The unit is approximately half way thru its useful life and should have another 5-10 years of service life. The units were manufactured in late 2007.
- The units are tied to an Alerton EMS DDC control system.


Typical Classroom RTU

Buildings 35-39

Buildings 35 thru 38 are classroom buildings that are served by a roof top package unit, one per classroom.

- The RTU units for the classrooms are Carrier Gas Electric units located above the walkway foyer and are side discharge ductwork within the classroom. The RTU's range from 2 – 6 ton units and are in Fair condition. The unit is approximately half way thru its useful life and should have another 5-10 years of service life. The units were manufactured in late 2007.
- Exterior Ductwork is damaged on some of the units due to people walking on the ductwork.
- The units are tied to an Alerton EMS DDC control system.

Building 37 – Reprographics

Building 37 has roof top package units located in various locations for the building. There are units located on the foyer of the building along with units that are located on the high roof within a parapet.

- Above the foyer near building 37 around the HVAC units, there is standing water due to very poor roof drainage.
- Building 37 has roof mounted exhaust fans for the classrooms labs. The fans appear to be in fair condition.
- The units on the low roof are Carrier Gas Electric units with side discharge ductwork within the classroom. The RTU's range from 2 – 6 ton units and are in Fair condition. The

unit is approximately half way thru its useful life and should have another 5-10 years of service life. The units were manufactured in late 2007.

- The units located on the high roof Gas Electric units that range from 2-5 ton units and are in old condition. The units have exceeded the useful life expectancy for this equipment and should be changed out.

Building 38 – Science Office Annex

Building 38 has three ductless split systems consist of a wall mounted fan coil located within each office and a condensing unit located on the roof. The systems appear to be in fair condition and are about half way thru the life expectancy of the equipment.

Building 39 – Planetarium

Building 39 has a single Rooftop gas unit (RTU) that is old and exceeded its useful life. This unit should be replaced or removed with the building.


Typical Classroom RTU


View of standing water next to HVAC unit


Damaged Ductwork from RTU within building 37

Buildings 93, 105 and 110

Building 93 – Pool Stadium

The pool has a new Lochinvar Copper Fin 2 CPN2072, 1,999,999 BTU/H with a ¾ hp Armstrong pump.

Building 105 & 110 –Stadium and Field House

The Field House is served via a Trane WCC060F100BE 5 Ton heat pump unit. The unit is in poor condition, coil fins are flaking off. The boiler for the showers has been abandoned. The roof mounted exhaust fans for the restrooms are in fair condition.

DX Heat Pump Unit

Exhaust Fans from Restrooms

Plumbing Overview

Plumbing

The plumbing fixtures for the site are very typical and are in fair to good condition. The water closets and urinals are manual operated flush valve fixtures, lavatories were typically wall mounted cold water only fixtures. Unless otherwise noted.

Buildings 2 and 4

- The restrooms were in good condition, fixtures appear to be replaced within the last 5 years.
- The standing water next to the Multizone unit should be fixed. It appears the roofing material is not slopped correctly to the roof drain which is causing the water to pond up. The standing water could potentially cause damage to the building.

Buildings 7, 8 & 9

- The restrooms in this area were in fair condition, the fixtures are starting to shows signs of extended use. No major defects or leaks were visible from the fixtures.

Buildings 12 & 13

- The restrooms in this area were in fair condition, the fixtures are starting to shows signs of extended use. No major defects or leaks were visible from the fixtures.

Buildings 35-39

- There is standing water above the foyer next to the HVAC equipment. Additional roof drains should be added to mitigate the standing water. The standing water creates a hazard for the maintenance staff as well as damages the building.

Buildings 93, 105 and 110

- The field house restrooms are cold water only and are in fair condition. The fixtures are starting to shows signs of extended use. No major defects or leaks were visible from the fixtures.
- Hot water for the restrooms is from a 100 Gallon Gas fired water heater. American CG32100T774NOV, 75,000 BTU/H input rating. The water heater is in fair condition.

Electrical Overview

A 4160V 3 phase electrical service feeds the majority of the campus. 4160V is distributed throughout to various step down transformers and unit substations.

Buildings 2 and 4

The electrical system for building 2, 3 and 4 are derived from a 4160V feed with the switchgear and 4160V transformers located in an electrical yard and electrical equipment room between buildings 2 and 4. The switchgear and transformers for building 4 were recently installed and are in good working condition. The switchgear MS1 and MS2 feeding building 2 are older but appear to be in good working condition. The lighting in building 2 is working condition, however, the older incandescent lighting could be replaced with more efficient fluorescent or LED lighting. There are some older subpanels in building 2 that should be replaced. Equipment of this age is subject to reliability issues and may also present obsolescence issues for obtaining replacement parts. Continued use of this equipment is likely to result in issues with reliability resulting from age related failures. Building 4 was recently remodeled in 2012 and all electrical equipment and lighting was found to be in good condition.

Building 2 – Theater

The electrical system is fed from two 4160 volt transformers, T24 and T24A, located in an electrical yard east of the auditorium. The first transformer T24 is a 500 KVA transformer that delivers 800 amps of 277/480 volt, 3 phase 4 wire power to switchboard ‘MS1’. The second transformer T24A is a 300 KVA transformer that provides 1200 amps of 120/208 volt, 3-phase, 4-wire power to switchboard ‘MS2’. The transformers and switchboards appear to be in good working condition. There are several subpanels throughout the building which appear to be original to the building and are recommended to be replaced. There are multiple subpanels that are not labeled. Cabling has been abandoned in place and left in some of the older boxes. Several boxes have had covers removed and have not been replaced.

General lighting consists of primarily T-8 strip fluorescents in support rooms and incandescent downlights in the dressing rooms. The theater lighting system consists of incandescent lighting controlled by a theatrical dimming system consisting of 600 amp, 240 volt Power Control Systems dimmer racks. The building is equipped with a central battery emergency lighting system that provides emergency egress lighting and also serves illuminated exit signs. Low and high level exit signs are installed throughout and are in good working condition.

4160V Transformer T-24

4160V Transformer T-24A

Switchboard MS2

Switchboard MS1

Existing unlabled panel that should be replaced

Existing unlabled panel and unsupported cabling

Existing unlabled panel that should be replaced

Existing dimmer racks

Building 4 – Music Wing

Building 4 was recently remodeled in 2012. The electrical system feed starts at a newly installed 4160 volt transformer TVHM, located in an exterior electrical yard between building 2 and 4. The transformer TVHM is a 1000 KVA and delivers 1200 amps of 277/480 volt, 3 phase 4 wire power to switchboard ‘STH’. From there, an 800A 480V feed is routed to distribution switchboard ‘DSMH’ located in Building 3 electrical room, which feeds an 800A 20/208 volt, 3-phase, 4-wire switchboard ‘DSML’ through a 225kVA transformer. These switchboards feed panels H1, L1A, L1B and L1C all located in the Building 4 electrical room. The transformers, switchboards and panelboards have been recently installed and are in good working condition.

General lighting primarily consists of T-8 recessed fluorescent 2x4 and 4’ linear. Select fixtures are provided with battery packs to supply emergency egress lighting. Exit signs with integral backup battery packs are installed throughout and are in good working condition. All rooms have occupancy sensor lighting controls.

It should be noted that any demolition should consider the interconnection of the electrical distribution systems between buildings 2, 3 and 4. At a minimum, both electrical yards between buildings 2 and 4 would need to be protected in place as they are the central power supply for all 3 buildings.

Exterior electrical yard between buildings 2 and 4 – 5kV switch, Transf. TVHM and Swbd STH

Buildings 7, 8 & 9

The electrical system for both buildings 7 and 8 are located within building 7. Building 9 is fed from a separate 4160 volt feed. The electrical switchgear is aged but appears to be in good working condition at building 7. There are older panelboards within the classrooms that are beyond their useful life expectancy and should be replaced. Lighting is primarily T-8 fluorescent. There is abandoned 4160V equipment that should be removed. The buildings are equipped with wall mounted emergency battery lighting units and have some illuminated exit signs.

Building 7 – Student Success Center

Buildings 7 and 8 are fed from two 5 KV switches providing 4160 volts to two transformers. The first is a 150 KVA transformer that delivers 480 volt, 3-phase, 3-wire power to the motor control center, which primarily feed the HVAC equipment. The second is a 300 KVA transformer that provides 800 amps of 120/208 volt, 3-phase, 4-wire power to local distribution. There are some older Zinsco panelboards that are original to the building and should be replaced, along with newer load centers that could be reused. The existing motor control center consists of fuses and HOA controls which have most likely been bypassed with the installation of the EMS. There are abandoned 4160V switches with exposed cabling that has been cut that should be removed.

Lighting is primarily T-8 fluorescent using a EMS system by Edward's Tech with occupancy sensors, timers and typical switches and outlets. The building is equipped with wall mounted emergency battery lighting units. The building has illuminated exit signs. There is a water heater that is in the clearance of the existing 800A distribution panel, which is a code violation. No mechanical ventilation was found in the transformer room at the north side of the building.

Building 7 Electrical Room – Water heater to left in front of Swbd

Abandoned 4160V equipment with exposed cables

Existing Motor Control Center

Existing tranformer room without ventilation

Building 8 – Classroom and Lab

The electrical system is fed from Building 7 providing 400 amps of 120/208 volt, 3-phase, 4-wire power. There are some older Zinsco panelboards that are original to the building and should be replaced, along with newer load centers that could be reused.

Lighting is primarily T-8 fluorescent using an Edward's EMS system with occupancy sensors in some locations with typical switches and outlets. The building has a limited amount of emergency lighting or illuminated exit signs. This building does not have a noted emergency generator.

Existing Zinsco Panelboard Original to Building

Building 9 – Classroom

The electrical system is fed from a 5 KV switch providing 4160 volt power to a 500 KVA transformer that delivers 1600 amps of 120/208 volt, 3-phase, 4-wire power to Distribution Board DPS. The switchgear appears to have been recently installed and is in good working condition. There are some older Zinsco panelboards that are original to the building and should be replaced, along with newer load centers that could be reused.

Lighting is primarily T-8 fluorescent using an Edward's EMS system with motion switches in some locations with typical switches and outlets. The building is not equipped with emergency lighting. Exit signs are present. This building does not have an emergency generator.

It should be noted that any demolition should consider the interconnection of the electrical distribution systems between buildings 7 and 8. If building 7 were to be demolished, building 8 would be affected.

Existing Distribution Board DPS


Existing panelboard, original to building

Buildings 12 & 13

The electrical system for both buildings 12 and 13 are powered from Building 14 with 400 amps of 120/208 volt, 3-phase, 4-wire power. The electrical system at building 14 is fed from a 5 KV switch providing 4160 volts to two transformers. The first is a 75 KVA transformer that delivers 400 amps of 120/208 volt, 3-phase, 4-wire power. The second is a 225 KVA transformer that provides 600 amps of 120/208 volt, 3-phase, 4-wire power for HVAC equipment in buildings 12, 13, and 14. Most of the panels are aged and are beyond there rated useful life expectancy.

The lighting for both buildings was recently upgraded to direct/indirect linear T-8 fluorescent pendant lighting using occupancy sensors with an Edward's system. The buildings are not equipped with emergency lighting or illuminated exit signs. This buildings do not have an emergency generator.

Existing panelboard, original to building


Existing panelboard, located in restroom

Buildings 35-39

The electrical system for buildings 35-39 are all powered from Building 37. The main transformer and distribution appear to be in good working condition, however, a majority of the electrical distribution equipment downstream is aged and beyond its useful life expectancy. Lighting is primarily T-8 fluorescent.

Building 35 and 36 – Math Wing Classrooms

The electrical systems for both buildings 35 and 36 are fed from Building 37 providing 120/208 volt, 3-phase, 4-wire power to mostly original distribution panelboards. The panelboards are working but are beyond their rated useful life expectancy.

The lighting was recently upgraded to a combination of recessed and pendant direct/indirect linear T-8 fluorescent fixtures using occupancy sensors. Receptacle outlets are mounted very low and do not meet current ADA requirements. The buildings are not equipped with emergency lighting or illuminated exit signs. This building does not have an emergency generator.

Newly installed lighting

Existing panelboard original to building

Building 37 – Reprographics

The electrical system at building 37 is fed from a 5 KV unit substation providing 4160 volt distribution to a 300 KVA transformer that provides 1200 amps of 120/208 volt, 3-phase, 4-wire power to buildings 35-39. The unit substation that consists of the 300kVA transformer and 208V distribution are in good working condition. The remainder of the distribution switchboards and panelboards are original to the building and are beyond their rated useful life expectancy. There are conduits that have been cut and have abandoned cabling that should be removed.

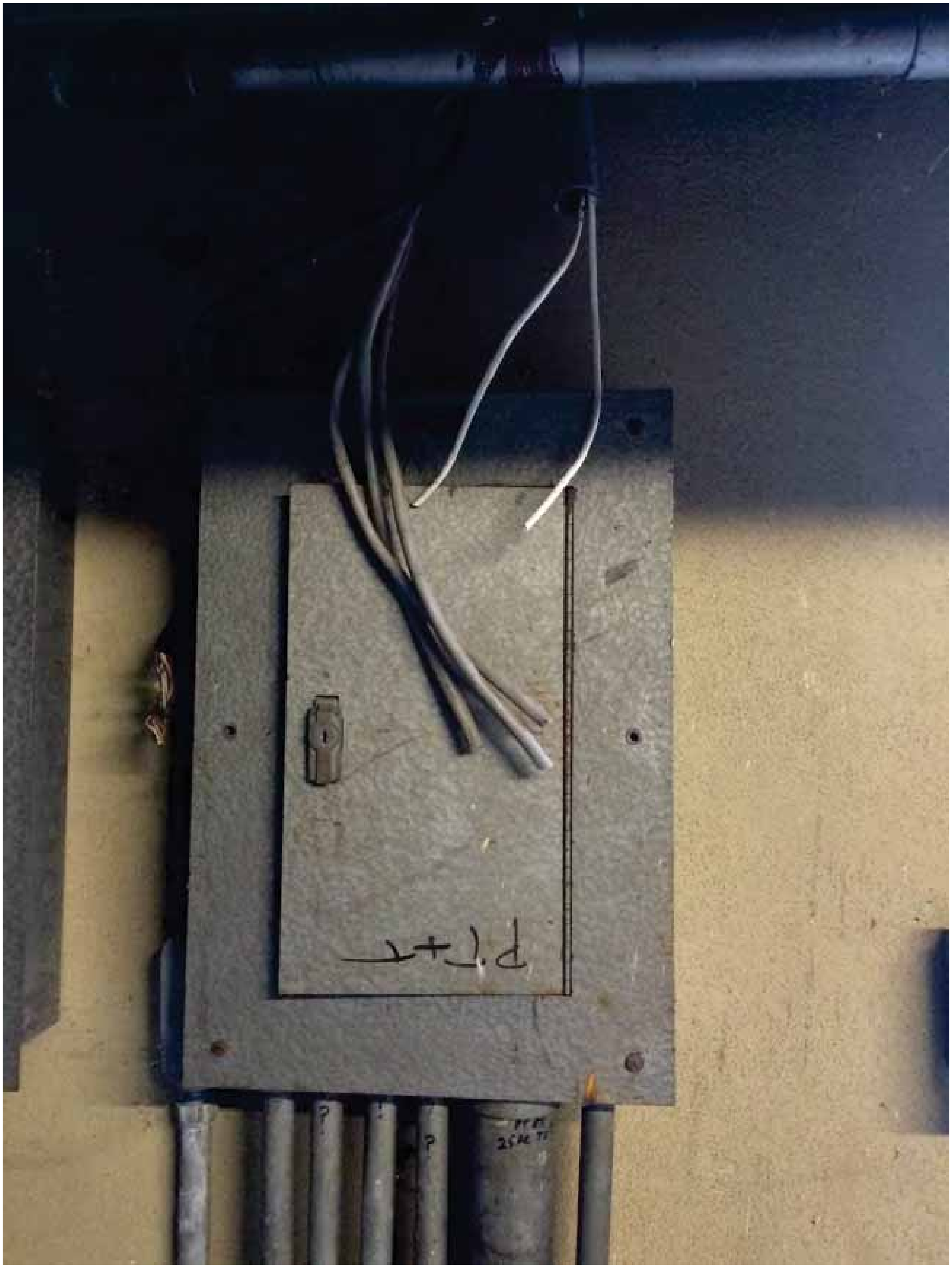
The lighting was recently upgraded to a combination of recessed and pendant direct/indirect linear T-8 fluorescent fixtures using occupancy sensors. Receptacle outlets are mounted very low and do not meet current ADA requirements. There are various light switches that are mounted at peculiar heights. The buildings are not equipped with emergency lighting or illuminated exit signs. This building does not have an emergency generator.

Existing light switches


Existing panelboard original to building

Existing unit substation

Existing distribution board DB1 and panelboard F original to building



Existing panelboard original to building and abandoned cabling

Building 38 – Science Office Annex

The offices are fed from Building 37, unidentified panelboard providing 120/208 volt, 3-phase, 4-wire power. There were no panels found within the offices and the exact source panelboard could not be found.

Lighting is primarily T-8 fluorescent surface wraps with typical switches and outlets. The building is not equipped with emergency lighting or any type of lighting controls.

Building 39 – Planetarium and Science Building

The electrical system is fed from Building 37 providing 120/208 volt, 3-phase, 4-wire power.
The existing panelboards are aged and are beyond there rated useful life expectancy. There is a device at the exterior patio area that has come unattached from the ceiling. The exterior fused disconnect at the existing HVAC unit is deteriorating.

Lighting is a combination of T-8 fluorescents, incandescent and compact fluorescents, using typical switches and outlets. The building has wall mounted battery powered emergency lighting units which appear to be operational. Exit signs are present, however, they appear to be self illuminated type that are not operating properly and are beyond there rated useful life expectancy. Receptacle outlets are mounted very low and do not meet current ADA requirements.

Existing fused disconnect


Existing device at ceiling

Existing panelboard original to building and load center mounted below

Existing lighting in planetarium soffit

Existing aged self illuminated exit sign

Buildings 93, 105 and 110

Building 93 – Pool Stadium

The existing switchgear including 4160V transformers and distribution that feed a majority of the gym complex are located below the pool stadium bleachers which consists of two 5.5 KV 200 amp switches providing 4160 volt power to two Transformers. A 225 KVA transformer 'T6A' provides 400 amps of 480/277 volt, 3-phase, 4-wire power. A 300 KVA transformer 'T6' provides 800 amps of 120/208 volt 3-phase 4-wire power to 1970s vintage local distribution panels. Both transormers appear to be in good working condition, however, the electrical panels and disconnects show signs of corrosion and should be replaced.

Existing electrical equipment and panelboard showing signs of corrosion

Building 105 & 110 –Stadium and Field House

The Field House electrical system is fed from Powerhouse "C" with 120/240 volt, 1-phase, 3-wire power to original local distribution. The existing panelboards A, B and C have recently been replaced and are in good working condition.

Lighting in the field house is provided by T-8 fluorescent using typical switches and outlets. The building is not equipped with emergency lighting or illuminated exit signs. This building does not have a noted emergency generator.

The Stadium lights are powered from a recently installed 750kVA unit substation through 480V distribution, located in an exterior yard south east of the stadium. The unit substation and associated 480V distribution equipment is in good working condition.

The panelboards within the score booths are original to the buildings and are beyond their rated useful life expectancy.

Existing panelboard at score booth

Existing 750kVA substation at exterior yard

5151 Shoreham Place, Suite 240
San Diego, CA 92122
Tel: 619.330.6043
Email: Cadd@designwesteng.com

275 W. Hospitality Lane, Suite 100
San Bernardino, CA 92408
Tel: 909.890.3700 Fax: 909.890.3770
Email: info@designwesteng.com

DESIGN WEST ENGINEERING

Date: March 17th, 2015

Company: Page & Turnbull
417 S. Hill St. Suite 211
Los Angeles, CA 90013

Attention: Drew Gorski

Subject: Orange Coast College Historic Structures Assessment Report
Our Proposal #: 14-411

Drew Gorski

This letter is in regard to potential options for the Mechanical and Electrical scope of work for the buildings that are currently under review for re-use.

Mechanical

Buildings 7,8,9

- Building 7 is currently being served by an existing 4 Pipe system that will need to be replaced. The existing capacity of the central plant portion is approximately 60 Tons. This system is currently located within building 7 and is an area that is currently shown to be removed. A new central plant would need to be built out with all new equipment.
- Building 8 and 9 are currently being served by rooftop package units that range from 3 – 5 ton units. It is the goal to remove these units from the current location and replace them with an alternate HVAC solution.

Buildings 12,13,14

- These buildings are currently being served by rooftop package units that range from 3 – 5 ton units. It is the goal to remove these units from the current location and replace them with an alternate HVAC solution.

Buildings 35,36,37

- These buildings are currently being served by rooftop package units that range from 3 – 5 ton units. It is the goal to remove these units from the current location and replace them with an alternate HVAC solution.

Mechanical Options

- Option #1 – Utilize a central plant with chilled and hot water piping distributed to the buildings. For the buildings in question, a centralized plant could be utilized to serve all buildings. This would require piping being distributed underground to all buildings. It is estimated that the plant size would be approximately 150 Tons for the cooling, 1,500,000 BTU/H for heating.

- Classroom ventilation tied to central plant options
  - o Fan coil ducted within the classroom. Fan coil would be located above a dropped T-Bar ceiling to conceal equipment and piping.
  - o Chilled beam units with OSA ducted to each unit. Chilled beam would provide increased energy efficiency as well as occupy less area within the ceiling to maintain ceiling heights. Each classroom however would require 6 to 8 chilled beam units.
- Option #2 – Utilize a VRF (Variable Refrigerant) system. This would require a single location for a condenser farm to be utilized per building and refrigerant piping routed to each fan coil within the building. These condensing units can be located on the roof or on the ground within an enclosure.
- Approximate Sizes per building
  - o Building 7 – 30 Tons
  - o Building 8 – 20 Tons
  - o Building 9 – 20 Tons
  - o Building 12 – 12 Tons
  - o Building 13 – 20 Tons
  - o Building 14 – 5 Tons
  - o Building 35 – 16 Tons
  - o Building 36 – 20 Tons
  - o Building 37 – 20 Tons
- Classroom Ventilation Options
  - o Fan coil ducted within the classroom. Fan coil would be located above a dropped T-Bar ceiling to conceal equipment and refrigerant piping.
  - o Ceiling Cassettes with OSA ducted to each unit. Each classroom however would require 4-6 ceiling cassettes.

Electrical

Buildings 7,8,9

- The existing main 1600A electrical gear and transformer at the service building could remain and could be modified to serve all 3 buildings. An allowance for a new 4160V 500kVA transformer and 1600A distribution board should be included for cost estimating
- Each building would need a main distribution panel, based on square footage and use the following service sizes and electrical rooms would be required
  - o Bldg 9 - 400A 120/208V 3ph – an approximate 5'x8' electrical room
  - o Bldg 8 - 400A 120/208V 3ph – an approximate 5'x8' electrical room
  - o Bldg 7 - 600A 120/208V 3ph – an approximate 5'x8' electrical room
- Each building should have a dedicated 4'x6' room for Data/IT to include IDF, security panels, and low voltage equipment

Buildings 12,13,14

- A new transformer and main electrical gear should be installed to serve all 3 buildings. . An allowance for a new 4160V 500kVA transformer and 1600A distribution board should be included for cost estimating. This would be housed in a new 10' x 16' room or outdoor space.
- Each building would need a main distribution panel, based on square footage and use the following service sizes and electrical rooms would be required
  - Bldg 14 - 200A 120/208V 3ph– This could be housed in the same room as main service/transformer, or a 4' x 6' electrical room
  - Bldg 13 - 400A 120/208V 3ph– an approximate 5'x8' electrical room
  - Bldg 12 - 600A 120/208V 3ph– an approximate 5'x8' electrical room
- Each building should have a dedicated 4'x6' room for Data/IT to include IDF, security panels, and low voltage equipment

Buildings 35,36,37

- Based on the proposed layout, the existing electrical room at bldg 37 would become new restrooms. A new transformer and main electrical gear should be installed to serve all 3 buildings. An allowance for a new 4160V 500kVA transformer and 1600A distribution board should be included for cost estimating. This would be housed in a new 10' x 16' room or outdoor space.
- Each building would need a main distribution panel, based on square footage and use the following service sizes and electrical rooms would be required
  - Bldg 37 - 600A 120/208V 3ph– an approximate 5'x8' electrical room
  - Bldg 36 - 400A 120/208V 3ph– an approximate 5'x8' electrical room
  - Bldg 35 - 400A 120/208V 3ph– an approximate 5'x8' electrical room
- Each building should have a dedicated 4'x6' room for Data/IT to include IDF, security panels, and low voltage equipment

The above electrical sizes include package units or VRF options. Depending on central plant option, additional power may be required to support new chillers and HVAC central plant equipment.

Should you have any questions or need additional information, please feel free to contact Design West Engineering at your earliest convenience.

Respectfully,

Steven Johnson
Design West Engineering

DESIGN WEST ENGINEERING

APPENDIX 5 | FIRE AND LIFE SAFETY

JENSEN HUGHES

- Orange Coast College, Historical Structures Report for Fire and Life Safety Systems

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JENSEN HUGHES

2099 South State College Blvd
Suite 360
Anaheim, CA 92806 USA
jensenhughes.com
+1 714-450-1700
Fax: +1 714-450-1701

ORANGE COAST COLLEGE HISTORICAL STRUCTURES REPORT FOR FIRE AND LIFE SAFETY SYSTEMS

Prepared For

Page & Turnbull
417 South Hill Street
Suite 211
Los Angeles, CA 90013

April 3, 2015

1YOK65334

TABLE OF CONTENTS

1. INTRODUCTION

JENSEN HUGHES has prepared this Historic Structures Report (HSR) for Orange Coast College (OCC) located at 2701 Fairview Road in Costa Mesa, California to assess the conditions of the existing fire protection systems as well as life safety features for the buildings identified to have historic significance. This report is based on the site visit performed by JENSEN HUGHES on January 13th and 14th, 2015. The site visits included visual examinations of the fire protection systems and life safety features of the facilities. No system testing or intrusive inspections were conducted by JENSEN HUGHES personnel.

2. FACILITY DESCRIPTION

OCC is located on 164 acres in Costa Mesa, CA. The campus was founded in 1947 and classes started in the Fall of 1948. This report focuses on the 16 buildings that are part of the historic structures survey. The buildings were constructed between 1950 and 1956. Renovations were done to the some of the buildings in the 1960's, 1970's, 1990's and 2000's. Table 1 shows the information of the buildings that are identified as buildings with historical significance were part of this survey.

Table 1 – Historic Structure Survey Buildings

Building Number	Building Name	Square Feet	Year Built	Year Renovated
2	Auditorium	36,566	1954	1993
4	Music	12,541	1954	2013
7	Student Success Center	13,350	1950	1999
8	Classroom and Labs	5,243	1950	1970
9	Classroom and Labs	5,430	1950	1970
12	Business Education	6,671	1953	2000
13	Business Education	4,617	1953	NR
14	Business Education	8,169	1953	1977
35	Math Wing	6,402	1956	1960
36	Math Wing	10,716	1956	1960
37	Reprographics	6,878	1956	1960
38	Science	600	1956	1960
39	Science	2,380	1956	1960
93	Pool Stadium			
105	Stadium			
110	Field House	9,010	1955	NR

Note: Areas that are blank indicate the information is not known.
NR means, based off of known information, the building has not been renovated.

3. APPLICABLE CODES

The buildings were reviewed for compliance with the current codes. The codes used are as follows,

- California Building Code (CBC), 2013 Edition
- California Fire Code (CFC), 2013 Edition
- California Historical Building Code (CHBC), 2013 Edition
- NFPA 13 *Standard for the Installation of Sprinkler Systems*, 2013 Edition
- NFPA 72 *National Fire Alarm and Signaling Code*, 2013 Edition

4. CODE REQUIREMENTS

4.1. Means of Egress

Typical means of egress from the office buildings is provided through corridors, whereas the classrooms lead directly to the outside. The auditoriums have a number of exits on the perimeter of the seating area and stage. The occupancies for the buildings are primarily Assembly (A) and Business (B), with the accessory Storage (S) occupancy. OCC, being a Higher Education institute, the classrooms will be classified as B occupancy. However, the classroom area occupant load factor would still be used to determine the occupant load of the classrooms based on the actual usage of the space.

The occupant load for Assembly areas with fixed seating is determined by the number of fixed seats per Section 1004.4 of the CBC. The occupant load factors based on California Building Code (CBC) Table 1004.1.2 for spaces with assembly (no fixed seating), business, educational and storage functions are listed in the table below.

Function of Space		**Occupant Load Factor (Sq. Ft. per occupant)**
Assembly	Concentrated (chairs only)	7 net
	Standing space	5 net
	Unconcentrated (tables and chairs)	15 net
Business	Office	100 gross
Educational	Classroom area	20 net
	Shops and other vocational room areas	50 net

In areas with A and B occupancies the maximum occupant load that can be served by one exit for A and B occupancies is 49 persons (Table 1015.1 CBC), whereas for S occupancy is 29. Using the classroom area occupant load factor, any classroom over 980 sq. ft. is required to have two exits. Any room with an occupant load factor between 501 and 1,000 is required to have three exits. Four or more exits are required when the occupant load exceeds 1,000 persons.

4.2. Fire Protection Systems

The following section covers the code requirements based on occupancy type as relates to the conditions of the buildings surveyed. These requirements are based off of the codes listed in Section 3 of this report.

OCCUPANCY	FIRE SPRINKLER	FIRE ALARM	FIRE HOSE REEL (STANDPIPE)
Assembly (A-1)	Required when the total area exceeds 12,000 sq. ft. or total occupant load exceeds 300 (CBC Section 903.2.1.1).	Manual fire alarm system is required when the occupant load exceeds 300 with emergency voice/alarm communication system required when occupant load exceeds 1,000 (CBC Section 907.2.1)	Not required except the Auditorium stage. Class III wet standpipes are required for stages greater than 1,000 sq. ft. When the building is fully sprinklered, the standpipe is required to be provided with 1½" connections and sufficient lengths of hose to cover the entire stage. (CBC Section 905.3.4)
Business	Not required unless the total floor area of building exceeds 15,000 sq. ft. for one-story building or 9,000 sq. ft. for Type V-B multistory building (CHBC Section 8-302.4 & CBC Chapter 5)	Manual fire alarm system is required when the occupant load of all floors exceeds 500 or occupant load for the floor below or above the floor of exit discharge.	Not Required.

5. BUILDING 2 – AUDITORIUM

Building 2 (Auditorium) was built in 1954 and then renovated in 1993. The building is 36,566 square feet. Building 2 has an occupancy of A-1 and B.

5.1. Means of Egress

Exiting from Building 2 is provided by multiple exits. The exiting appears to be compliant with the applicable codes. All rooms with Business (B) or Assembly (A) occupancy that have an occupant load over 49 persons have two or more exits provided as required by Table 1015.1 of the CBC.

It is possible that Room 109 (Drama Lab) may require a third exit from the room. Currently the room is provided with two exits. The third exit is dependent on the use of the room. The occupant load will exceed 500 if the room is classified as an Assembly Occupancy without fixed seats and a third exit will be required per Section 1015.1.1

of the CBCCBC. More information about the use of the room would be required to determine the correct usage and occupant load factor for the room.

Illuminated exit signage is provided throughout the building, directing occupants to the exits. The location and installation of the exit signage appears to be compliant with the applicable codes. All ceiling-level exit signs are directional (where required) and externally illuminated. It was noted during the site visit that the exit signs in the Drama Room were not illuminated. These signs will need to be replaced.

The door going from the Drama Corridor into room Drama 101 and 102 is a 20-minute rated fire door. The door frame is a 90-minute rated frame. Since the building is protected with automatic sprinkler system throughout, the corridor is not required to be rated per Table 1018.1 of the CBC. It should also be noted that the door frame tag has been tampered with and now the tag shows “VOID” on it. This frame should be replaced in order to maintain any fire rating that might be in the corridor.

5.2. Fire Alarm System

Building 2 is provided with an Edwards EST 3 addressable fire alarm system. The panel reports back to the main panels located in the Administrative Office and the Maintenance and Operations Office. The fire alarm system appears to be in good condition. The panel is currently serviced under contract with HCI. The panel’s last annual service was done by HCI on December 26, 2014.

The fire alarm panel is located on the second level of the Auditorium in the mechanical room. Smoke detection is provided above the fire alarm control panel.

The fire alarm system for Building 2 monitors all building initiation devices. The fire alarm system includes manual (fire alarm boxes) and automatic (smoke detection, sprinkler waterflow switches, tamper switches, and heat detectors) initiation devices and audible (horn) and visual appliances (strobes).

5.2.1. System Status

The fire alarm panel was in normal status at the time of JENSEN HUGHES’S visit.

5.2.2. Initiation Devices

Manual fire alarm boxes are provided on the outside of the building in select locations. These should be provided on the interior of the building located within 5 ft. to each exit door.

System smoke detection in provided throughout the building.

5.2.3. Notification Appliances

The system is reportedly installed and programmed to provide evacuation for the entire building. Audible notification appears to be provided by means of horns throughout the building. Visual notification appears to be provided by means of strobes throughout the building.

5.3. Fire Sprinkler Systems

5.3.1. General Configuration

The building is provided with full automatic wet-pipe sprinkler system protection throughout the entire building. It is unknown when the fire sprinkler system was first installed in the building. It is possible that the sprinkler system was installed during the original construction of the building.

The fire sprinkler system is supplied by a single riser located on the second floor of the building near the projector room. The room that the riser is located in contains storage of costumes for performances. The riser is monitored by a waterflow switch which is connected to the fire alarm panel.

There was a Fire Department Connection (FDC) found on the outside of the building. It is unclear if this FDC is connected to the fire sprinkler system. There was no signage provided on the FDC and the caps were bolted on. It appears that the FDC is no longer in use, but this could not be confirmed.

It does not appear that there is adequate seismic bracing of the system throughout the building. The riser also has no seismic bracing provided at the top. It is recommended that seismic bracing be added to the top of the riser and throughout the building.

5.3.2. Fire Sprinklers

There were no spare sprinklers provided near the fire sprinkler riser. During the visit JENSEN HUGHES was unable to locate any spare sprinkler heads anywhere in the building. It is recommended that a spare sprinkler head cabinet be provided near the fire sprinkler riser.

The sprinklers installed in the building are Star Pendent Spray Sprinklers Model-E. From the sprinklers that were able to be viewed, they appeared to be manufactured in 1974. These sprinklers are approximately 40 years old since the manufacture date. When the sprinklers become 50 years old, a sample of sprinklers will need to be removed and sent out for testing.

The sprinklers installed in the mechanical areas of the building appear to be Grinnell F-950 fire sprinklers. The Grinnell F-950 sprinklers manufactured in 1975 and between 1978 and 1982 have had a high number of premature operations. The high number of premature operations typically indicates manufacturing defects. At the time of Jensen Hughes visit, we were unable to read the date of manufacture on the sprinkler heads. A Safety and Health Hazards Alert for the Grinnell F-950 fire sprinkler heads is provided in Appendix B.

5.4. Fire Extinguisher

The building is provided with fire extinguishers throughout. The fire extinguishers were last inspected on January 6, 2015 by World-Wide Fire Inc.

It should be noted that the fire extinguisher located in the projector room on the second level was not inspected on January 6, 2015. The tag shows a date in January 2014. It appears this fire extinguisher was missed during the latest inspection.

5.5. Fire Hose Reels

Fire hose reels are installed in the building with 1-½ -inch hose valves. Water is supplied to the hose reels via the domestic water supply. The fire hose reels can be removed from the building, with permission from the AHJ. The only areas of the building required to have the hose reels are the stage areas. If the hose reels are to remain, then they should be fed from a dedicated fire water supply.

5.6. Building 2 Recommendations

Item	Building Number	Building Name	System	Recommendation
1	2	Auditorium	Fire Sprinkler	No seismic bracing is provided on the fire sprinkler riser. It is recommended that seismic bracing be added to the riser.
2	2	Auditorium	Fire Sprinkler	It appeared that the seismic bracing for the sprinkler system is not adequate for the system. It is recommended that additional seismic bracing be added to the fire sprinkler

				system.
3	2	Auditorium	Fire Sprinkler	The spare fire sprinkler cabinet could not be located in the building. It is recommended that one be installed next to the riser and the required amount of sprinkler heads be placed in the cabinet.
4	2	Auditorium	Fire Sprinkler	The power/storage room (102G) on the right side of the stage does not have adequate fire sprinkler coverage. It is recommended that more fire sprinklers be added to this area to provide adequate coverage.
5	2	Auditorium	Fire Sprinkler	The status (open/closed) of the Post Indicating Valve (PIV) located near Building 2 is hard to read. Replace PIV window and text to make it easier to tell if the system is open or closed.
6	2	Auditorium	Fire Sprinkler	The Fire Department Connection (FDC) is not labeled for what buildings it serves. Add signage to the FDC to indicate what buildings are being served. If FDC is not in use a sign should be placed on the FDC indicating that it is not in use.
7	2	Auditorium	Fire Sprinkler	The FDC looks like it is bolted shut and wrench of the appropriate size would have to be used to unbolt the covers for fire department hookup. It is recommended that a new cover be installed on the FDC.
8	2	Auditorium	Fire Sprinkler	Storage in the fire sprinkler riser room is too close to the ceiling. The items being stored are closer to the sprinklers than the minimum clearance of 18 inches required by NFPA 13. This will have an effect on the spray pattern of the sprinklers in that room. Remove storage away from the sprinklers to provide a minimum clearance of 18 inches between the storage and sprinkler deflector.
9	2	Auditorium	Fire Sprinkler	Fire sprinklers are missing escutcheons on the side exits. It is recommended that the escutcheon be replaced so that the performance of the sprinkler system is not compromised.
10	2	Auditorium	Egress	Exit signs in the Drama Rooms are not illuminated. These signs will need to be replaced.
11	2	Auditorium	Fire Hose Reels	The fire hose reels can be removed from the building, except for the stage area, with the permission of the AHJ. If the hose reels are to remain, then they should be removed from the domestic water supply and fed from a dedicated fire water supply.

6. BUILDING 4 – MUSIC

Building 4 (Music) was built in 1954 and renovated in 2013. The building is approximately 12,541 square feet. Building 4 is a B occupancy.

6.1. Means of Egress

All classrooms for Building 4 exit directly to the outside of the building. Classrooms with occupant load more than 49 students are provided with two exits as required by the CBC, There are two small corridors located in the building that provide access to practice rooms for the students. These hallways have two means of egress from the building that lead directly to the outside.

Illuminated exit signage is provided throughout the building, directing occupants to the exits. The location and installation of the exit signage appears to be compliant with the applicable codes. All ceiling-level exit signs are externally illuminated.

6.2. Fire Alarm System

Building 4 is provided with an Edwards EST 3 addressable fire alarm system. The panel reports back to the main panels located in the Administrative Office and the Maintenance and Operations Office. The fire alarm system appears to be in good condition. The panel is currently serviced under contract with HCI. The panel's last annual service was done by HCI on December 26, 2014.

The fire alarm panel is located in the electrical room. Smoke detection is provided above the fire alarm control panel.

The fire alarm system for Building 4 monitors all building initiation devices. The fire alarm system includes manual (fire alarm boxes) initiation devices and audible (horn) and visual appliances (strobes).

6.2.1. System Status

The fire alarm panel was in normal status at the time of JENSEN HUGHES's visit.

6.2.2. Initiation Devices

Manual fire alarm boxes are provided on the outside of the building in one location. The fire alarm boxes were also installed next to each exit leading to the outside of the building.

6.2.3. Notification Appliances

The system is reportedly installed and programmed to provide evacuation for the entire building. Audible notification appears to be provided by means of horns throughout the building. Visual notification appears to be provided by means of strobes throughout the building.

6.3. Fire Sprinkler System

There is no fire sprinkler system installed in Building 4. A fire sprinkler system is not required.

6.4. Fire Extinguishers

The building is provided with fire extinguishers throughout. The fire extinguishers were last inspected on January 6, 2015 by World-Wide Fire Inc.

6.5. Fire Hose Reels

Fire hose reels with 1-½ -inch hose valves are installed in the building. Water is supplied to the hose reels via the domestic water supply. The fire hose reels are not required for this building, and should be removed with permission of the AHJ. If the hose reels are to remain, they should be fed from their own dedicated fire water supply.

6.6. Building 4 Recommendations

Item	Building Number	Building Name	System	Recommendation
1	4	Music	Fire Hose Reels	The fire hose reels are not required for this building, and should be removed with permission of the AHJ. If the hose

				reels are to remain, they should be fed from their own dedicated fire water supply.

7. BUILDING 7 – STUDENT SUCCESS CENTER

Building 7 (Student Success Center) was built in 1950 and later renovated in 1999. The building is 13,350 square feet. Building 7 is an A-1 and B occupancy.

7.1. Means of Egress

Exiting from the Student Success Center is provided by multiple exits that lead to the outside of the building. All classrooms for the Building 7 exit directly to the outside of the building. Rooms that have an occupant load over 49 persons have two or more exits provided as required by Table 1015.1 of the CBCCBC.

Illuminated exit signage is provided thought out the building, directing occupants to the exits. The location and installation of the exit signage appears to be compliant with the applicable codes. Ceiling-level exit signs are directional (where required) and externally illuminated.

7.2. Fire Alarm System

Building 7 is provided with an Edwards EST 3 addressable fire alarm system. The panel reports back to the main panels located in the Administrative Office and the Maintenance and Operations Office. The fire alarm system appears to be in good condition. The panel is currently serviced under contract with HCI. The panel’s last annual service was done by HCI on December 26, 2014.

The fire alarm panel is located in the utility room. Smoke detection is provided above the fire alarm control panel.

The fire alarm system in the Student Success Center monitors the fire alarm initiation devices. The fire alarm system includes manual (manual fire alarm boxes) and automatic (smoke detection, sprinkler waterflow switches, tamper switches, and heat detectors) initiation devices and audible (horns and visual appliances (strobes).

7.2.1. System Status

The fire alarm panel was in normal status at the time of JENSEN HUGHES’s visit.

7.2.2. Initiation Devices

Manual fire alarm boxes are provided on the outside of the building in select locations. These should be provided on the interior of the building located next to each exit door.

System smoke detection in provided throughout the building.

7.2.3. Notification Appliances

The system is reportedly installed and programmed to provide evacuation for the entire building. Audible notification appears to be provided by means of horns throughout the building. Visual notification appears to be provided by means of strobes throughout the building.

Room 102 has no notification appliances.

7.3. Fire Sprinkler Systems

7.3.1. General Configuration

The building is provided with automatic wet-pipe sprinkler system protection throughout the entire building. It appears the sprinkler system was installed sometime around 1967. This is based on the date shown on the alarm check valve is shown as 1967. The exact date of installation is unknown.

The fire sprinkler system is supplied by a single riser located in its own room accessed from the outside of the building. The riser is monitored by a waterflow switch which is connected to the fire alarm panel.

There was a Fire Department Connection (FDC) found on the outside of the building. It is unclear if this FDC is connected to the fire sprinkler system. There was no signage provided on the FDC and the caps were bolted on. It appears that the FDC is no longer in use, but this could not be confirmed.

7.3.2. Fire Sprinklers

There were six spare sprinklers provided near the fire sprinkler riser. The spare sprinklers provided do not match what is installed in the building. Three of the spare sprinklers are a newer model of sprinklers and would be a suitable replacement for the older sprinkler heads installed in the building. The other three spare sprinkler heads are Grinnell F-950 fire sprinklers. The Grinnell F-950 sprinklers manufactured in 1975 and between 1978 and 1982 have had a high number of premature operations. The high number of premature operations typically indicates manufacturing defects. A Safety and Health Hazards Alert for the Grinnell F-950 fire sprinkler heads is provided in Appendix B. The Grinnell F-950 spare sprinkler heads provided in the spare head cabinet had a manufacture date of 1986. Although, the F-950 sprinkler heads in the spare cabinet don't match any years with reported problems, it is recommended that the spare heads be removed and replaced with sprinklers matching the sprinklers installed in the building.

The sprinklers installed in the building are Globe Pendent Spray Sprinklers and the Reliable R1725. Information obtained from the spare fire sprinklers is listed in Table 2 below.

Table 2 – Building 7 Student Success Center Spare Fire Sprinklers

Manufacture	Model	Temp (°F)	Year Manufactured	Type
Grinnell	F950	155	1986	Pendent
Reliable	R1725	155	2005	Pendent

7.4. Fire Extinguishers

The building is provided with fire extinguishers throughout. The fire extinguishers were last inspected on January 6, 2015 by World-Wide Fire Inc.

7.5. Fire Hose Reels

Fire hose reels with 1-½ -inch hose valves are installed in the building. Water is supplied to the hose reels via the domestic water supply. The fire hose reels are not required for this building, and should be removed with permission of the AHJ. If the hose reels are to remain, they should be fed from their own dedicated fire water supply.

7.6. Building 7 Recommendations

Item	Building Number	Building Name	System	Recommendation
1	7	Student Success Center	Fire Sprinkler	The spare fire sprinklers do not match the currently installed sprinklers in the building. It is recommended that the spare sprinklers be changed out to include the sprinklers that are installed in the building. If the sprinklers installed in the building are no longer available a newer sprinkler head with the similar characteristics should be used.
2	7	Student Success Center	Fire Sprinkler	The ceiling tiles in many locations appear to have some sort of damage leaving gaps around sprinkler escutcheons. These tiles need to be replaced to ensure proper sprinkler coverage.
3	7	Student Success Center	Fire Alarm	Only one manual fire alarm box is provided on the outside of the building. Manual fire alarm boxes should be provided on the interior of the building located within 5 ft. of each exit door.
4	7	Student Success Center	Fire Hose Reel	The fire hose reels are not required for this building, and should be removed with permission of the AHJ. If the hose reels are to remain, they should be fed from their own dedicated fire water supply.

8. BUILDING 8 – CLASSROOM AND LABS

Building 8 (Classroom and Labs) was built in 1950 and renovated in 1970. The building is approximately 5,243 square feet. Building 8 is an B occupancy.

8.1. Means of Egress

Classrooms for Building 8 exit directly to the outside of the building. Rooms that have an occupant load over 49 persons have two or more exits provided as required by Table 1015.1 of the CBC.

Illuminated exit signage is provided thought out the building, directing occupants to the exits. The location and installation of the exit signage appears to be compliant with the applicable codes.

8.2. Fire Alarm System

Building 8 is provided with an Edwards EST 3 addressable fire alarm system. The panel reports back to the main panels located in the Administrative Office and the Maintenance and Operations Office. The fire alarm system appears to be in good condition. The panel is currently serviced under contract with HCI. The panel's last annual service was done by HCI on December 26, 2014.

The fire alarm panel is located in the utility room located in Building 7. Smoke detection is provided above the fire alarm control panel.

The fire alarm system for Building 8 monitors the fire alarm initiation devices. The fire alarm system includes manual (fire alarm boxes) initiation devices and audible (horn) and visual appliances (strobes).

8.2.1. System Status

The fire alarm panel was in normal status at the time of JENSEN HUGHES's visit.

8.2.2. Initiation Devices

Manual fire alarm boxes are provided on the outside of the building in one location. These should be provided on the interior of the building located within 5 ft. of each exit door.

There is no smoke or heat detection provided in the building.

8.2.3. Notification Appliances

The system is reportedly installed and programmed to provide evacuation for the entire building. Audible notification appears to be provided by means of horns throughout the building. Visual notification appears to be provided by means of strobes throughout the building.

8.3. Fire Sprinkler System

There is no fire sprinkler system installed in Building 8. Building 8 is not required to have a fire sprinkler system.

8.4. Fire Extinguishers

The building is provided with fire extinguishers throughout. The fire extinguishers were last inspected on January 6, 2015 by World-Wide Fire Inc.

8.5. Fire Hose Reels

Fire hose reels with 1-½ -inch hose valves are installed in the building. Water is supplied to the hose reels via the domestic water supply. The fire hose reels are not required for this building, and should be removed with permission of the AHJ. If the hose reels are to remain, they should be fed from their own dedicated fire water supply.

8.6. Building 8 Recommendations

Item	Building Number	Building Name	System	Recommendation
1	8	Classrooms and Labs	Fire Alarm	Only one manual fire alarm box is provided on the outside of the building. Manual fire alarm boxes should be provided on the interior of the building located next to each exit door.
2	8	Classrooms and Labs	Fire Hose Reel	The fire hose reels are not required for this building, and should be removed with permission of the AHJ. If the hose reels are to remain, they should be fed from their own dedicated fire water supply.

9. BUILDING 9 – CLASSROOM AND LABS

Building 9 (Classroom and Labs) was built in 1950 and renovated in 1970. The building is approximately 5,430 square feet. Building 9 is an B occupancy.

9.1. Means of Egress

Classrooms for Building 9 exit directly to the outside of the building. Rooms that have an occupant load over 49 persons have two or more exits provided as required by Table 1015.1 of the CBCCBC.

Illuminated exit signage is provided thought out the building, directing occupants to the exits. The location and installation of the exit signage appears to be compliant with the applicable codes.

9.2. Fire Alarm System

Building 9 is provided with an Edwards EST 3 addressable fire alarm system. The panel reports back to the main panels located in the Administrative Office and the Maintenance and Operations Office. The fire alarm system appears to be in good condition. The panel is currently serviced under contract with HCI. The panel's last annual service was done by HCI on December 26, 2014.

The fire alarm panel is located in the electrical room in the Fine Arts Building (Building 5). Smoke detection is provided above the fire alarm control panel.

The fire alarm system for Building 9 monitors all building initiation devices. The fire alarm system includes manual (fire alarm boxes) and automatic (smoke and heat detection) initiation devices and audible (horn) and visual appliances (strobes).

9.2.1. System Status

The fire alarm panel was in normal status at the time of JENSEN HUGHES's visit.

9.2.2. Initiation Devices

Manual fire alarm boxes are provided on the outside of the building in one location. These should be provided on the interior of the building located within 5 ft. of each exit door.

Rooms 111 and 112 have no smoke or heat detection. Rooms 113 and 114 have smoke and heat detection.

9.2.3. Notification Appliances

The system is reportedly installed and programmed to provide evacuation for the entire building. Audible notification appears to be provided by means of horns throughout the building. Visual notification appears to be provided by means of strobes throughout the building.

9.3. Fire Sprinkler System

There is no fire sprinkler system installed in Building 9. Building 9 is not required to have a fire sprinkler system.

9.4. Fire Extinguishers

The building is provided with fire extinguishers throughout. The fire extinguishers were last inspected on January 6, 2015 by World-Wide Fire Inc.

9.5. Fire Hose Reels

Fire hose reels with 1-½ -inch hose valves are installed in the building. Water is supplied to the hose reels via the domestic water supply. The fire hose reels are not required for this building, and should be removed with permission of the AHJ. If the hose reels are to remain, they should be fed from their own dedicated fire water supply.

9.6. Building 9 Recommendations

Item	Building Number	Building Name	System	Recommendation
1	9	Classrooms and Labs	Fire Alarm	Only one manual fire alarm box is provided on the outside of the building. Manual fire alarm boxes should be provided on the interior of the building located next to each exit door.

2	9	Classrooms and Labs	Fire Hose Reel	The fire hose reels are not required for this building, and should be removed with permission of the AHJ. If the hose reels are to remain, they should be fed from their own dedicated fire water supply.

10. BUILDING 12 – BUSINESS EDUCATION

Building 12 (Business Education) was built in 1953 and renovated in 2000. The building is approximately 6,671 square feet. Building 12 is of B occupancy.

10.1. Means of Egress

Classrooms for Building 12 exit directly to the outside of the building. Rooms that have an occupant load over 49 persons have two or more exits provided as required by Table 1015.1 of the CBC.

Illuminated exit signage is provided thought out the building, directing occupants to the exits. The location and installation of the exit signage appears to be compliant with the applicable codes.

10.2. Fire Alarm System

Building 12 is provided with an Edwards EST 3 addressable fire alarm system. The panel reports back to the main panels located in the Administrative Office and the Maintenance and Operations Office. The fire alarm system appears to be in good condition. The panel is currently serviced under contract with HCI. The panel’s last annual service was done by HCI on December 26, 2014.

The fire alarm panel is located in the telephone equipment room in Building 14. Smoke detection is provided above the fire alarm control panel.

The fire alarm system for Building 12 monitors all building initiation devices. The fire alarm system includes manual (fire alarm boxes) initiation devices and audible (horn) and visual appliances (strobes).

10.2.1. System Status

The fire alarm panel was in normal status at the time of JENSEN HUGHES’s visit.

10.2.2. Initiation Devices

Manual fire alarm boxes are provided on the outside of the building in one location. These should be provided on the interior of the building located within 5 ft. of each exit door.

No rooms in Building 12 have any automatic initiation devices.

10.2.3. Notification Appliances

The system is reportedly installed and programmed to provide evacuation for the entire building. Audible notification appears to be provided by means of horns throughout the building. Visual notification appears to be provided by means of strobes throughout the building.

10.3. Fire Sprinkler System

There is no fire sprinkler system installed in Building 12. Fire sprinklers for Building 12 are not required.

10.4. Fire Extinguishers

The building is provided with fire extinguishers throughout. The fire extinguishers were last inspected on January 6, 2015 by World-Wide Fire Inc.

10.5. Fire Hose Reels

Fire hose reels with 1-½ -inch hose valves are installed in the building. Water is supplied to the hose reels via the domestic water supply. The fire hose reels are not required for this building, and should be removed with permission of the AHJ. If the hose reels are to remain, they should be fed from their own dedicated fire water supply.

10.6. Building 12 Recommendations

Item	Building Number	Building Name	System	Recommendation
1	12	Business Education	Fire Alarm	Only one manual fire alarm box is installed in the building. The fire alarm box is installed on the outside of the building. It is recommended that a fire alarm box be installed on the inside of the building near all exit doors.
2	12	Business Education	Fire Hose Reel	The fire hose reels are not required for this building, and should be removed with permission of the AHJ. If the hose reels are to remain, they should be fed from their own dedicated fire water supply.

11. BUILDING 13 – BUSINESS EDUCATION

Building 13 (Business Education) was built in 1953 and has not been renovated. The building is approximately 4,617 square feet. Building 13 is of B occupancy.

11.1. Means of Egress

Classrooms for Building 13 exit directly to the outside of the building. All rooms, except for Room 106, that have an occupant load over 49 persons have two or more exits provided as required by Table 1015.1 of the CBC. Room 106 has an area of 1,208 sq. ft. Using an occupant load factor of 20 sq. ft. per person, the room has an occupant load of 61 persons. Room 106 exceeds the limit 49 persons for one exit, and is required to have two exits.

Illuminated exit signage is provided thought out the building, directing occupants to the exits. The location and installation of the exit signage appears to be compliant with the applicable codes.

11.2. Fire Alarm System

Building 13 is provided with an Edwards EST 3 addressable fire alarm system. The panel reports back to the main panels located in the Administrative Office and the Maintenance and Operations Office. The fire alarm system appears to be in good condition. The panel is currently serviced under contract with HCI. The panel’s last annual service was done by HCI on December 26, 2014.

The fire alarm panel is located in the telephone equipment room located in Building 14. Smoke detection is provided above the fire alarm control panel.

The fire alarm system for Building 13 monitors all building initiation devices. The fire alarm system includes manual (fire alarm boxes) initiation devices and audible (horns) and visual appliances (strobes).

11.2.1. System Status

The fire alarm panel was in normal status at the time of JENSEN HUGHES's visit.

11.2.2. Initiation Devices

Manual fire alarm boxes are provided on the outside of the building in one location. Manual fire alarm boxes should be provided on the interior of the building located within 5 ft. of each exit door.

No rooms in Building 13 have any automatic initiation devices.

11.2.3. Notification Appliances

The system is reportedly installed and programmed to provide evacuation for the entire building. Audible notification appears to be provided by means of horns throughout the building. Visual notification appears to be provided by means of strobes throughout the building.

11.3. Fire Sprinkler System

There is no fire sprinkler system installed in Building 13. A fire sprinkler system for Building 13 is not required.

11.4. Fire Extinguishers

The building is provided with fire extinguishers throughout. The fire extinguishers were last inspected on January 6, 2015 by World-Wide Fire Inc.

11.5. Fire Hose Reels

Fire hose reels with 1-½ -inch hose valves are installed in the building. Water is supplied to the hose reels via the domestic water supply. The fire hose reels are not required for this building, and should be removed with permission of the AHJ. If the hose reels are to remain, they should be fed from their own dedicated fire water supply.

11.6. Building 13 Recommendations

Item	Building Number	Building Name	System	Recommendation
1	13	Business Education	Fire Alarm	Only one manual fire alarm box is installed in the building. The fire alarm box is installed on the outside of the building. It is recommended that a fire alarm box be installed on the inside of the building within 5 ft. of all exit doors.
2	13	Business Education	Fire Alarm	In room 105 a 30cd strobe is installed in the room. A 30cd strobe can cover a room that is 28 x 28 feet in accordance with NFPA 72. The room measures to be 20'8" by 34'2". The strobe needs to be replaced with a higher candela rating to provide adequate strobe coverage.
3	13	Business Education	Egress	Room 106 measures to be 1,208 square feet. This room is provided with only one exit. Since this room has an occupant load greater than 49, it is required to have a minimum of two exits. It is recommended that a second exit be provided for this room.

4	13	Business Education	Fire Hose Reel	The fire hose reels are not required for this building, and should be removed with permission of the AHJ. If the hose reels are to remain, they should be fed from their own dedicated fire water supply.

12. BUILDING 14 – BUSINESS EDUCATION

Building 14 (Business Education) was built in 1953 and renovated in 1977. The building is approximately 8,169 square feet. This building was not included in the scope of work, but the fire alarm panel for Buildings 12 and 13 is located in Building 14.

12.1. Means of Egress

Classrooms for the Building 14 exit directly to the outside of the building.

Illuminated exit signage is provided thought out the building, directing occupants to the exits. The location and installation of the exit signage appears to be compliant with the applicable codes.

12.2. Fire Alarm System

Building 14 is provided with an Edwards EST 3 addressable fire alarm system. The panel reports back to the main panels located in the Administrative Office and the Maintenance and Operations Office. The fire alarm system appears to be in good condition. The panel is currently serviced under contract with HCI. The panel’s last annual service was done by HCI on December 26, 2014.

The fire alarm panel is located in the telephone equipment room. Smoke detection is provided above the fire alarm control panel.

The fire alarm system for Building 14 monitors all building initiation devices. The fire alarm system includes manual (fire alarm boxes) initiation devices and audible (horn) and visual appliances (strobes).

12.2.1. System Status

The fire alarm panel was in normal status at the time of JENSEN HUGHES’s visit.

12.2.2. Initiation Devices

Manual fire alarm boxes are provided on the outside of the building in various locations. Manual fire alarm boxes should be provided on the interior of the building located within 5 ft. of each exit door.

No rooms in Building 14 have any automatic initiation devices.

12.2.3. Notification Appliances

The system is reportedly installed and programmed to provide evacuation for the entire building. Audible notification appears to be provided by means of horns throughout the building. Visual notification appears to be provided by means of strobes throughout the building.

12.3. Fire Sprinkler System

There is no fire sprinkler system installed in Building 14. Fire sprinklers for Building 14 are not required.

12.4. Fire Extinguishers

The building is provided with fire extinguishers throughout. The fire extinguishers were last inspected on January 6, 2015 by World-Wide Fire Inc.

12.5. Fire Hose Reels

Fire hose reels with 1-½ -inch hose valves are installed in the building. Water is supplied to the hose reels via the domestic water supply. The fire hose reels are not required for this building, and should be removed with permission of the AHJ. If the hose reels are to remain, they should be fed from their own dedicated fire water supply.

12.6. Building 14 Recommendations

Item	Building Number	Building Name	System	Recommendation
1	14	Business Education	Fire Alarm	Manual fire alarm boxes are provided on the outside of the building. Manual fire alarm boxes should be provided on the interior of the building located within 5 ft. of each exit door.
2	14	Business Education	Fire Hose Reel	The fire hose reels are not required for this building, and should be removed with permission of the AHJ. If the hose reels are to remain, they should be fed from their own dedicated fire water supply.

13. BUILDING 35 – MATH WING

Building 35 (Math Wing) was built in 1956 and renovated in 1960. The building is approximately 6,402 square feet. Building 25 is an B occupancy.

13.1. Means of Egress

Classrooms for Building 35 exit directly to the outside of the building. Room 149 is 997 sq. ft. in size and is provided with one exit. Using an occupant factor of 20 sq. ft. per person for classrooms (CBC Table 1004.1.2), the occupant load for the room will exceed 49, thereby requiring a second exit.

Illuminated exit signage is provided thought out the building, directing occupants to the exits. The location and installation of the exit signage appears to be compliant with the applicable codes.

13.2. Fire Alarm System

Building 35 is provided with an Edwards EST 3 addressable fire alarm system. The panel reports back to the main panels located in the Administrative Office and the Maintenance and Operations Office. The fire alarm system appears to be in good condition. The panel is currently serviced under contract with HCI. The panel's last annual service was done by HCI on December 26, 2014.

The fire alarm panel is located in the telephone equipment room in Building 38. Smoke detection is provided above the fire alarm control panel.

The fire alarm system for Building 35 monitors all building initiation devices. The fire alarm system includes manual (fire alarm boxes) initiation devices and audible (horn) and visual appliances (strobes).

13.2.1. System Status

The fire alarm panel was in normal status at the time of JENSEN HUGHES's visit.

13.2.2. Initiation Devices

Manual fire alarm boxes are provided on the outside of the building in one location. Manual fire alarm boxes should be provided on the interior of the building located within 5 ft. of each exit door.

No rooms in Building 35 have automatic initiation devices.

13.2.3. Notification Appliances

The system is reportedly installed and programmed to provide evacuation for the entire building. Audible notification appears to be provided by means of horns throughout the building. Visual notification appears to be provided by means of strobes throughout the building.

13.3. Fire Sprinkler System

There is no fire sprinkler system installed in Building 35. Fire sprinklers are not required in Building 35.

13.4. Fire Extinguishers

The building is provided with fire extinguishers throughout. The fire extinguishers were last inspected on January 6, 2015 by World-Wide Fire Inc.

13.5. Fire Hose Reels

Fire hose reels with 1-½ -inch hose valves are installed in the building. Water is supplied to the hose reels via the domestic water supply. The fire hose reels are not required for this building, and should be removed with permission of the AHJ. If the hose reels are to remain, they should be fed from their own dedicated fire water supply.

13.6. Building 35 Recommendations

Item	Building Number	Building Name	System	Recommendation
1	35	Math Wing	Fire Alarm	Only one manual fire alarm box is installed in the building. The fire alarm box is installed on the outside of the building. It is recommended that a fire alarm box be installed on the inside of the building within 5 ft. of all exit doors.
2	35	Math Wing	Egress	Room 149 is 997 sq. ft. in size. Using an occupant factor of 20 sq. ft. Room 149 is 997 sq. ft. in size and is provided with one exit. Using an occupant factor of 20 sq. ft. per person for classrooms, the occupant load for the room will exceed 49, thereby requiring a second exit. It is recommended that a second exit be provided from this room.
3	35	Math Wing	Fire Hose Reel	The fire hose reels are not required for this building, and should be removed with permission of the AHJ. If the hose reels are to remain, they should be fed from their own dedicated fire water supply.

14. BUILDING 36 – MATH WING

Building 36 (Math Wing) was built in 1956 and renovated in 1960. The building is approximately 10,716 square feet. Building 36 is an B occupancy.

14.1. Means of Egress

Classrooms for the Building 36 exit directly to the outside of the building. Rooms 141, 142, 143, 145, 146, and 148 all are over 980 sq. ft and are provided with one exit. Using an occupant factor of 20 sq. ft. per person for classrooms (CBC Table 1004.1.2), the occupant load for the room will exceed 49, thereby requiring a second exit.

Illuminated exit signage is provided thought out the building, directing occupants to the exits. The location and installation of the exit signage appears to be compliant with the applicable codes.

14.2. Fire Alarm System

Building 36 is provided with an Edwards EST 3 addressable fire alarm system. The panel reports back to the main panels located in the Administrative Office and the Maintenance and Operations Office. The fire alarm system appears to be in good condition. The panel is currently serviced under contract with HCI. The panel's last annual service was done by HCI on December 26, 2014.

The fire alarm panel is located in the telephone equipment room in the Building 38. Smoke detection is provided above the fire alarm control panel.

The fire alarm system for Building 36 monitors all building initiation devices. The fire alarm system includes manual (fire alarm boxes) and automatic (smoke and heat detection) initiation devices and audible (horn) and visual appliances (strobes).

14.2.1. System Status

The fire alarm panel was in normal status at the time of JENSEN HUGHES's visit.

14.2.2. Initiation Devices

Manual fire alarm boxes are provided on the outside of the building in one location. These should be provided on the interior of the building located within 5 ft. of each exit door.

Only Rooms 141 and 142 in Building 35 have automatic initiation devices. The rest of the building has no automatic initiation devices.

14.2.3. Notification Appliances

The system is reportedly installed and programmed to provide evacuation for the entire building. Audible notification appears to be provided by means of horns throughout the building. Visual notification appears to be provided by means of strobes throughout the building.

14.3. Fire Sprinkler System

Room 142A is provided with fire sprinklers. The sprinklers in room 142A are fed from the domestic water supply. There are no other fire sprinklers installed in Building 36. Fire sprinklers are not required in Building 36. The fire sprinklers in Room 142A should be removed, or full fire sprinkler protection should be installed throughout Building 36.

14.4. Fire Extinguishers

The building is provided with fire extinguishers throughout. The fire extinguishers were last inspected on January 6, 2015 by World-Wide Fire Inc.

14.5. Fire Hose Reels

Fire hose reels with 1-½ -inch hose valves are installed in the building. Water is supplied to the hose reels via the domestic water supply. The fire hose reels are not required for this building, and should be removed with permission of the AHJ. If the hose reels are to remain, they should be fed from their own dedicated fire water supply.

14.6. Building 36 Recommendations

Item	Building Number	Building Name	System	Recommendation
1	36	Math Wing	Fire Alarm	Only one manual fire alarm box is installed in the building. The fire alarm box is installed on the outside of the building. It is recommended that a fire alarm box be installed on the inside of the building within 5 ft. of all exit doors.
2	36	Math Wing	Egress	A brick wall keeps the 2nd exit door from opening all the way. It is recommended that the wall be removed so the exit door can open all the way. This room does require two exits.
3	36	Math Wing	Egress	Rooms 141, 142, 143, 145, 146, and 148 all are over 980 sq. ft. Using an occupant load factor of 20 sq. ft. (CBC Table 1004.1.2) all of the rooms exceed the 49 persons for a single exit and a second exit will have to be added to each room.
4	36	Math Wing	Fire Sprinkler	Fire sprinklers are not required in Building 36. The fire sprinklers in Room 142A should be removed, or full fire sprinkler protection should be installed throughout Building 36.
5	36	Math Wing	Fire Hose Reel	The fire hose reels are not required for this building, and should be removed with permission of the AHJ. If the hose reels are to remain, they should be fed from their own dedicated fire water supply.

15. BUILDING 37 – REPROGRAPHICS

Building 37 (Reprographics) was built in 1956 and renovated in 1960. The building is approximately 6,878 square feet. Building 37 is an B occupancy.

15.1. Means of Egress

All rooms for Building 37 exit directly to the outside of the building.

Illuminated exit signage is provided thought out the building, directing occupants to the exits. The location and installation of the exit signage appears to be compliant with the applicable codes.

15.2. Fire Alarm System

Building 37 is provided with an Edwards EST 3 addressable fire alarm system. The panel reports back to the main panels located in the Administrative Office and the Maintenance and Operations Office. The fire alarm system appears to be in good condition. The panel is currently serviced under contract with HCI. The panel's last annual service was done by HCI on December 26, 2014.

The fire alarm panel is located in the telephone equipment room in Building 38. Smoke detection is provided above the fire alarm control panel.

The fire alarm system for Building 37 monitors all building initiation devices. The fire alarm system includes manual (fire alarm boxes) initiation devices and audible (horn) and visual appliances (strobes).

15.2.1. System Status

The fire alarm panel was in normal status at the time of JENSEN HUGHES's visit.

15.2.2. Initiation Devices

Manual fire alarm boxes are provided on the outside of the building in one location. These should be provided on the interior of the building located within 5 ft. of each exit door.

No rooms in Building 37 have any automatic initiation devices.

15.2.3. Notification Appliances

The system is reportedly installed and programmed to provide evacuation for the entire building. Audible notification appears to be provided by means of horns throughout the building. Visual notification appears to be provided by means of strobes throughout the building.

15.3. Fire Sprinkler System

There is no fire sprinkler system installed in Building 37. Fire sprinklers are not required in Building 37.

15.4. Fire Extinguishers

The building is provided with fire extinguishers throughout. The fire extinguishers were last inspected on January 6, 2015 by World-Wide Fire Inc.

15.5. Fire Hose Reels

Fire hose reels with 1-½ -inch hose valves are installed in the building. Water is supplied to the hose reels via the domestic water supply. The fire hose reels are not required for this building, and should be removed with permission of the AHJ. If the hose reels are to remain, they should be fed from their own dedicated fire water supply.

15.6. Building 37 Recommendations

Item	Building Number	Building Name	System	Recommendation
1	37	Reprographics	Fire Alarm	Only one manual fire alarm box is installed in the building. The fire alarm box is installed on the outside of the building. It is recommended that a fire alarm box be installed on the inside of the building within 5 ft. of all exit doors.

2	37	Reprographics	Fire Hose Reel	The fire hose reels are not required for this building, and should be removed with permission of the AHJ. If the hose reels are to remain, they should be fed from their own dedicated fire water supply.

16. BUILDING 39 – SCIENCE (PLANETARIUM)

Building 39 (Planetarium) was built in 1956 and renovated in 1960. The building is approximately 2,380 square feet. Building 39 is an B occupancy.

16.1. Means of Egress

All exits for the Building 39 exit directly to the outside of the building.

Illuminated exit signage is provided thought out the building, directing occupants to the exits. The location and installation of the exit signage appears to be compliant with the applicable codes.

16.2. Fire Alarm System

Building 39 is provided with an Edwards EST 3 addressable fire alarm system. The panel reports back to the main panels located in the Administrative Office and the Maintenance and Operations Office. The fire alarm system appears to be in good condition. The panel is currently serviced under contract with HCI. The panel's last annual service was done by HCI on December 26, 2014.

The fire alarm panel is located in the telephone equipment room in Building 38. Smoke detection is provided above the fire alarm control panel.

The fire alarm system for Building 38 monitors all building initiation devices. The fire alarm system includes manual (fire alarm boxes) initiation devices and audible (horn) and visual appliances (strobes).

16.2.1. System Status

The fire alarm panel was in normal status at the time of JENSEN HUGHES's visit.

16.2.2. Initiation Devices

Manual fire alarm boxes are provided on the outside of the building in one location. These should be provided on the interior of the building located within 5 ft. of each exit door.

Building 39 does not have any automatic initiation devices.

16.2.3. Notification Appliances

The system is reportedly installed and programmed to provide evacuation for the entire building. Audible notification appears to be provided by means of horns throughout the building. Visual notification appears to be provided by means of strobes throughout the building.

16.3. Fire Sprinkler System

There is no fire sprinkler system installed in Building 39. A fire sprinkler system is not required in Building 39.

16.4. Fire Extinguishers

The building is provided with fire extinguishers throughout. The fire extinguishers were last inspected on January 6, 2015 by World-Wide Fire Inc.

16.5. Fire Hose Reels

Fire hose reels are not installed in Building 39. Hose reels are not required.

16.6. Building 39 Recommendations

Item	Building Number	Building Name	System	Recommendation
1	39	Science (Planetarium)	Fire Alarm	Only one manual fire alarm box is installed in the building. The fire alarm box is installed on the outside of the building. It is recommended that a fire alarm box be installed on the inside of the building within 5 ft. of all exit doors.

17. BUILDING 93 – POOL STADIUM

The age and square footage of the Pool Stadium is not known based off of information provided to Jensen Hughes.

17.1. Means of Egress

There are two exits that lead out of the pool stadium. One located on each side of the seating area.

The stairs for the seating are 42” wide by 10¾” long by 5” high. The seating area aisle is 32” wide with the seat and 22” wide without the seat.

17.2. Fire Alarm System

There is no fire alarm system for Building 93.

17.3. Fire Sprinkler System

There is no fire sprinklers located in Building 93.

17.4. Fire Extinguishers

Fire extinguishers are located in the pump room for the pool stadium. They were last inspected on January 6, 2015 by World-Wide Fire Inc.

17.5. Fire Hose Reels

Fire hose reels are not installed in Building 93.

18. BUILDING 105 – STADIUM

The age and square footage of the Stadium is not known based off of information provided to Jensen Hughes.

18.1. Means of Egress

There are multiple exits that lead out of the stadium.

The stairs for the seating are 56.5” wide by 11.5” long by 6” high. The seating area aisle is 22” wide with the seat and 11” wide without the seat.

18.2. Fire Alarm System

Building 105 is provided with an Edwards EST 2 addressable fire alarm system. The panel reports back to the main panels located in the Administrative Office and the Maintenance and Operations Office. The fire alarm system appears to be in good condition. The panel is currently serviced under contract with HCI. The service tag from HCI is not located on the panel. It is unknown was the last annual service was performed.

The fire alarm panel is located in the press box on the home team side of the field. Smoke detection is provided above the fire alarm control panel.

The fire alarm system in Building 105 monitors all building initiation devices. The fire alarm system includes manual (fire alarm boxes) initiation devices and audible (horn) and visual appliances (strobes).

18.2.1. System Status

The fire alarm panel was in normal status at the time of JENSEN HUGHES’s visit.

18.2.2. Initiation Devices

Building 105 has smoke detection in the announcer and press rooms of the Press Box.

18.2.3. Notification Appliances

The system is reportedly installed and programmed to provide evacuation for the entire building. Audible notification appears to be provided by means of horns throughout the building. Visual notification appears to be provided by means of strobes throughout the building.

18.3. Fire Sprinkler System

There is no fire sprinkler system installed in Building 105.

18.4. Fire Extinguishers

The building is provided with fire extinguishers throughout. The fire extinguishers were last inspected on January 6, 2015 by World-Wide Fire Inc.

18.5. Fire Hose Reels

Fire hose reels are not installed in the building.

19. BUILDING 110 – FIELD HOUSE

The age and square footage of Building 110 is not known based off of information provided to Jensen Hughes.

19.1. Means of Egress

All exits for the Building 110 exit directly to the outside.

Illuminated exit signage is provided thought out the building, directing occupants to the exits. The location and installation of the exit signage appears to be compliant with the applicable codes.

19.2. Fire Alarm System

There is no fire alarm system for Building 110.

19.3. Fire Sprinkler System

There is no fire sprinkler system installed in Building 110.

19.4. Fire Extinguishers

Fire extinguishers are located throughout Building 110. They were last inspected on January 6, 2015 by World-Wide Fire Inc.

19.5. Fire Hose Reels

Fire hose reels are installed in the building. Water is supplied to the hose reels via the domestic water supply.

20. SUMMARY OF ALL BUILDING RECOMMENDATIONS

The table below shows a list of recommendations that should be addressed with each building.

Item	Building Number	Building Name	System	Recommendation
1	2	Auditorium	Fire Sprinkler	No seismic bracing is provided on the fire sprinkler riser. It is recommended that seismic bracing be added to the riser.
2	2	Auditorium	Fire Sprinkler	It appeared that the seismic bracing for the sprinkler system is not adequate for the system. It is recommended that additional seismic bracing be added to the fire sprinkler system.
3	2	Auditorium	Fire Sprinkler	The spare fire sprinkler cabinet could not be located in the building. It is recommended that one be installed next to the riser and the required amount of sprinkler heads be placed in the cabinet.
4	2	Auditorium	Fire Sprinkler	The power/storage room (102G) on the right side of the stage does not have adequate fire sprinkler coverage. It is recommended that more fire sprinkler heads be added to this area.
5	2	Auditorium	Fire Sprinkler	The Post Indicating Valve (PIV) located near Building 2 is hard to read. It does not show if the system is open or closed. Replace PIV window and text to make it easier to tell if the system is open or closed.
6	2	Auditorium	Fire Sprinkler	The Fire Department Connection (FDC) is not labeled for what buildings it serves. Add signage to the FDC to indicate what buildings are being served. If FDC is not in use a sign should be placed on the FDC indicating that it is not in use.
7	2	Auditorium	Fire Sprinkler	The FDC looks like it is bolted shut and wrench of the appropriate size would have to be used to unbolt the covers for fire department hookup. It is recommended that a new cover be installed on the FDC.
8	2	Auditorium	Fire Sprinkler	Storage in the fire sprinkler riser room is too close to the ceiling. The items being stored are closer to the sprinklers

Item	Building Number	Building Name	System	Recommendation
				than the minimum clearance of 18 inches required by NFPA 13. This will have an effect on the spray pattern of the sprinklers in that room. Remove storage away from the sprinklers to provide a minimum clearance of 18 inches between the storage and sprinkler deflector.
9	2	Auditorium	Fire Sprinkler	Fire sprinklers are missing escutcheons on the side exits. It is recommended that the escutcheon be replaced so the performance of the sprinkler system is not compromised.
10	2	Auditorium	Egress	Exit signs in the Drama Rooms are not illuminated. These signs will need to be replaced.
11	2	Auditorium	Fire Hose Reels	The fire hose reels can be removed from the building, except for the stage area, with the permission of the AHJ. If the hose reels are to remain, then they should be removed from the domestic water supply and fed from a dedicated fire water supply.
12	2	Auditorium	Fire Alarm	Only one manual fire alarm box is provided on the outside of the building. Manual fire alarm boxes should be provided on the interior of the building located within 5 ft. each exit door.
13	4	Music	Fire Hose Reels	The fire hose reels can be removed from the building, except for the stage area, with the permission of the AHJ. If the hose reels are to remain, then they should be removed from the domestic water supply and fed from a dedicated fire water supply.
14	7	Student Success Center	Fire Sprinkler	The spare fire sprinklers are not what are currently installed in the building. It is recommended that the spare sprinklers be changed out to include the sprinklers that are installed in the building. If the sprinklers installed in the building are no longer available a newer sprinkler head with the same characteristics should be used.
15	7	Student Success Center	Fire Sprinkler	The ceiling tiles in many locations appear to have some sort of damage leaving gaps around sprinkler escutcheons. These tiles need to be replaced to ensure proper sprinkler coverage.
16	7	Student Success Center	Fire Alarm	Only one manual fire alarm box is provided on the outside of the building. Manual fire alarm boxes should be provided on the interior of the building located next to each exit door.
17	7	Student Success Center	Fire Hose Reels	The fire hose reels can be removed from the building, except for the stage area, with the permission of the AHJ. If the hose reels are to remain, then they should be removed from the domestic water supply and fed from a dedicated fire water supply.
18	8	Classrooms and Labs	Fire Alarm	Only one manual fire alarm box is provided on the outside of the building. Manual fire alarm boxes should be provided on the interior of the building located within 5 ft. of each exit door.
19	8	Classrooms and Labs	Fire Hose Reels	The fire hose reels can be removed from the building, except for the stage area, with the permission of the AHJ. If the hose reels are to remain, then they should be removed from the domestic water supply and fed from a dedicated fire water supply.
20	9	Classrooms and Labs	Fire Alarm	Only one manual fire alarm box is provided on the outside of the building. Manual fire alarm boxes should be provided on

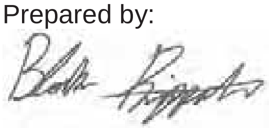
Item	Building Number	Building Name	System	Recommendation
				the interior of the building located within 5 ft. of each exit door.
21	9	Classrooms and Labs	Fire Hose Reels	The fire hose reels can be removed from the building, except for the stage area, with the permission of the AHJ. If the hose reels are to remain, then they should be removed from the domestic water supply and fed from a dedicated fire water supply.
22	12	Business Education	Fire Alarm	Only one manual fire alarm box is installed in the building. The fire alarm box is installed on the outside of the building. It is recommended that a fire alarm box be installed on the inside of the building within 5 ft. of each exit door.
23	12	Business Education	Fire Hose Reels	The fire hose reels can be removed from the building, except for the stage area, with the permission of the AHJ. If the hose reels are to remain, then they should be removed from the domestic water supply and fed from a dedicated fire water supply.
24	13	Business Education	Fire Alarm	Only one manual fire alarm box is installed in the building. The fire alarm box is installed on the outside of the building. It is recommended that a fire alarm box be installed on the inside of the building within 5 ft. of each exit door.
25	13	Business Education	Fire Alarm	In room 105 a 30cd strobe is installed in the room. A 30cd strobe can cover a room that is 28 x 28 feet. The room measures to be 20’8” by 34’2”. The strobe needs to be replaced with a higher candela rating.
26	13	Business Education	Egress	Room 106 measures to be 1,208 square feet. This room is provided with only one exit. This room has an occupant load of 51 persons, so it is required to have two exits. It is recommended that an second exit be provided for this room
27	13	Business Education	Fire Hose Reels	The fire hose reels can be removed from the building, except for the stage area, with the permission of the AHJ. If the hose reels are to remain, then they should be removed from the domestic water supply and fed from a dedicated fire water supply.
28	14	Business Education	Fire Alarm	Manual fire alarm boxes are provided on the outside of the building. Manual fire alarm boxes should be provided on the interior of the building located next to each exit door.
29	14	Business Education	Fire Hose Reels	The fire hose reels can be removed from the building, except for the stage area, with the permission of the AHJ. If the hose reels are to remain, then they should be removed from the domestic water supply and fed from a dedicated fire water supply.
30	35	Math Wing	Fire Alarm	Only one manual fire alarm box is installed in the building. The fire alarm box is installed on the outside of the building. It is recommended that a fire alarm box be installed on the inside of the building within 5 ft. of each exit door.
31	35	Math Wing	Egress	Room 149 is 997 sq. ft. in size. Using an occupant factor of 20 sq. ft. per person any room over 980 sq. ft. is required to have two exits
32	35	Math Wing	Fire Hose Reels	The fire hose reels can be removed from the building, except for the stage area, with the permission of the AHJ. If the hose reels are to remain, then they should be removed from the domestic water supply and fed from a dedicated fire water

Item	Building Number	Building Name	System	Recommendation
				supply.
33	36	Math Wing	Fire Alarm	Only one manual fire alarm box is installed in the building. The fire alarm box is installed on the outside of the building. It is recommended that a fire alarm box be installed on the inside of the building within 5 ft. of each exit door.
34	36	Math Wing	Egress	A brick wall keeps the 2nd exit door from opening all the way. It is recommended that the wall be removed so the exit door can open all the way. This room does require two exits.
35	36	Math Wing	Egress	Rooms 141, 142, 143, 145, 146, and 148 all are over 980 sq. ft. Using an occupant load factor of 20 sq. ft. (CBC Table 1004.1.2) all of the rooms exceed the 49 persons for a single exit and a second exit will have to be added to each room.
36	36	Math Wing	Fire Hose Reels	The fire hose reels can be removed from the building, except for the stage area, with the permission of the AHJ. If the hose reels are to remain, then they should be removed from the domestic water supply and fed from a dedicated fire water supply.
37	37	Reprographics	Fire Alarm	Only one manual fire alarm box is installed in the building. The fire alarm box is installed on the outside of the building. It is recommended that a fire alarm box be installed on the inside of the building within 5 ft. of each exit door.
38	37	Reprographics	Fire Hose Reels	The fire hose reels can be removed from the building, except for the stage area, with the permission of the AHJ. If the hose reels are to remain, then they should be removed from the domestic water supply and fed from a dedicated fire water supply.
39	39	Science (Planetarium)	Fire Alarm	Only one manual fire alarm box is installed in the building. The fire alarm box is installed on the outside of the building. It is recommended that a fire alarm box be installed on the inside of the building within 5 ft. of each exit door.
40	39	Science (Planetarium)	Fire Hose Reels	The fire hose reels can be removed from the building, except for the stage area, with the permission of the AHJ. If the hose reels are to remain, then they should be removed from the domestic water supply and fed from a dedicated fire water supply.

If you have any questions regarding this report, please feel free to contact our office at 714-450-1700.

JENSEN HUGHES

Prepared by:



Blake Rippetoe
Consultant

Reviewed by:

Yogesh Kalantre
Senior Consultant

BR/YK:na
1YOK65334/20150403 STRUCTURES REPORT

Attachments

APPENDIX A. PICTURES OF RECOMMENDATIONS

Photograph 1: Storage close to the sprinkler head in the fire sprinkler riser room in Building 2

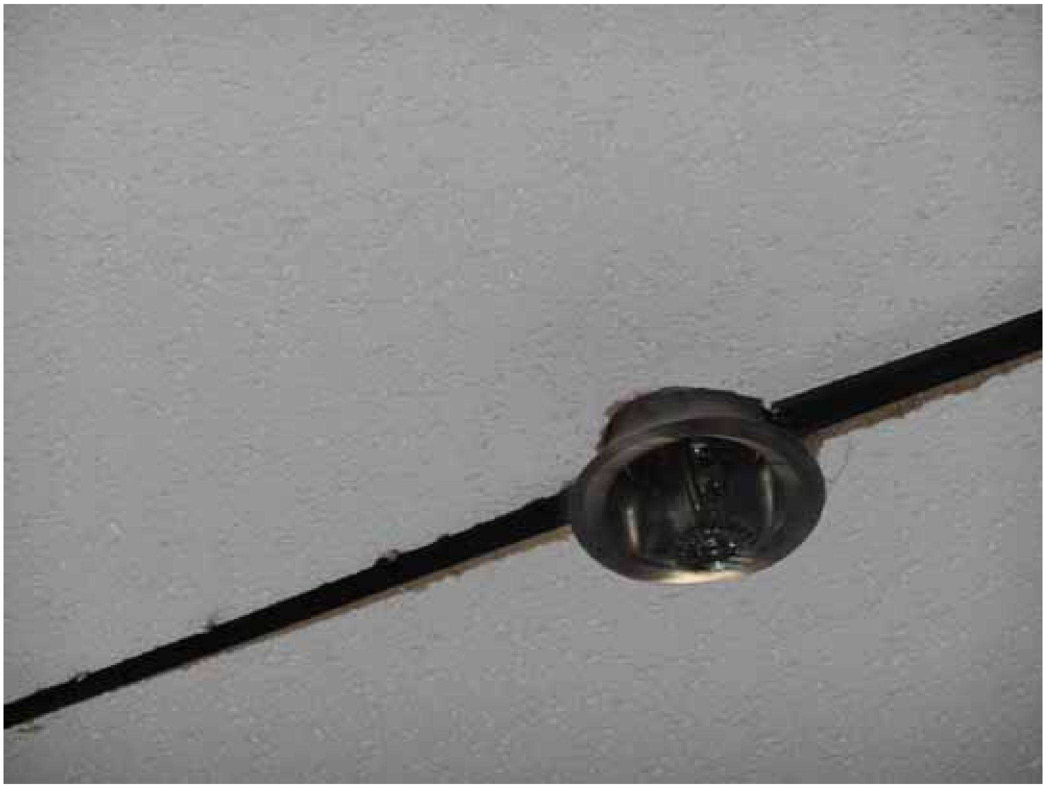
Photograph 2: No seismic bracing provided on the fire sprinkler riser in Building 2

Photograph 3: Sprinkler escutcheon missing in Building 2.

Photograph 4: FDC not identifying what buildings it serves. The picture also shows an improper cap on the FDC.

Photograph 5: Unable to read PIV to determine if the valve is open or closed.

Photograph 6: Exit sign in the Drama Rooms not lit up.



Photograph 7: Building 7 ceiling tiles warped so the fire sprinkler escutcheon won't go flush against the ceiling.

Photograph 8: Manual fire alarm boxes installed on the outside of the building (typical for all buildings).

Photograph 9: Second exit door for Room 146 located in Building 36 impeded by brick wall.

APPENDIX B. GRINNELL F-950 SAFETY BULLITIN

ENVIRONMENT, SAFETY & HEALTH

SAFETY & HEALTH HAZARDS ALERT

Assistant Secretary for Environment, Safety & Health • U.S. Department of Energy • Washington, D.C. 20585

DOE/EH-0518 Issue No.2001-01 August 2001

Potentially Defective Automatic Fire Sprinklers — An Update

The purpose of this notice is to provide you with an update to previously reported information of a similar nature, published by the Office of Environment, Safety and Health.[1] This notice addresses the recent automatic fire sprinkler recall issued through the Consumer Products Safety Commission (CPSC), as well as the discovery of conditions that may adversely affect satisfactory performance of certain automatic fire sprinklers. Recommended actions are included. If implemented in your facilities, these actions will help avoid the adverse consequences associated with potentially defective automatic fire sprinklers.

Image of a defective Grinnell F-950 Sprinkler

On July 19, 2001, the CPSC announced a voluntary recall of O-ring-type fire sprinklers manufactured by Central Sprinkler Company, Gem Sprinkler Company, and Star Sprinkler Inc. for installations dating as far back as the mid-1970s. A similar recall was announced for 8 million Central Omega brand sprinklers on October 14, 1999, as reported in the January 1999, Safety and Health Hazards Alert. Central Sprinkler, an affiliate of Tyco Fire Products LP of Lansdale, Pennsylvania, will provide free parts and labor to replace 35 million Central fire sprinklers with O-ring seals, as well as for a limited number of O-ring models sold by Gem Sprinkler Company and Star Sprinkler, Inc.— totaling about 167,000 sprinkler heads.

Central initiated this action because it discovered that the performance of O-ring seals can degrade over time due to either metal corrosion, minerals, salts or other contaminants of installed systems. These factors could cause sprinkler valve caps to seal shut and not activate in the event of a fire. To date, Central has received four reports of "wet" sprinklers failing to activate in a fire and nine similar reports on "dry" sprinklers.

Replacement sprinklers that do not use O-ring seals will be provided for certain types of wet sprinklers installed between 1989-2000 or for dry sprinklers installed from the mid-1970s to 2001. An identification brochure for all the models covered under this voluntary replacement program can be downloaded via the Internet at http://www.sprinklerreplacement.com/VRP/whatSprinklers/downloadID.html.

As a supplement to this recall, please review the January 1999 Safety and Health Hazards Alert addressing issues with other fire sprinkler models that have additional suspect deficiencies and which may continue to be present within your

[1] Environment, Safety and Health Safety & Health Hazards Alert, Issue No.99-1 DOE/EH-0518, January 1999. *Potentially Defective Automatic Fire Sprinklers.*

facilities. One such issue was the inadvertent activation of Grinnell Model F-950 sprinkler heads. The Alert stated: ". . . in a series of incidents beginning in 1987 and culminating in the recent past, the Princeton Plasma Physics Laboratory and the Rocky Flats Environmental Technology Site collectively experienced 11 unexplained activations of Grinnell Model F-950 sprinkler heads in 9 different building areas. The heads were manufactured in 1978." This issue continues to affect DOE facilities as described in the following events.

On February 23, 2001, a Grinnell F-950 sprinkler head in Building 371 at Rocky Flats inadvertently actuated causing a release of 500 – 1,000 gallons of water that affected Rooms 2221, 2321, and adjacent areas and shorted out a criticality detector.[2] RFO-KHLL-3710PS-2001-0004 also cites another event that occurred on January 12, 2001, in which a Grinnell F-950 sprinkler head in Room 2203 of Building 371 inadvertently caused the release of approximately 40 gallons of water into the room. In addition to these, three other similar events at Rocky Flats have occurred since April 1997 described as follows:

- On April 10, 1997, an F-950 sprinkler inadvertently actuated in Room 1105 of Building 371, releasing an undetermined amount of water.[3]
- On June 12, 1997, an F-950 sprinkler head inadvertently actuated in Room 2022, releasing approximately 2,000 gallons of water.[4]
- On November 9, 2000, an F-950 sprinkler head inadvertently actuated in Room 2201, discharging an estimated 2,000 gallons of water onto the floor and on top of plenum units.[5]

A contractor engineering assessment team of subject matter experts submitted a technical report indicating that the failure rate clearly exceeds normal design expectations. The RFO-KHLL-3710PS-2001-0004 ORPS (Occurrence Reporting and Processing System) report states that a sample of nine unactuated Grinnell F-950 sprinkler heads taken from throughout the facility was evaluated by Factory Mutual Research Corporation (FMRC) following the first two abnormal failures in 1997. All nine tested heads passed a test described as "an accelerated aging test to determine if the sprinklers are likely to prematurely operate." In addition to the nine unactuated heads, two heads that had previously actuated inadvertently were sent to FMRC. FMRC evaluated the cause of their inadvertent actuation to be cold flow of the solder, that is, slow separation or creep of the solder. The ORPS report states that cold flow "could occur when the sprinkler was manufactured or while in storage prior to installation. Grinnell F-950 sprinklers manufactured in 1975 and between 1978 and 1982 have had a high number of premature operations, which typically indicate manufacturing defects."

Specific potential consequences for the Rocky Flats site from these inadvertent actuation events include damage to safety equipment, such as criticality detection systems and life safety disaster warning equipment. In general, such events disrupt operations and are a nuisance.

The latest inadvertent sprinkler actuation reported to ORPS happened at the National Energy Technology Laboratory on May 30, 2001. A Grinnell F-950 discharged in Building 83, Room 318, resulting in significant water damage ($15,000) to equipment, papers, and materials.[6]

In June 2001, a survey of the DOE fire safety community was conducted via the fire protection Listserv. This survey indicated that similar failures of Grinnell F-950 sprinkler heads have been noted at the Sandia National Laboratories, the Kansas City Plant, and the Paducah Gaseous Diffusion Plant.

[2] RFO-KHLL-3710PS-2001-0004
[3] RFO-KHLL-3710PS-1997-0031
[4] RFO-KHLL-3710PS-1997-0047
[5] RFO-KHLL-3710PS-2000-0065

In light of the above, the following actions are deemed prudent and should be considered as expeditiously as possible for potentially defective fire sprinklers that have either been addressed by CPSC or past DOE notices:

- Consider surveying all facilities protected by automatic sprinklers with the purpose of discovering the presence of any targeted fire sprinklers. It is suggested that all sprinkler make and model types in these facilities be documented, both to locate suspect sprinkler areas and to facilitate any future reliability concerns that may derive from either sprinkler manufacturers or CPSC or DOE. Concerning the Grinnell F-950 sprinkler, surveys should focus on identifying facilities and areas where water damage from inadvertent sprinkler actuation would be most vulnerable, such as nuclear facilities. The results of any survey should be reported to the appropriate DOE program and fire safety officials.

- Where recalled sprinklers are discovered, the process described by the CPSC to obtain replacements should be initiated. DOE contractors and non-contractor DOE field elements should consider interim compensatory activities in high-risk facilities, pending manufacturer replacements of recalled sprinklers.

- Where Grinnell F-950 sprinklers are discovered, the vulnerability and risks associated with the area should be weighed against the cost of replacement. The potential wetting of safety-related instrumentation, controls, or electrical equipment should be given priority evaluations. Pending replacement of sprinklers that are determined to be in highly vulnerable areas, interim compensatory (water damage prevention) measures should be implemented.

- All site fire protection system inspection, testing, and maintenance programs should be reviewed to assure they include routine exterior and interior inspections of sprinkler heads.

- The results of these activities should be shared with other organizations and individuals via the occurrence reporting system, as required, and within the DOE fire safety community via the fire protection Listserv, which is accessible from the DOE Fire Protection Home Page, located at: http://tis.eh.doe.gov/fire

Contact:

For additional information or clarification on the content of this Alert, contact:

James Bisker, P.E.
Fire Protection Engineer
U.S. Department of Energy
11901 Germantown Rd.
Germantown, MD 20874
Phone: 301/903-6542
E-mail: jim.bisker@eh.doe.gov

This Safety and Health Alert is one in a series of publications issued by EH to share occupational safety and health information throughout the DOE complex. Copies are available on the web at:

http://tis.eh.doe.gov/portal/docs.html

To obtain copies of the publication, call 1-800-473-4375, or (301) 903-8358. For additional information regarding these publications, call Mary Cunningham at (301) 903-2072.

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* HQ-GOPE-FETC-2001-0006

APPENDIX 6 | HAZARDOUS MATERIALS VISUAL ASSESSMENT REPORTS

OMEGA ENVIRONMENTAL SERVICES, INC.

- Visual Assessment Report, Buildings 7, 8 and 9
- Visual Assessment Report, Buildings 12, 13 and 14
- Visual Assessment Report, Buildings 2 and 4
- Visual Assessment Report, Buildings 35-39
- Visual Assessment Report, Buildings 93, 105 and 110
- Attachment B: Asbestos Survey, Patriot Environmental, 2005.

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Omega Enviornmental Services, Inc.
4570 Campus Drive, Suite 30
Newport Beach, California 92660

949-252-2145 Phone
949-252-2148 Fax
www.omgeaenv.com

January 28, 2015

Drew Gorski, AIA, LEED AP
Page & Turnbull
417 S. Hill Street, Suite 211
Los Angeles, California 90013

Re: Visual Assessment Report (Draft)
Orange Coast College
1370 Adams Avenue
Buildings 7, 8 and 9
Costa Mesa, California 92626
Project Number 2014-1679PAG

Dear Mr. Gorski:

Omega Environmental Services, Inc. (Omega) is pleased to provide the following hazardous materials visual assessment report of potential hazardous materials at buildings 7, 8 and 9 located at the Orange Coast College in Costa Mesa, California.

Project Summary

Omega was requested to conduct a review of previous asbestos-containing materials (ACMs) survey reports and perform a Walk-Through Visual Assessment of buildings 7, 8 and 9. The purpose of this limited visual assessment was to evaluate the presence of potential hazardous materials at the interior and exterior of the subject buildings including; ACMs, lead-based paint (LBP), polychlorinated biphenyls (PCBs) in light fixtures ballasts, mercury vapor in light tubes, floor drain, hydrochlorofluorocarbon (HCFC) in heating, ventilation and air conditioning system (HVAC), exit signs for the presence of tritium gas, suspect mold growth and other miscellaneous and potential hazardous materials.

Asbestos Survey Report Review

A review of the previous asbestos survey report prepared by Patriot Environmental Laboratory Services, Inc., dated March 28, 2005 (Project #19378 and #19379), revealed that ACMs were identified in the following materials:

Table 1
Building 7 – Student Success Center/Library

Material Description	Sample Location
Window putty	Exterior
Leveling compound	Custodial closet
Linoleum flooring (brown)	Exterior telephone room near sliding door

Table 2
Building 8 – Classroom and Laboratory

Material Description	Sample Location
Vinyl floor tile (tan)	Rooms 108 & 109, under carpet
Vinyl floor tile (gray) and associated mastic	Room 104

Table 3
Building 9 – Classroom and Lab

Material Description	Sample Location
Vinyl floor tile (tan)	Throughout building, under carpet
Transite pipe	Exterior electrical room

Observations

Omega's observations and findings summarized as follows: The subject buildings are currently occupied and used as library, classrooms, laboratory and offices. The buildings interior consisted of painted drywalls, vinyl floor tiles under carpet and a combination of dropped ceiling tiles and ceiling panels. The laboratory consisted of vinyl tile under carpet and suspect asbestos-containing counter tops. The exterior walls are a mixture of concrete, brick and glass. The HVAC packaged units are located on the roof areas.

Generally the materials were in a good condition throughout the interior and exterior of the buildings.

Attachment A includes photographs of the general building materials and condition at the time of site visit. Based on the visual observations made during the limited assessment it is Omega's professional opinion that the following potentially hazardous materials may be present in the subject buildings:

<u>Building 7 – Student Success Center</u>

- Asbestos-containing material (ACM)
  - 1'x1' acoustic ceiling tile with associated mastic
  - 2'x4' acoustic ceiling tile
  - Drywall and joint compound with rough texture
  - Vinyl base cove mastic
  - Carpet mastic
  - Vinyl floor covering (12" x12" tiles) and associated mastic

- Fireproofing on structural members
- Grout
- Insulation, registered
- Exterior Window putty
- Exterior paint/skim coat
- Exterior stucco
- Concrete
- Exterior concrete expansion joints
- Exterior sub-surface transite pipes
- Roofing material
- Roof mastic
- HVAC system components

- Lead based paints (LBP)
  - Painted door and window systems
  - Painted wall surfaces
  - Ceramic tiles
  - Toilet bowls, Sinks & Urinals
  - Floor drain
  - Roof systems (fascia, eves, gutters, etc.)
  - Exterior painted walls

- Mercury
  - Fluorescent light bulbs

- Hydrochlorofluorocarbon (HCFC)
  - HVAC system

- Polychlorinated biphenyls (PCB)
  - Ballast (fluorescent fixtures)
  - Concrete expansion joint caulking
  - Window caulking

Building 8 – Classroom & Laboratory

- Asbestos-containing material (ACM)
  - 2’x4’ acoustic ceiling tiles
  - Drywall and joint compound
  - Vinyl base cove and mastic
  - Carpet mastic
  - Vinyl floor covering (12” x12” tiles) and associated mastic
  - Vinyl sheet flooring
  - Counter top
  - Mastic under sink
  - Transite panels

  - Exterior Window putty
  - Exterior stucco
  - Exterior paint/skim coat
  - Concrete
  - Exterior concrete expansion joints
  - Exterior sub-surface transite pipes
  - Roofing material
  - Roof mastic
  - HVAC system components

- Lead based paints (LBP)
  - Painted door and window systems
  - Painted wall surfaces
  - Floor drain
  - Painted structural columns and beams
  - Roof systems (fascia, eves, gutters, etc.)
  - Exterior painted walls

- Mercury
  - Fluorescent light bulbs

- Hydrochlorofluorocarbon (HCFC)
  - HVAC system

- Polychlorinated biphenyls (PCB)
  - Ballast (fluorescent fixtures)
  - Concrete expansion joint caulking
  - Window caulking

Building 9 – Classroom and Laboratory

- Asbestos-containing material (ACM)
  - 2'x4' acoustic ceiling tiles
  - Drywall and joint compound
  - Vinyl base cove and mastic
  - Carpet mastic
  - Vinyl floor covering (12" x12" tiles) and associated mastic
  - Vinyl sheet flooring
  - Counter top
  - Mastic under sink
  - Transite panels
  - Exterior Window putty
  - Exterior stucco
  - Exterior paint/skim coat
  - Concrete

  - Exterior concrete expansion joints
  - Exterior sub-surface transite pipes
  - Roofing material
  - Roof mastic
  - HVAC system components

- Lead based paints (LBP)
  - Painted door and window systems
  - Painted wall surfaces
  - Floor drain
  - Painted structural columns and beams
  - Roof systems (fascia, eves, gutters, etc.)
  - Exterior painted walls

- Mercury
  - Fluorescent light bulbs

- Hydrochlorofluorocarbon (HCFC)
  - HVAC system

- Polychlorinated biphenyls (PCB)
  - Ballast (fluorescent fixtures)
  - Concrete expansion joint caulking
  - Window caulking

Conclusions and Recommendations
Based on the limited visual assessment of the subject buildings and the identified potentially hazardous materials listed above, Omega recommends the following:

- A thorough survey and sampling assessment for the identified potentially hazardous materials is recommended to identify and evaluate actual hazardous materials that may exist in the subject buildings.
- If the materials identified in the previous survey[1] will be removed or impacted during renovation or demolition activities, a California licensed asbestos contractor, prior to any demolition and or renovation activities shall remove the ACMs and or ACCM from the subject buildings.

- Personnel in charge of renovation or demolition should be alerted to note materials uncovered during these activities, unidentified hazardous materials may be hidden within the walls, sub-floors, ceiling cavities or inaccessible areas.

1 See asbestos survey report, Attachment B

Limitations

This assessment was limited to visually accessible areas. The conclusions of this assessment and the opinions expressed herein are based upon visual observations of the specific areas, a review of on site conditions and the limitations of the approved scope of services described in the proposal. The items discussed in this report are subject to revision as more information becomes available.

All observations are not static conditions. Visual observations are limited in their representation of the conditions at the time of the visual assessment. Omega expects that many conditions may worsen without proper characterization and remediation efforts and new conditions may arise.

Our services consist of professional opinions, conclusions, and recommendations that are made in accordance with generally accepted consulting standards, principles, and practices. Reasonable attempts have been made to ensure that the report is complete and accurate with respect to Omega's authorized scope of investigation. Omega assumes no liability for damages, which might result from errors contained in the report or conditions, which the report fails to disclose. The potential hazardous materials noted in the report might be more severe than indicated and other conditions may exist.

Omega appreciates the opportunity to provide this service to Page and Turnbull. Please call me if you have any questions or require additional assistance.

Sincerely,

Steve Rosas
Principal
Omega Environmental Services, Inc.
Attachments
Attachment A, Photographs
Attachment B, Asbestos Survey Report

Attachment A

Photographs

Photo Log

Photograph 1-General front view of the subject buildings

Photograph 2-General view of the suspect exterior asbestos and lead containing materials


Photograph 3-General view of the suspect exterior building materials


Photograph 4-View of the suspect exterior window putty and lead paint

Photograph 5-General view of the suspect interior building materials, including ACM, LBP, light ballasts and mercury

Photograph 6-View of the suspect interior building materials, including counter top

Photograph 7-View of the suspect asbestos under sink

Photograph 8-View of suspect floor tile & mastic under carpet

Photograph 9-General view of the suspect ceiling panels

Photograph 10-View of the suspect lead-containing materials in the X-Ray room

Attachment B

Asbestos Survey Report

Omega Enviornmental Services, Inc.
4570 Campus Drive, Suite 30
Newport Beach, California 92660

949-252-2145 Phone
949-252-2148 Fax
www.omgeaenv.com

January 29, 2015

Drew Gorski, AIA, LEED AP
Page & Turnbull
417 S. Hill Street, Suite 211
Los Angeles, California 90013

Re: Visual Assessment Report (Draft)
Orange Coast College
1370 Adams Avenue
Buildings 12, 13 and 14
Costa Mesa, California 92626
Project Number 2014-1679PAG

Dear Mr. Gorski:

Omega Environmental Services, Inc. (Omega) is pleased to provide the following hazardous materials visual assessment report of potential hazardous materials at buildings 12, 13 and 14 located at the Orange Coast College in Costa Mesa, California.

Project Summary

Omega was requested to conduct a review of previous asbestos-containing materials (ACMs) survey reports and perform a Walk-Through Visual Assessment of buildings 12, 13 and 14. The purpose of this limited visual assessment was to evaluate the presence of potential hazardous materials at the interior and exterior of the subject buildings including; ACMs, lead-based paint (LBP), polychlorinated biphenyls (PCBs) in light fixtures ballasts, mercury vapor in light tubes, floor drain, hydrochlorofluorocarbon (HCFC) in heating, ventilation and air conditioning system (HVAC), exit signs for the presence of tritium gas, suspect mold growth and other miscellaneous and potential hazardous materials.

Asbestos Survey Report Review

A review of the previous asbestos survey report prepared by Patriot Environmental Laboratory Services, Inc., dated March 28, 2005 (Project #19378 and #19379), revealed that ACMs and asbestos-containing construction materials (ACCMs) were identified in the following materials:

Table 1
Building 12 – Business Education Wing

Material Description	Sample Location
Window putty	Exterior
Transite pipe	Utility closet
9” gray vinyl floor tile & mastic	Exterior custodial closet at room 104
Flooring bullnose	Exterior custodial closet at room 104
Flooring mastic	Room 103, under carpet
Tan vinyl floor tile & mastic	Rooms 101A & 101B

Table 2
Building 13 – Business Education Wing

Material Description	Sample Location
Window putty	Exterior

Table 3
Building 14 – Business Education Wing

Material Description	Sample Location
Wallboard (<1%)	Throughout building
HVAC duct seam tape	Exterior telephone/HVAC room
HVAC duct vibration gasket	Exterior telephone/HVAC room

Observations
Omega's observations and findings summarized as follows: The subject buildings are currently occupied and used as classrooms and offices. The interior of the buildings consisted of painted drywalls, vinyl floor tiles under carpet, 2'x4' suspended ceiling tiles, and 1'x1' acoustic ceiling tiles with associated mastic and fireproofing on structural members above the ceiling system. The restrooms located outside building 14 contain ceramic tiles on floor and walls. The exterior walls are a mixture of concrete, brick and glass. The HVAC packaged units are located on the roof areas.

Generally the materials were in a good condition throughout the interior and exterior of the buildings.

Attachment A includes photographs of the general building materials and condition at the time of site visit. Based on the visual observations made during the limited assessment it is Omega's professional opinion that the following potentially hazardous materials may be present in the subject buildings:

Building 12 – Business Education Wing

- Asbestos-containing material (ACM)
  - 1'x1' acoustic ceiling tile with associated mastic
  - 2'x4' acoustic ceiling tile
  - Drywall and joint compound
  - Transite panels
  - Vinyl base cove mastic
  - Carpet mastic
  - Vinyl floor tile and associated mastic
  - Exterior grout
  - Insulation, registered
  - Exterior Window putty
  - Exterior paint/skim coat
  - Exterior stucco

- Concrete
- Exterior concrete expansion joints
- Exterior sub-surface transite pipes
- Roofing material
- Roof mastic
- HVAC system components

- Lead based paints (LBP)
  - Painted door and window systems
  - Painted wall surfaces
  - Roof systems (fascia, eves, gutters, etc.)
  - Exterior painted walls

- Mercury
  - Fluorescent light bulbs

- Hydrochlorofluorocarbon (HCFC)
  - HVAC system

- Polychlorinated biphenyls (PCB)
  - Ballast (fluorescent fixtures)
  - Concrete expansion joint caulking
  - Window caulking

<u>Building 13 – Business Education Wing</u>

- Asbestos-containing material (ACM)
  - 1’x1’ acoustic ceiling tile with associated mastic
  - 2’x4’ acoustic ceiling tile
  - Drywall and joint compound
  - Transite panels
  - Vinyl base cove mastic
  - Carpet mastic
  - Vinyl floor tile and associated mastic
  - Exterior grout
  - Insulation, registered
  - Exterior Window putty
  - Exterior paint/skim coat
  - Exterior stucco
  - Concrete
  - Exterior concrete expansion joints
  - Exterior sub-surface transite pipes
  - Roofing material
  - Roof mastic
  - HVAC system components

- Lead based paints (LBP)
  - Painted door and window systems
  - Painted wall surfaces
  - Roof systems (fascia, eves, gutters, etc.)
  - Exterior painted walls

- Mercury
  - Fluorescent light bulbs

- Hydrochlorofluorocarbon (HCFC)
  - HVAC system

- Polychlorinated biphenyls (PCB)
  - Ballast (fluorescent fixtures)
  - Concrete expansion joint caulking
  - Window caulking

Building 14 – Business Education Wing

- Asbestos-containing material (ACM)
  - 1’x1’ acoustic ceiling tile with associated mastic
  - 2’x4’ acoustic ceiling tile
  - Drywall and joint compound
  - Transite panels
  - Vinyl base cove mastic
  - Carpet mastic
  - Vinyl floor tile and associated mastic
  - Exterior grout
  - Insulation, registered
  - Exterior Window putty
  - Exterior paint/skim coat
  - Exterior stucco
  - Concrete
  - Exterior concrete expansion joints
  - Exterior sub-surface transite pipes
  - Roofing material
  - Roof mastic
  - HVAC system components

- Lead based paints (LBP)
  - Painted door and window systems
  - Painted wall surfaces
  - Roof systems (fascia, eves, gutters, etc.)
  - Exterior painted walls

- Mercury
  - Fluorescent light bulbs

- Hydrochlorofluorocarbon (HCFC)
  - HVAC system

- Polychlorinated biphenyls (PCB)
  - Ballast (fluorescent fixtures)
  - Concrete expansion joint caulking
  - Window caulking

Exterior Restrooms

- Asbestos-containing material (ACM)
  - Ceiling system

- Lead based paints (LBP)
  - Painted door and frames
  - Ceramic tiles
  - Sinks, Toilet bowls and Urinals

- Mercury
  - Fluorescent light bulbs

- Polychlorinated biphenyls (PCB)
  - Ballast (fluorescent fixtures)

Conclusions and Recommendations

Based on the limited visual assessment of the subject buildings and the identified potentially hazardous materials listed above, Omega recommends the following:

- A thorough survey and sampling assessment for the identified potentially hazardous materials is recommended to identify and evaluate actual hazardous materials that may exist in the subject buildings.
- If the materials identified in the previous survey report[1] will be removed or impacted during renovation or demolition activities, a California licensed asbestos contractor, prior to any demolition and or renovation activities shall remove the ACMs and or ACCM from the subject buildings.

[1] See asbestos survey report, Attachment B

- Personnel in charge of renovation or demolition should be alerted to note materials uncovered during these activities, unidentified hazardous materials may be hidden within the walls, sub-floors, ceiling cavities or inaccessible areas.

Limitations

This assessment was limited to visually accessible areas. The conclusions of this assessment and the opinions expressed herein are based upon visual observations of the specific areas, a review of on site conditions and the limitations of the approved scope of services described in the proposal. The items discussed in this report are subject to revision as more information becomes available.

All observations are not static conditions. Visual observations are limited in their representation of the conditions at the time of the visual assessment. Omega expects that many conditions may worsen without proper characterization and remediation efforts and new conditions may arise.

Our services consist of professional opinions, conclusions, and recommendations that are made in accordance with generally accepted consulting standards, principles, and practices. Reasonable attempts have been made to ensure that the report is complete and accurate with respect to Omega's authorized scope of investigation. Omega assumes no liability for damages, which might result from errors contained in the report or conditions, which the report fails to disclose. The potential hazardous materials noted in the report might be more severe than indicated and other conditions may exist.

Omega appreciates the opportunity to provide this service to Page and Turnbull. Please call me if you have any questions or require additional assistance.

Sincerely,

Steve Rosas
Principal
Omega Environmental Services, Inc.
Attachments
Attachment A, Photographs
Attachment B, Asbestos Survey Report

Attachment A

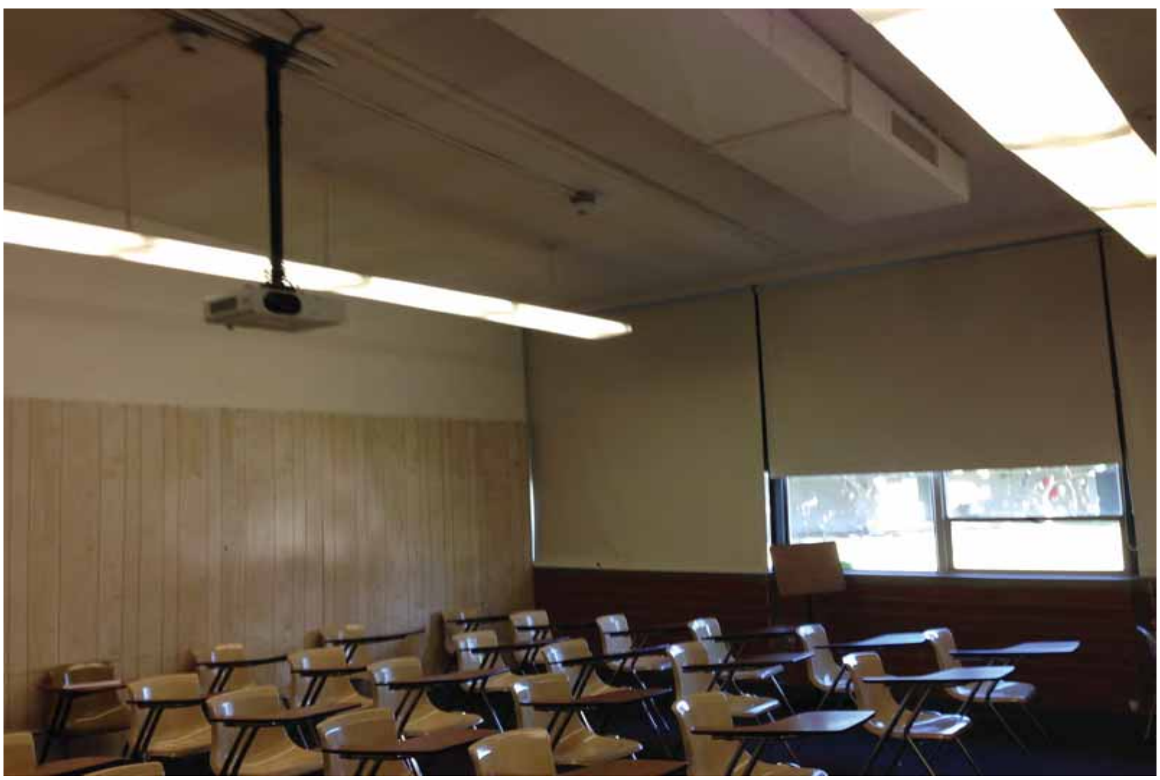
Photographs

Photo Log

Photograph 1-General view of the suspect exterior building materials

Photograph 2-General view of the suspect exterior building materials, including window putty and lead paint


Photograph 3-General view of the suspect interior building materials


Photograph 4-General view of the suspect interior building materials

Photograph 5-General view of the exterior building 14

Photograph 6- View of the suspect lead ceramic tiles in the restrooms


Photograph 7- General interior view of the suspect building materials


Photograph 8-View of the suspect floor mastic under the carpet

Photograph 9-View of the suspect flooring materials

Photograph 10-View of the suspect fireproofing and overspray on beams

Photograph 11-View of the suspect pipe insulation materials

Photograph 12-View of the suspect asbestos and lead-containing roofing materials


Photograph 13-General view of the suspect roofing materials


Photograph 14-View of the suspect roofing materials

OMEGA ENVIRONMENTAL

Attachment B

Asbestos Survey Report

Omega Enviornmental Services, Inc.
4570 Campus Drive, Suite 30
Newport Beach, California 92660

949-252-2145 Phone
949-252-2148 Fax
www.omgeaenv.com

January 30, 2015

Drew Gorski, AIA, LEED AP
Page & Turnbull
417 S. Hill Street, Suite 211
Los Angeles, California 90013

Re: Visual Assessment Report (Draft)
Orange Coast College
1370 Adams Avenue
Buildings 2 and 4
Costa Mesa, California 92626
Project Number 2014-1679PAG

Dear Mr. Gorski:

Omega Environmental Services, Inc. (Omega) is pleased to provide the following hazardous materials visual assessment report of potential hazardous materials at buildings 2 and 4 located at the Orange Coast College in Costa Mesa, California.

Project Summary
Omega was requested to conduct a review of previous asbestos-containing materials (ACMs) survey reports and perform a Walk-Through Visual Assessment of buildings 2 and 4. The purpose of this limited visual assessment was to evaluate the presence of potential hazardous materials at the interior and exterior of the subject buildings including; ACMs, lead-based paint (LBP), polychlorinated biphenyls (PCBs) in light fixtures ballasts, mercury vapor in light tubes, floor drain, hydrochlorofluorocarbon (HCFC) in heating, ventilation and air conditioning system (HVAC), exit signs for the presence of tritium gas, suspect mold growth and other miscellaneous and potential hazardous materials.

Asbestos Survey Report Review
A review of the previous asbestos survey report prepared by Patriot Environmental Laboratory Services, Inc., dated March 28, 2005 (Project #19378 and #19379), indicate that the subject buildings were excluded from the survey.

Observations

Omega's observations and findings summarized as follows: Building number 2 (Robert B. Moore Theatre) is currently used as a Theatre consisting of auditorium, stage area, mezzanine, mechanical room and catwalk area. The building interior consisted of painted drywalls, carpet and ceiling panels. The restrooms consisted of ceramic tiles on walls and floor, and plaster ceiling materials.

Building number 4 (Music wing) is currently used as classrooms. The building interior consisted of painted drywalls, vinyl sheet flooring, and carpet and dropped ceiling tiles.

The exterior walls are a mixture of concrete and brick. The HVAC packaged units are located on the roof areas. Generally the materials were in a good condition throughout the interior and exterior of the buildings.

Attachment A includes photographs of the general building materials and condition at the time of site visit. Based on the visual observations made during the limited assessment it is Omega's professional opinion that the following potentially hazardous materials may be present in the subject buildings:

<u>Building 2 – Robert B. Moore Theatre</u>

- Asbestos-containing material (ACM)
  - Painted ceiling materials
  - Drywall and joint compound
  - Vinyl base cove and mastic
  - Carpet mastic
  - Exterior and interior stucco materials
  - Exterior paint/skim coat
  - Concrete
  - Plaster
  - Stage curtains
  - Exterior concrete expansion joints
  - Exterior sub-surface transite pipes
  - Expansion joint
  - Roofing material
  - Roof mastic
  - Insulation
  - HVAC system components
  - Pipe insulation
  - Transite pipe

- Lead based paints (LBP)
  - Painted door and window systems
  - Painted wall surfaces
  - Painted structural columns and beams

- Roof systems (fascia, eves, gutters, etc.)
- Exterior painted walls

• Mercury
  - Fluorescent light bulbs

• Hydrochlorofluorocarbon (HCFC)
  - HVAC system

• Tritium gas
  - Exit sign

• Polychlorinated biphenyls (PCB)
  - Ballast (fluorescent fixtures)
  - Concrete expansion joint caulking
  - Transformers
  - Expansion joint

Building 4 – Music Wing

• Asbestos-containing material (ACM)
  - 2’x4’ acoustic ceiling tile
  - 2’x2’ acoustic ceiling tile
  - Drywall and joint compound
  - Carpet glue
  - Vinyl base cove and mastic
  - Sheet vinyl flooring
  - Vinyl floor covering (12” x12” tiles) and associated mastic
  - Exterior stucco
  - Concrete
  - Exterior concrete expansion joints
  - Exterior sub-surface transite pipes
  - Roofing material
  - Roof mastic
  - HVAC system components

• Lead based paints (LBP)
  - Painted door and window systems
  - Painted wall surfaces
  - Painted structural columns and beams
  - Roof systems (fascia, eves, gutters, etc.)
  - Exterior painted walls
  - Ceramic tiles

- Mercury
  - Fluorescent light bulbs

- Hydrochlorofluorocarbon (HCFC)
  - HVAC system

- Tritium gas
  - Exit sign

- Polychlorinated biphenyls (PCB)
  - Ballast (fluorescent fixtures)
  - Concrete expansion joint caulking

<u>Mechanical Room</u>

- Asbestos-containing material (ACM)
  - Plaster materials
  - Pipe insulation
  - Mastic

- Lead based paints (LBP)
  - Painted door and window systems
  - Painted wall surfaces

- Polychlorinated biphenyls (PCB)
  - Ballast (fluorescent fixtures)

- Mercury
  - Fluorescent light bulbs

Conclusions and Recommendations

Based on the limited visual assessment of the subject buildings and the identified potentially hazardous materials listed above, Omega recommends the following:

- A thorough survey and sampling assessment for the identified potentially hazardous materials is recommended to identify and evaluate actual hazardous materials that may exist in the subject buildings.

- Exit signs, light bulbs and ballast shall be inspected prior to demolition or renovation of the building and properly removed, packaged, labeled, manifested and transported to an EPA approved facility for recycling or proper disposal.

Limitations

This assessment was limited to visually accessible areas. The conclusions of this assessment and the opinions expressed herein are based upon visual observations of the specific areas, a review of on site conditions and the limitations of the approved scope of services described in the proposal. The items discussed in this report are subject to revision as more information becomes available.

All observations are not static conditions. Visual observations are limited in their representation of the conditions at the time of the visual assessment. Omega expects that many conditions may worsen without proper characterization and remediation efforts and new conditions may arise.

Our services consist of professional opinions, conclusions, and recommendations that are made in accordance with generally accepted consulting standards, principles, and practices. Reasonable attempts have been made to ensure that the report is complete and accurate with respect to Omega's authorized scope of investigation. Omega assumes no liability for damages, which might result from errors contained in the report or conditions, which the report fails to disclose. The potential hazardous materials noted in the report might be more severe than indicated and other conditions may exist.

Omega appreciates the opportunity to provide this service to Page and Turnbull. Please call me if you have any questions or require additional assistance.

Sincerely,

Steve Rosas
Principal
Omega Environmental Services, Inc.
Attachment
Attachment A, Photographs

Attachment A

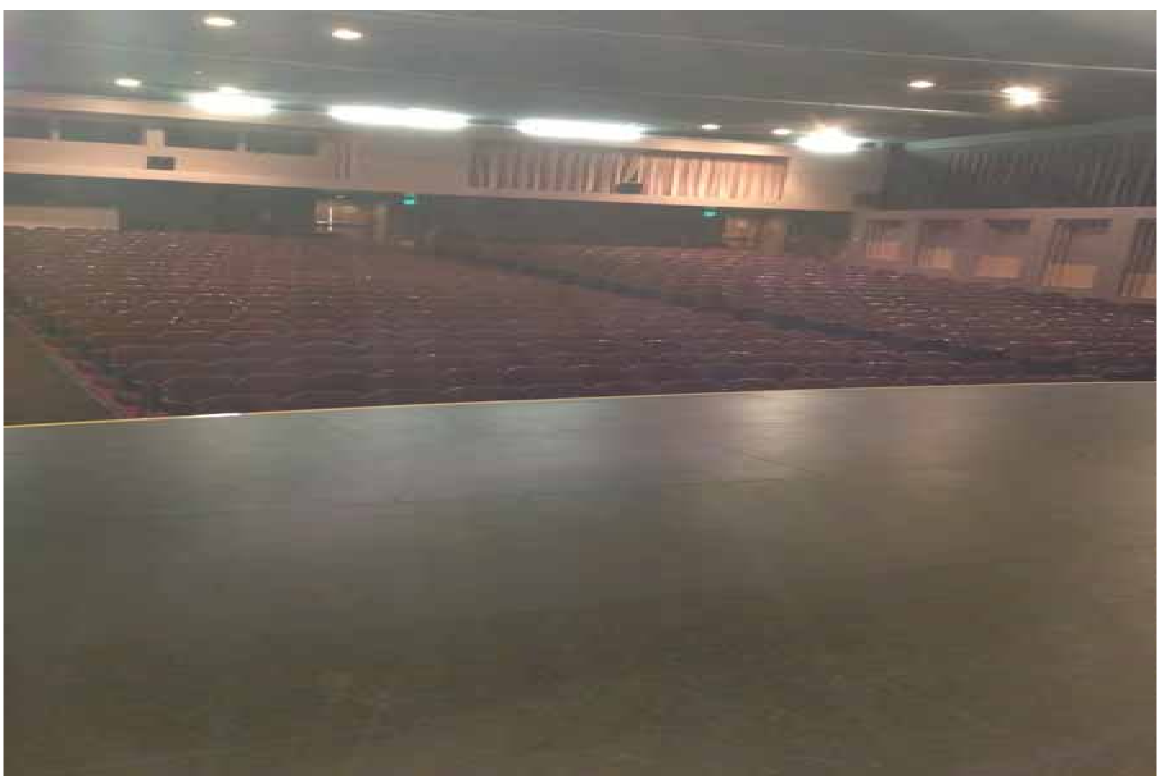
Photographs

Photo Log

Photograph 1-General view of the building exterior


Photograph 2-General view of the suspect building materials, catwalk area

Photograph 3-General view of the suspect pipe insulation, plaster, drywall/joint compound, and HVAC mastic, mechanical room



Photograph 4-General view of the interior suspect building materials

Photograph 5-General view of the interior suspect building materials

Photograph 6-View of the exit sign with suspect tritium gas

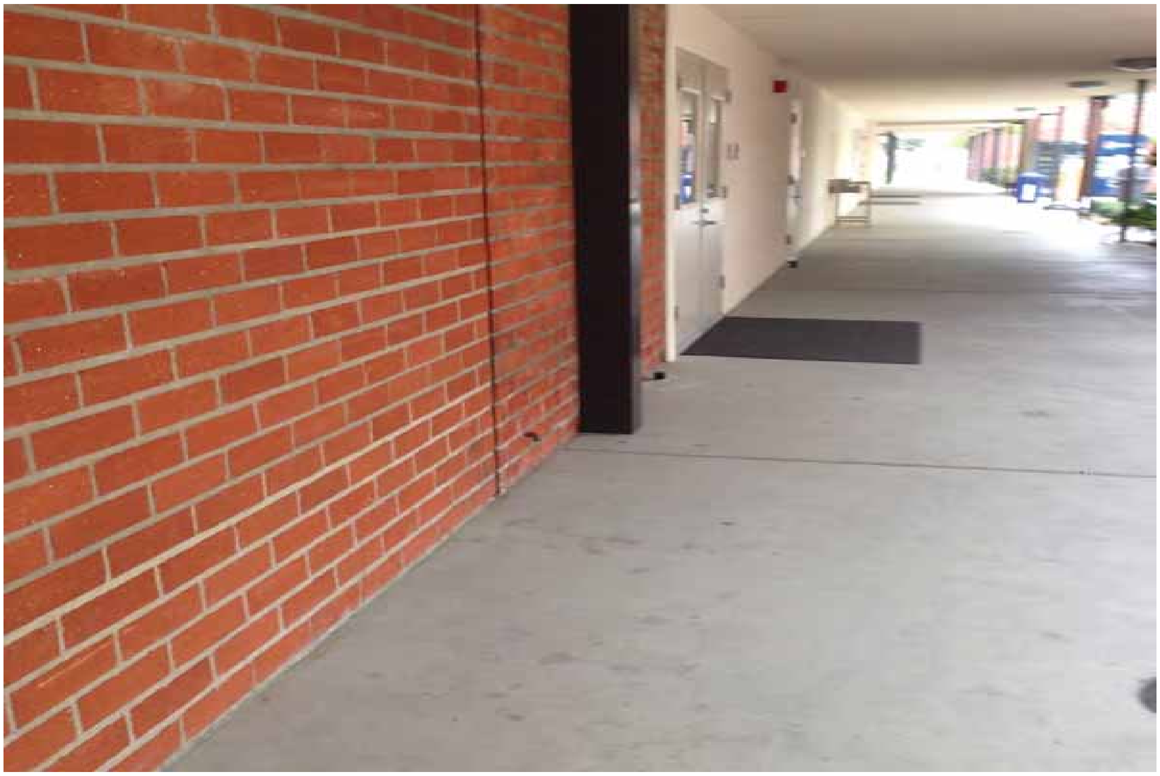

Photograph 7-General interior view of the exterior


Photograph 8-General view of the suspect roofing materials


Photograph 9-View of the suspect exterior stucco, roof area


Photograph 10-View of the suspect transite pipe, roofing and lead paint materials

Photograph 11-General view of the suspect exterior building materials


Photograph 12-General view of the suspect exterior building materials

Photograph 13-General view of the interior suspect building materials

Photograph 14-View of the exit sign with suspect tritium gas

Photograph 15-View of the cooling tower with suspect insulation

Photograph 16-View of the exterior transformer with suspect PCB materials

Omega Enviornmental Services, Inc.
4570 Campus Drive, Suite 30
Newport Beach, California 92660

949-252-2145 Phone
949-252-2148 Fax
www.omgeaenv.com

January 26, 2015

Drew Gorski, AIA, LEED AP
Page & Turnbull
417 S. Hill Street, Suite 211
Los Angeles, California 90013

Re: Visual Assessment Report (Draft)
Orange Coast College
1370 Adams Avenue
Buildings 35-39
Costa Mesa, California 92626
Project Number 2014-1679PAG

Dear Mr. Gorski:

Omega Environmental Services, Inc. (Omega) is pleased to provide the following hazardous materials visual assessment report of potential hazardous materials at buildings 35, 36, 37, 38 and 39 located at the Orange Coast College in Costa Mesa, California.

Project Summary
Omega was requested to conduct a review of previous asbestos-containing materials (ACMs) survey reports and perform a Walk-Through Visual Assessment of buildings 35 through 39. The purpose of this limited visual assessment was to evaluate the presence of potential hazardous materials at the interior and exterior of the subject buildings including; ACMs, lead-based paint (LBP), polychlorinated biphenyls (PCBs) in light fixtures ballasts, mercury vapor in light tubes, floor drain, hydrochlorofluorocarbon (HCFC) in heating, ventilation and air conditioning system (HVAC), exit signs for the presence of tritium gas, suspect mold growth and other miscellaneous and potential hazardous materials.

Asbestos Survey Report Review
A review of the previous asbestos survey report prepared by Patriot Environmental Laboratory Services, Inc., dated March 28, 2005 (Project #19378 and #19379), revealed that ACMs and asbestos-containing construction materials (ACCMs) were identified in the following materials:

Table 1
Building 35 – Math Wing

Material Description	Sample Location
Vinyl floor tile and associated mastic	Rooms 149 & 150 under carpet
9” vinyl floor tile and associated mastic	Rooms 151 & 155
Flooring mastic	Room 154, under carpet

Table 2
Building 36 – Math Wing

Material Description	Sample Location
Window putty	Exterior
Beige vinyl floor tile and associated mastic	Room 144-under carpet
Plaster	Throughout Bldg.
12” white w/brown vinyl floor tile and associated mastic	Room 148 & lab prep area

Table 3
Building 37 – Reprographics Center

Material Description	Sample Location
TSI pipe insulation & pipe elbows	Attic
Tan floor tile debris	Crawlspace at room 168
TSI pipe insulation & pipe elbows (Multiple sixes)	Utility room at Men’s restroom
HVAC duct vibration gasket	Utility room at Men’s restroom
Ceiling tile debris	Crawlspace at room 168
Vinyl floor tile and associated mastic	Rooms 168 & 169 – under carpet
Vinyl floor tile and associated mastic	Rooms 162, 163 & 164 – under carpet

Table 4
Building 39 - Planetarium

Material Description	Sample Location
Tan vinyl floor tile	Throughout building under carpet
Wallboard (<1%)	Throughout building

Observations

Omega’s observations and findings summarized as follows: The subject buildings are currently occupied and used as classrooms, laboratories and offices. The buildings interior consisted of painted drywalls, vinyl floor tiles under carpet and a combination of dropped ceiling tiles and ceiling panels. The restrooms consisted of ceramic tiles on walls and floor, and plaster ceiling materials. The exterior walls are a mixture of concrete, brick and glass. The HVAC packaged units are located on the roof areas.

Generally the materials were in a good condition throughout the interior and exterior of the buildings, however wall damage was noted in the mechanical room at the time of the site visit.

Attachment A includes photographs of the general building materials and condition at the time of site visit. Based on the visual observations made during the limited assessment it is Omega's professional opinion that the following potentially hazardous materials may be present in the subject buildings:

Building 35 – Math Wing

- Asbestos-containing material (ACM)
  - 1'x1' acoustic ceiling tile with associated mastic
  - Drywall and joint compound with rough texture
  - Vinyl base cove and mastic
  - Carpet mastic
  - Vinyl floor covering (12" x12" tiles) and associated mastic
  - Exterior Window putty
  - Exterior stucco
  - Exterior paint/skim coat
  - Concrete
  - Exterior concrete expansion joints
  - Exterior sub-surface transite pipes
  - Roofing material
  - Roof mastic
  - HVAC system components
  - Pipe insulation in Mechanical rooms

- Lead based paints (LBP)
  - Painted door and window systems
  - Painted wall surfaces
  - Painted structural columns and beams
  - Roof systems (fascia, eves, gutters, etc.)
  - Exterior painted walls

- Mercury
  - Fluorescent light bulbs

- Hydrochlorofluorocarbon (HCFC)
  - HVAC system

- Polychlorinated biphenyls (PCB)
  - Ballast (fluorescent fixtures)
  - Concrete expansion joint caulking
  - Window caulking

Building 36 – Math Wing

- Asbestos-containing material (ACM)
  - 1’x1’ acoustic ceiling tile with associated mastic
  - Drywall and joint compound with rough texture
  - Vinyl base cove and mastic
  - Carpet mastic
  - Vinyl floor covering (12” x12” tiles) and associated mastic
  - Exterior Window putty
  - Exterior stucco
  - Exterior paint/skim coat
  - Concrete
  - Exterior concrete expansion joints
  - Exterior sub-surface transite pipes
  - Roofing material
  - Roof mastic
  - HVAC system components

- Lead based paints (LBP)
  - Painted door and window systems
  - Painted wall surfaces
  - Painted structural columns and beams
  - Roof systems (fascia, eves, gutters, etc.)
  - Exterior painted walls

- Mercury
  - Fluorescent light bulbs

- Hydrochlorofluorocarbon (HCFC)
  - HVAC system

- Polychlorinated biphenyls (PCB)
  - Ballast (fluorescent fixtures)
  - Concrete expansion joint caulking
  - Window caulking

Building 37 – Reprographics Center

- Asbestos-containing material (ACM)
  - 2’x4’ ceiling tile
  - 1’x1’ ceiling tile with associated mastic
  - Drywall and joint compound
  - Vinyl base cove and mastic
  - Carpet mastic
  - Vinyl floor covering and associated mastic

- Exterior Window putty
- Exterior stucco
- Exterior paint/skim coat
- Concrete
- Exterior concrete expansion joints
- Exterior sub-surface transite pipes
- Pipe insulation
- Roofing material
- Roof mastic
- HVAC system components

• Lead based paints (LBP)
  - Painted door and window systems
  - Painted wall surfaces
  - Wall and floor ceramic tiles
  - Urinals, toilet bowls and sinks
  - Painted structural columns and beams
  - Roof systems (fascia, eves, gutters, etc.)
  - Exterior painted walls

• Mercury
  - Fluorescent light bulbs

• Hydrochlorofluorocarbon (HCFC)
  - HVAC system

• Polychlorinated biphenyls (PCB)
  - Ballast (fluorescent fixtures)
  - Concrete expansion joint caulking
  - Window caulking

Building 38 – Science

• Asbestos-containing material (ACM)
  - 1’x1’ ceiling tile with associated mastic
  - Drywall and joint compound with rough texture
  - Vinyl base cove and mastic
  - Carpet mastic
  - Vinyl floor covering (12” x12” tiles) and associated mastic
  - Exterior Window putty
  - Exterior stucco
  - Exterior paint/skim coat
  - Concrete
  - Exterior concrete expansion joints
  - Exterior sub-surface transite pipes

  - Roofing material
  - Roof mastic
  - HVAC system components

- Lead based paints (LBP)
  - Painted door and window systems
  - Painted wall surfaces
  - Wall and floor ceramic tiles
  - Urinals, toilet bowls and sinks
  - Painted structural columns and beams
  - Roof systems (fascia, eves, gutters, etc.)
  - Exterior painted walls

- Mercury
  - Fluorescent light bulbs

- Hydrochlorofluorocarbon (HCFC)
  - HVAC system

- Polychlorinated biphenyls (PCB)
  - Ballast (fluorescent fixtures)
  - Concrete expansion joint caulking
  - Window caulking

Building 39 – Planetarium

- Asbestos-containing material (ACM)
  - 1'x1' ceiling tile with associated mastic
  - Spray-on acoustic ceiling materials
  - Drywall and joint compound with rough texture
  - Vinyl base cove and mastic
  - Carpet mastic
  - Vinyl floor covering (12" x12" tiles) and associated mastic
  - Exterior Window putty
  - Exterior stucco
  - Exterior paint/skim coat
  - Concrete
  - Exterior concrete expansion joints
  - Exterior sub-surface transite pipes
  - Roofing material
  - Roof mastic
  - HVAC system components

- Lead based paints (LBP)
  - Painted door and window systems

- Painted wall surfaces
- Wall and floor ceramic tiles
- Urinals, toilet bowls and sinks
- Painted structural columns and beams
- Roof systems (fascia, eves, gutters, etc.)
- Exterior painted walls
- Floor drains

• Mercury
  - Fluorescent light bulbs

• Hydrochlorofluorocarbon (HCFC)
  - HVAC system

• Polychlorinated biphenyls (PCB)
  - Ballast (fluorescent fixtures)
  - Concrete expansion joint caulking
  - Window caulking

Mechanical Room

• Asbestos-containing material (ACM)
  - Plaster materials (wall/ceiling)
  - Pipe insulation
  - Mastic
  - Debris

• Lead based paints (LBP)
  - Painted door and window systems
  - Painted wall surfaces

• Polychlorinated biphenyls (PCB)
  - Ballast (fluorescent fixtures)

• Mercury
  - Fluorescent light bulbs

During the visual assessment of building 39, caution signs denoting radioactive materials were observed. These areas were not inspected.

Conclusions and Recommendations

Based on the limited visual assessment of the subject buildings and the identified potentially hazardous materials listed above, Omega recommends the following:

- A thorough survey and sampling assessment for the identified potentially hazardous materials is recommended to identify and evaluate actual hazardous materials that may exist in the subject buildings.
- If the materials identified in the previous asbestos survey report[1] will be removed or impacted during renovation or demolition activities, a California licensed asbestos contractor, prior to any demolition and or renovation activities shall remove the ACMs and or ACCM from the subject buildings.

- Personnel in charge of renovation or demolition should be alerted to note materials uncovered during these activities, unidentified hazardous materials may be hidden within the walls, sub-floors, ceiling cavities or inaccessible areas.

Limitations

This assessment was limited to visually accessible areas. The conclusions of this assessment and the opinions expressed herein are based upon visual observations of the specific areas, a review of on site conditions and the limitations of the approved scope of services described in the proposal. The items discussed in this report are subject to revision as more information becomes available.

All observations are not static conditions. Visual observations are limited in their representation of the conditions at the time of the visual assessment. Omega expects that many conditions may worsen without proper characterization and remediation efforts and new conditions may arise.

Our services consist of professional opinions, conclusions, and recommendations that are made in accordance with generally accepted consulting standards, principles, and practices. Reasonable attempts have been made to ensure that the report is complete and accurate with respect to Omega's authorized scope of investigation. Omega assumes no liability for damages, which might result from errors contained in the report or conditions, which the report fails to disclose. The potential hazardous materials noted in the report might be more severe than indicated and other conditions may exist.

Omega appreciates the opportunity to provide this service to Page and Turnbull. Please call me if you have any questions or require additional assistance.

Sincerely,

Steve Rosas
Principal
Omega Environmental Services, Inc.
Attachments
Attachment A, Photographs
Attachment B, Asbestos Survey Report

1 See asbestos survey report, Attachment B

Attachment A

Photographs

Photo Log

Photograph 1-General front view of the subject buildings 35 & 36

Photograph 2-General rear view of the subject buildings 35 & 36


Photograph 3-General view of the interior suspect building materials


Photograph 4-General view of the interior suspect building materials

Photograph 5-View of the suspect flooring materials under carpet

Photograph 6-View of exterior suspect expansion joint

Photograph 7-View of pipe insulation inside the mechanical room

Photograph 8-View of pipe insulation & debris inside the mechanical room

Photograph 9-General front view of the building 37

Photograph 10-General view of the interior suspect building materials

Photograph 11-Suspect lead containing ceramic tile & drain in the restrooms

Photograph 12-General front view of the building 39


Photograph 13-View of exterior peeling paint


Photograph 14-View of suspect lead containing ceramic tiles & drain

Photograph 15-View of the radioactive sign, building 39


Photographs 16-General view of the suspect roofing materials

Photographs 17-General view of the suspect roofing materials

Photographs 18-General view of the suspect roofing materials

OMEGA ENVIRONMENTAL

Attachment B

Asbestos Survey Report

Omega Enviornmental Services, Inc.
4570 Campus Drive, Suite 30
Newport Beach, California 92660

949-252-2145 Phone
949-252-2148 Fax
www.omgeaenv.com

January 29, 2015

Drew Gorski, AIA, LEED AP
Page & Turnbull
417 S. Hill Street, Suite 211
Los Angeles, California 90013

Re: Visual Assessment Report (Draft)
Orange Coast College
1370 Adams Avenue
Buildings 93, 105 and 110
Costa Mesa, California 92626
Project Number 2014-1679PAG

Dear Mr. Gorski:

Omega Environmental Services, Inc. (Omega) is pleased to provide the following hazardous materials visual assessment report of potential hazardous materials at buildings 93, 105 and 110 located at the Orange Coast College in Costa Mesa, California.

Project Summary

Omega was requested to conduct a review of previous asbestos-containing materials (ACMs) survey reports and perform a Walk-Through Visual Assessment of buildings 93, 105 and 110. The purpose of this limited visual assessment was to evaluate the presence of potential hazardous materials at the interior and exterior of the subject buildings including; ACMs, lead-based paint (LBP), polychlorinated biphenyls (PCBs) in light fixtures ballasts, mercury vapor in light tubes, floor drain, hydrochlorofluorocarbon (HCFC) in heating, ventilation and air conditioning system (HVAC), exit signs for the presence of tritium gas, suspect mold growth and other miscellaneous and potential hazardous materials.

Asbestos Survey Report Review

A review of the previous asbestos survey report prepared by Patriot Environmental Laboratory Services, Inc., dated March 28, 2005 (Project #19378 and #19379), revealed that ACMs were identified in the following materials:

Table 1
Building 93 – Pool Stadium

Material Description	Sample Location
Pipe insulation	Pool equipment room at bleachers
Pipe elbows	Pool equipment room at bleachers

Table 2
Building 110 – Field House

Material Description	Sample Location
Transite panels	Exterior at doors and windows
Transite panels	Electrical rooms at south restrooms
TSI - pipe insulation, all sizes	Exterior boiler room
TSI – pipe elbows 8" (ELB)	Exterior boiler room
TSI – pipe insulation 4" (P/C)	Exterior boiler room
HVAC duct seam tape (TAP)	Exterior boiler room
T.S.I. – boiler tank insulation	Exterior boiler room
Woven materials at tank	Exterior boiler room
10" transite pipe	Exterior boiler room

Observations

Omega's observations and findings summarized as follows: Building 93 is currently used as a swimming pool with suspect lead containing paint. During the visual assessment five-gallons buckets were noted marked as Hypochlorite, which is used as cleaning solution. The materials were located in a locked area under the bleachers.

Building 105 is a stadium with mostly suspect lead and ACMs at the press boxes. Building 110 is used as offices with restrooms, storage and equipment room. The interior of building 110 consisted of painted drywalls, carpet and wood ceiling. The exterior walls are stucco, wood and transite panels. The HVAC packaged units are located on the roof area.

Generally the materials were in a good condition throughout the interior and exterior of the buildings at the time of the site visit.

Attachment A includes photographs of the general building materials and condition at the time of site visit. Based on the visual observations made during the limited assessment it is Omega's professional opinion that the following potentially hazardous materials may be present in the subject buildings:

Building 93 – Pool Stadium

- Asbestos-containing material (ACM)
  - Pipe insulation
  - Elbows
  - Mastic
  - Grout
  - Exterior concrete expansion joints
  - Exterior sub-surface transite pipes

- Lead based paints (LBP)
  - Painted floor

  - Painted wall surfaces and handrails
  - Ceramic tiles

- Mercury
  - Fluorescent light bulbs

- Polychlorinated biphenyls (PCB)
  - Ballast (fluorescent fixtures)
  - Concrete expansion joint caulking

- Miscellaneous Materials
  - Hypochlorite

Building 105 – Stadium

- Asbestos-containing material (ACM)
  - Drywall and joint compound
  - Transite panels
  - Exterior Window putty
  - Exterior stucco
  - Exterior paint/skim coat
  - Concrete
  - Exterior concrete expansion joints
  - Exterior sub-surface transite pipes
  - Roofing material
  - Roof mastic

- Lead based paints (LBP)
  - Painted wood members
  - Painted wall surfaces
  - Painted handrails and posts

- Mercury
  - Fluorescent light bulbs

- Polychlorinated biphenyls (PCB)
  - Ballast (fluorescent fixtures)
  - Concrete expansion joint caulking
  - Window caulking

Building 110 – Field House

- Asbestos-containing material (ACM)
  - Acoustic ceiling tiles
  - Drywall and joint compound

- Vinyl base cove and mastic
- Carpet mastic
- Transite panels
- Pipe insulation
- Tank insulation
- Exterior Window putty
- Exterior stucco
- Exterior paint/skim coat
- Concrete
- Exterior concrete expansion joints
- Exterior sub-surface transite pipes
- Roofing material
- Transite pipes
- Roof mastic
- HVAC system components

- Lead based paints (LBP)
  - Painted door and window systems
  - Painted wall surfaces
  - Floor drain
  - Painted wood ceiling
  - Roof systems (fascia, eves, gutters, etc.)
  - Exterior painted walls
  - Painted concrete floor
  - Sinks, Toilet bowls and Urinals
  - Ceramic tiles

- Mercury
  - Fluorescent light bulbs

- Hydrochlorofluorocarbon (HCFC)
  - HVAC system

- Polychlorinated biphenyls (PCB)
  - Ballast (fluorescent fixtures)
  - Concrete expansion joint caulking
  - Window caulking

Conclusions and Recommendations
Based on the limited visual assessment of the subject buildings and the identified potentially hazardous materials listed above, Omega recommends the following:

- A thorough survey and sampling assessment for the identified potentially hazardous materials is recommended to identify and evaluate actual hazardous materials that may exist in the subject buildings.
- If the materials identified in the previous survey report[1] will be removed or impacted during renovation or demolition activities, a California licensed asbestos contractor, prior to any demolition and or renovation activities shall remove the ACMs and or ACCM from the subject buildings.
- Personnel in charge of renovation or demolition should be alerted to note materials uncovered during these activities, unidentified hazardous materials may be hidden within the walls, sub-floors, ceiling cavities or inaccessible areas.
- It may be necessary to contain and dispose of Sodium Hypochlorite as a hazardous waste, in accordance with the federal, state and local requirements.

Limitations

This assessment was limited to visually accessible areas. The conclusions of this assessment and the opinions expressed herein are based upon visual observations of the specific areas, a review of on site conditions and the limitations of the approved scope of services described in the proposal. The items discussed in this report are subject to revision as more information becomes available.

All observations are not static conditions. Visual observations are limited in their representation of the conditions at the time of the visual assessment. Omega expects that many conditions may worsen without proper characterization and remediation efforts and new conditions may arise.

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Omega appreciates the opportunity to provide this service to Page and Turnbull. Please call me if you have any questions or require additional assistance.

Sincerely,

Steve Rosas
Principal
Omega Environmental Services, Inc.
Attachments
Attachment A, Photographs
Attachment B, Asbestos Survey Report

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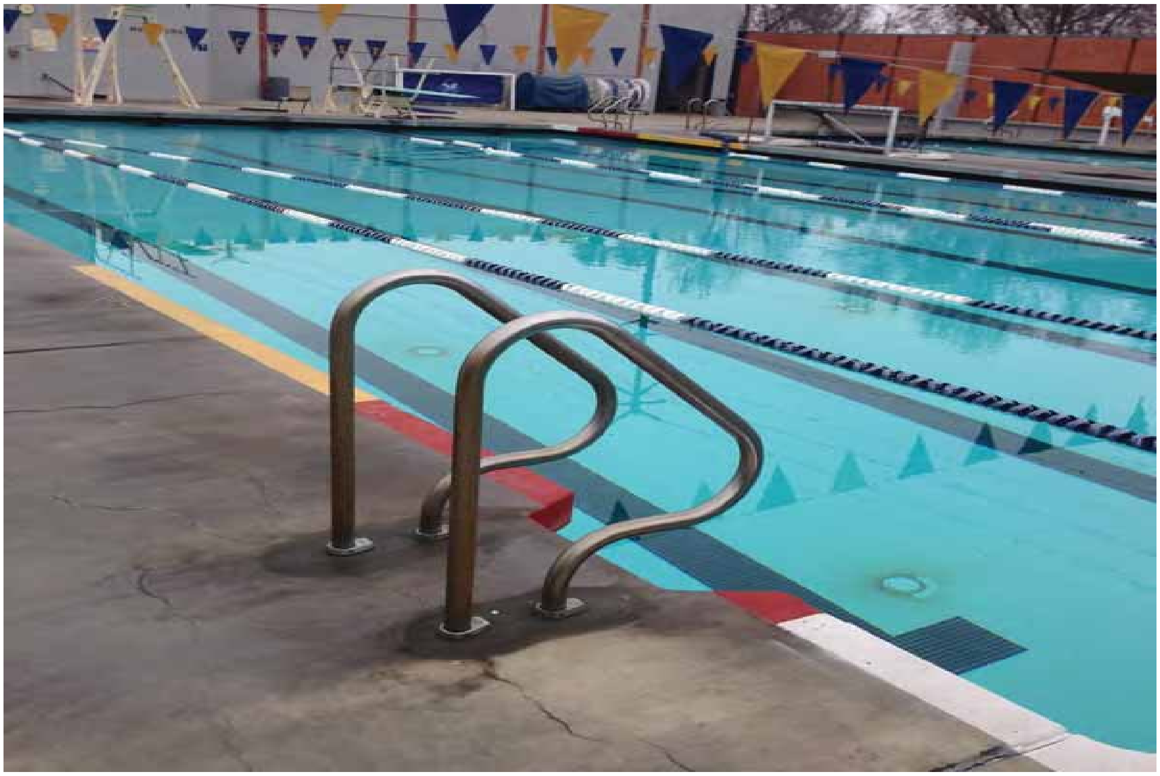
1 See asbestos survey report, Attachment B

OMEGA
ENVIRONMENTAL

Attachment A

Photographs

Photo Log



Photograph 1-General front view of the suspect lead paint, building 93

Photograph 2-General view of the suspect lead ceramic tile and paint


Photograph 3-View of the suspect expansion joint, building 93


Photograph 4-View of the 5-gallons Hypochlorite observed, building 93


Photograph 5-General view of the suspect roof and exterior building materials, building 110


Photograph 6-General view of the suspect interior building materials,
Including ACM, lead paint, ballasts and mercury light bulbs

Photograph 7-View of suspect lead containing ceramic tiles,
Toilet bowls, sinks and urinals in the restrooms

Photograph 8-General view of the Stadium with suspect lead paint

Photograph 9-General view of the Stadium with suspect lead paint

Attachment B

Asbestos Survey Report

PATRIOT
ENVIRONMENTAL
LABORATORY SERVICES

Asbestos Survey

District Offices, Orange Coast College & Golden West College

March 28, 2005

Prepared by:

Patriot Environmental Laboratory Services, Inc.
7271 Garden Grove Boulevard, Suite A
Garden Grove, CA 92841

Project # 19378 & 19379

Prepared for:

Coast Community College District
Environmental Health and Safety
1370 Adams Avenue Bldg. D, Costa Mesa, CA 92626

TABLE OF CONTENTS

EXECUTIVE SUMMARY

Beginning December 6, 2004 thru March 23, 2005, Mr. Erik Paquette of Patriot Environmental Laboratory Services, Inc. (Patriot) performed an asbestos survey for the Environmental Health and Safety Department of the Coast Community College District. The areas surveyed included all specified buildings of Golden West College, Orange Coast College and the District Office locations on the property from attic to basement. The survey did not include building materials on the roof including any roofing materials. The survey also did not include buildings specified by our client at the Orange Coast College Site (Buildings: 2, 3, 4, 147,158, 169, 162, 146, 155, 114, 115, 116, 156, 170, 121, 171, 172, Watson Hall and Weight Room), District Office Site (Buildings: B, C, D) and the Golden West College Site (Buildings: 8, 14, 21, 17)(See attached site plans for building names and numbers). Inspection, sampling and analytical procedures were performed in general accordance with the Environmental Protection Agency's interpretations, and guidelines of, the Asbestos Hazard Emergency Response Act (AHERA). All bulk samples collected were analyzed by Patriot's NVLAP accredited laboratory.

Asbestos was identified in representative samples collected from Golden West College, Orange Coast College and the District Offices of the Coast Community College Property.

Asbestos containing materials as defined by the EPA are materials with an asbestos concentration of greater than 1% (>1%). For worker protection, CAL-OSHA defines materials with a concentration of one-tenth of one percent of asbestos or greater (>0.1%) as asbestos containing. This survey identified any building material with an asbestos concentration greater than 0.1% by weight. A complete listing of suspect materials, sampled materials and the analytical results can be found in the text portion of the report. Coast Community College District site maps were used for building number identification. (See Appendix B)

*Laboratory analytical data sheets should be reviewed for potential asbestos content within individual layers of a sample for each material. Analysis of an individual layer of a material may exceed 1% while the composite analysis of the material as a whole is below 1%. Laboratory analytical data sheets are presented within Appendix A.

If you have any comments or questions concerning the information presented in the report or attachments, or if we may be of additional service, please contact our office at (714) 899-8900.

Sincerely,

Patriot Environmental Laboratory Services, Inc.

Martin K. Kimble

Martin Kimble, CAC
Certified Asbestos Consultant No. 94-1339

INTRODUCTION

A comprehensive AHERA based asbestos survey was performed for the Environmental Health and Safety Department of the Coast Community College District at Golden West College in Huntington Beach, Orange Coast College in Costa Mesa and the District Offices in Costa Mesa, California from December 6, 2004 thru March 23, 2005 by Patriot Environmental Laboratory Services, Inc (Patriot). The survey encompassed all buildings unless specified by our client of the Coast Community College District properties located at: 1370 Adams Avenue & 2701 Fairview Road in Costa Mesa, California as well as 15744 Golden West Street in Huntington Beach, California. The survey did not include building materials on the roof including any roofing materials.

The AHERA accredited and State of California certified building inspector representative that performed this asbestos survey for Patriot was Erik Paquette (**CSST# 02-3243**). Copies of valid state certificates are presented in Appendix C.

ASBESTOS CONTAINING MATERIALS

The following asbestos containing materials were identified:

District Site

Building #A - Administration

Material Description	Material Location
12"x12" Floor tile (brown)	**Staff Lounge Area (top layer)**
12"x12" Floor tile (yellow)	**Staff Lounge Area (bottom layer)**
Floor tile mastic	**Staff Lounge Area**
12"x12" Floor tile (beige) and associated mastic	**Custodial Closet – Southwest**
12' x 12" Floor tile (tan) and associated mastic	**Telephone Room**
Wallboard (<1%)	**Throughout Bldg.**

Building #E – Transportation Offices

- No asbestos was identified in the samples collected for this building.

Building #F – Transportation Garage

Material Description	Material Location

T.S.I. pipe covering – (P/C) multiple sizes	Under Raised Flooring Area at West End of Garage
T.S.I. Pipe insulation elbows – (ELB) multiple sizes	Under Raised Flooring Area at West End of Garage
4" Cement pipe	Computer Storage Area at Sink - unattached
9" Floor tile (beige) and associated mastic	Computer Storage Area – Southwest Portion of Bldg.
Insulated doors "Ice-box"	Southwest Portion of Bldg. near Computer Storage Area – Refrigerator Doors (Qty. 4)
Plaster	Southwest Portion of Bldg. near Computer Storage Area – At Refrigerated Door Areas
Fume Hood Joint Gasket (WOV)	Raised Flooring Area at West End of Garage At Fume Hood

Orange Coast College

Field House

Material Description	Material Location
Transite Panels	Exterior at Doors and Windows
Transite Panels	Electrical Room at South Restrooms
TSI – pipe insulation (all sizes)	Exterior Boiler Room
TSI – pipe elbow insulation (all sizes)	Exterior Boiler Room
TSI – pipe insulation (4" diam.)	Exterior Boiler Room
HVAC duct seam tape	Exterior Boiler Room
TSI – Boiler Tank Insulation	Exterior Boiler Room
Woven material at Tank	Exterior Boiler Room
10" Transite Pipe	Exterior Boiler Room

Fine Arts – Building #5

Material Description	Material Location
Fireproofing	Structural Members Throughout
Fire Rated Doors	Room 116A at Double Doors
Acoustic Ceiling Material	Lecture Halls
Orange Vinyl Sheet Flooring	Room 121,201B, 203, 103 (under carpet)
Wallboard (<1%)	Throughout Bldg.

Administration – Building #7

Material Description	Material Location
Fireproofing	**Structural Members Throughout**
Transite Pipe	**Open Air Utility Area – East side**
Window Putty	**Exterior**
Leveling Compound	**Custodial Closet**
Brown Linoleum Flooring	**Exterior Utility/Telephone Room at Slider Door**

Counseling and Admissions – Building #8

Material Description	Material Location
Tan Vinyl Floor Tile and associated mastic	**Rooms 108 & 109 – Under Carpet**
Grey Vinyl Floor Tile and associated mastic	**Room 104**

Counseling and Admissions – Building #9

Material Description	Material Location
Tan Vinyl Floor Tile and associated mastic	**Throughout Bldg. - Under Carpet**
Transite Pipe	**Exterior Electrical Room**

Special Services – Building #10

Material Description	Material Location
12" Orange Vinyl Floor Tile	**Kitchen**

Business - Building #13

Material Description	Material Location
Window Putty	**Exterior**

Business - Building #14

Material Description	Material Location
Wallboard (<1%)	**Throughout Bldg.**
HVAC Duct Seam Tape	**Exterior Telephone Room/HVAC Room**
HVAC Duct Vibration Gasket (Qty. 4)	**Exterior Telephone Room/HVAC Room**

Science - Building #35

Material Description	Material Location
Vinyl Floor Tile and associated mastic	**Rooms 149 & 150 – Under Carpet**
9" Vinyl Floor Tile and associated mastic	**Rooms 151 & 155**
Flooring Mastic	**Room 154 – Under Carpet**

Science - Building #36

Material Description	Material Location
Window Putty	**Exterior**
Beige Vinyl Floor Tile and associated mastic	**Room 144 – Under Carpet**
Plaster	**Throughout Bldg.**
12" White w/brown Vinyl Floor Tile and associated mastic	**Room 148 & Lab Prep Area**

Reprographics - Building #37

Material Description	Material Location
TSI Pipe Insulation & Pipe Elbows	**Attic**
Tan Floor Tile Debris	**Crawlspace at Room 168**
TSI Pipe Insulation & Pipe Elbows (multiple sizes)	**Utility Room at Men's Restroom**
HVAC Duct Vibration Gasket	**Utility Room at Men's Restroom**
Ceiling Tile Debris	**Crawlspace at Room 168**
Vinyl Floor Tile and associated mastic	**Rooms 168 & 169 – Under Carpet**
Vinyl Floor Tile and associated mastic	**Rooms 162, 163 & 164 – Under Carpet**

Planetarium - Building #39

Material Description	Material Location
Tan Vinyl Floor Tile	**Throughout Bldg. – Under Carpet**
Wallboard (<1%)	**Throughout Bldg.**

Science Hall - Building #40

Material Description	Material Location
Acoustic Ceiling	**Lecture Seating Area**
Wallboard	**Throughout Bldg.**
Fire Rated Door	**Room 110A**

Transite Panels	Below windows at offices

Science Lecture - Building #41

Material Description	Material Location
Spray Applied Cementous Ceiling Material	**Foyer Ceiling**
12" Beige Vinyl Floor Tile and associated mastic	**Rear Prep & Storage Area at Stage**
Brown Base Cove Mastic	**Rear Prep & Storage Area at Stage**
Spray Applied Acoustic Ceiling Material	**Room 101 & 102**
12" Brown Vinyl Floor Tile and associated mastic	**Projection Rooms 5 & 6**
Fireproofing	**Structural Members Throughout**

Allied Health - Building #50

Material Description	Material Location
Plaster (<1%)	**Rooms 110 & 112**

Home Economics - Building #71

Material Description	Material Location
Fire rated door	**Room 114 Rear Utility Closet (Qty. 1)**
HVAC Duct Seam tape	**Room 114 Rear Utility Closet**
Transite Panels	**Panels Below Windows – Entire Bldg.**
Vinyl floor tile (green) and associated mastic	**Throughout Bldg. – Under Carpet**

Home Economics - Building #72

Material Description	Material Location
Metal Fire doors (Qty. 2)	**Room 102 Offices at HVAC Closet**
TSI – pipe insulation (all sizes)	**Throughout Attic**
TSI – pipe elbow	**Throughout Attic**
Metal Fire doors (Qty. 2)	**Room 108 Exterior HVAC Closet**
Metal Fire doors (Qty. 3)	**Exterior Utility Closet at Room 107 (Playground Area)**
Transite Panels	**Entire Bldg. Exterior below windows**
12" Peach Vinyl Floor tile and associated mastic	**Room 107**
Wallboard (< 1%)	**Throughout Bldg.**

Forum - Building #81

Material Description	Material Location
Transite Panels	**Exterior; At Office Area Windows**
Acoustic Ceiling Material	**Throughout Bldg.**
Fire Rated Door	**Office Area Hallway at Sink Room**
Fire Rated Doors (Qty. 2)	**Office Area Hallway at HVAC Closet**
Fire Rated Door	**Forum Seating Area at North entry; Attic Access Door**
HVAC Duct Seam Tape	**Throughout Attic**
Window Putty	**Faculty Office Area**
Wallboard with associated joint compound	**Throughout Bldg.**
9" Brown Vinyl Floor Tile and associated mastic	**Forum Seating Area Entry and Exits**
9" Grey Vinyl Floor Tile and associated mastic	**Division Office; Film Room**
9" Beige Vinyl Floor Tile and associated mastic	**Division Office; Film Room & Faculty Office**

Portside Café - Building #85

Material Description	Material Location
TSI Pipe Elbow	**Attic above Café Storage Room**
Transite Panels	**Café Service/Side Entrance – South Side**

Student Center - Building #86

Material Description	Material Location
Wallboard (<1%)	**Throughout Bldg.**

Administration - Building #1

Material Description	Material Location
Wallboard (< 1%)	**Throughout Bldg.**

Student Health Center - Building #89

Material Description	Material Location
TSI – pipe insulation (multiple sizes)	**Throughout Bldg. - Attic**
TSI – pipe elbow insulation (multiple sizes)	**Throughout Bldg. - Attic**
12" White w/blue Vinyl Floor Tile	**Throughout Bldg.**

White Cobble pattern Vinyl Sheet Flooring	West Custodial Closet

Gymnasium - Building #91

Material Description	Material Location
HVAC duct expansion joint gasket	Copy Room Attic at Dance Room B
HVAC duct seam tape	Copy Room Attic at Dance Room B
Fire Rated Door (Qty. 1)	Copy Room Attic at Dance Room B
HVAC duct expansion joint gasket	Dance Room B Storage - Attic
HVAC duct seam tape	Dance Room B Storage – Attic
Fire Rated Door (Qty. 1)	Dance Room B Storage - Attic
12" White/Blue Vinyl Floor Tile	Gymnasium Foyer & Restrooms
Wallboard (<1%)	Gymnasium Foyer (ceiling above existing acoustic ceiling tiles)

Women's Locker Room - Building #92

Material Description	Material Location
TSI Pipe Elbow (4" diameter)	Coed Team Room
HVAC duct seam tape	Throughout Bldg.
TSI Pipe elbow (4" diameter)	Equipment Room at Laundry
Wallboard (<1%)	Throughout Bldg.

Bookstore Warehouse– Building #144

- No asbestos was identified in the samples collected for this building.

Bookstore – Building # 83

Material Description	Material Location
HVAC Duct Seam Tape (TAP)	Backroom near "Roll-up Door"
Acoustic ceiling material (sprayed on) (<1%)	Throughout Bldg.
Wallboard (<1%)	Throughout Bldg.
Floor tile (beige) and associated mastic	Men's Restroom Entry

Men's Locker Room – Building # 96

Material Description	Material Location
T.S.I. Pipe insulation (P/C)	Men's Locker Room at HVAC Loft Above Equipment Room

T.S.I. Pipe elbow (ELB)	Men's Locker Room at HVAC Loft Above Equipment Room
T.S.I. Pipe elbow (ELB)	Men's Locker Room at HVAC Loft Above Equipment Room – Floor Cavity

Pool Equipment Room at Breezeway

Material Description	Material Location
T.S.I. Pipe insulation (P/C)	**Pool Equipment Room at Bleachers**
T.S.I. Pipe elbow (ELB)	**Pool Equipment Room at Bleachers**

Bursars Office – Building # 149

Material Description	Material Location
HVAC duct seam tape (TAP)	**Attic above drop ceiling**

Handball – Building # 97

- No asbestos was identified in the samples collected for this building.

Student Center – Building # 86

Material Description	Material Location
Wallboard (<1%)	**Throughout Bldg.**

Skill Center - Building # 47

Material Description	Material Location
Transite Panels	**Room 101, Welding Booths (Qty. 20)**
HVAC Duct Seam Tape	**Room 101**
HVAC Duct Vibration Gasket	**Room 101**
12" Beige Multi-Colored Vinyl Floor Tile & Associated Mastic	**Office 101B, Office 102A and Classroom 103**
Wallboard and associated joint compound (< 1%)	**Throughout Bldg.**
White Welding Curtains	**Room 101 at north rear of room**

Skill Center - Buildings # 47 Middle Classrooms & # 48

Material Description	Material Location
Wallboard (< 1%)	**Room 104**
Transite Panels	**Skill Center #47 Middle Classrooms below windows**
Woven Fume Ventilation System Gaskets	**Skill Center #47; Welding 101**
Transite Panels	**Skill Center # 48; Airframe Room 110**
12" Beige Multi-Colored Vinyl Floor Tile & Associated Mastic	**Skill Center # 48; Airframe Room 110B Office and 110A Office**
Wallboard and associated joint compound	**Throughout Airframe 110**

Allied Health- Building #49

Material Description	Material Location
Beige Vinyl floor Tile & Associated Mastic	**Room 105; Under Carpet**
Flooring Mastic (black)	**Room 103; Under Carpet**
Carpet Glue	**Room 101**
Window Putty (< 1%)	**Exterior**

Horticulture - Building #64

Material Description	Material Location
Wallboard (< 1%)	**Throughout Bldg.**
Window Putty	**Chemical Room (Northeast Unattached Bldg.)**
Brown Base Cove & Associated Mastic	**Room 101**
12" Tan With Pattern Vinyl Floor Tile	**Room 102 at Entry**

Horticulture Storage – Building #51

- No Access – Steel sided building with no visible suspect materials.

Lewis Applied Science- Building #42

Material Description	Material Location
Black Base Cove and associated mastic	**Throughout Bldg.**
12" Beige Vinyl Floor Tile & Mastic	**Rooms 101, 104, 119, 209, 210, and 211**
TSI Pipe Elbows	**Attic (above Room 104)**
12" Beige Multi-Colored Vinyl Floor Tile &	**Room 103 and 103A**

Mastic	
Stucco	2nd Floor External Soffit near Café
TSI Pipe Insulation & TSI Elbows (multiple sizes)	2nd Floor External HVAC Room
Woven HVAC Expansion Gasket	2nd Floor External HVAC Room
TSI Pipe Insulation & TSI Elbows (multiple sizes)	1st Floor Exterior Compressor Room
Elbow - 10" Diameter	Southwest Utility Room at Boiler
Stucco	2nd Floor External Soffit at South End of Bldg.
TSI Pipe Insulation	Southwest Utility Room at Boiler
TSI Pipe Elbow	Southwest Utility Room at Boiler

Chemistry– Building #69

Material Description	Material Location
HVAC Duct Expansion Joint	2nd Floor Utility Room 2 (Qty. 6)
HVAC Joint Seam Tape	2nd Floor Utility Room 2
Transite Table Tops	Laboratory Room 115 - Throughout
Fire Rated Door	½ & ½ Doors Throughout Middle Office Area (Qty. 4)
Yellow/Brown Sheet Flooring	Room 121
Brown Multi Sheet Flooring	1st Floor Middle Office Area and All Interior Areas of same
Orange Multi Sheet Flooring	Throughout Rooms 124 & 126 & 129
Green/Yellow Sheet Flooring	Rooms 115 & 118 Throughout
Yellow/Brown Sheet Flooring	Room 124 Middle and Middle Lab Area

Exercise Science– Building #83

Material Description	Material Location
TSI Elbows-3"	Exercise Lab Attic at Access Panel (Qty. 3)
TSI Pipe Insulation-3"	Exercise Lab Attic at Access Panel
TSI Elbows-3"	Exercise Science Classroom; above T-bar ceiling
9" Beige Vinyl Floor Tile and associated mastic	Faculty Office Stairwell and Offices Under Carpet
TSI Elbows-3"	2nd Floor Faculty Offices South Utility Closet at Roof Access
TSI Pipe Insulation-3"	2nd Floor Faculty Offices South Utility Closet at Roof Access
HVAC Duct Seam Tape	2nd Floor Faculty Offices South Utility Closet at Roof Access
Carpet Glue	1st Floor Exercise Room

Tan Vinyl Floor Tile and associated mastic	1st Floor Exercise Science Rooms – Under Carpet
12" Blue Vinyl Floor Tile with associated mastic	2nd Floor Faculty Office – Men's & Women's Restrooms
Wallboard (< 1%)	Throughout Bldg.

Social Science– Building #80

Material Description	Material Location
Fire Rated Door	Utility Room near Classroom 112
Wallboard (< 1%)	Throughout Bldg.
Vinyl Floor Tile & Mastic	Throughout Bldg. Under Carpet

Computing Center– Building #73

Material Description	Material Location
Fireproofing	Exterior Utility Closet near Social Science Bldg.
TSI Pipe Insulation	2nd Floor - Interior Loft Equipment Room near Elevator
TSI Pipe Elbows	2nd Floor - Interior Loft Equipment Room near Elevator
Fire Door	2nd Floor - Interior Loft Room D-12 Equipment
Fire Door	Classroom 105 at Storage Room
9" Beige Vinyl floor Tile	Classroom 105 at Storage Room
Fireproofing	Classroom 6; Above T-Bar Ceiling System
Vinyl Floor Tile and associated mastic	At Classroom 105 & Elevator – Under Carpet
Wallboard-Joint Compound	Throughout Bldg.

Business Education– Building #12

Material Description	Material Location
Transite Pipe	Room 104 Utility Closet
9" Grey Vinyl Floor Tile & Mastic	Exterior Custodial Closet at Room 104
Flooring Bullnose	Exterior Custodial Closet at Room 104
Flooring Mastic	Room 103 – Under Carpet
Tan Vinyl Floor Tile & Mastic	Rooms 101A & 101B
Window Putty	Exterior

Faculty House– Building #11

Material Description	Material Location
12" Pink Vinyl Floor Tile & Mastic	**Main Entry Area**
9" Orange Vinyl Floor Tile & Mastic	**Kitchen, Custodial Closet and HVAC Closet**
Vent Pipe Gasket	**HVAC Closet at vent pipe**
White Cobble Linoleum (Sub Floor)	**Bathroom**
Wallboard (< 1%)	**Throughout Bldg.**

Consumer Health Sciences – Building #43

- No asbestos was identified in the samples collected for this building.

Literature & Languages– Building #70

Material Description	Material Location
HVAC Expansion Gasket-Woven	**1st and 2nd Floor Utility/Equipment Rooms (Qty. 2 Each Room)**
HVAC Duct Joint Tape	**1st and 2nd Floor Utility/Equipment Rooms (Qty. 2 Each Room)**
Fire Rated Doors	**All Doors On First Floor**
Fire Rated Doors	**All Doors On Second Floor**
Wallboard (<1%)	**Throughout Bldg.**

Strength Lab – Building #139

- No asbestos was identified in the samples collected for this building.

Analysis of the bulk samples was performed under microscopic examination to identify the composition of the suspect asbestos material. More specifically, the bulk samples were analyzed to determine if they consisted of the five asbestos types: chrysotile, amosite, crocidolite, anthophyllite, and actinolite/tremolite; and/ or fibrous non-asbestos constituents: mineral wool, cellulose, etc.; and/ or various non-fibrous constituents. Then, using the stereomicroscope, the microscopist visually estimated relative amounts of each constituent by determining the volume of each constituent in proportion to the total volume of the sample.

PLM samples were analyzed utilizing the Environmental Protection Agency's Test Methods: Methods for the determination of Asbestos in Bulk Building Materials (EPA 600/R-93/116, July 1993) and the McCrone Research Institute's The Asbestos Particle Atlas as method references. Additional treatment and tests may be required to accurately define composition (i.e. ashing, extraction, acetone treatment, and TEM).

FINDINGS

Asbestos was identified in various building materials located throughout all three (3) facilities (see page 4).

Interpretation of Asbestos Results

A material is considered by the Environmental Protection Agency (EPA) to be asbestos-containing if at least one sample collected from the homogenous material contains asbestos in a concentration greater than one percent (>1 %). For worker protection, CAL-OSHA defines materials with a concentration of one-tenth of one percent of asbestos or greater (>.1%) as asbestos containing.

CONCLUSIONS AND RECOMMENDATIONS

Results of the bulk sample analysis show that **asbestos was identified in the representative samples collected as part of this survey**. Therefore Patriot recommends the following:

Any materials identified as asbestos containing materials (in this report or any previous survey reports), which have the potential to be disturbed during construction, renovation, and/or demolition activities; should be removed prior to the commencement of such activities. In addition, if any new materials (not included in this survey report) are discovered, which have the potential to be affected during any construction, renovation, and/or demolition activities; these materials should be either tested and/ or removed prior to the commencement of such activities. All such removal work should be performed by appropriately qualified and licensed asbestos abatement personnel under proper abatement conditions, as dictated by EPA and Cal-OSHA regulations.

The U.S. Environmental Protection Agency (EPA) regulations do not require removal of asbestos-containing materials that are in good condition and/ or do not have the potential to be disturbed. However, personnel who may be involved with building renovations will need to be advised of the presence of the specific asbestos containing materials and appropriate measures may be warranted in order to assure the identified asbestos-containing materials are not disturbed during such renovation activities. If the asbestos-containing materials left in place are disturbed during any future activities, the materials must be handled and disposed of in accordance with applicable State and Federal regulations.

TABLE I

SUMMARY OF PLM ANALYTICAL DATA

District Site

Summary of Findings

The following building materials were sampled for asbestos content:

Bolded items indicate asbestos containing materials
ND indicates no asbestos detected in samples

Building #A - Administration

Material Description	Sample Number	Material Location	Material Cond.
12"x12" Floor tile (brown)	**1-3 / 10-20% CH**	**Staff Lounge Area (top layer)**	**Good**
12"x12" Floor tile (yellow)	**1-3 / 10-20% CH**	**Staff Lounge Area (bottom layer)**	**Good**
Floor tile mastic	**1-3 / 10-20% CH**	**Staff Lounge**	**Good**
12"x12" Floor tile (beige) and associated mastic	**4-6 / 6 - 20% CH**	**Custodial Closet – Southwest**	**Good**
12' x 12" Floor tile (tan) and associated mastic	**7-9/ 5 - 10% CH**	**Telephone Room**	**Good**
Plaster	10/ ND	**Custodial Closet – Southwest**	Good
Cement	11/ ND	Exterior	Good
12" Acoustic Wall Tile	12/ ND	Copy Room	
Linoleum flooring (white with sand)	13-14/ ND	Men's Restroom – Southwest	Good
Linoleum flooring (grey)	15/ ND	Men's Restroom – Southwest	Good
12" Acoustic Ceiling Tile	16-18/ ND	Men's Restroom – Southwest	Good
Wallboard (<1%)	**19-22 / <1% CH**	**Throughout Bldg.**	**Good**
Linoleum flooring (white cobblestone)	23-25/ ND	Men's Restroom 2 – Northeast	Good
Wall tile mastic dots	26-27/ ND	Copy Room	Good
2' x 4' Acoustic Ceiling Tile	28-29/ ND	Above Men's Restroom 2 Ceiling – Northeast	Good

Notes: The following areas were inaccessible on the day this building was surveyed and therefore not known if asbestos is present:

- None

Building #E – Transportation Offices

Material Description	Sample Number	Material Location	Material Cond.
Linoleum flooring (black/white)	1-3/ ND	Office Areas	Good
Wallboard	4-9/ ND	Throughout Bldg.	Good
2' x 3' Acoustic ceiling tile	10-12/ ND	Throughout Bldg.	Good
Window putty	13-14/ ND	Exterior	Good

Notes: The following areas were inaccessible on the day this building was surveyed and therefore not known if asbestos is present:

- None

Building #F – Transportation Garage

Material Description	Sample Number	Material Location	Material Cond.
T.S.I. pipe covering – (P/C) multiple sizes	**1 (assumed)**	**Under Raised Flooring Area at West End of Garage**	**Good**
T.S.I. Pipe insulation elbows – (ELB) multiple sizes	**2 (assumed)**	**Under Raised Flooring Area at West End of Garage**	**Good**
4" Cement pipe	**3 (assumed)**	**Computer Storage Area at Sink - unattached**	**Damaged**
9" Floor tile (beige) and associated mastic	**4-6/ 6 - 10% CH**	**Computer Storage Area – Southwest Portion of Bldg.**	**Good**
Wallboard	7, 12-15/ ND	Throughout Bldg.	Good
Insulated doors "Ice-box"	**8 (assumed)**	**Southwest Portion of Bldg. near Computer Storage Area – Refrigerator Doors (Qty. 4)**	**Good**
Wall insulation	9-11/ ND	Southwest Portion of Bldg. near Computer Storage Area – At Refrigerated Door Areas	Good
Plaster	**16-18 / 5 - 10% CH**	**Southwest Portion of Bldg. near Computer Storage Area – At Refrigerated Door Areas**	**Good**
Window putty	19-21/ ND	Computer Storage Area – Southwest Portion of Bldg. – Interior	Good
Cement	22/ ND	Exterior – Foundation	Good
Fume Hood Joint Gasket	**23**	**Raised Flooring Area at West End of Garage**	**Good**

(WOV)	(assumed)	At Fume Hood	
Moisture barrier paper	24/ ND	Garage at Bay Doors	Good

Notes: The following areas were inaccessible on the day this building was surveyed and therefore not known if asbestos is present:

- None

Orange Coast College

Summary of Findings

The following building materials were sampled for asbestos content:

Bolded items indicate asbestos containing materials
ND indicates no asbestos detected in samples

Field House – Stadium Locker Room

Material Description	Sample Number	Material Location	Material Cond.
Transite panels	**1-3 / 18% CH**	**Exterior at Doors and Windows**	**Good**
Transite panels	**4 (assumed)**	**Electrical Room at South Rest Rooms**	**Good**
TSI – pipe insulation (all sizes)(P/C)	**5 / 10% AM**	**Exterior Boiler Room**	**Good**
TSI – pipe elbow 8" (ELB)	**6 / 10% AM**	**Exterior Boiler Room**	**Good**
TSI – pipe insulation 4"(P/C)	**7 / 10% CH**	**Exterior Boiler Room**	
HVAC Duct Seam Tape (TAP)	**8-10 / 30-60% CH**	**Exterior Boiler Room**	**Good**
T.S.I - Boiler Tank Insulation	**11 (assumed)**	**Exterior Boiler Room**	**Good**
Woven material at Tank	**12 (assumed)**	**Exterior Boiler Room**	**Good**
10" Transite Pipe	**13 (assumed)**	**Exterior Boiler Room**	**Good**
Plaster	14-18/ ND	Throughout Bldg.	Good
Stucco	19-24/ ND	Exterior	Good
Window putty	25/ ND	Exterior	Good

Notes: The following areas were inaccessible on the day this building was surveyed and therefore not known if asbestos is present:

- No Access to Home Team Office of "Ernie Weiss"
- No Access to Concession Stand Area

Fine Arts – Building # 5

Material Description	Sample Number	Material Location	Material Cond.
Leveling compound	1/ ND	Lecture 119 at entry	Good
Fireproofing	**2, 7 (assumed)**	**Structural Members Throughout**	**Good**
Fire doors (Qty. 2)	**3 (assumed)**	**Room 116A (double-doors)**	**Good**
Acoustic ceiling material	**4 (assumed)**	**Lecture 116**	**Good**
Acoustic ceiling material	**5-6, 10-11 / 5 - 7% CH**	**Lecture Halls**	**Good**
Fireproofing	8-9/ ND	Structural Members Throughout	
Base cove (gray) and mastic	12-13/ ND	Room 102	Good
Base cove (brown) and mastic	14-16/ ND	Throughout Bldg.	Good
Carpet mastic	17-19/ ND	Throughout Bldg.	Good
12" Acoustic ceiling tile (rough)	20-23/ ND	Control Room at 201, Room 102, Men's Restroom, Room 101A	Good
Vinyl sheet flooring (orange cobble pattern)	**24-27 / 15 - 20% CH**	**Custodial Room 121 & 203, Room 201B, Room 103 (under carpeting)**	**Good**
12" Acoustic ceiling tile (random pinhole)	28-30/ ND	Room 118 - Offices	Good
Formed Cement	31-34/ ND	Interior & Exterior	Good
Wallboard and associated joint compound (<1%)	**35-44 / <1% CH**	**Throughout Bldg.**	**Good**
2' x 3' Acoustic ceiling tile	45-47/ ND	Room 118 Offices	Good

Notes: The following areas were inaccessible on the day this building was surveyed and therefore not known if asbestos is present:

- No Access – Room 118A Storage
- No Access – Room 103A
- No Access – Room 105 Photo Issue Room
- No Access – Attic Area of Lecture Halls Have Visible Fireproofing Not Accessible

Administration – Building # 7

Material Description	Sample Number	Material Location	Material Cond.
Fireproofing material	**assumed**	**Structural Members Throughout**	**Good**
Cement pipe - transite	**2 (assumed)**	**Open Air Utility Area at East side of Bldg.**	**Damaged**
Stucco	22-27/ ND	Exterior	Good
Wallboard	4-7/ ND	Throughout Bldg.	Good
Window putty	**8-10 / 3 - 5% CH**	**Exterior**	**Good**
2' x 3' Acoustic ceiling tile	11/ ND	Throughout	Good
12" Acoustic ceiling tile	12-16/ ND	Registration/Counseling/Dean's Office/Matriculation	Good
Leveling compound	**17 / 2% CH**	**Custodial Closet**	**Good**
Linoleum flooring (brown)	**18-20/ 10 - 20% CH**	**Exterior Telephone Room near Sliding Door**	**Good**
Smooth cement	21/ ND	Exterior	Good

Notes: The following areas were inaccessible on the day this building was surveyed and therefore not known if asbestos is present:

- Access to ceiling cavity throughout Bldg. # 7 is limited due to plywood sheeting above existing drop ceiling panels.

Counseling and Admissions – Building # 8

Material Description	Sample Number	Material Location	Material Cond.
Plaster	1, 7 & 12/ ND	Throughout Bldg. – Walls Dividing Classrooms	Good
Vinyl floor tile (tan)	**2, 8 / 7-8% CH**	**Rooms 108 & 109 – Under Carpet**	**Good**
Associated mastic	8/ ND	Room 108 – Under Carpet	
Base cove (black) and associated mastic	3,9 & 29/ ND	Rooms 108 & 109 and Breezeway at Faculty Offices	Good
2' x 4' Acoustic wall panel (fissured)	4, 16, 17/ ND	Rooms 105 & 109	Good
2' x 4' Acoustic ceiling tile (w/holes)	5, 10 & 4 19/ ND	Rooms 109, 108, 105	GoodGood

2' x 4' Acoustic ceiling tile (smooth)	6, 11, 18/ ND	Rooms 109, 108, 105	Good
Base cove (grey) and associated mastic	13-15/ ND	Room 105	Good
12" x 12" Acoustic ceiling tiles (smooth)	20-22/ ND	Room 101	
12" x 12" Acoustic ceiling tiles (large random holes)	23-28/ ND	Room 102, 104	Good
Vinyl floor tile (grey) and associated mastic	**30-32 / 4-5% CH**	**Room 104**	**Good**
Wallboard	33-35/ ND	Room 104 – Office Build Outs	Good
Window putty	36-38/ ND	Exterior	Good
Stucco	39 & 40/ ND	Exterior	Good

Notes: The following areas were inaccessible on the day this building was surveyed and therefore not known if asbestos is present:

- None

Counseling and Admissions – Building # 9

Material Description	Sample Number	Material Location	Material Cond.
Plaster	1, 10 & 15/ ND	Throughout Bldg.	Good
Black Base Cove and associated mastic	2, 8 & 18/ ND	Throughout Bldg.	Good
Vinyl floor tile (tan)	**3, 6, 7 & 19 / 5 - 7% CH**	**Throughout Bldg. – Under Carpet**	**Good**
2' x 4' Acoustic ceiling tile (large hole)	4, 9 & 17/ ND	Throughout Bldg. – Walls & Ceilings	Good
2' x 4' Acoustic ceiling tile (smooth)	5 & 16/ ND	Throughout Bldg.	Good
Wallboard	12-14/ ND	Throughout Bldg.	Good
Cement foundation	20/ ND	Exterior	Good
Stucco	21/ ND	Exterior	Good
Transite Pipe	**22 (assumed)**	**Exterior Electrical Room**	**Good**
Smooth cement	23-24/ ND	Exterior	Good
Window putty	25-26/ ND	Exterior	Good

Notes: The following areas were inaccessible on the day this building was surveyed and therefore not known if asbestos is present:

- None

Special Services – Building #10

Material Description	Sample Number	Material Location	Material Cond.
Stucco	1-3/ ND	Exterior	Good
Plaster	4/ ND	Kitchen	Good
Wallboard	5 & 6/ ND	Throughout Bldg.	Good
12" Acoustic ceiling tile (rough)	7-10/ ND	Disabled Student Area, Learning Center, Reception & Kitchen	Good
12" Acoustic ceiling tile (pin hole)	11/ ND	Room 105	Good
12" Vinyl floor tile (orange)	**12-14 / 2 - 3% CH**	**Kitchen**	**Good**

Notes: The following areas were inaccessible on the day this building was surveyed and therefore not known if asbestos is present:

- None

Business – Building #13

Material Description	Sample Number	Material Location	Material Cond.
Wallboard	1,6-7,12 & 16/ ND	Throughout Bldg.	Good
Plaster (smooth)	2,8/ ND	Men's & Women's Restroom	Good
Black Base cove and associated mastic	3,13/ ND	Throughout Bldg.	Good
2' x 4' Acoustic ceiling tile	4,9-11, 15/ ND	Throughout Bldg.	Good
2' x 4' Acoustic wall tile	14/ ND	Throughout Bldg.	
12" Acoustic ceiling tile (random hole)	5/ ND	Room 105, Storage Room	Good
Window putty	**17-18 / 3% CH**	**Exterior**	**Good**

Notes: The following areas were inaccessible on the day this building was surveyed and therefore not known if asbestos is present:

- None

Business – Building #14

Material Description	Sample Number	Material Location	Material Cond.
Fireproofing material	1 & 6/ ND	Throughout Bldg. Attic on Structural Members	Good
Wallboard (<1%)	**2,7,10,17, 18,23-25,29, 102-105 / <1% CH**	**Throughout Bldg.**	Good
Stucco	3/ ND	Exterior	Good
HVAC Duct Seam Tape	101 / ND	Exterior Telephone Room/HVAC Room	Good
HVAC Duct Seam Tape	**4 (assumed)**	**Exterior Telephone Room/HVAC Room**	**Good**
HVAC Duct Vibration Gasket	**5 (assumed)**	**Exterior Telephone Room/HVAC Room - (Qty. 4)**	**Good**
Black Base Cove	22 / ND	Room 110	**Good**
Brown Base Cove	8, 9/ ND	Room 108	Good
Grey Base Cove	30/ ND	Room 111	
12" Vinyl floor tile (white)	11-13/ ND	Room 108	Good
12" Acoustic ceiling tile	14-16/ ND	Room 108 Rear Classroom	Good
x 3' Acoustic ceiling tile	19-21 & 31/ ND	Throughout Bldg.	Good
Linoleum flooring (white)	26-28/ ND	Room 111 – Kitchen	Good

Notes: The following areas were inaccessible on the day this building was surveyed and therefore not known if asbestos is present:

- None

Science– Building #35

Material Description	Sample Number	Material Location	Material Cond.
Window Putty	1-2/ ND	Exterior	Good
12" White Vinyl Floor Tile	3-5/ ND	Room 149 Under Carpet at Crawlspace Hatch	Good
Stucco (< 0.1% pt. count)	6-9 / <0.1%	Exterior	Good
Vinyl Floor Tile & Mastic	**10-11 / 10 - 15% CH**	**Room 149 & 150 Under Carpet**	**Good**
9" Vinyl Floor Tile & Mastic	**12-16 / 5 - 10% CH**	**Room 151 & 155**	**Good**
x 2' Acoustic Ceiling Tile	17-18/ ND	Room 154	Good

(random pinhole)			
2' x 3' Acoustic Wall Tile-Random Hole	19-20/ ND	Room 154 & 150	Good
Flooring Mastic	**21 / 3% CH**	**Room 154 – Under Carpet**	**Good**
2' x 3' Acoustic Ceiling Tile	22-23/ ND	Room 152 & 153	Good
Brown Base Cove & Mastic	24-28/ ND	Throughout Bldg.	Good
2' x 3' Acoustic Ceiling Tile (random hole)	29-31/ ND	Room 151	Good
Wall Plaster	32-36/ ND	Throughout Bldg.	Good
2' x 3' Acoustic Ceiling Tile-Smooth	37-39/ ND	Room 151	Good
Wallboard-Joint Compound	40-41/ ND	Room 150 – Built Out Area	Good

Notes: The following areas were inaccessible on the day this building was surveyed and therefore not known if asbestos is present:

- No Access – Room 151; Room 5A & Non-labeled Door

Science – Building #36

Material Description	Sample Number	Material Location	Material Cond.
Base cove (large brown)	1/ ND	Room 148	Good
Base cove (small brown)	2-4/ ND	Throughout Bldg.	Good
Stucco (<0.1%) pt. count	5-7 / <0.1% CH	Exterior	Good
2' x 3' Acoustic wall tile (random holes)	8-9/ ND	Throughout Bldg.	Good
Base cove (black)	10-12/ ND	Throughout Bldg.	Good
2' x 3' Acoustic ceiling tile (random holes)	13-15/ ND	Throughout Bldg.	Good
12" Vinyl floor tile (white with gray) with associated mastic	**16-18 / 6% CH**	**Rooms 141/142**	**Good**
12" Vinyl floor tile (tan)	19-20/ ND	Rooms 141/142 – Accent Stripe	Good
2' x 3' Acoustic ceiling tile (smooth)	21-23/ ND	Rooms 145/146	Good
Vinyl Sheet flooring (brown cobble)	**24-26 / 15% CH**	**Rooms 143/145**	**Good**
Window putty	**27-29 / 3% CH**	**Exterior**	**Good**
Vinyl Floor Tile (beige) and associated mastic	**30-31 / 8 – 10% CH**	**Room 144 – Under Carpet**	**Good**

Plaster	**32-39 / <1 - 4% CH**	**Throughout Bldg.**	**Good**
Wallboard	40-41/ ND	Room 141 (Rear), Room 142 (Front)	Good
2' x 2' Acoustic ceiling tile (straight hole)	42-44/ ND	Room 141/142	Good
12" Vinyl floor tile (white with brown) with associated mastic	**45-47 / 3 - 8% CH**	**Room 148 and Lab Prep Area**	**Good**
12" Acoustic ceiling tile (pin hole)	48-50/ ND	Room 144 Office and Computer Lab Area	Good
Base cove (gray)	51-52/ ND	Room 146	Good

Notes: The following areas were inaccessible on the day this building was surveyed and therefore not known if asbestos is present:

- None

Reprographics – Building #37

Material Description	Sample Number	Material Location	Material Cond.
TSI – pipe insulation (all sizes)	**2, 8 (assumed)**	**Attic**	**Good**
TSI – pipe elbows (all sizes)	**1, 7 (assumed)**	**Attic**	**Good**
TSI Debris	3/ ND	Crawlspace Under Room 168	Sig. Damaged
Tan Floor Tile Debris and associated mastic	**4-6 / 5 - 10% CH**	**Crawlspace Under Room 168**	**Sig. Damaged**
TSI – pipe elbows (all sizes)	**9 (assumed)**	**Utility Room near Men's Restroom**	**Good**
TSI – pipe insulation (all sizes)	**10 (assumed)**	**Utility Room near Men's Restroom**	**Good**
HVAC Duct Vibration Gasket	**11 (assumed)**	**Utility Room near Men's Restroom**	**Good**
Ceiling Tile Debris	12 / ND	Crawlspace Under Room 168	Sig. Damaged
Wall Plaster - Rough	13-14/ ND	Exterior Utility Room near Men's Restroom & Interior Utility Room	Good
Wall Plaster - Smooth	15-20/ ND	Throughout Bldg.	Good
2' x 3' Acoustic Ceiling Tile	21-25/ ND	Throughout Bldg.	Good
Vinyl Floor Tile and associated mastic	**26-31 / 1 - 7% CH**	**Rooms 168/169 – Under Carpet**	**Good**
Orange Base Cove and associated mastic	32-34/ ND	Print Room	Good

Black Base Cove and associated mastic	35-37/ ND	Garage/Store Room	Good
Brown Base Cove and associated mastic	38-40/ ND	Rooms 163 and 169	Good
Stucco	41/ ND	Exterior	Good
12" x 12" Acoustic Ceiling Tile	44/ ND	Rooms 162 - 164	Good
Vinyl Floor Tile and associated mastic	**47-49 / 5 - 10% CH**	**Rooms 162 – 164; Under Carpet**	**Good**
12" x 12" Acoustic Ceiling Tile (random hole)	50-52/ ND	Garage/Store Room	Good .
2' x 4' Acoustic Ceiling Tile	53-54/ ND	Room 168 – Above existing ceiling	Good
Wallboard with associated joint compound	55-58/ ND	Throughout Bldg.	Good

Notes: The following areas were inaccessible on the day this building was surveyed and therefore not known if asbestos is present:

- No Access – Telephone Equipment Room 1; Door Jammed

Planetarium – Building #39

Material Description	Sample Number	Material Location	Material Cond.
Vinyl Sheet flooring (tan)	**1-3 / 7% CH**	**Throughout Bldg. – Under Carpeting**	**Good**
Wallboard and associated joint compound (< 1%)	**4-8 / <1% CH**	**Throughout Bldg.**	**Good**
Base cove (brown) and associated mastic	9-10/ ND	Throughout Bldg.	Good
Plaster	11-12/ ND	Planetarium Hallway	Good
Exterior covering (rough coat)	13-14/ ND	Planetarium Exterior; at round portion	Good
Stucco	15-16/ ND	Exterior	Good

Notes: The following areas were inaccessible on the day this building was surveyed and therefore not known if asbestos is present:

- No Access   Small closet at South entry to Planetarium

Science Hall – Building #40

Material Description	Sample Number	Material Location	Material Cond.
Acoustic ceiling	**1-3,8, 10 / 6% CH**	**Lecture Seating Area**	**Good**
Wallboard with joint compound	**4-6,28-30 / <1-3% CH**	**Throughout Bldg.**	**Good**
Base cove (black) with associated mastic	7,14,19/ ND	Throughout Bldg.	Good
Wall plaster	9,23,24/ ND	Throughout Bldg.	Good
Stucco (< 0.1%) pt. count	35-37/ (< 0.1%)	Exterior	Good
Acoustic ceiling tile mastic (brown)	11-13/ ND	Room 110 and 110A	Good
Base cove mastic (white)	15/ ND	Room 131	Good
Fire rated door (FRD)	**16 (assumed)**	**Room 110A**	**Good**
Transite panels	**17 (assumed)**	**Below windows at offices**	**Good**
Acoustic ceiling tile mastic (brown)	18/ ND	Room 110	Good
HVAC Duct Seam tape	20-22/ ND	Attic at 134	Good
2' x 3' Acoustic ceiling tile	25/ ND	Throughout Office Area	Good
Grout	26/ ND	North Side of Bldg. At Small Tiled Area	Good
12" Acoustic ceiling tile (pinhole pattern)	27/ ND	Throughout Office Area	Good
Window putty	31-34/ ND	North Side of Bldg. at Offices	Good

Notes: The following areas were inaccessible on the day this building was surveyed and therefore not known if asbestos is present:

- None

Science Lecture – Building #41

Material Description	Sample Number	Material Location	Material Cond.
Spray Applied Cementous Ceiling Material (A/C) (<1%)	**1 – 3 / <1% CH**	**Foyer Ceiling**	**Good**
12" Beige Vinyl Floor Tile and associated mastic	**4, 5, 9 / 3-10% CH**	**Rear Prep/Storage Area at Stage**	**Good**
Brown Base Cove Mastic	**6 – 8 / 4%**	**Rear Prep/Storage Area at Stage**	**Good**

	AN		
Black Base Cove Mastic	10 - 12/ ND	Rear Prep/Storage Area at Stage	
Spray Applied Acoustic Ceiling Material	**13 – 16 / 3% CH**	**Room 101/102**	Good
12" Acoustic Ceiling Tile - Rough	17-19/ ND	Room 5 - Storage	**Good**
12" Brown Vinyl Floor Tile and associated mastic	**20, 23-24 / 3-10% CH**	**Projection Rooms 5 & 6**	**Good**
Fireproofing	**21, 22, 25 / 6% CH**	**Structural Members Throughout**	**Good**
Wall Plaster	26 – 28/ ND	Throughout Bldg.	Good

Notes: The following areas were inaccessible on the day this building was surveyed and therefore not known if asbestos is present:

- None

Allied Health – Building #50

Material Description	Sample Number	Material Location	Material Cond.
Yellow Carpet glue	1/ ND	Room 110	Good
2' x 3' Acoustic ceiling tile (random pinhole)	2-4/ ND	Room 110 and Middle Lab Prep Area	Good
Tan Base Cove with associated mastic	5-6/ ND	Room 110	Good
Wallboard with associated joint compound	7-9/ ND	Throughout Bldg.	Good
Plaster (<1%)	**10,11 / <1% CH**	**Room 110, Room 112 (Custodial)**	**Good**
Vapor barrier paper	12-14/ ND	Rear Exterior Closet at Room 110	**Good**
Stucco (< 0.1%) pt. count	15-19/ < 0.1% CH	Exterior	Good

Notes: The following areas were inaccessible on the day this building was surveyed and therefore not known if asbestos is present:

- No Access - Rear utility area behind cove

Home Economics – Building #71

Material Description	Sample Number	Material Location	Material Cond.
Fire rated door	**assumed**	**Room 114 Rear Utility Closet (Qty. 1)**	**Good**
HVAC Duct Seam tape	**assumed**	**Room 114 Rear Utility Closet**	**Good**
Transite Panels	**3 / 12% CH**	**Panels Below Windows – Entire Bldg.**	**Good**
Plaster	4-9/ ND	Throughout Bldg.	Good
Vinyl floor tile (green) and associated mastic	**10-12 / 4-10% CH**	**Throughout Bldg. – Under Carpet**	**Good**
Base cove (brown, tan & grey) and associated mastic	13-17/ ND	Brown – Room 112, Tan – Room 113, Grey – Room 111/112/114	Good
2' x 2' Acoustic wall tile	18-20/ ND	Throughout Bldg.	Good
Window putty	21-22/ ND	Throughout Bldg.	Good
12" Acoustic ceiling tile (random pattern)	23-25/ ND	Throughout Bldg.	Good
Stucco	26-28/ ND	Entire Bldg.	Good

Notes: The following areas were inaccessible on the day this building was surveyed and therefore not known if asbestos is present:

- Bldg. 71, Room 110, Rear Utility Closet: Door was "rain swollen" and not accessible.

Home Economics – Building #72

Material Description	Sample Number	Material Location	Material Cond.
Metal Fire doors (Qty. 2)	**1 (assumed)**	**Room 102 Offices at HVAC Closet**	**Good**
TSI – pipe insulation (all sizes)	**2 (assumed)**	**Throughout Attic**	**Good**
TSI – pipe elbow	**3 (assumed)**	**Throughout Attic**	**Good**
Metal Fire doors (Qty. 2)	**4 (assumed)**	**Room 108 Exterior HVAC Closet**	**Good**
Metal Fire doors (Qty. 3)	**5 (assumed)**	**Exterior Utility Closet at Room 107 (Playground Area)**	**Good**
Transite Panels	**6 (assumed)**	**Entire Bldg. Exterior below windows**	**Good**
2' x 2' Acoustic Wall Tile (straight hole pattern)	7-10/ ND	Throughout Bldg. (Rooms 103 & 107)	Good
Spray Applied Acoustic Ceiling Material	11-14/ ND	Throughout Bldg.	Good
Vinyl floor tile (peach)	**15-17 /**	**Room 107**	**Good**

and associated mastic	**8% CH**		
Carpet mastic	18/ ND	Room 102 – Office Hallway	Good
Plaster	19-21/ ND	Throughout Bldg.	Good
2' x 3' Acoustic ceiling tile	22-24/ ND	Room 104	Good
12" Vinyl floor tile (white)	25-27/ ND	Rooms 105 & 106	Good
Wallboard with associated joint compound (< 1%)	**28-32 / <1% CH**	**Throughout Bldg.**	**Good**
Base cove (tan)	33-35/ ND	Throughout Bldg. (Rooms 104,106,108)	Good
12" Acoustic ceiling tile (random hole pattern)	36-40/ ND	Throughout Bldg.	Good
Base cove (black)	41-43/ ND	Throughout Bldg. (Rooms 101,102,103)	Good
Stucco	44-46/ ND	Exterior	Good

Notes: The following areas were inaccessible on the day this building was surveyed and therefore not known if asbestos is present:

- No Access – Food Lab Closet in Faculty Area at Room 107

Forum – Building #81

Material Description	Sample Number	Material Location	Material Cond.
Stucco (<0.1% pt. count)	1-5 / <0.1% CH	Exterior	Good
Transite panels	**6-7 / 15-20% CH**	**Exterior; At Office Area Windows**	**Good**
Acoustic Ceiling Material	**8, 23-32 / <1-7% CH**	**Entire Bldg.**	**Good**
. Fire rated door	**09 (assumed)**	**Office Area Hallway at Sink Room; adjacent to Forum**	**Good**
Fire rated doors (Qty. 2)	**10 (assumed)**	**Office Area Hallway at HVAC Closet**	**Good**
Fire rated door	**11 (assumed)**	**Forum Seating Area at North Entry; Attic Access Door**	**Good**
HVAC Duct Seam Tape (TAP)	**12 (assumed)**	**Throughout Attic**	**Good**
Window putty	**15 & 16 / 2-3% CH**	**Faculty Office Area**	**Good**
Base cove (brown) and associated mastic	17-22/ ND	Throughout Bldg.	Good
2' x 2" Acoustic Wall Tile	33-34/ ND	Forum Seating Area; Rear	Good
Wallboard with associated joint compound (<1%)	**35-38 / <1% CH**	**Throughout Bldg.**	**Good**

12" Acoustic ceiling tile	39-41/ ND	Faculty Offices	Good
9" Vinyl floor tile (brown) and associated mastic	**42-44 / 4-6% CH**	**Forum Seating Area Entry and Exits**	**Good**
9" Vinyl floor tile (grey) and associated mastic	**45, 46 / 4-5% CH**	**Division Office; Film Room**	**Good**
Plaster	47-54/ ND	Throughout Bldg.	Good
9" Vinyl floor tile (beige) and associated mastic	**55-58 / 6-10% CH**	**Division Office at Film Room & Faculty Offices**	**Good**

Notes: The following areas were inaccessible on the day this building was surveyed and therefore not known if asbestos is present:

- None

Portside Cafe – Building #85

Material Description	Sample Number	Material Location	Material Cond.
TSI Pipe elbow	**assumed**	**Attic above Café Storage Room**	**Good**
Transite panels	**assumed**	**Café Service/Side Entrance – South Side**	**Good**
Sheet flooring (grey)	3-5/ ND	Retail and Kitchen Area	Good
Plaster	6-9/ ND	Entire Bldg.	Good
x 3' Acoustic ceiling tile	10-11/ ND	Exterior Office	Good
Base cove and mastic (black)	12-14 & 23/ ND	Entire Bldg.	Good
12" Acoustic ceiling tile (rough)	15-17/ ND	Café Break Room	Good
Stucco	18-20/ ND	Exterior of Bldg.	Good
Wallboard	21-22/ ND	Exterior Office	Good
12" Acoustic ceiling tile (semi-rough)	24-26/ ND	Retail Area	Good

Notes: The following areas were inaccessible on the day this building was surveyed and therefore not known if asbestos is present:

Administration – Building # 1

Material Description	Sample Number	Material Location	Material Cond.
Wallboard (<1%)	**1-3 / <1% CH**	**Throughout Bldg.**	**Good**
Stucco	4-6/ ND	Exterior	Good
Fireproofing material	7-8/ ND	Attic - Throughout	Good

12" Acoustic ceiling tile	9-10/ ND	Throughout Bldg.	Good

Notes: The following areas were inaccessible on the day this building was surveyed and therefore not known if asbestos is present:

- None

Student Health Center – Building #89

Material Description	Sample Number	Material Location	Material Cond.
Fireproofing material (sprayed on)	1 (assumed)	Throughout Bldg. On Structural Members	Good
TSI – pipe insulation (multiple sizes)	**2 (assumed)**	**Throughout Bldg. – Attic**	**Good**
TSI Pipe elbows (multiple sizes)	**3 (assumed)**	**Throughout Bldg. – Attic**	**Good**
Fireproofing material (sprayed on)	4-7/ ND	Throughout Bldg. On Structural Members	Good
12" Vinyl floor tile (white with blue)	**8-10 / 15 –25% CH**	**Throughout Bldg.**	**Good**
Wallboard	11-13/ ND	Throughout Bldg.	Good
Vinyl sheet flooring (white cobble pattern)	**14-16 / 25-30% CH**	**West Custodial Closet**	**Good**
Exterior cement	17-19/ ND	Exterior	Good
12" Acoustic ceiling tile	20-21/ ND	Room 110	Good
Base cove (black) and associated mastic	22/ ND	Exterior Telephone Closet	Good
Base cove (gray) and associated mastic	23-25/ ND	Throughout Bldg.	Good
2' x 2' Acoustic ceiling tile (smooth pinhole pattern)	26-28/ ND	Throughout Bldg.	Good
Carpet mastic	29/ ND	Room 110	Good
2' x 2' Acoustic ceiling tile (rough)	30-32/ ND	Throughout Bldg.	Good

Notes: The following areas were inaccessible on the day this building was surveyed and therefore not known if asbestos is present:

- No Access - Exterior Bio-hazardous Waste Storage Room

Gymnasium – Building #91

Material Description	Sample Number	Material Location	Material Cond.
HVAC expansion joint gasket (WOV)	**1 (assumed)**	**Copy Room Attic; at Dance Room B**	**Damaged**
HVAC Duct seam tape (TAP)	**2 (assumed)**	**Copy Room Attic; at Dance Room B**	**Good**
Fire door (Qty. 1)	**3 (assumed)**	**Copy Room Attic; at Dance Room B**	**Good**
HVAC expansion joint gasket (WOV)	**4 (assumed)**	**Dance Room B; Storage Room - Attic**	**Damaged**
HVAC Duct seam tape (TAP)	**5 (assumed)**	**Dance Room B; Storage Room - Attic**	**Good**
Fire door (Qty. 1)	**6 (assumed)**	**Dance Room B; Storage Room - Attic**	**Good**
12" Acoustic ceiling tile (pin hole)	7 (assumed)	Fitness Studio/Aerobics Room	Good
Plaster	8/ ND	Dance Room B	Good
2' x 3' Acoustic ceiling tile	9-11/ ND	Gymnasium Entry Foyer	Good
12" Acoustic ceiling tile (pin hole)	12-13/ ND	Gymnasium Foyer & Restrooms	Good
12" Vinyl floor tile (white/blue)	**14-16 /6-10% CH**	**Gymnasium Foyer & Restrooms**	**Good**
Acoustic ceiling tile mastic	17-18,103, 104/ ND	Gymnasium Foyer & Restrooms	Good
Stucco	19,108-112/ ND	Division Offices	Good
Smooth Cement Exterior Wall Material (<0.1% pt. count)	20,105,106,107 / <0.1% CH	Dance Room C	Good
Wallboard (<1%)	**21 / <1% CH**	**Gymnasium Foyer (ceiling above existing acoustic ceiling tiles)**	**Good**
Wallboard and associated joint compound	22-25/ ND	Throughout Bldg.	Good

Notes: The following areas were inaccessible on the day this building was surveyed and therefore not known if asbestos is present:

- Gymnasium Ceiling, suspect-ceiling tiles with associated mastic visible

Women's Locker Room – Building #92

Material Description	Sample Number	Material Location	Material Cond.
TSI Pipe elbow (4" diameter)	**1 (assumed)**	**Coed Team Room**	**Good**
HVAC Duct seam tape	**2 (assumed)**	**Throughout Bldg.**	**Good**
TSI Pipe elbow (4" diameter)	**3 (assumed)**	**Equipment Room at Laundry Area**	**Good**
TSI Pipe Cover Tape (on fiberglass insulated pipe)	4/ ND	Equipment Room at Laundry Area	Damaged
2' x 4' Acoustic ceiling tile	5-7/ ND	Faculty Offices	Good
12" Vinyl floor tile (white with blue)	8-9/ ND	Locker Room entry and Faculty Office Hallway	Good
Stucco (<0.1%) pt. count	10-11 / <0.1% CH	Exterior	Good
Vinyl sheet flooring (white)	12-14/ ND	Faculty Locker Room	Good
12" Acoustic ceiling tile (random hole) and mastic	15-18/ ND	Faculty Office 4	Good
Joint compound	19/ ND	Faculty Locker Room; above t-bar ceiling	Good
Base cove (black)	20-22/ ND	Throughout Bldg.	Good
Plaster	23-27/ ND	Throughout Bldg.	Good
Wallboard (< 1%)	**28-31 / <1% CH**	**Throughout Bldg.**	**Good**

Notes: The following areas were inaccessible on the day this building was surveyed and therefore not known if asbestos is present:

- None

Bookstore Warehouse– Building #144

Material Description	Sample Number	Material Location	Material Cond.
Wallboard	1-3/ ND	Throughout Bldg.	Good
Base cove (brown) and associated mastic	4/ ND	Throughout Bldg.	Good

Notes: The following areas were inaccessible on the day this building was surveyed and therefore not known if asbestos is present:

- None

Bookstore -- Building # 83

Material Description	Sample Number	Material Location	Material Cond.
HVAC Duct Seam Tape (TAP)	**1 (assumed)**	**Backroom near "Roll-up Door"**	**Good**
Acoustic ceiling material (sprayed on) (<1%)	**2-4, 15-17 / <1% CH**	**Throughout Bldg.**	**Good**
Wallboard (<1%)	**5-7 / <1% CH**	**Throughout Bldg.**	**Good**
12"x12" Vinyl Floor Tile (off-white) and associated mastic	8-10/ ND	Backroom	Good
2' x 3' Acoustic ceiling tile	11/ ND	Backroom	Good
White Linoleum flooring	12-13/ ND	Men's and Women's Restroom	Good
Floor tile (beige) and associated mastic	**14 / 4-7% CH**	**Men's Restroom Entry**	**Good**
Stucco (<0.1%) pt. count	**18-20 / <0.1% CH**	**Exterior**	
Cement	21/ ND	Exterior	Good

Notes: The following areas were inaccessible on the day this building was surveyed and therefore not known if asbestos is present:

- None

Men's Locker Room – Building # 96

Material Description	Sample Number	Material Location	Material Cond.
T.S.I. Pipe insulation (P/C)	**1 (assumed)**	**Men's Locker Room at HVAC Loft Above Equipment Room**	**Good**
T.S.I. Pipe elbow (ELB)	**2 (assumed)**	**Men's Locker Room at HVAC Loft Above Equipment Room**	**Good**
T.S.I. Pipe elbow (ELB)	**3 / 3% CH**	**Men's Locker Room at HVAC Loft Above Equipment Room – Floor Cavity**	**Sig. Damaged**
Woven duct insulation paper	4 / ND	**Men's Locker Room at HVAC Loft Above Equipment Room**	Good
12" x 12" Floor tile (white with blue)	5-7/ ND	**Men's Locker Room at Entry and Office Hallway**	Good
Wallboard	8-9,101-104/ ND	Throughout Bldg.	**Good**
Stucco	10-15/ ND	Exterior	Good

Notes: The following areas were inaccessible on the day this building was surveyed and therefore not known if asbestos is present:

- None

Pool Equipment Room Breezeway

Stucco	101-104/ ND	Pool Equipment Room at Bleachers	Good
T.S.I. Pipe insulation (P/C)	**(assumed)**	**Pool Equipment Room at Bleachers**	**Good**
T.S.I. Pipe elbow (ELB)	**(assumed)**	**Pool Equipment Room at Bleachers**	**Good**

Notes: The following areas were inaccessible on the day this building was surveyed and therefore not known if asbestos is present:

- None

Bursars Office – Building # 149

Material Description	Sample Number	Material Location	Material Cond.
HVAC duct seam tape (TAP)	**1 (assumed)**	**Attic above drop ceiling**	**Good**
HVAC duct seam tape (TAP)	2 / ND	Copy Room at HVAC Closet	Good
Linoleum flooring (yellow)	3-5/ ND	Copy Room	Good
Stucco	6-8/ ND	Exterior	Good
Wallboard	9-11/ ND	Throughout Bldg.	Good

Notes: The following areas were inaccessible on the day this building was surveyed and therefore not known if asbestos is present:

- None

Handball – Building # 97

Material Description	Sample Number	Material Location	Material Cond.
Plaster	1-3/ ND	Throughout Bldg.	Good
Stucco	4/ ND	Exterior At Offices	Good
Cement	5/ ND	Exterior at Tennis Courts	Good

Notes: The following areas were inaccessible on the day this building was surveyed and therefore not known if asbestos is present:

- None

Student Center – Building # 86

***Note: Duplicate sample numbers indicates additional site visits.

Material Description	Sample Number	Material Location	Material Cond.
12" Ceiling tile	1-3/ ND	Cafeteria Room 10 and Captain's Restaurant	Good
Wallboard (<1%)	**4-8 / <1% CH**	**Throughout Bldg.**	**Good**
Plaster	9-10/ ND	Exterior Rear Boiler Closet, Captain's Restaurant above ceiling level	Good
Ceiling tile mastic dots	11-12/ ND	Captain's Restaurant Area and Cafeteria Room 10	Good
12" Ceiling tile (semi-rough)	13-15/ ND	Captain's Restaurant Kitchen	Good
Stucco	3,16-19/ ND	Exterior	Good

Notes: The following areas were inaccessible on the day this building was surveyed and therefore not known if asbestos is present:

- None

Skill Center - Building # 47

Material Description	Sample Number	Material Location	Material Cond.
Transite Panels	**1-3 / 18% CH**	**Room 101, Welding Booths (Qty. 20)**	**Good**
HVAC Duct Seam Tape	**4 (assumed)**	**Room 101**	**Good**
HVAC Duct Vibration Gasket	**5 (assumed)**	**Room 101**	**Good**
Fireproofing	6-8/ ND	Structural Members Throughout	Good
12" Beige Multi-Colored Vinyl Floor Tile & Associated Mastic	**9-11, 27 / 8-10% CH**	**Office 101B, Office 102A and Classroom 103**	**Good**
Black Base Cove	12, 14, 26, 28/ ND	Throughout Bldg.	Good
Base Cove Mastic	13, 15, 25, 29/ ND	Throughout Bldg.	
12" Acoustic Ceiling Tile Mastic (Brown)	16-17/ ND	Room 101 – Hydraulic Press Room	Good

12" Acoustic Ceiling Tile	18-19/ ND	Room 101 – Hydraulic Press Room	Good
Wallboard and associated joint compound (< 1%)	**20, 23-24, 30-32 / <1% CH**	**Throughout Bldg.**	
Green Welding Curtains	21/ ND	Room 101 at north rear of room	Good
White Welding Curtains	**22 / 100% CH**	**Room 101 at north rear of room**	**Good**

Notes: The following areas were inaccessible on the day this building was surveyed and therefore not known if asbestos is present:

- None

Skill Center – Bldg. # 47 & Middle Classrooms & Bldg. # 48

Material Description	Sample Number	Material Location	Material Cond.
2' x 4' Acoustic Ceiling Tile	1-2, 9/ ND	Room 104	Good
HVAC Duct Seam Tape	3-4/ ND	Throughout Attic	Good
Wallboard and associated joint compound (< 1%)	**5-6 / <1% CH**	**Room 104**	**Good**
Brown Base Cove & Mastic	7-8, 10-11/ ND	Throughout Bldg.	Good
Transite Panels	**assumed**	**Skill Center #47 Middle Classrooms below windows**	**Good**
Woven Fume Ventilation System Gaskets	**assumed**	**Skill Center #47; Welding 101**	Good
12" Acoustic Ceiling Tile and associated mastic	12-13/ ND	Skill Center #48; Computer Lab at Rooms 104/105	Good
Acoustic Ceiling & Wall Panels	14-16/ ND	Airframe Room 110	Good
Transite Panels	**assumed**	**Skill Center # 48; Airframe Room 110**	
12" Beige Multi-Colored Vinyl Floor Tile & Associated Mastic	**17-19 / 4-10% CH**	**Skill Center # 48; Airframe Room 110B Office and 110A Office**	**Good**
Woven Cloth Wall & Ceiling Covering	20-22/ ND	Wind Tunnel/Sound Room	Good
Wallboard and associated joint compound	**23-25 / <1% CH**	**Throughout Airframe 110**	**Good**

Notes: The following areas were inaccessible on the day this building was surveyed and therefore not known if asbestos is present:

- None

Allied Health- Building #49

Material Description	Sample Number	Material Location	Material Cond.
12" Acoustic Ceiling Tile-Straight Hole pattern	1-3/ ND	Throughout Bldg.	Good
Wall Plaster	4-6/ ND	Throughout Bldg.	Good
Stucco	7-10/ ND	Exterior	Good
Beige Vinyl floor Tile & Associated Mastic	**11-13 / 8-15% CH**	**Room 105; Under Carpet**	**Good**
Brown Base Cove & Mastic	14-16/ ND	Throughout Bldg.	Good
Flooring Mastic (black)	**17 / 5% CH**	**Room 103; Under Carpet**	**Good**
Carpet Glue	**185% CH**	**Room 101**	**Good**
Window Putty (< 1%)	**19-20 / < 1%**	**Exterior**	**Good**

Notes: The following areas were inaccessible on the day this building was surveyed and therefore not known if asbestos is present:

- None

Horticulture - Building #64

Material Description	Sample Number	Material Location	Material Cond.
Blue Base Cove & associated mastic	1-3/ ND	Room 102	Good
Wallboard with associated joint compound (< 1%)	**4-8 / <1% CH**	**Throughout Bldg.**	**Good**
Wall Plaster	9-10/ ND	Chemical Room (Northeast Unattached Bldg.)	Good
Window Putty	**11-13 / 3% CH**	**Chemical Room (Northeast Unattached Bldg.)**	**Good**
Brown Base Cove & Associated Mastic	**14-16 / 2% AN**	**Room 101**	**Good**
12" Tan With Pattern Vinyl Floor Tile	**17-19 / 10% CH**	**Room 102 at Entry**	**Good**
2' x 3' Acoustic Ceiling Tile	20-22/ ND	Room 103A	Good
Stucco (< 0.1%) pt. count	23-24/ <0.1% CH	Chemical Room (Northeast Unattached Bldg.)	Good
Stucco	25-26/ ND	Small Maintenance Office (Northwest Unattached Bldg.) - near Chemical Room	Good
Cementous Exterior Finish	27-29/ ND	Exterior	Good

Notes: The following areas were inaccessible on the day this building was surveyed and therefore not known if asbestos is present:

- None

Horticulture Storage – Building #51

- No Access – Steel sided building with no visible suspect materials.

Lewis Applied Science- Building #42

Material Description	Sample Number	Material Location	Material Cond.
Fireproofing	1 (assumed)	Throughout Bldg. On Structural Members	Good
Fireproofing	10, 19, 30/ ND	Throughout Bldg. On Structural Members	Good
2' x 4' Acoustic Ceiling Tile	2, 9, 18, 36-37/ ND	Throughout Bldg.	Good
Wall Plaster	3, 14, 20-21/ ND	Throughout Bldg.	Good
Black Base Cove and associated mastic	**4-7, 38-39 / 2% AN**	**Throughout Bldg.**	Good
12" Acoustic Ceiling Tile	8/ ND	Entry Area	Good
12" Beige Vinyl Floor Tile & Mastic	**11-12, 17 / 2-5% CH**	**Rooms 101, 104, 119, 209, 210, and 211**	**Good**
TSI Pipe Elbows	**13 (assumed)**	**Attic (above Room 104)**	**Good**
12" Beige Multi-Colored Vinyl Floor Tile & Mastic	**15-16 / 2-4% CH**	**Room 103 and 103A**	**Good**
Stucco	**22 (assumed)**	**2nd Floor External Soffit near Café**	**Good**
TSI Pipe Insulation & TSI Elbows (multiple sizes)	**23 (assumed)**	**2nd Floor External HVAC Room**	**Good**
Woven HVAC Expansion Gasket	**24 (assumed)**	**2nd Floor External HVAC Room**	**Good**
HVAC Duct Seam Tape	25/ ND	2nd Floor External HVAC Room	Good
TSI Pipe Insulation & TSI Elbows (multiple sizes)	**26 (assumed)**	**1st Floor Exterior Compressor Room**	
Elbow - 10" Diameter	**27 / 3% CH**	**Southwest Utility Room at Boiler**	**Good**
Stucco	**28**	**2nd Floor External Soffit at South End of Bldg.**	**Good**

	(assumed)		
Insulation at Floor Penetration	29/ ND	1st Floor Exterior Compressor Room	Damage
TSI Pipe Insulation	**31 / 5% CH & 10% AM**	**Southwest Utility Room at Boiler**	**Good**
TSI Pipe Elbow	**32 / 5% CH**	**Southwest Utility Room at Boiler**	**Good**
Wall Plaster-Rough	33-35/ ND	Southwest Utility Room at Boiler	Good

Notes: The following areas were inaccessible on the day this building was surveyed and therefore not known if asbestos is present:

- No Access – Walls covered with aluminum siding throughout interior
- No Access – Rooms 212 thru 213

Chemistry– Building #69

Material Description	Sample Number	Material Location	Material Cond.
Fireproofing	**1 (Assumed)**	**Structural Members Throughout**	**Good**
Fireproofing	37-38/ ND	On Structural Members Throughout Bldg.	Good
TSI Elbow	2 / ND	2nd Floor - Room 3; Utility Room	Good
HVAC Duct Expansion Joint	**3 (Assumed)**	**2nd Floor Utility Room 2 (Qty. 6)**	**Good**
HVAC Joint Seam Tape	**4 (Assumed)**	**2nd Floor Utility Room 2**	**Good**
Water/Chiller Line End cap at Gauge	5/ ND	2nd Floor Utility Room 2	Damage
Transite Table Tops	**Assumed**	**Laboratory Room 115 - Throughout**	**Good**
Fire Rated Door	**6,9,11,12 (Assumed)**	**½ & ½ Doors Throughout Middle Office Area (Qty. 4)**	**Good**
Yellow/Brown Sheet Flooring	**7 / 25% CH**	**Room 121**	**Good**
Brown Multi Sheet Flooring	**8,15,16 / 25% CH**	**1st Floor Middle Office Area and All Interior Areas of same**	**Good**
Orange Multi Sheet Flooring	**10,27,28 / 25% CH**	**Throughout Rooms 124 & 126 & 129**	**Good**
Leveling Compound	17/ ND	Room 124 – Under Carpet	Good
Green/Yellow Sheet Flooring	**18-20 / 25% CH**	**Rooms 115 & 118 Throughout**	**Good**
Wallboard with associated joint compound	21-26/ ND	Throughout Bldg.	Good
2" Acoustic Ceiling Tile	29-31/ ND	2nd Floor At Faculty Offices	Good

Yellow/Brown Sheet Flooring	**32-33 / 25% CH**	**Room 124 Middle and Middle Lab Area**	**Good**
2' Acoustic Ceiling Tile	34-36/ ND	Throughout Bldg.	Good
Acoustic Ceiling	39-42/ ND	Lecture Halls	Good
Brown Base Cove & Mastic	43-46/ ND	Throughout Bldg.	Good
Stucco	47-48/ ND	2nd Floor Side Entry near Horticulture Bldg.	Good
Cement Siding- Rough	49-52/ ND	Exterior and at Foyer	Good
Smooth Cement Material	53/ ND	Overhang at Side Entry to 121/118	Good

Notes: The following areas were inaccessible on the day this building was surveyed and therefore not known if asbestos is present:

- None

Exercise Science– Building #83

Material Description	Sample Number	Material Location	Material Cond.
TSI Elbows-3"	**1 (Assumed)**	**Exercise Lab Attic at Access Panel (Qty. 3)**	**Damage**
TSI Pipe Insulation-3"	**2 (Assumed)**	**Exercise Lab Attic at Access Panel**	**Damage**
TSI Elbows-3"	**3 (Assumed)**	**Exercise Science Classroom; above T-bar ceiling**	**Good**
Black Base Cove	4/ ND	First Floor Exercise Lab	Good
Grey Base Cove	5/ ND	Faculty Office G; 2nd Floor	Good
2' x 3' Acoustic Ceiling Tile	6-8/ ND	Exam Room and North Classroom	Good
9" Beige Vinyl Floor Tile and associated mastic	**9-11 / 3% CH**	**Faculty Office Stairwell and Offices Under Carpet**	**Good**
TSI Elbows-3"	**12 (Assumed)**	**2nd Floor Faculty Offices South Utility Closet at Roof Access**	
TSI Pipe Insulation-3"	**(Assumed)**	**2nd Floor Faculty Offices South Utility Closet at Roof Access**	
HVAC Duct Seam Tape	**13,14 (Assumed)**	**2nd Floor Faculty Offices South Utility Closet at Roof Access**	**Good**
Beige Sheet Flooring	15-18/ ND	**Faculty Office Stairwell**	Good
Ceiling Tile Mastic	19/ ND	1st Floor Exercise Room	Damage
Carpet Glue	**20 / 10% CH**	**1st Floor Exercise Room**	**Good**
Stucco	21-22/ ND	Exercise Science	Good
Wall Plaster	23-24/ ND	Throughout Bldg.	Good
Tan Vinyl Floor Tile and associated mastic	**25-28 / 4-6% CH**	**1st Floor Exercise Science Rooms – Under Carpet**	**Good**
12" Blue Vinyl Floor Tile	**29-32 / 5%**	**2nd Floor Faculty Office – Men's & Women's**	**Good**

with associated mastic	**CH**	**Restrooms**	
2" Acoustic Ceiling Tile (random hole pattern)	33-34/ ND	1st Floor Exercise Lab – Fitness Rooms	Good
12" Acoustic Ceiling Tile (semi rough random hole pattern)	35-36/ ND	1st Floor Exercise Lab – Fitness Rooms	Good
12" Acoustic ceiling Tile-Random Hole	37-39/ ND	2nd Floor Faculty Office Area	Good
Wallboard with associated joint compound (< 1%)	**40-46 / <1% CH**	**Throughout Bldg.**	**Good**

Notes: The following areas were inaccessible on the day this building was surveyed and therefore not known if asbestos is present:

- None

Social Science– Building #80

Material Description	Sample Number	Material Location	Material Cond.
Fire Rated Door	**1 (Assumed)**	**Utility Room near Classroom 112**	**Damage**
2' Acoustic Wall Tile	2-4/ ND	Throughout Bldg.	Good
Wall Plaster	5-7/ ND	Men's & Women's Restrooms and Utility Room	Good
Window Putty	8/ ND	Room 101	Good
12" Acoustic Ceiling Tile-Random Hole	9-11/ ND	Above T-Bar Ceiling in Rooms 101, 106, 110	Good
Stucco (< 0.1% pt. count)	12-14/ <0.1% CH	Exterior	Good
Cement-Exterior	15/ ND	Exterior	Good
Smooth Coat-Exterior	16-18/ ND	Exterior	Good
2' x 3' Acoustic Ceiling Tiles	19-21/ ND	Throughout Bldg.	Good
Smooth Coat-Interior	22/ ND	Room 101	Good
Rough Coat-Beams	23-26/ ND	Throughout Bldg.	Damage
Wallboard-Joint Comp. (< 1%)	**27-32 < 1% CH**	**Throughout Bldg.**	**Good**
Vinyl Floor Tile & Mastic	**33-39 / 3-10% CH**	**Throughout Bldg. Under Carpet**	**Good**
Leveling Compound	40-41/ ND	Rooms 110 & 112 Under Carpet	Good
Black Base Cove & Mastic	42-43/ ND	Throughout Bldg.	Good

Notes: The following areas were inaccessible on the day this building was surveyed and therefore not known if asbestos is present:

- None

Computing Center– Building #73

Material Description	Sample Number	Material Location	Material Cond.
Fireproofing	**1 (Assumed)**	**Exterior Utility Closet near Social Science Bldg.**	**Good**
TSI Pipe Insulation	**2 (Assumed)**	**2nd Floor - Interior Loft Equipment Room near Elevator**	**Sig. Damage**
TSI Pipe Elbows	**3 / 3% CH & 3% AM**	**2nd Floor - Interior Loft Equipment Room near Elevator**	**Slight Damage**
Fire Door	**4 (Assumed)**	**2nd Floor - Interior Loft Room D-12 Equipment**	**Good**
Fire Door	**5 (Assumed)**	**Classroom 105 at Storage Room**	**Good**
9" Beige Vinyl floor Tile	**6 / 3% CH**	**Classroom 105 at Storage Room**	**Good**
Fireproofing	**7 / 10% CH**	**Classroom 6; Above T-Bar Ceiling System**	**Good**
2' x 3' Acoustic Ceiling Tiles	8/ ND	Classroom 6; Above T-Bar Ceiling System	Good
Blue Base Cove	9-10/ ND	Throughout Bldg.	Good
Wall Plaster-Smooth Coat	11-14/ ND	Throughout Bldg.	Good
Wall Plaster-Rough Coat	15/ ND	Room D-12; Ceiling	Good
Vinyl Floor Tile and associated mastic	**16-17 / 4-8% CH**	**At Classroom 105 & Elevator – Under Carpet**	**Good**
Wallboard-Joint Compound (< 1%)	**18-21 / < 1% CH**	**Throughout Bldg.**	**Good**
Stucco	22-24/ ND	Exterior; Overhang	Good
Exterior Smooth Coat	25-26/ ND	Exterior	Good

Notes: The following areas were inaccessible on the day this building was surveyed and therefore not known if asbestos is present:

- No Access – Small Doors at Elevator

Business Education– Building #12

Material Description	Sample Number	Material Location	Material Cond.
12" Acoustic Ceiling Tile & Mastic	1/ ND	Room 104 Utility Closet	Damage
Transite Pipe	**2 (Assumed)**	**Room 104 Utility Closet**	**Damage**

Stucco	3/ ND	Exterior	Good
[illegible] x 4' Acoustic Ceiling & Wall Tiles	4, 13-14, 21-22/ ND	Throughout Bldg.	Good
Wallboard-Joint Comp.	5,17-20, 27/ ND	Throughout Bldg.	Good
Black Base Cove & Mastic	6,16/ ND	Throughout Bldg.	Good
Flooring Mastic	7/ ND	Room 104	Good
Stucco	8/ ND	Exterior	Good
9" Grey Vinyl Floor Tile & Mastic	**9-11 / 5-8% CH**	**Exterior Custodial Closet at Room 104**	**Good**
Flooring Bullnose	**12 / 6% CH**	**Exterior Custodial Closet at Room 104**	**Good**
Flooring Mastic	**15 / 3% CH**	**Room 103 – Under Carpet**	**Good**
Tan Vinyl Floor Tile & Mastic	**23-26 / 5-8% CH**	**Rooms 101A & 101B**	**Good**
Window Putty	**28-32 / 3-5% CH**	**Exterior**	**Good**

Notes: The following areas were inaccessible on the day this building was surveyed and therefore not known if asbestos is present:

- None

Faculty House– Building #11

Material Description	Sample Number	Material Location	Material Cond.
Stucco	1,19-20/ ND	Exterior	Good
12" Pink Vinyl Floor Tile & Mastic	**2-4 / 4-15% CH**	**Main Entry Area**	**Good**
9" Orange Vinyl Floor Tile & Mastic	**5-7 / 5-15% CH**	**Kitchen, Custodial Closet and HVAC Closet**	**Good**
Vent Pipe Gasket	**8 / 4% CH**	**HVAC Closet at vent pipe**	**Good**
White Base Cove & Mastic	9/ ND	Bathroom	Good
Black Base Cove & Mastic	10-11/ ND	Kitchen and Utility Closet	Good
White Cobble Linoleum (Sub Floor)	**12-14 / 6-8% CH**	**Bathroom**	**Good**
Wallboard-Joint Compound (< 1%)	**15-18 / < 1% CH**	**Throughout Bldg.**	**Good**

Notes: The following areas were inaccessible on the day this building was surveyed and therefore not known if asbestos is present:

- No Access – Academic Senate Area

- No Access Coast Federation of Educators/AFT Local 1911 Office

Consumer Health Sciences – Building #43

Material Description	Sample Number	Material Location	Material Cond.
12" Acoustic Ceiling Tiles	1-3/ ND	Throughout Bldg.	Good

Notes: The following areas were inaccessible on the day this building was surveyed and therefore not known if asbestos is present:

- No Access – Attic or Plenum Area

Literature & Languages– Building #70

Material Description	Sample Number	Material Location	Material Cond.
HVAC Expansion Gasket-Woven	**1,3 (Assumed)**	**1st and 2nd Floor Utility/Equipment Rooms (Qty. 2 Each Room)**	**Good**
HVAC Duct Joint Tape	**2,4 (Assumed)**	**1st and 2nd Floor Utility/Equipment Rooms (Qty. 2 Each Room)**	**Good**
Fire Rated Doors	**5-22 (Assumed)**	**All Doors On First Floor**	**Damage**
Fire Rated Doors	**23 (Assumed)**	**All Doors On Second Floor**	**Damage**
Fireproofing-Spray Applied	24-25/ ND	1st Floor Custodial Room	Good
Formed Cement Wall Finish Material	26-27/ ND	Exterior & Interior	Good
2' x 4' Acoustic Ceiling Tile	28-30/ ND	Throughout Bldg.	Good
Leveling Compound	31/ ND	Room 146 Under Carpet	Good
Black Base Cove & Mastic	32-33/ ND	Throughout Bldg.	Good
Wallboard-Joint Compound (< 1%)	**34-38 / < 1% CH**	**Throughout Bldg.**	**Good**

Notes: The following areas were inaccessible on the day this building was surveyed and therefore not known if asbestos is present:

- None

Strength Lab – Building #139

Material Description	Sample Number	Material Location	Material Cond.

Black Base Cove & Mastic	1-3/ ND	Throughout Bldg.	Good
llboard-Joint Compound	4-6/ ND	Throughout Bldg.	Good

Notes: The following areas were inaccessible on the day this building was surveyed and therefore not known if asbestos is present:

- None

Golden West College

Summary of Findings

The following building materials were sampled for asbestos content:

Bolded items indicate asbestos containing materials
ND indicates no asbestos detected in samples

Community Services Building #1

Material Description	Sample Number	Material Location	Material Cond.
Wallboard material	1,101,102, 107/ ND	Throughout Bldg.	Good
Wall Plaster	108,109, 110/ ND	Kitchen Area, Utility Closet	Good
9" x 9" Floor tile (beige) and associated mastic	**2-4 / 5-10% CH**	**Kitchen Area**	**Good**
2' x 3' Ceiling tile	5,105,106/ ND	Office Area	Good
Carpet Glue	111/ ND	Throughout Bldg.	Good
Black Base Cove and Mastic	112,113/ ND	Throughout Bldg.	Good
Stucco	6,103,104/ ND	Exterior	Good

Notes: The following areas were inaccessible on the day this building was surveyed and therefore not known if asbestos is present:

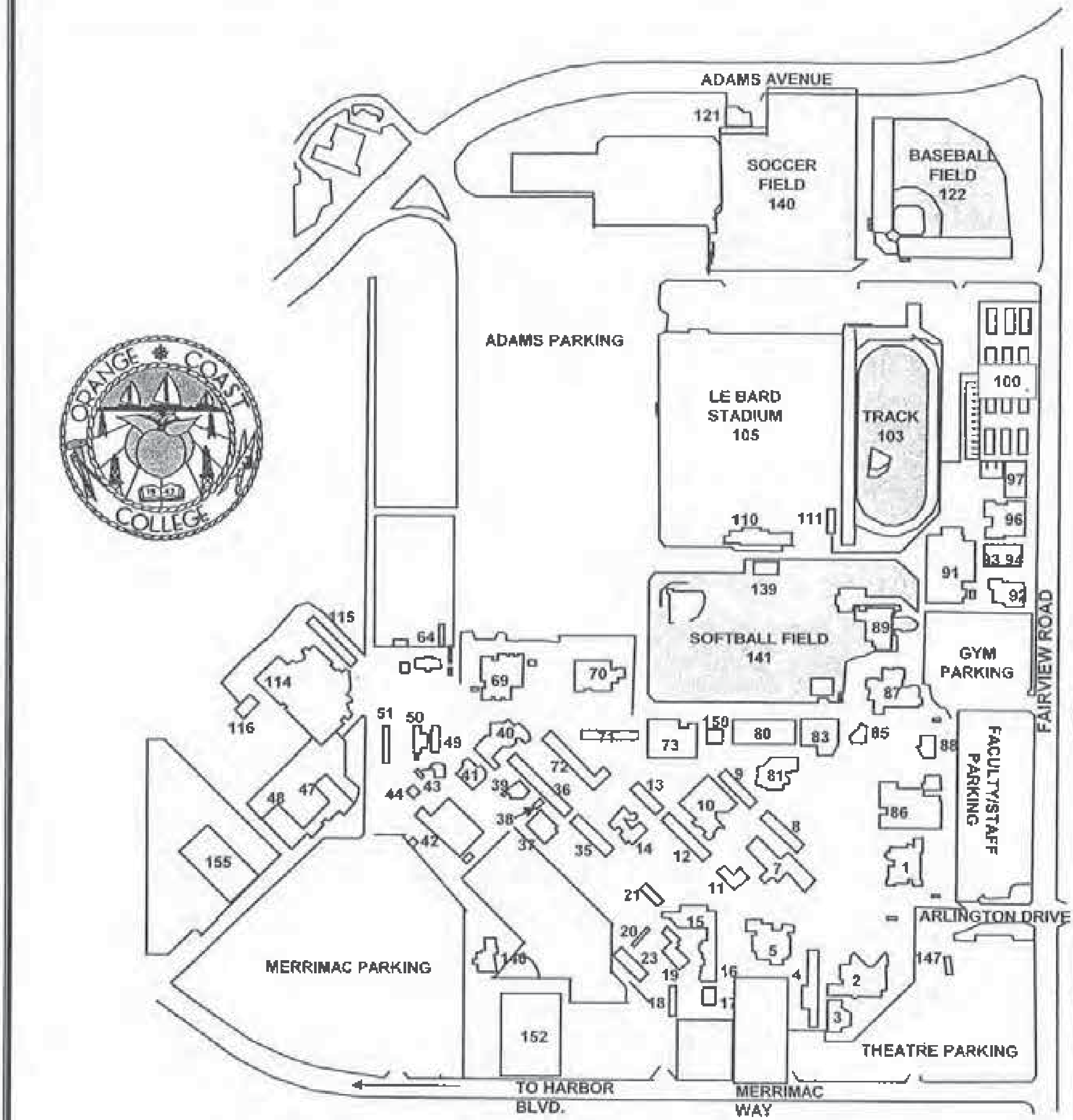
- None

Counseling/Career and Transfer Centers – Building #2

Material Description	Sample Number	Material Location	Material Cond.

APPENDIX B

BUILDING LOCATION & SITE MAPS



1	Administration	18	Art Center	91	Gymnasium	146	Early Childhood Lab
2	Theater	19	Art Center	92	Women's Locker	147	Security
3	Music	20	Lighthouse Café	93	Pool	150	Counseling & Admissions Annex
4	Music	21	Art Center	94	Pool	152	Children's Center
5	Fine Arts	23	Multi Media	96	Men's Locker	155	Maint & Oper
7	Counseling & Admissions	35	Science	97	Handball Courts		
8	Counseling & Admissions	36	Science	100	Tennis Courts		
9	Counseling & Admissions	37	Reprographics	105	Stadium		
10	Special Services	38	Science	110	Field House		
11	Faculty House	39	Science	114	Technology		
12	Business	40	Science Hall	115	Technology		
13	Business	41	Science Lecture Hall	116	Technology		
14	Business	42	Lewis Center	121	Recycling Center		
15	Art Center	43	Consumer Health	138	Sailing Center		
16	Art Center	44	The Cove	139	Strength Lab		
17	Art Center	47	Skill Center				

Map Based on EHS Building Numbers

Revised 8/99

APPENDIX C

INSPECTOR'S CREDENTIALS

State of California
Division of Occupational Safety and Health
Certified Site Surveillance Technician

Erik S Paquette
Name

Certification No. 02-3243

Expires on 03/20/2006

This certification was issued by the Division of Occupational Safety and Health as authorized by Sections 7180 et seq. of the Business and Professions Code.

PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

236340

ECT NAME: Orange Coast College

R... T ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
~~23~~ Assumed	Dist. Site - Bldg F - Rear Fume Hood	WOV	X		G	Garage - Raised Area Fume Hood
24	~~D~~ ↓ ↓ - Garage At Bay Door	Moisture Barrier Paper	X		D	Garage near Bay Doors

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty
RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 12/9/04 @ 9:00am

Samples received by: Candy Campos Date/Time: 12/9/04 @ 9:00am

... Garden Grove Blvd. Suite A, Garden Grove, CA 92841 Tel: 888/743-0998 Tel: 714/899/8900 Fax: 714/899-7098

PATRIOT ENVIRONMENTAL LABORATORY SERVICES, INC

Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 237499
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa, CA 92626
Claim Number:
Number of Samples: 25
PO Number:

Date Received: 12/23/2004
Date Analyzed: 12/28/2004
Date Reported: 12/28/2004

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237499-001 01	Field House - Exterior At Doors and Windows	Transite Panels	Grey	82% Carbonate
Chrysotile 18 %				
Total Asbestos 18 %				
237499-002 02	Field House - Visitor Entry Into Lockerroom	Transite Panels	Grey	82% Carbonate
Chrysotile 18 %				
Total Asbestos 18 %				
237499-002B 04	Field House - Electrical Rm at South Restrooms	Transite Panels		
Total Asbestos **Assumed Positive**				
237499-003 05	Field House - Boiler Rm - Exterior Bldg	Pipe Insulation	White	75% Sulfate 15% Cellulose
Amosite 10 %				
Total Asbestos 10 %				
237499-004 06	Field House - Boiler Rm - Exterior Bldg	Pipe Elbow	White	75% Sulfate 15% Cellulose
Amosite 10 %				
Total Asbestos 10 %				

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 237499
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa, CA 92626

Claim Number:
Number of Samples: 25
PO Number:

Date Received: 12/23/2004
Date Analyzed: 12/28/2004
Date Reported: 12/28/2004

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237499-005 08	Field House - Boiler Rm - Exterior Bldg	Duct Tape	Grey	25% Cellulose 15% Binder
Chrysotile 60 %				
Total Asbestos 60 %				
237499-006 03	Field House - Home Lockeroom Near Stadium Field	Transite Panels	Grey	82% Carbonate
Chrysotile 18 %				
Total Asbestos 18 %				
237499-007 07	Field House - Electrical Rm - Boiler Rm	4 Inch TSI - Pipe Insulation	White	75% Sulfate 15% Cellulose
Amosite 10 %				
Total Asbestos 10 %				
237499-008 09	Field House - Boiler Rm At Entry	Duct Tape	Grey	55% Cellulose 15% Binder
Chrysotile 30 %				
Total Asbestos 30 %				

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Project Name: Orange Coast College
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Costa Mesa, CA 92626
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Number of Samples: 25
PO Number:

Date Received: 12/23/2004
Date Analyzed: 12/28/2004
Date Reported: 12/28/2004

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237499-009 10	Field House - Boiler Rm - Near Tank	Duct Tape	Grey	55% Cellulose 15% Binder
Chrysotile	30 %			
Total Asbestos	30 %			
237499-009B 11	Field House - Boiler Rm - Ext Bldg	Boiler Tank Insulation		
Total Asbestos	**Assumed Positive**			
237499-009C 12	Field House - Boiler Rm - Ext Bldg	Woven Material		
Total Asbestos	**Assumed Positive**			
237499-009D 13	Field House - Boiler Rm - Ext Bldg	10" Cement Pipe		
Total Asbestus	**Assumed Positive**			
237499-010 14	Field House - Restroom - E	Wall Plaster	Beige	65% Minerals 32% Carbonate 3% Paint
Total Asbestos	**None Detected**			

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Claim Number:
Number of Samples: 25
PO Number:

Date Received: 12/23/2004
Date Analyzed: 12/28/2004
Date Reported: 12/28/2004

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237499-011 15	Field House - Shower - E	Wall Plaster	Beige	65% Minerals 32% Carbonate 3% Paint
Total Asbestos	None Detected			
237499-012 16	Field House - Locker Room - E	Wall Plaster	Beige	65% Minerals 32% Carbonate 3% Paint
Total Asbestos	None Detected			
237499-013 17	Field House - Shower - W	Wall Plaster	Beige	65% Minerals 32% Carbonate 3% Paint
Total Asbestos	None Detected			
237499-014 18	Field House - Locker Room - W	Wall Plaster	Beige	65% Minerals 32% Carbonate 3% Paint
Total Asbestos	None Detected			
237499-015 19	Field House - At Restrooms	Stucco	Grey Beige	75% Minerals 22% Carbonate 3% Paint
Total Asbestos	None Detected			

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Project Number: 19378
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Costa Mesa, CA 92626
Claim Number:
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PO Number:

Date Received: 12/23/2004
Date Analyzed: 12/28/2004
Date Reported: 12/28/2004

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237499-016 20	Field House - At South Restrooms - Mens	Stucco	Grey Beige	75% Minerals 22% Carbonate 3% Paint
Total Asbestos	**None Detected**			
237499-017 21	Field House - At Ticket - Concession Stand	Stucco	Grey Beige	75% Minerals 22% Carbonate 3% Paint
Total Asbestos	**None Detected**			
237499-018 22	Field House - At Visitor Entry	Stucco	Grey Beige	75% Minerals 22% Carbonate 3% Paint
Total Asbestos	**None Detected**			
237499-019 23	Field House - Custodial Closet At Bathrooms	Stucco	Beige	70% Minerals 27% Carbonate 3% Paint
Total Asbestos	**None Detected**			
237499-020 24	Field House - Entry Fascade At Visitors	Stucco	Grey Beige	75% Minerals 22% Carbonate 3% Paint
Total Asbestos	**None Detected**			

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Costa Mesa, CA 92626
Claim Number:
Number of Samples: 25
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Date Received: 12/23/2004
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Date Reported: 12/28/2004

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237499-021 25	Field House - Softball Office - Home Entry	Window Putty	Grey	100% Carbonate

Total Asbestos **None Detected**

Ian Reyes
Analyst

Cristina E. Tabatt
Approved Signatory

Bulk samples analyzed per 40 CFR 763, Subpart F, Appendix A; EPA-600/R-93/116 and for friable materials, EPA-600/M4-82-020. Samples are analyzed by calibrated visual estimation; therefore, results may not be reliable for samples of low concentration levels. This report applies only to the items tested. The results are representative of the samples submitted and may not represent the entire material from which samples were collected. This report was issued by a NIST/NVLAP (Lab Code 200358-0) accredited laboratory and may not be reproduced without the expressed written consent of Patriot Environmental. This report must not be used to claim product certification, approval or endorsement by NIST, NVLAP or any agency of the federal government.

Samples of wall systems containing discrete and separable layers are analyzed separately and reported as composite. Samples such as floor tiles and ceiling tiles with mastic layers are analyzed and reported separately.

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

237499

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
01 [illegible]	Field House	Transite Panels		X	G	Exterior At Doors and Windows
02						Visitor Entry into Lockeroom
NOTE						No Access - HomeTeam AT "ERNIE WEISS" - Combo Lock
NOTE						No Access - At Conc. Stand
04 ASS		Transite Panels		X	G	Electrical Room At South Restrooms
05 [illegible]		P/C	X			Boiler Room - Exterior Bldg
06 [illegible]		ELB				-
08 [illegible]		TAP				-
11 ASS.		Boiler Tank Insulation				-
12 ASS.		WOV				-
13 ASS.		Cement Pipe (10")		X		-

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 12/23/04 @ 1:00pm

Samples received by: [signature] Date/Time: 12/23/04 1:00pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

237499

...ECT NAME: Orange Coast College

...ECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

...ROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
03	Field House	Transite Panels		X	G	Home Lockeroom near Stadium Field
07		4" T.S.I. (P/C)	X			Electrical Room/Boiler Room
09		TAP				Boiler Room At Entry
10 ~~09~~						; Near Tank
14		WP		X	G	Restroom (E)
						Shower (E)
16						Locker Room (E)
17						Shower (W)
18						Locker Room (W)
19		Stucco		X	G	At Restrooms
20						At South Restrooms - Mens

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 12/23/04 @ 1:00pm

Samples received by: [signature] Date/Time: 12/23/04 1:08 pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

237499

ROJECT NAME: Orange Coast College

ROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
21	Field House	Stucco		X	G	At Ticket/Concession Stand
22						At Visitor Entry
23						Custodial Closet At Bathrooms
24						Entry Facade At Visitors
25		WPTY		X		Softball Office/Home Entry

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 12/23/04 @ 1:00pm

Samples received by: [signature] Date/Time: 12/23/04 1:01 pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES, INC.

Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 237982
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Dr
Costa Mesa CA 92626

Claim Number:
Number of Samples: 59
PO Number:

Date Received: 1/4/2005
Date Analyzed: 1/27/2005
Date Reported: 1/27/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237982-001 01	Fine Arts 5 - Lecture Hall 119 - At Upper Entry	Leveling Compound	White	100% Non-Fibrous
Total Asbestos	**None Detected**			
237982-002 05	Fine Arts 5 - Lecture Hall 116 - Seating Area Rear South	Acoustic Ceiling	White	95% Carbonate
Chrysotile	5 %			
Total Asbestos	5 %			
237982-003 06	Fine Arts 5 - Lecture Hall 116 - Seating Area Rear North	Acoustic Ceiling	White	93% Carbonate
Chrysotile	7 %			
Total Asbestos	7 %			
237982-004 08	Fine Arts 5 - Room 117 - Beams	Fire Proofing	Tan	15% Cellulose 5% Glass Fibers 80% Vermiculite
Total Asbestos	**None Detected**			

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Attn: Michael Collins
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Costa Mesa, CA 92626

Report Number:	237982
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Dr Costa Mesa CA 92626
Claim Number:	
Number of Samples:	59
PO Number:	

Date Received:	1/4/2005
Date Analyzed:	1/27/2005
Date Reported:	1/27/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237982-046 04	Fine Arts 5 - Lecture Hall 116 - Stage Front	Acoustic Ceiling		

Total Asbestos **Assumed Positive**

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237982-047 07	Fine Arts 5 - Lecture Hall 119 - Throughout Roof Ceiling and Beams	Fireproofing		

Total Asbestos **Assumed Positive**

John Lopez
Analyst

Grace Herrera
Approved Signatory

Bulk samples analyzed per 40 CFR 763, Subpart F, Appendix A; EPA-600/R-93/116 and for friable materials, EPA-600/M4-82-020. Samples are analyzed by calibrated visual estimation; therefore, results may not be reliable for samples of low concentration levels. This report applies only to the items tested. The results are representative of the samples submitted and may not represent the entire material from which samples were collected. This report was issued by a NIST/NVLAP (Lab Code 200358-0) accredited laboratory and may not be reproduced without the expressed written consent of Patriot Environmental. This report must not be used to claim product certification, approval or endorsement by NIST, NVLAP or any agency of the federal government.

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237982-033 Joint Compound only in Sample.

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Polarized Light Microscopy Analysis

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Claim Number:
Number of Samples: 59
PO Number:

Date Received: 1/4/2005
Date Analyzed: 1/27/2005
Date Reported: 1/27/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237982-005 09	Fine Arts 5 - Transformer Room At 120	Fire Proofing	Tan	20% Cellulose 15% Glass Fibers 65% Vermiculite
Total Asbestos	None Detected			
237982-006 10	Fine Arts 5 - Lecture Hall 119 at Upper Entry hall - Projection Room	Acoustic Ceiling	White	95% Carbonate
Chrysotile	5 %			
Total Asbestos	5 %			
237982-007 11	Fine Arts 5 - Lecture 119 - Seating Area - Rear	Acoustic Ceiling	White	94% Carbonate
Chrysotile	6 %			
Total Asbestos	6 %			
237982-008 12	Fine Arts 5 - Room 102	Base Cove	Grey	100% Carbonate
Total Asbestos	None Detected			
237982-008M 12	Fine Arts 5 - Room 102	Base Cove Mastic	Yellow	2% Cellulose 98% Non-Fibrous
Total Asbestos	None Detected			

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Claim Number:
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Date Received: 1/4/2005
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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237982-009 13	Fine Arts 5 - Room 102	Base Cove Mastic	Brown	100% Non-Fibrous
Total Asbestos	**None Detected**			
237982-010 14	Fine Arts 5 - Lecture 116	Base Cove	Brown	100% Carbonate
Total Asbestos	**None Detected**			
237982-010M 14	Fine Arts 5 - Lecture 116	Base Cove Mastic	Yellow	100% Carbonate
Total Asbestos	**None Detected**			
237982-011 15	Fine Arts 5 - Storage Room 119A	Base Cove	Brown	100% Carbonate
Total Asbestos	**None Detected**			
237982-011M 15	Fine Arts 5 - Storage Room 119A	Base Cove Mastic	Brown	3% Cellulose 97% Non-Fibrous
Total Asbestos	**None Detected**			

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Claim Number:
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Date Received: 1/4/2005
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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237982-012 16	Fine Arts 5 - Room 113	Base Cove	Brown	100% Non-Fibrous
Total Asbestos	**None Detected**			
237982-012M 16	Fine Arts 5 - Room 113	Base Cove Mastic	Brown	2% Cellulose 98% Non-Fibrous
Total Asbestos	**None Detected**			
237982-013 17	Fine Arts 5 - Room 104	Carpet Glue	Tan	5% Celluose 95% Non-Fibrous
Total Asbestos	**None Detected**			
237982-014 18	Fine Arts 5 - Room 118 Offices	Carpet Glue	Yellow	100% Carbonate
Total Asbestos	**None Detected**			
237982-015 19	Fine Arts 5 - Hallway At 118	Carpet Glue	Yellow	3% Cellulose 97% Non-Fibrous
Total Asbestos	**None Detected**			

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Date Reported: 1/27/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237982-016 20	Fine Arts 5 - Control Room At 201A	12 Inch Acoustic Ceiling Tile - Rough	White	100% Mineral Wool
Total Asbestos	None Detected			
237982-017 21	Fine Arts 5 - Room 102	12 Inch Acoustic Ceiling Tile - Rough	Grey	3% Cellulose 97% Mineral Wool
Total Asbestos	None Detected			
237982-018 22	Fine Arts 5 - Mens Restroom	12 Inch Acoustic Ceiling Tile - Rough	Grey	100% Mineral Wool
Total Asbestos	None Detected			
237982-019 23	Fine Arts 5 - Room 101A	12 Inch Acoustic Ceiling Tile - Rough	Grey, White	5% Paint 95% Mineral wool
Total Asbestos	None Detected			
237982-020 24	Fine Arts 5 - Custodial Room 203	Linoleum	Orange	80% Vinyl Binder
Chrysotile	20 %			
Total Asbestos	20 %			

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Date Received: 1/4/2005
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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237982-021 25	Fine Arts 5 - Custodial Room 121	Linoleum	Orange	75% Vinyl Binder
Chrysotile	25 %			
Total Asbestos	**25 %**			
237982-022 26	Fine Arts 5 - Room 201B	Linoleum	Orange	80% Vinyl Binder
Chrysotile	20 %			
Total Asbestos	**20 %**			
237982-023 27	Fine Arts 5 - Room 103 - Under Carpet	Linoleum	Orange	85% Vinyl Binder
Chrysotile	15 %			
Total Asbestos	**15 %**			
237982-024 28	Fine Arts 5 - Room 118 Offices	12 Inch Acoustic Ceiling Tile -	Grey, White	15% Cellulose 50% Mineral Wool 25% Perlite 10% Paint
Total Asbestos	**None Detected**			

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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237982-025 29	Fine Arts 5 - Room 118 Offices	12 Inch Acoustic Ceiling Tile -	Grey, White	15% Cellulose 50% Mineral Wool 25% Perlite 10% Paint
Total Asbestos	**None Detected**			
237982-026 30	Fine Arts 5 - Room 118 Offices	12 Inch Acoustic Ceiling Tile -	Grey, White	15% Cellulose 40% Mineral Wool 25% Perlite 20% Paint
Total Asbestos	**None Detected**			
237982-027 31	Fine Arts 5 - At Mens Restroom	Cement - Interior	Grey	100% Minerals
Total Asbestos	**None Detected**			
237982-028 32	Fine Arts 5 - At Rear Exit Near Room 119A	Cement - Exterior	Grey	3% Cellulose 97% Minerals
Total Asbestos	**None Detected**			
237982-029 33	Fine Arts 5 - At Front Entry	Cement - Exterior	Grey	100% Minerals
Total Asbestos	**None Detected**			

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Claim Number:
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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237982-030 34	Fine Arts 5 - At Room 124	Cement - Exterior	Grey	100% Minerals
Total Asbestos	**None Detected**			
237982-031A 35	Fine Arts 5 - Room 104 - Small Room	Joint Compound	White	97% Carbonate
Chrysotile	3 %			
Total Asbestos	**3 %**			
237982-031B 35	Fine Arts 5 - Room 104 - Small Room	Wallboard - Joint Compound	White	5% Cellulose 15% Carbonate 80% Sulfate
Chrysotile	< 1 %			
Total Asbestos	**< 1%**			
237982-032A 36	Fine Arts 5 - Room 113 - Photo Studio	Joint Compound	White	96% Carbonate
Chrysotile	4 %			
Total Asbestos	**4 %**			

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Date Reported: 1/27/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237982-032B 36	Fine Arts 5 - Room 113 - Photo Studio	Wallboard - Joint Compound	White, Brown	10% Cellulose 70% Carbonate 20% Sulfate
Chrysotile < 1 %				
Total Asbestos < 1%				
237982-033 37	Fine Arts 5 - Lecture 116 - Front	Joint Compound	White	97% Carbonate
Chrysotile 3 %				
Total Asbestos 3 %				
237982-034A 38	Fine Arts 5 - Room 118 Offices	Joint Compound	White	97% Carbonate
Chrysotile 3 %				
Total Asbestos 3 %				
237982-034B 38	Fine Arts 5 - Room 118 Offices	Wallboard - Joint Compound	White, Brown	10% Cellulose 55% Carbonate 35% Sulfate
Chrysotile < 1 %				
Total Asbestos < 1%				

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Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 237982
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Dr
Costa Mesa CA 92626

Claim Number:
Number of Samples: 59
PO Number:

Date Received: 1/4/2005
Date Analyzed: 1/27/2005
Date Reported: 1/27/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237982-035 39	Fine Arts 5 - Room 117 - Entry	Wallboard - Joint Compound	White, Brown	5% Cellulose 85% Carbonate 10% Sulfate
Total Asbestos	**None Detected**			
237982-036A 40	Fine Arts 5 - Custodial Room 121	Joint Compound	White	98% Carbonate
Chrysotile	2 %			
Total Asbestos	2 %			
237982-036B 40	Fine Arts 5 - Custodial Room 121	Wallboard - Joint Compound	White, Brown	15% Cellulose 50% Carbonate 35% Sulfate
Chrysotile	< 1 %			
Total Asbestos	< 1%			
237982-037A 41	Fine Arts 5 - Transformer Room - At 120	Joint Compound	White	96% Carbonate
Chrysotile	4 %			
Total Asbestos	4 %			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

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Project Number: 19378
Project Name: Orange Coast College
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Costa Mesa CA 92626
Claim Number:
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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237982-037B 41	Fine Arts 5 - Transformer Room - At 120	Wallboard - Joint Compound	White, Brown	20% Cellulose 15% Carbonate 65% Sulfate
Chrysotile	< 1 %			
Total Asbestos	< 1%			
237982-038A 42	Fine Arts 5 - 1st Floor - Foyer	Joint Compound	White	96% Carbonate
Chrysotile	4 %			
Total Asbestos	4 %			
237982-038B 42	Fine Arts 5 - 1st Floor - Foyer	Wallboard - Joint Compound	White, Brown	10% Cellulose 50% Carbonate 40% Sulfate
Chrysotile	< 1 %			
Total Asbestos	< 1%			
237982-039A 43	Fine Arts 5 - Custodial Room 203	Joint Compound	White	95% Carbonate
Chrysotile	5 %			
Total Asbestos	5 %			

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Claim Number:
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Date Received: 1/4/2005
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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237982-039B 43	Fine Arts 5 - Custodial Room 203	Wallboard - Joint Compound	White, Brown	25% Cellulose 20% Carbonate 55% Sulfate
Chrysotile	< 1 %			
Total Asbestos	< 1%			
237982-040A 44	Fine Arts 5 - Control Room At 201A	Joint Compound	White	5% Cellulose 93% Carbonate
Chrysotile	2 %			
Total Asbestos	2 %			
237982-040B 44	Fine Arts 5 - Control Room At 201A	Wallboard - Joint Compound	White, Brown	15% Cellulose 15% Carbonate 70% Sulfate
Chrysotile	< 1 %			
Total Asbestos	< 1%			
237982-041 45	Fine Arts 5 - Room 118 Offices	2x3 Acoustic Ceiling Tile	Grey, White	20% Cellulose 45% Mineral Wool 25% Perlite 10% Paint
Total Asbestos	**None Detected**			

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Costa Mesa, CA 92626

Report Number: 237982
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Dr
Costa Mesa CA 92626
Claim Number:
Number of Samples: 59
PO Number:

Date Received: 1/4/2005
Date Analyzed: 1/27/2005
Date Reported: 1/27/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237982-042 46	Fine Arts 5 - Room 118 Offices	2x3 Acoustic Ceiling Tile	Grey, White	20% Cellulose 45% Mineral Wool 25% Perlite 10% Paint
Total Asbestos	**None Detected**			
237982-043 47	Fine Arts 5 - Room 118 Offices	2x3 Acoustic Ceiling Tile	Grey, White	25% Cellulose 45% Mineral Wool 20% Perlite 10% Paint
Total Asbestos	**None Detected**			
237982-044 02	Fine Arts 5 - Throughout Attic Btwn 1st and 2nd Flrs	Fireproofing		
Total Asbestos	**Assumed Positive**			
237982-045 03	Fine Arts 5 - Lecture Hall 116 Storage 116A At Base of Hall	Fire Rated Door		
Total Asbestos	**Assumed Positve**			

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

237982

...ECT NAME: Orange Coast College

...ECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
01	Fine Arts (5)	Leveling Compound		X	G	Lecture Hall 119; At Upper Entry
NOTE	No Access to 118A Storage	12/30/04 @ 11:30am				* NOTE *
NOTE	103A					
NOTE	105 Photo Issue Room					
02 ASS.	Fine Arts (5)	Fireproofing	X		G	Throughout Attic between 1st & 2nd Floors - Spray Applied -
		FRD (Fire Rated Door) X2		X	G	Lecture Hall 116 - Storage 116A At Base of Hall (Double Doors)
04 ASS.		A/C	X		G	Lecture Hall 116 - Stage Front
05						Lecture Hall 116 - Seating Area Rear South
06						North
07 ASS.		Fireproofing	X		G	Lecture Hall 119 - Throughout Roof - Ceiling & Beams
08			X			Room 117 - Beams

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/4/05

Samples received by: Candy Campos Date/Time: 1/4/05 @ ~~11:25am~~ 3:00pm C.C.

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

237982

ROJECT NAME: Orange Coast College

ROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
09	Fine Arts (5)	Fireproofing	X		G	Transformer Room At #120
10		A/C				Lecture Hall 119 At Upper Entry Hall ; Projection Room
11						Lecture 119 ; Seating Area - Rear
12		Grey Base Cove		X	G	Room 102
13		Base Cove Mastic		X		
14		Brown Base Cove				Lecture 116
15						Storage Room 119A
16						Room 113
17		Carpet Glue		X	G	Room 104
18						Room 118 Offices
19						Hallway At 118

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Samples relinquished by: [signature] Date/Time: 1/4/05

Samples received by: Candy Campos Date/Time: 1/4/05 @ 3:00pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

237982

CT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
20	Fine Arts (5)	12" ACT - Rough	X		G	Control Room At 201 A
21						Room 102
22						Men's Restroom
23						Room 101 A
24		Orange Cobble Lin.		X	G	Custodial Room 203
5						121
26						Room 201 B
27						Room 103; Under Carpet
28		12" Act - Random Pinhole	X		G	Room 118 Offices
29						
30						

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty
RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/4/05

Samples received by: Candy Campos Date/Time: 1/4/05 @ 3:00pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

237982

OJECT NAME: Orange Coast College

ROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
31	Fine Arts (5)	Cement - Interior		X	G	At Men's Restroom
32		Cement - Exterior				At Rear Exit near Room 119 A
33						At Front Entry
34						At Room 124
35		WB/JC		X	G	Room 104 - Small Room
36						Room 113 - Photo Studio
37						Lecture 116 - Front
38						Room 118 Offices
39						Room 117 ; Entry
40						Custodial Room 121
41						Transformer Room ; At 120

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/4/05

Samples received by: Candy Campos Date/Time: 1/4/05 @ 3:00pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

2379982

ECT NAME: Orange Coast College

RO ET ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

ROJECT #: 19378

ample ID	Sample Location	Material Type	F	N F	Cond	Material Location
42	Fine Arts (5)	WB/JC		X	G	1st Floor - Foyer
43						Custodial Room 203
44						Control Room at 201A
45		2'x3' ACT	X		G	Room 118 Offices
46						
7						
NOTE	* No ACCESS *	Fireproofing				Attic Area Above Lecture Halls Have Visible Fireproofing NOT ACCESSIBLE*

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/4/05

Samples received by: Candy Campos Date/Time: 1/4/05 @ 3:00pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES, INC

Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 237466
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Road
Costa Mesa, CA 92626
Claim Number:
Number of Samples: 27
PO Number:

Date Received: 12/23/2004
Date Analyzed: 12/28/2004
Date Reported: 12/28/2004

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237466-001 01	Admin (Bldg. 7)- Room 119 Telephone	Fireproofing		
Total Asbestos	**Assumed Positive**			
237466-002 02	Records/Counseling (7)- Open Air Utility Area at E	Cement Pipe		
Total Asbestos	**Assumed Positive**			
237466-003 03	Student Center (86)- HVAC Closet Near Admin Bldg,	Stucco	Beige, Grey	100% Minerals
Total Asbestos	**None Detected**			
237466-004 04	Admin (Bldg. 7)- Counseling- Room 13	Wallboard- Joint Compound	White	10% Cellulose 90% Carbonate
Total Asbestos	**None Detected**			
237466-005 05	Admin (Bldg. 7)- At Records Room	Wallboard- Joint Compound	White	10% Cellulose 5% Carbonate 85% Sulfate
Total Asbestos	**None Detected**			

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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237466-006 06	Admin (Bldg. 7)- Registration- Copy Room	Wallboard- Joint Compound	White	15% Cellulose 15% Carbonate 70% Sulfate
Total Asbestos	**None Detected**			
237466-007 07	Admin (Bldg. 7)- Registration- at Counter	Wallboard- Joint Compound	White	100% Carbonate
Total Asbestos	**None Detected**			
237466-008 08	Admin (Bldg. 7)- At Front-Counter Area	Window Putty	Beige	97% Carbonate
Chrysotile	3 %			
Total Asbestos	3 %			
237466-009 09	Admin (Bldg. 7)- At Rear Side Window	Window Putty	White	96% Carbonate
Chrysotile	4 %			
Total Asbestos	4 %			
237466-010 10	Admin (Bldg. 7)- At Rear-Upper Windows	Window Putty	Beige	97% Carbonate
Chrysotile	3 %			
Total Asbestos	3 %			

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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237466-011 11	Admin (Bldg. 7)- At Room 38	2'x3' Acoustic Ceiling Tile	Grey, White	15% Cellulose 50% Mineral Wool 25% Perlite 10% Paint
Total Asbestos	**None Detected**			
237466-012 12	Admin (Bldg. 7)- Registration- copy Room	12" Acoustic Ceiling Tile	Beige	90% Mineral wool 10% Carbonate
Total Asbestos	**None Detected**			
237466-013 13	Admin (Bldg. 7)- At Counseling	12" Acoustic Ceiling Tile	Grey, White	15% Cellulose 50% Mineral Wool 25% Perlite 15% Paint
Total Asbestos	**None Detected**			
237466-014 14	Admin (Bldg. 7)- At Deans Office	12" Acoustic Ceiling Tile	Grey, White	90% Mineral Wool 10% Non-Fibrous
Total Asbestos	**None Detected**			

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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237466-015 15	Admin (Bldg. 7)- At Counseling Entry	12" Acoustic Ceiling Tile	Beige, White	15% Cellulose 50% Mineral Wool 25% Perlite 10% Paint
Total Asbestos	**None Detected**			
237466-016 16	Admin (Bldg. 7)- At Matriculation	12" Acoustic Ceiling Tile	Grey	95% Mineral Wool 5% Carbonate
Total Asbestos	**None Detected**			
237466-017 17	Admin (Bldg. 7)- Custodial Closet	Leveling Compound (Floor)	White, Black	98% Non-Fibrous
Chrysotile	2 %			
Total Asbestos	**2 %**			
237466-018 18	Admin (Bldg. 7)- Telephone Room at Sliding Door	Linoleum	Brown	85% Vinyl Binder
Chrysotile	15 %			
Total Asbestos	**15 %**			

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Date Reported: 12/28/2004

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237466-019 19	Admin (Bldg. 7)- Telephone Room at Sliding Door	Linoleum	Brown	80% Vinyl Binder
Chrysotile	20 %			
Total Asbestos	**20 %**			
237466-020 20	Admin (Bldg. 7)- Telephone Room at Sliding Door	Linoleum	Brown	90% Vinyl Binder
Chrysotile	10 %			
Total Asbestos	**10 %**			
237466-021 21	Admin (Bldg. 7)- North End of Building	Smooth Cement	Grey, Tan	100% Non-Fibrous
Total Asbestos	**None Detected**			
237466-022 22	Admin (Bldg. 7)- At HVAC Room	Stucco	White, Yellow	5% Cellulose 95% Minerals
Total Asbestos	**None Detected**			
237466-023 23	Admin (Bldg. 7)- At Sliding Door Interior	Stucco	Beige, Tan	5% Paint 95% Minerals
Total Asbestos	**None Detected**			

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Claim Number:
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Date Analyzed: 12/28/2004
Date Reported: 12/28/2004

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237466-024 24	Admin (Bldg. 7)- Telephone Room Exterior	Stucco	White	100% Minerals
Total Asbestos	**None Detected**			
237466-025 25	Admin (Bldg. 7)- Rear-Overhang	Stucco	Beige	3% Cellulose 97% Minerals
Total Asbestos	**None Detected**			
237466-026 26	Admin (Bldg. 7)- Rear-Telephone Room	Stucco	Beige, Yellow	5% Cellulose 95% Minerals
Total Asbestos	**None Detected**			
237466-027 27	Admin (Bldg. 7)- North End Near Registration	Stucco	Grey, White	100% Minerals
Total Asbestos	**None Detected**			

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Number of Samples:	27
PO Number:	

Date Received:	12/23/2004
Date Analyzed:	12/28/2004
Date Reported:	12/28/2004

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)

John Lopez
Analyst

Cristina E. Tabatt
Approved Signatory

Bulk samples analyzed per 40 CFR 763, Subpart F, Appendix A; EPA-600/R-93/116 and for friable materials, EPA-600/M4-82-020. Samples are analyzed by calibrated visual estimation; therefore, results may not be reliable for samples of low concentration levels. This report applies only to the items tested. The results are representative of the samples submitted and may not represent the entire material from which samples were collected. This report was issued by a NIST/NVLAP (Lab Code 200358-0) accredited laboratory and may not be reproduced without the expressed written consent of Patriot Environmental. This report must not be used to claim product certification, approval or endorsement by NIST, NVLAP or any agency of the federal government.

Samples of wall systems containing discrete and separable layers are analyzed separately and reported as composite. Samples such as floor tiles and ceiling tiles with mastic layers are analyzed and reported separately.

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

237466

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
01 Ass.	Admin (Bldg. 7)	Fireproofing	X		G	Rm 119/Telephone
02 Ass.	Records/Counseling (7)	Cement Pipe			D	Open Air Utility Area At E
NOTE	NOTE					ABOVE T-BAR CEILING IS PLYWOOD THROUGHOUT BLDG.; BLDG 7
03	Student Center (B6)	Stucco		X	G	HVAC Closet near Admin. Bldg.
04	Admin. (Bldg. 7)	WB/JC				Counseling - Room 13
5						At Records Room
06						Registration - Copy Room
07						at Counter
08		WPTY				At Front ; Counter Area
09						At Rear Side Window
10						At Rear ; Upper Windows

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 12/23/04 @ 2:10pm

Samples received by: [signature] Date/Time: 12/23/04 2:10pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

237466

ROJECT NAME: Orange Coast College

ROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
11	Admin (Bldg. 7)	2'x3' ACT	X		G	At Room 38
12		12" ACT				Registration ; Copy Room
13						At Counseling
14						At Dean's Office
15						At Counseling Entry
16						At Matriculation
17		Leveling Cpd. (Floor)		X	G	Custodial Closet
18		Brown Lin.		X		Telephone Room; At Sliding Door
19						
20						
21		Smooth Cement		X	G	North End of Bldg

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 12/23/04 @ 2:15pm

Samples received by: [signature] Date/Time: 12/23/04 2:15pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

237466

...ECT NAME: Orange Coast College

A...ECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
22	Admin (Bldg. 7)	Stucco		X	G	At HVAC Room
23						At Sliding Door - Interior
24						Telephone Room - Exterior
25						Rear - Overhang
26						Rear Telephone Room
						North End near Registration

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty
RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 12/23/04 @ 2:15pm

Samples received by: [signature] Date/Time: 12/23/04 2:15pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES, INC.

Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 237401
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Rd
Costa Mesa CA 92626
Claim Number:
Number of Samples: 50
PO Number:

Date Received: 12/23/2004
Date Analyzed: 12/27/2004
Date Reported: 12/27/2004

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237401-001 1	Bldg 8 Rm 109 Counseling-Admin East Wall Dividing Classroom	Plaster	Beige, White	3% Cellulose 97% Minerals
Total Asbestos	None Detected			
237401-002 2	Bldg 8 Rm 109 Counseling-Admin SE Corner Floor Under Carpet	Vinyl Floor Tile	Tan	92% Carbonate
Chrysotile	8 %			
Total Asbestos	8 %			
237401-003 3	Bldg 8 Rm 109 Counseling-Admin S Wall Base Throughout Exterior Breezeways	Vinyl - Basecove	Black	100% Carbonate
Total Asbestos	None Detected			
237401-003M 3	Bldg 8 Rm 109 Counseling-Admin S Wall Base Throughout Exterior Breezeways	Mastic	White	100% Carbonate
Total Asbestos	None Detected			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 237401
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Rd
Costa Mesa CA 92626

Claim Number:
Number of Samples: 50
PO Number:

Date Received: 12/23/2004
Date Analyzed: 12/27/2004
Date Reported: 12/27/2004

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237401-004 4	Bldg 8 Rm 109 Counseling-Admin East Wall Nailed On	2x4 Acoustic Wall Panel	Beige, White	15% Cellulose 50% Mineral Wool 20% Pelrite 15% Paint
Total Asbestos	**None Detected**			
237401-005 5	Bldg 8 Rm 109 Counseling-Admin NW Ceiling Screwed On	2x4 with Holes Acoustic Ceiling	Brown, White	90% Cellulose 10% Paint
Total Asbestos	**None Detected**			
237401-006 6	Bldg 8 Rm 109 Counseling-Admin NW Ceiling Screwed On	Smooth 2x4 Acoustic Ceiling Panel	Brown, White	85% Cellulose 15% Paint
Total Asbestos	**None Detected**			
237401-007 7	Bldg 8 Rm 108 - East Wall Dividing Classrooms	Plaster	Beige, White	100% Minerals
Total Asbestos	**None Detected**			
237401-008 8	Bldg 8 Rm 108 - Floor NW - Under Carpet	Vinyl Floor Tile	Tan	93% Carbonate
Chrysotile	7 %			
Total Asbestos	7 %			

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PO Number:

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Date Reported: 12/27/2004

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237401-008M 8	Bldg 8 Rm 108 - Floor NW - Under Carpet	Mastic	Black	15% Carbonate 85% Tar
Total Asbestos	**None Detected**			
237401-009 9	Bldg 8 Rm 108 - E Wall Base	Vinyl Basecove	Black	100% Carbonate
Total Asbestos	**None Detected**			
237401-009M 9	Bldg 8 Rm 108 - E Wall Base	Mastic	Brown, White	100% Non-Fibrous
Total Asbestos	**None Detected**			
237401-010 10	Bldg 8 Rm 108 - E Wall and Ceiling Nailed Screwed On	2x4 Acoustic Panel with Holes	Brown, Blue	15% Paint 85% Cellulose
Total Asbestos	**None Detected**			
237401-011 11	Bldg 8 Rm 108 - NW Ceiling Nailed On	2x4 Acoustic Ceiling Panels	Brown, White	10% Paint 90% Cellulose
Total Asbestos	**None Detected**			
237401-012 12	Bldg 8 Rm 105 - West Wall	Plaster	Beige	2% Cellulose 98% Minerals
Total Asbestos	**None Detected**			

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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237401-013 13	Bldg 8 Rm 105 - E Wall Base	Vinyl Basecove	Grey	100% Carbonate
Total Asbestos	**None Detected**			
237401-013M 13	Bldg 8 Rm 105 - E Wall Base	Mastic	Yellow	100% Carbonate
Total Asbestos	**None Detected**			
237401-014 14	Bldg 8 Rm 105 - S Wall Base	Vinyl Basecove	Grey	100% Carbonate
Total Asbestos	**None Detected**			
237401-014M 14	Bldg 8 Rm 105 - S Wall Base	Mastic	Brown, Yellow	4% Cellulose 96% Non-Fibrous
Total Asbestos	**None Detected**			
237401-015 15	Bldg 8 Rm 105 - NE Wall Base	Vinyl Basecove	Grey	100% Carbonate
Total Asbestos	**None Detected**			

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Date Received: 12/23/2004
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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237401-015M 15	Bldg 8 Rm 105 - NE Wall Base	Mastic	White	100% Carbonate
Total Asbestos	**None Detected**			
237401-016 16	Bldg 8 Rm 105 - S Wall	2x4 Acoustic Wall Panels	Grey, White	15% Cellulose 50% Mineral Wool 25% Pelrite 10% Paint
Total Asbestos	**None Detected**			
237401-017 17	Bldg 8 Rm 105 - S Wall	2x4 Acoustic Wall Panels	Beige, White	15% Cellulose 50% Mineral Wool 20% Pelrite 15% Paint
Total Asbestos	**None Detected**			
237401-018 18	Bldg 8 Rm 105 - E Wall	2x4 Acoustic Panels	Brown, White	25% Paint 75% Cellulose
Total Asbestos	**None Detected**			
237401-019 19	Bldg 8 Rm 105 - NE Ceiling	2x4 Acoustic Panel with Holes	Brown, White	15% Paint 85% Cellulose
Total Asbestos	**None Detected**			

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Claim Number:
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PO Number:

Date Received: 12/23/2004
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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237401-020 20	Bldg 8 Rm 101 Office - E Ceiling	Smooth 12x12 Acoustic Ceiling Tile	Grey, White	15% Cellulose 50% Mineral Wool 10% Pelrite 25% Paint
Total Asbestos	**None Detected**			
237401-021 21	Bldg 8 Rm 101 Office - E Ceiling	Smooth 12x12 Acoustic Ceiling Tile	Grey, White	10% Cellulose 50% Mineral Wool 15% Perlite 25% Paint
Total Asbestos	**None Detected**			
237401-022 22	Bldg 8 Rm 101 Office - E Ceiling	Smooth 12x12 Acoustic Ceiling Tile	Grey, White	10% Cellulose 50% Mineral Wool 20% Perlite 20% Paint
Total Asbestos	**None Detected**			
237401-023 23	Bldg 8 Rm 102 Office - Ceiling East	12x12 Acoustic Ceiling Tile	Brown, White	25% Paint 75% Cellulose
Total Asbestos	**None Detected**			

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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237401-024 24	Bldg 8 Rm 102 Office - Ceiling East	12x12 Acoustic Ceiling Tile	Brown, White	
Total Asbestos				
237401-025 25	Bldg 8 Rm 102 Office - Ceiling East	12x12 Acoustic Ceiling Tile	Brown, White	20% Paint 80% Cellulose
Total Asbestos	None Detected			
237401-026 26	Bldg 8 Rm 104 Office - Ceiling	12x12 Acoustic Ceiling Tile	Brown, White	25% Paint 75% Cellulose
Total Asbestos	None Detected			
237401-027 27	Bldg 8 Rm 104 Office - Ceiling	12x12 Acoustic Ceiling Tile	Brown, White	20% Paint 80% Cellulose
Total Asbestos	None Detected			
237401-028 28	Bldg 8 Rm 104 Office - Ceiling	12x12 Acoustic Ceiling Tile	Brown, White	100% Cellulose
Total Asbestos	None Detected			
237401-029 29	Bldg 8 Breezeway - Wall Base Interor and Exterior	Vinyl Basecove	Black	3% Cellulose 97% Carbonate
Total Asbestos	None Detected			

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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237401-029M 29	Bldg 8 Breezeway - Wall Base Interor and Exterior	Mastic	Tan	100% Non-Fibrous
Total Asbestos	**None Detected**			
237401-030 30	Bldg 8 Rm 104 Office - Floor	Vinyl Floor Tile	Grey	3% Cellulose 97% Carbonate
Total Asbestos	**None Detected**			
237401-030M 30	Bldg 8 Rm 104 Office - Floor	Mastic	Yellow	100% Non-Fibrous
Total Asbestos	**None Detected**			
237401-031 31	Bldg 8 Rm 104 Office - Floor	Vinyl Floor Tile	Grey	100% Carbonate
Total Asbestos	**None Detected**			
237401-031M 31	Bldg 8 Rm 104 Office - Floor	Mastic	Black, Yellow	95% Non-Fibrous
Chrysotile	5 %			
Total Asbestos	5 %			

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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237401-032 32	Bldg 8 Rm 104 Office - Floor	Vinyl Floor Tile	Grey	100% Carbonate
Total Asbestos	None Detected			
237401-032M 32	Bldg 8 Rm 104 Office - Floor	Mastic	Black, Tan	96% Non-Fibrous
Chrysotile	4 %			
Total Asbestos	4 %			
237401-033 33	Bldg 8 Rm 104 Office - S Wall	Drywall with Joint Compound	White	30% Cellulose 5% Carbonate 65% Sulfate
Total Asbestos	None Detected			
237401-034 34	Bldg 8 Rm 104 Counseling and Admin - E Wal l	Drywall with Joint Compound	White	20% Cellulose 10% Carbonate 70% Sulfate
Total Asbestos	None Detected			
237401-035 35	Bldg 8 Rm 104 Counseling and Admin - E Wal l	Drywall with Joint Compound	White, Brown	30% Cellulose 5% Carbonate 65% Sulfate
Total Asbestos	None Detected			

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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237401-036 36	Bldg 8 Counseling and Admin Re-Entry Center	Window Putty	Grey	100% Carbonate
Total Asbestos	None Detected			
237401-037 37	Bldg 8 Counseling and Admin At Room 109	Window Putty	Grey	100% Carbonate
Total Asbestos	None Detected			
237401-038 38	Bldg 8 Counseling and Admin At Counseling	Window Putty	Grey	2% Cellulose 98% Carbonate
Total Asbestos	None Detected			
237401-039 39	Bldg 8 Counseling and Admin Connecting Beam From Bldg 8-7	Stucco	Grey	3% Cellulose 97% Minerals
Total Asbestos	None Detected			
237401-040 40	Bldg 8 Counseling and Admin At Rm 109 - N	Stucco	Grey, Brown	15% Paint 85% Non-Fibrous
Total Asbestos	None Detected			

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Costa Mesa, CA 92626

Report Number:	237401
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Rd Costa Mesa CA 92626
Claim Number:	
Number of Samples:	50
PO Number:	

Date Received:	12/23/2004
Date Analyzed:	12/27/2004
Date Reported:	12/27/2004

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)

John Lopez
Analyst

Grace Herrera
Approved Signatory

Bulk samples analyzed per 40 CFR 763, Subpart F, Appendix A; EPA-600/R-93/116 and for friable materials, EPA-600/M4-82-020. Samples are analyzed by calibrated visual estimation; therefore, results may not be reliable for samples of low concentration levels. This report applies only to the items tested. The results are representative of the samples submitted and may not represent the entire material from which samples were collected. This report was issued by a NIST/NVLAP (Lab Code 200358-0) accredited laboratory and may not be reproduced without the expressed written consent of Patriot Environmental. This report must not be used to claim product certification, approval or endorsement by NIST, NVLAP or any agency of the federal government.

Samples of wall systems containing discrete and separable layers are analyzed separately and reported as composite. Samples such as floor tiles and ceiling tiles with mastic layers are analyzed and reported separately.

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

237401

...ECT NAME: Orange Coast College

...JECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
	BLDG 8 (Counseling & Admissions)					
1	Room 109 - East Wall	Plaster		X	Good	Walls - dividing classrooms
2	- SE corner - floor	Beige VFT		X	Good	Floors - under carpet
3	- S wall base	Black vinyl base cove w/ mastic		X	Good	Wall base - throughout + exterior breezeways
4	- East wall	Pinhole w/ fissures 2'x4' Acoustic wall panel	X		Good	Walls - nailed on
5	- NW ceiling	~~Smooth~~ 2'x4' w/ holes acoustic ceiling panel	X		Good	Ceiling (screw down)
6		Smooth 2'x4' acoustic ceiling panel	X		Good	
7	BLDG 8 - EAST WALL Rm 108	PLASTER		X	Good	Walls - dividing classrooms
8	- Floor (NW)	Beige VFT w/ mastic		X		Floors - under carpet
9	- E wall base	Black vinyl base cove w/ mastic		X		Wall base
10	- E wall	2'x4' Acoustic panel w/ holes	X			walls & ceiling nailed/screw on
11	- NW ceiling	Smooth 2'x4' Acoustic ceiling panels	X			Ceiling nailed on

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 12/23/04 @ 1:20pm

Samples received by: Candy Campos Date/Time: 12/23/04 @ 1:30pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

237401

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
	(Counseling & Admissions)					
12	BLDG 8 Rm. 105 - West wall	Plaster		X	Good	Walls
13	- E wall base	Grey ~~VFT~~ Vinyl base cove & mastic		X	Good	Room 105 Wall base
14	- S wall base			X		
15	- NE wall base			X		
16	- S wall	pinholes w/fissures 2'x4' acoustic wall panels	X			walls
17	- S wall		X			
18	- E wall	smooth 2'x4' acoustic panel	X			Walls
19	- NE ceiling	2'x4' acoustic panel w/ holes	X			Ceilings
20	Bldg 8 Rm 101 (OFFICE) - E ceiling	Smooth 12"x12" ACT	X			Rm 101 ceiling
21			X			
22			X			

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 12/23/04 @ 1:20pm

Samples received by: Candy Campos Date/Time: 12/23/04 @ 1:30pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

...CT NAME: Orange Coast College

...JECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
23	Bldg 8 (Counseling & Admissions) Rm 102 (office) - Ceiling East	12"x12" ACT w/ large Random holes	X		Good	Rm 102 Ceiling
24			X			
25			X			
26	Bldg 8 Rm 104 office - Ceiling		X		Good	
27			X			
8			X			
29	Bldg 8 Breezeway - Wall base	Black vinyl base cove & mastic		X	Good	Interior Wall bases & exterior breezeway
30	Bldg 8 Rm 104 (office) - Floor	Grey VFT & mastic		X	Good	Rm 104 office floor
31				X	Good	
32				X	Good	
33	~~Room~~ - S wall	Drywall w/ JC		X	Good	Rm 104 E wall

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty
RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 12/23/04 @ 1:20pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

237401

ROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
34	Bldg 8 (Counseling & Admissions) Room 104 E wall	Drywall w/ JC		X	Good	Room 104 E Wall
35	↓ ↓	↓		X	↓	↓
36	Bldg 8 (Counseling & Admissions)	WPTY		X	G	Re-Entry Center
37						At Room 109
38						At Counseling
39		Stucco		X	G	Connecting Beam from Bldg 8 Bldg
40	↓	↓		↓	↓	At Room 109 (N)

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 12/23/04 @ 1:20pm

Samples received by: Candy Campos Date/Time: 12/23/04 @ 1:30pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES, INC.

Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 237068
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Road
Costa Mesa CA 92626
Claim Number:
Number of Samples: 33
PO Number:

Date Received: 12/17/2004
Date Analyzed: 12/22/2004
Date Reported: 12/23/2004

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237068-001 1	Bldg 9 Rm 110 - West Wall - Between Classroom-Restrooms	Plaster	Beige White	65% Minerals 32% Carbonate 3% Paint
Total Asbestos	None Detected			
237068-002 2	Bldg 9 Rm 110 - East Wall Base	Vinyl Basecove	Black	65% Carbonate 35% Vinyl Binder
Total Asbestos	None Detected			
237068-002M 2	Bldg 9 Rm 110 - East Wall Base	Mastic	Brown	100% Organic Binder
Total Asbestos	None Detected			
237068-003 3	Bldg 9 Rm 110 - East Floor Under Carpet	Vinyl Floor Tile	Tan	73% Carbonate 20% Vinyl Binder
Chrysotile	7 %			
Total Asbestos	7 %			
237068-003M 3	Bldg 9 Rm 110 - East Floor Under Carpet	Floor Tile Mastic	Black	100% Tar
Total Asbestos	None Detected			

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Report Number:	237068
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Road Costa Mesa CA 92626
Claim Number:	
Number of Samples:	33
PO Number:	

Date Received:	12/17/2004
Date Analyzed:	12/22/2004
Date Reported:	12/23/2004

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237068-004 4	Bldg 9 Rm 110 - South Wall - Walls and Ceilings	2x4 Large Hole Acoustic Ceiling Tile	Brown Yellow	97% Cellulose 3% Paint
Total Asbestos	**None Detected**			
237068-005 5	Bldg 9 Rm 110 - East Ceiling	2x4 Smooth Acoustic Ceiling Tile	Brown White	97% Cellulose 3% Paint
Total Asbestos	**None Detected**			
237068-006 6	Bldg 9 Rm 112 - Floor Under Carpet	Vinyl Floor Tile	Tan	75% Carbonate 20% Vinyl Binder
Chrysotile	5 %			
Total Asbestos	5 %			
237068-006M 6	Bldg 9 Rm 112 - Floor Under Carpet	Floor Tile Mastic	Black	100% Tar
Total Asbestos	**None Detected**			
237068-007 7	Bldg 9 Rm 112 - Floor Under Carpet	Vinyl Floor Tile	Tan	74% Carbonate 20% Vinyl Binder
Chrysotile	6 %			
Total Asbestos	6 %			

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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237068-007M 7	Bldg 9 Rm 112 - Floor Under Carpet	Floor Tile Mastic	Black	100% Tar
Total Asbestos	**None Detected**			
237068-008 8	Bldg 9 Rm 112 - Wall Base	Vinyl Basecove	Black	65% Carbonate 35% Vinyl Binder
Total Asbestos	**None Detected**			
237068-008M 8	Bldg 9 Rm 112 - Wall Base	Mastic	Brown	100% Organic Binder
Total Asbestos	**None Detected**			
237068-009 9	Bldg 9 Rm 112 - South Wall	2x4 Acoustic Ceiling Tile with Large Holes	Brown Yellow	97% Cellulose 3% Paint
Total Asbestos	**None Detected**			
237068-010 10	Bldg 9 Rm 112 -Wall	Plaster	Beige White	65% Minerals 32% Carbonate 3% Paint
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number:	237068
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Road Costa Mesa CA 92626
Claim Number:	
Number of Samples:	33
PO Number:	

Date Received:	12/17/2004
Date Analyzed:	12/22/2004
Date Reported:	12/23/2004

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237068-011 11	Bldg 9 Rm 112 - Ceiling	2x4 Acoustic Ceiling Tile	Brown White	97% Cellulose 3% Paint
Total Asbestos	None Detected			
237068-012 12	Bldg 9 EOPS Offices - Walls - Indv. Office Buildouts	Drywall with Joint Compound	White	85% Sulfate 3% Carbonate 7% Cellulose 2% Glass Fibers 3% Paint
Total Asbestos	None Detected			
237068-013 13	Bldg 9 EOPS Offices - Walls - Indv. Office Buildouts	Drywall with Joint Compound	White	86% Sulfate 2% Carbonate 7% Cellulose 2% Glass Fibers 3% Paint
Total Asbestos	None Detected			
237068-014 14	Bldg 9 EOPS Offices - Walls - Indv. Office Buildouts	Drywall with Joint Compound	White	86% Sulfate 2% Carbonate 7% Cellulose 2% Glass Fibers 3% Paint
Total Asbestos	None Detected			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 237068
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Road
Costa Mesa CA 92626
Claim Number:
Number of Samples: 33
PO Number:

Date Received: 12/17/2004
Date Analyzed: 12/22/2004
Date Reported: 12/23/2004

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237068-015 15	Bldg 9 EOPS Offices - Walls - East	Plaster	Beige White	65% Minerals 32% Carbonate 3% Paint
Total Asbestos	**None Detected**			
237068-016 16	Bldg 9 EOPS Offices - Ceiling	2x4 Acoustic Ceiling Tile Smooth	Brown White	97% Cellulose 3% Paint
Total Asbestos	**None Detected**			
237068-017 17	Bldg 9 EOPS Offices - Ceiling	2x4 Acoustic Ceiling Tile with Large Holes	Brown White	97% Cellulose 3% Paint
Total Asbestos	**None Detected**			
237068-018 18	Bldg 9 EOPS Offices - Wallbase	Vinyl Basecove	Black	65% Carbonate 35% Vinyl Binder
Total Asbestos	**None Detected**			
237068-018M 18	Bldg 9 EOPS Offices - Wallbase	Mastic	Brown White	100% Organic Binder
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 237068
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Road
Costa Mesa CA 92626
Claim Number:
Number of Samples: 33
PO Number:

Date Received: 12/17/2004
Date Analyzed: 12/22/2004
Date Reported: 12/23/2004

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237068-019 19	Bldg 9 EOPS Offices - Wallbase	Vinyl Floor Tile	Tan	75% Carbonate 20% Vinyl Binder
Chrysotile	5 %			
Total Asbestos	5 %			
237068-019M 19	Bldg 9 EOPS Offices - Wallbase	Floor Tile Mastic	Black	100% Tar
Total Asbestos	**None Detected**			
237068-020 20	Bldg 9 - Exterior North End Of Bldg	Cement Foundation	Grey Brown	80% Minerals 20% Carbonate
Total Asbestos	**None Detected**			
237068-021 21	Bldg 9 - Custodial Room At Bathrooms	Stucco	Beige	70% Minerals 27% Carbonate 3% Paint
Total Asbestos	**None Detected**			
237068-022 22	Bldg 9 - Custodial Room Electrical Rm - Flue Pipe	Cement Pipe		
Total Asbestos	**Assumed Positive**			

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Polarized Light Microscopy Analysis

Coast Community College
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1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 237068
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Road
Costa Mesa CA 92626
Claim Number:
Number of Samples: 33
PO Number:

Date Received: 12/17/2004
Date Analyzed: 12/22/2004
Date Reported: 12/23/2004

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237068-023 23	Bldg 9 - Exterior South End At Rm 110	Smooth Cement	Grey Beige	75% Minerals 22% Carbonate 3% Paint
Total Asbestos	**None Detected**			
237068-024 24	Bldg 9 - Exterior North End	Smooth Cement	Grey Beige	75% Minerals 22% Carbonate 3% Paint
Total Asbestos	**None Detected**			
237068-025 25	Bldg 9 - South Middle - East Side	Window Putty	Grey	100% Carbonate
Total Asbestos	**None Detected**			
237068-026 26	Bldg 9 - North End - East Side	Window Putty	Grey	100% Carbonate
Total Asbestos	**None Detected**			

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Costa Mesa, CA 92626

Report Number: 237068
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Road
Costa Mesa CA 92626
Claim Number:
Number of Samples: 33
PO Number:

Date Received: 12/17/2004
Date Analyzed: 12/22/2004
Date Reported: 12/23/2004

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)

Ian Reyes
Analyst

Cristina E. Tabatt
Approved Signatory

Bulk samples analyzed per 40 CFR 763, Subpart F, Appendix A; EPA-600/R-93/116 and for friable materials, EPA-600/M4-82-020. Samples are analyzed by calibrated visual estimation; therefore, results may not be reliable for samples of low concentration levels. This report applies only to the items tested. The results are representative of the samples submitted and may not represent the entire material from which samples were collected. This report was issued by a NIST/NVLAP (Lab Code 200358-0) accredited laboratory and may not be reproduced without the expressed written consent of Patriot Environmental. This report must not be used to claim product certification, approval or endorsement by NIST, NVLAP or any agency of the federal government

Samples of wall systems containing discrete and separable layers are analyzed separately and reported as composite. Samples such as floor tiles and ceiling tiles with mastic layers are analyzed and reported separately.

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

2370208

ECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
1	Bldg 9 Rm 110 - West wall	Plaster		X	Good	Walls between classrooms & restrooms
2	- East wall base	Black vinyl basecove & mastic		X		Wall base
3	- East Floor	Tan VFT & mastic		X		Floors under carpet
4	- South Wall	2'x4' large hole ACT	X	~~X~~		Walls & ceilings
5	- East ceiling	2'x4' smooth ACT	X			Ceilings
6	Bldg 9 Rm. 112 - Floor	Tan VFT & mastic		X		Floors under carpet
7	↓	↓		X		↓
8	- Wall base	Black Vinyl Base cove & Mastic		X		Walls at base
9	- South Wall	2'x4' ACT ~~South~~ w/ large holes				& Walls
10	- Wall	Plaster				Walls
11	- Ceiling	2'x4' ACT				Ceiling

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty
RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 12/17/04 @ 4:00pm

Samples received by: Candy Campos Date/Time: 12/17/04 @ 4.00pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

2370208

ROJECT NAME: Orange Coast College

ROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
12	Bldg 9 EOPS offices - Walls	Drywall w/ JC		X	Good	Indiv. office buildouts
13	↓	↓		Y		↓
14	↓	↓		Y		↓
15	↓ ↓	PLASTER		Y		East wall
16	↓ - Ceiling	2'x4' ACT Smooth	Y			Ceiling
17	↓ - Ceiling	2'x4' ACT w/ Large Pinholes				Ceiling
18	↓ - Wallbase	Black vinyl basecove w/ mastic				Wallbase
19	↓	Tan VFT		X	G	EOPS Office Area
20	Bldg 9 - Exterior	Cement Foundation		X	G	North End of Bldg
21	↓ - Custodial Room	Stucco		X	G	At Bathrooms
22 Ass.	↓ ↓	Cement Pipe		X	G	Electrical Room - Flue Pipe

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty
RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 12/17/04 @ 4:00pm

Samples received by: Candy Campos Date/Time: 12/17/04 @ 4:00pm

PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

2370608

…CT NAME: Orange Coast College

…OJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
23	Bldg 9 - Exterior	Smooth Cement		X	G	South End @ Room 110
24	↓	↓		↓	↓	North End
25	- South Middle - East Side	WPTY		X	G	Exterior
26	- North End - East Side	↓		↓	↓	↓

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty
RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 12/17/04 @ 4:00pm

…nples received by: Candy Campos Date/Time: 12/17/04 @ 4:00pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES, INC.

Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 237653
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa, CA
92626
Claim Number:
Number of Samples: 14
PO Number:

Date Received: 12/30/2004
Date Analyzed: 12/30/2004
Date Reported: 1/3/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237653-001 1	Special Services - At Custodial Rm 104	Stucco	Grey	2% Cellulose 98% Minerals
Total Asbestos	**None Detected**			
237653-002 2	Special Services - At Ext Bathroom - Rm 2	Stucco	Grey, Beige	100% Minerals
Total Asbestos	**None Detected**			
237653-003 3	Special Services - At North Entry	Stucco	Grey	3% Cellulose 97% Minerals
Total Asbestos	**None Detected**			
237653-004 4	Special Services - At Kitchen	Wall Plaster	White, Beige	3% Cellulose 97% Minerals
Total Asbestos	**None Detected**			
237653-005 5	Special Services - Rear Office At Assessment Cntr	Wallboard Composite	White, Brown	15% Cellulose 25% Carbonate 60% Sulfate
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 237653
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa, CA
92626
Claim Number:
Number of Samples: 14
PO Number:

Date Received: 12/30/2004
Date Analyzed: 12/30/2004
Date Reported: 1/3/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237653-006 6	Special Services - At Entry to Learning Cntr	Wallboard Composite	White	15% Cellulose 85% Carbonate
Total Asbestos	**None Detected**			
237653-007 7	Special Services - At Disabled Students Cntr	12" ACT-Rough	Grey , White	90% Mineral Wool 10% Non-Fibrous
Total Asbestos	**None Detected**			
237653-008 8	Special Services - At Learning Cntr	12" ACT-Rough	Grey, White	90% Minerals Wool 10% Paint
Total Asbestos	**None Detected**			
237653-009 9	Special Services - At SS - Reception	12" ACT-Rough	Grey, White	95% Mineral Wool 5% Paint
Total Asbestos	**None Detected**			
237653-010 10	Special Services - At Kitchen	12" ACT-Rough	Grey, White	90% Mineral Wool 10% Paint
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number:	237653
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Drive Costa Mesa, CA 92626
Claim Number:	
Number of Samples:	14
PO Number:	

Date Received: 12/30/2004
Date Analyzed: 12/30/2004
Date Reported: 1/3/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237653-011 11	Special Services	12 " ACT-Pinhole	Brown, White	90% Cellulose 10% Paint
Total Asbestos	**None Detected**			
237653-012 12	Special Services - At Kitchen	12" Orange VFT	Orange	100% Carbonate
Chrysotile	2 %			
Total Asbestos	2 %			
237653-013 13	Special Services - At Kitchen	12" Orange VFT	Orange	98% Carbonate
Chrysotile	2 %			
Total Asbestos	2 %			
237653-014 14	Special Services - At Kitchen	12" Orange VFT	Orange	97% Carbonate
Chrysotile	3 %			
Total Asbestos	3 %			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number:	237653
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Drive Costa Mesa, CA 92626
Claim Number:	
Number of Samples:	14
PO Number:	

Date Received:	12/30/2004
Date Analyzed:	12/30/2004
Date Reported:	1/3/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)

John Lopez
Analyst

Grace Herrera
Approved Signatory

Bulk samples analyzed per 40 CFR 763, Subpart F, Appendix A; EPA-600/R-93/116 and for friable materials, EPA-600/M4-82-020. Samples are analyzed by calibrated visual estimation; therefore, results may not be reliable for samples of low concentration levels. This report applies only to the items tested. The results are representative of the samples submitted and may not represent the entire material from which samples were collected. This report was issued by a NIST/NVLAP (Lab Code 200358-0) accredited laboratory and may not be reproduced without the expressed written consent of Patriot Environmental. This report must not be used to claim product certification, approval or endorsement by NIST, NVLAP or any agency of the federal government.

Samples of wall systems containing discrete and separable layers are analyzed separately and reported as composite. Samples such as floor tiles and ceiling tiles with mastic layers are analyzed and reported separately.

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

237653

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
01	Special Services (10)	Stucco		X	G	At Custodial Room #104
02						At Exterior Bathrooms (Room #2)
03						At North Entry
04		WP		X	G	At Kitchen
05		WB/JC		X	G	Rear Office at Assessment Center
06						At Entry to Learning Center
07		12" ACT - Rough	X		G	At Disabled Students Center
08						At Learning Center
09						At Special Services - Reception
10						At Kitchen
11		12" ACT - Pinhole				Room 105

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 12/29/04 @

Samples received by: [signature] Date/Time: 12-30-04 0935

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

CT NAME: Orange Coast College

OJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
12	Special Services (10)	12" Orange VFT		X	G	Kitchen
13	↓	↓		↓	↓	↓
14	↓	↓		↓	↓	↓

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty
RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 12/28/04 @

mples received by: Date/Time:

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES, INC.

Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number:	237695
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Drive Costa Mesa, CA 92626
Claim Number:	
Number of Samples:	20
PO Number:	

Date Received:	12/28/2004
Date Analyzed:	1/21/2005
Date Reported:	1/21/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237695-001 01	Business (13)- Custodial Closet at Bathrooms	Wallboard and Wall Plaster Rough Coat	Beige	42% Minerals 35% Sulfate 18% Carbonate 3% Cellulose 2% Paint
Total Asbestos	**None Detected**			
237695-002 02	Business (13)- Womens Restroom	Wall Paster Smooth	Beige	60% Minerals 37% Carbonate 3% Paint
Total Asbestos	**None Detected**			
237695-003 03	Business (13)- Room 105 Main	Base Cove	Black	65% Carbonate 35% Vinyl Binder
Total Asbestos	**None Detected**			
237695-003M 03	Business (13)- Room 105 Main	Mastic	Beige	100% Organic Binder
Total Asbestos	**None Detected**			
237695-004 04	Business (13)- Room 105 Storage Room	2'x4' Acoustic Ceiling Tile	Brown White	95% Cellulose 5% Paint
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 237695
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa, CA 92626
Claim Number:
Number of Samples: 20
PO Number:

Date Received: 12/28/2004
Date Analyzed: 1/21/2005
Date Reported: 1/21/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237695-005 05	Business (13)- Room 105 Storage Room	12" Acoustic Ceiling Tile	Brown White	95% Cellulose 5% Paint
Total Asbestos	**None Detected**			
237695-006 06	Business (13)- Room 105- At Front	Wallboard and Joint Compound	White	80% Sulfate 10% Carbonate 7% Cellulose 3% Paint
Total Asbestos	**None Detected**			
237695-007 07	Business (13)- Room 105 at Storage Room	Wallboard and Joint Compound	White	80% Sulfate 10% Carbonate 7% Cellulose 3% Paint
Total Asbestos	**None Detected**			
237695-008 08	Business (13)- Mens Restroom	Wall Plaster Smooth	Beige	60% Minerals 37% Carbonate 3% Paint
Total Asbestos	**None Detected**			
237695-009 09	Business (13)- Room 106 Backroom	2'x4' Acoustic Ceiling Tile	Brown	100% Cellulose
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

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Report Number: 237695
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa, CA 92626
Claim Number:
Number of Samples: 20
PO Number:

Date Received: 12/28/2004
Date Analyzed: 1/21/2005
Date Reported: 1/21/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237695-010 10	Business (13)- Room 106 Office	2'x4' Acoustic Ceiling Tile	Brown White	95% Cellulose 5% Paint
Total Asbestos	**None Detected**			
237695-011 11	Business (13)- Room 106 Classroom	2'x4' Acoustic Ceiling Tile	Brown White	95% Cellulose 5% Paint
Total Asbestos	**None Detected**			
237695-012 12	Business (13)- Room 106 Classroom Front	Wallboard and Joint Compound	White	80% Sulfate 10% Carbonate 7% Cellulose 3% Paint
Total Asbestos	**None Detected**			
237695-013 13	Business (13)- Room 106 Classroom Front	Base Cove	Black	65% Carbonate 35% Vinyl Binder
Total Asbestos	**None Detected**			
237695-013M 13	Business (13)- Room 106 Classroom Front	Mastic	Brown	100% Organic Binder
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

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Report Number:	237695
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Drive Costa Mesa, CA 92626
Claim Number:	
Number of Samples:	20
PO Number:	

Date Received: 12/28/2004
Date Analyzed: 1/21/2005
Date Reported: 1/21/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237695-014 14	Business (13)- Room 107 Classroom	2'x4' Acoustic Ceiling Tile-Wall	Brown White	95% Cellulose 5% Paint
Total Asbestos	**None Detected**			
237695-015 15	Business (13)- Room 107 Classroom	2'x4' Acoustic Ceiling Tile- Ceiling	Brown White	95% Cellulose 5% Paint
Total Asbestos	**None Detected**			
237695-016 16	Business (13)- Room 107 Classroom	Wallboard and Joint Compound	White	80% Sulfate 10% Carbonate 7% Cellulose 3% Paint
Total Asbestos	**None Detected**			
237695-017 17	Business (13)- At Room 105 Exterior	Window Putty	Grey	92% Carbonate 5% Paint
Chrysotile	3 %			
Total Asbestos	3 %			
237695-018 18	Business (13)- At Room 106 Exterior	Window Putty	Grey	92% Carbonate 5% Paint
Chrysotile	3 %			
Total Asbestos	3 %			

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Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number:	237695
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Drive Costa Mesa, CA 92626
Claim Number:	
Number of Samples:	20
PO Number:	

Date Received:	12/28/2004
Date Analyzed:	1/21/2005
Date Reported:	1/21/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)

Ian Reyes
Analyst

Grace Herrera
Approved Signatory

Bulk samples analyzed per 40 CFR 763, Subpart F, Appendix A; EPA-600/R-93/116 and for friable materials, EPA-600/M4-82-020. Samples are analyzed by calibrated visual estimation; therefore, results may not be reliable for samples of low concentration levels. This report applies only to the items tested. The results are representative of the samples submitted and may not represent the entire material from which samples were collected. This report was issued by a NIST/NVLAP (Lab Code 200358-0) accredited laboratory and may not be reproduced without the expressed written consent of Patriot Environmental. This report must not be used to claim product certification, approval or endorsement by NIST, NVLAP or any agency of the federal government.

Samples of wall systems containing discrete and separable layers are analyzed separately and reported as composite. Samples such as floor tiles and ceiling tiles with mastic layers are analyzed and reported separately.

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

237695

.CT NAME: Orange Coast College

..OJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

..mple ID	Sample Location	Material Type	F	NF	Cond	Material Location
01	Business (13)	WB/WP - Rough Coat		X	G	Custodial Closet At Bathrooms
02		WP - Smooth				Womens Restroom
03		Black Base Cove & Mastic		X		Room 105 - Main
04		2'X4' Act	X		G	- Storage Room
05		12" Random Hole ACT				
[illegible]		WB/JC		X		- At Front
07						- At Storage Room
08		WP - Smooth		X		Mens Restroom
09		2'X4' ACT	X		G	Room 106 - Backroom
10						- Office
11						- Classroom

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty
RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 12/28/04 @

..mples received by: [signature] Date/Time: 12/28/04

PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

PROJECT NAME: Orange Coast College

237696

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
12	Business (13)	WB/JC		X	G	Room 106 - Classroom Front
13	↓	Black Base Cove & Mastic		↓	↓	↓
14		2'x4' ACT - Wall	X		G	Room 107 - Classroom
15		2'x4' ACT - Ceiling	↓		↓	↓
16	↓	WB/JC		X	↓	↓
17		WPTY		X	G	At Room 105 - Exterior
18	↓	↓		↓	↓	106

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 12/28/04 @

Samples received by: [signature] Date/Time: 12/28/04

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES, INC.

Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 237691
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa, CA 92626

Claim Number:
Number of Samples: 39
PO Number:

Date Received: 12/28/2004
Date Analyzed: 12/30/2004
Date Reported: 1/3/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237691-001 01	Business (14)- Custodial Closet at Bathrooms (Exterior)	Fireproofing Material	Brown	65% Carbonate 20% Vermiculite 15% Cellulose
Total Asbestos	None Detected			
237691-002 02	Business (14)- Custodial Closet at Bathrooms (Exterior)	Wallboard and Joint Compound	Beige White	86% Sulfate 8% Cellulose 3% Glass Fibers 3% Paint
Total Asbestos	None Detected			
237691-003 03	Business (14)- Telephone Room- Exterior	Stucco	Grey	75% Minerals 22% Carbonate 3% Paint
Total Asbestos	None Detected			
237691-004 04	Business (14)- Telephone Equipment /HVAC Room Exterior	Duct Tape		
Total Asbestos	Assumed Positve			
237691-005 05	Business (14)- Telephone Equipment /HVAC Room Exterior	Woven Material X4		
Total Asbestos	Assumed Positve			

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Costa Mesa, CA 92626

Report Number: 237691
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa, CA 92626
Claim Number:
Number of Samples: 39
PO Number:

Date Received: 12/28/2004
Date Analyzed: 12/30/2004
Date Reported: 1/3/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237691-006 06	Business (14)- Telephone Equipment /HVAC Room Exterior	Fireproofing	Brown	65% Carbonate 20% Vermiculite 15% Cellulose
Total Asbestos	**None Detected**			
237691-007A 07	Business (14)- Room 108	Joint Compound	White	93% Carbonate 5% Paint
Chrysotile	2 %			
Total Asbestos	2 %			
237691-007B 07	Business (14)- Room 108	Wallboard and Joint Compound	White	85% Sulfate 5% Carbonate 7% Cellulose 3% Paint
Chrysotile	<1 %			
Total Asbestos	< 1%			
237691-008 08	Business (14)- Room 108	Base Cove	Brown	65% Carbonate 35% Vinyl Binder
Total Asbestos	**None Detected**			

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Report Number: 237691
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa, CA 92626
Claim Number:
Number of Samples: 39
PO Number:

Date Received: 12/28/2004
Date Analyzed: 12/30/2004
Date Reported: 1/3/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237691-009 09	Business (14)- Room 108	Base Cove	Dark Brown	65% Carbonate 35% Vinyl Binder
Total Asbestos	None Detected			
237691-010 10	Business (14)- Room 108	Wallboard and Joint Compound	White	80% Sulfate 10% Carbonate 7% Cellulose 3% Paint
Total Asbestos	None Detected			
237691-011 11	Business (14)- Room 108 Front Entry	12" Vinyl Floor Tile	White	80% Carbonate 20% Vinyl Binder
Total Asbestos	None Detected			
237691-012 12	Business (14)- Room 108 Front Entry	12" Vinyl Floor Tile	White	80% Carbonate 20% Vinyl Binder
Total Asbestos	None Detected			
237691-013 13	Business (14)- Room 108 Front Entry	12" Vinyl Floor Tile	White	80% Carbonate 20% Vinyl Binder
Total Asbestos	None Detected			

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Report Number:	237691
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Claim Number:	
Number of Samples:	39
PO Number:	

Date Received:	12/28/2004
Date Analyzed:	12/30/2004
Date Reported:	1/3/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237691-014 14	Business (14)- Room 108 Rear Classroom	12" Acoustic Ceiling Tile	Grey White	25% Mineral Wool 60% Cellulose 12% Perlite 3% Paint
Total Asbestos	**None Detected**			
237691-015 15	Business (14)- Room 108 Rear Classroom	12" Acoustic Ceiling Tile	Grey White	25% Mineral Wool 60% Cellulose 12% Perlite 3% Paint
Total Asbestos	**None Detected**			
237691-016 16	Business (14)- Room 108 Rear Classroom	12" Acoustic Ceiling Tile	Grey White	25% Mineral Wool 60% Cellulose 12% Perlite 3% Paint
Total Asbestos	**None Detected**			
237691-017 17	Business (14)- Room 108 Front Entry	Wallboard and Joint Compound	Beige White	82% Sulfate 8% Carbonate 7% Cellulose 3% Paint
Total Asbestos	**None Detected**			

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Number of Samples: 39
PO Number:

Date Received: 12/28/2004
Date Analyzed: 12/30/2004
Date Reported: 1/3/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237691-018 18	Business (14)- Room 108 Rear Area	Wallboard and Joint Compound	Beige White	82% Sulfate 8% Carbonate 7% Cellulose 3% Paint
Total Asbestos	**None Detected**			
237691-019 19	Business (14)- Room 110	2'x3' Acoustic Ceiling Tile	Grey White	30% Mineral Wool 55% Cellulose 12% Perlite 3% Paint
Total Asbestos	**None Detected**			
237691-020 20	Business (14)- Room 110	2'x3' Acoustic Ceiling Tile	Grey White	30% Mineral Wool 55% Cellulose 12% Perlite 3% Paint
Total Asbestos	**None Detected**			
237691-021 21	Business (14)- Room 110	2'x3' Acoustic Ceiling Tile	Grey White	20% Mineral Wool 65% Cellulose 12% Perlite 3% Paint
Total Asbestos	**None Detected**			

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Claim Number:
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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237691-022 22	Business (14)- Room 110 Private Office	Base Cove	Black	65% Carbonate 35% Vinyl Binder
Total Asbestos	**None Detected**			
237691-023 23	Business (14)- Room 110 Private Office	Wallboard and Joint Compound	Beige White	80% Sulfate 10% Carbonate 7% Cellulose 3% Paint
Total Asbestos	**None Detected**			
237691-024 24	Business (14)- Room 110 Front	Wallboard and Joint Compound	Beige White	80% Sulfate 10% Carbonate 7% Cellulose 3% Paint
Total Asbestos	**None Detected**			
237691-025A 25	Business (14)- Room 110 East Side	Joint Compound	Beige	93% Carbonate 5% Paint
Chrysotile	2 %			
Total Asbestos	2 %			

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PO Number:

Date Received: 12/28/2004
Date Analyzed: 12/30/2004
Date Reported: 1/3/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237691-025B 25	Business (14)- Room 110 East Side	Wallboard and Joint Compound	Beige White	80% Sulfate 10% Carbonate 7% Cellulose 3% Paint
Chrysotile	<1 %			
Total Asbestos	**< 1%**			
237691-026A 26	Business (14)- Room 111 Kitchen	Linoleum	White	15% Linoleum 55% Vinyl Binder 20% Cellulose 10% Glass Fibers
Total Asbestos	**None Detected**			
237691-026B 26	Business (14)- Room 111 Kitchen	Floor Tile	Brown	77% Carbonate 20% Vinyl Binder
Chrysotile	3 %			
Total Asbestos	**3 %**			
237691-026BM 26	Business (14)- Room 111 Kitchen	Floor Tile Mastic	Black	92% Tar
Chrysotile	8 %			
Total Asbestos	**8 %**			

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Costa Mesa, CA 92626

Claim Number:
Number of Samples: 39
PO Number:

Date Received: 12/28/2004
Date Analyzed: 12/30/2004
Date Reported: 1/3/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237691-027A 27	Business (14)- Room 111 Kitchen	Linoleum	White	15% Linoleum 55% Vinyl Binder 20% Cellulose 10% Glass Fibers
Total Asbestos	**None Detected**			
237691-027B 27	Business (14)- Room 111 Kitchen	Floor Tile	Brown	77% Carbonate 20% Vinyl Binder
Chrysotile	3 %			
Total Asbestos	3 %			
237691-027BM 27	Business (14)- Room 111 Kitchen	Floor Tile Mastic	Black	92% Tar
Chrysotile	8 %			
Total Asbestos	8 %			
237691-028A 28	Business (14)- Room 111 Kitchen	Linoleum	White	15% Linoleum 55% Vinyl Binder 20% Cellulose 10% Glass Fibers
Total Asbestos	**None Detected**			

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Costa Mesa, CA 92626

Report Number: 237691
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa, CA 92626

Claim Number:
Number of Samples: 39
PO Number:

Date Received: 12/28/2004
Date Analyzed: 12/30/2004
Date Reported: 1/3/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237691-028B 28	Business (14)- Room 111 Kitchen	Floor Tile	Brown	77% Carbonate 20% Vinyl Binder
Chrysotile	3 %			
Total Asbestos	3 %			
237691-028BM 28	Business (14)- Room 111 Kitchen	Floor Tile Mastic	Black	92% Tar
Chrysotile	8 %			
Total Asbestos	8 %			
237691-029 29	Business (14)- Room 111 Reception	Wallboard and Joint Compound	White	84% Sulfate 4% Carbonate 7% Cellulose 2% Glass Fibers 3% Paint
Total Asbestos	**None Detected**			
237691-030 30	Business (14)- Room 111 Kitchen	Base Cove	Grey	65% Carbonate 35% Vinyl Binder
Total Asbestos	**None Detected**			

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Report Number: 237691
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Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa, CA 92626
Claim Number:
Number of Samples: 39
PO Number:

Date Received: 12/28/2004
Date Analyzed: 12/30/2004
Date Reported: 1/3/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237691-031 31	Business (14)- Room 108B	2'x3' Acoustic Ceiling Tile	Grey White	20% Mineral Wool 65% Cellulose 12% Perlite 3% Paint

Total Asbestos **None Detected**

Ian Reyes
Analyst

Grace Herrera
Approved Signatory

Bulk samples analyzed per 40 CFR 763, Subpart F, Appendix A; EPA-600/R-93/116 and for friable materials, EPA-600/M4-82-020. Samples are analyzed by calibrated visual estimation; therefore, results may not be reliable for samples of low concentration levels. This report applies only to the items tested. The results are representative of the samples submitted and may not represent the entire material from which samples were collected. This report was issued by a NIST/NVLAP (Lab Code 200358-0) accredited laboratory and may not be reproduced without the expressed written consent of Patriot Environmental. This report must not be used to claim product certification, approval or endorsement by NIST, NVLAP or any agency of the federal government.

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

237691

…CT NAME: Orange Coast College

…JECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
01	Business (14)	Fireproofing Mat.	X		G	Custodial Closet At Bathrooms (Exterior)
02		WB/JC		X		
03		Stucco -		X	G	Telephone Room - Exterior
04 ASS		TAP	X		G	Telephone Equipment/HVAC Room - Exterior
05 ASS		WOV x 4				
06		Fireproofing				
07		WB/JC		X	G	
08		Brown Base Cove				Room 108
09		Dk. Brown Base Cove				
10		WB/JC		X		
11		12" White VFT		X	G	· Front Entry

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty
RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 12/20/04 @

…mples received by: Candy Campos Date/Time: 12/26/04 @ 4:00pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

237691

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
12	Business (14)	12" White VFT		X	G	Room 108 · Front Entry
13						
14		12" White ACT	X			· Rear Classroom
15						·
16						·
17		WB/JC		X	G	· Front Entry
18						· Rear Area
19		2'x3' ACT	X		G	Room 110
20						
21						
22		Black Base Cove		X	G	· Private Office

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 12/28/04 @

Samples received by: [signature] Date/Time: 12/28/04 @ 4:00 pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

237691

CT NAME: Orange Coast College

ROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

ample ID	Sample Location	Material Type	F	N F	Cond	Material Location
23	Business (14)	WB/JC		X	G	Room 110 • Private Office
24						• Front
25						• East Side
26		White Lin.		X	G	Room 111 • Kitchen
27						
[illegible]						
29		WB/JC		X	G	• Reception
30		Gray Base Cove				• Kitchen
31		2'x3' ACT	X		G	Room 108B

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty
RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 12/28/04 @

mples received by: Candyn Campo Date/Time: 12/28/04 @ 4:00pm

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 243547
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Road
Costa Mesa CA 92626

Claim Number: NA
Number of Samples: 5
PO Number:

Date Received: 3/25/2005
Date Analyzed: 3/28/2005
Date Reported: 3/28/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
243547-001 101	Business 14 Rear Telephone Room	HVAC Duct Seam Tape	White	85% Cellulose 15% Binder
Total Asbestos	**None Detected**			
243547-002 102	Business 14 Kitchen Near Office D	Wallboard and Joint Compound	White	79% Sulfate 6% Carbonate 12% Cellulose 3% Paint
Total Asbestos	**None Detected**			
243547-003 103	Business 14 Hallway At Office D	Wallboard and Joint Compound	White	79% Sulfate 6% Carbonate 12% Cellulose 3% Paint
Total Asbestos	**None Detected**			
243547-004 104	Business 14 Custodial Closet	Wallboard and Joint Compound	Beige	84% Sulfate 6% Carbonate 7% Cellulose 3% Paint
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 243547
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Road
Costa Mesa CA 92626
Claim Number: NA
Number of Samples: 5
PO Number:

Date Received: 3/25/2005
Date Analyzed: 3/28/2005
Date Reported: 3/28/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
243547-005 105	Business 14 Rear Telephone Room	Wallboard and Joint Compound	White	79% Sulfate 6% Carbonate 12% Cellulose 3% Paint

Total Asbestos **None Detected**

Ian Reyes
Analyst

Grace Herrera
Approved Signatory

Bulk samples analyzed per 40 CFR 763, Subpart F, Appendix A; EPA-600/R-93/116 and for friable materials, EPA-600/M4-82-020. Samples are analyzed by calibrated visual estimation; therefore, results may not be reliable for samples of low concentration levels. This report applies only to the items tested. The results are representative of the samples submitted and may not represent the entire material from which samples were collected. This report was issued by a NIST/NVLAP (Lab Code 200358-0) accredited laboratory and may not be reproduced without the expressed written consent of Patriot Environmental. This report must not be used to claim product certification, approval or endorsement by NIST, NVLAP or any agency of the federal government.

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

243547

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
101	Business (14)	HVAC DUCT SEAM TAPE	X		G	Rear Telephone Room
102		WB/JC		X	G	Kitchen near Office D
103						Hallway At Office D
104						Custodial Closet
105						Rear Telephone Room

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 3/24/05 @ 12:00pm

Samples received by: [signature] Date/Time: 3/25/05 9:20

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 239251
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa, CA 92626

Claim Number:
Number of Samples: 52
PO Number:

Date Received: 1/19/2005
Date Analyzed: 2/2/2005
Date Reported: 2/9/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239251-001 01	Science (35)- Exterior of #149	Window Putty	Grey	100% Carbonate
Total Asbestos	**None Detected**			
239251-002 02	Science (35)- Exterior of #145	Window Putty	Grey	2% Cellulose 98% Carbonate
Total Asbestos	**None Detected**			
239251-003 03	Science (35)- Room 149 at Crawlspace Hatch Under Carpet	12 in.Vinyl Floor Tile	White, Brown	100% Carbonate
Total Asbestos	**None Detected**			
239251-004 04	Science (35)- Room 149 at Crawlspace Hatch Under Carpet	12 in.Vinyl Floor Tile	White, Brown	100% Carbonate
Total Asbestos	**None Detected**			
239251-005 05	Science (35)- Room 149 at Crawlspace Hatch Under Carpet	12 in.Vinyl Floor Tile	White, Brown	4% Cellulose 96% Carbonate
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 239251
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa, CA 92626

Claim Number:
Number of Samples: 52
PO Number:

Date Received: 1/19/2005
Date Analyzed: 2/2/2005
Date Reported: 2/9/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239251-006 06	Science (35)- N. End of Bldg.	Stucco	Grey, White	10% Paint 90% Minerals
Total Asbestos	**None Detected**			
239251-007 07	Science (35)- Overhead at 155	Stucco	Grey	5% Cellulose 95% Minerals
Total Asbestos	**None Detected**			
239251-008 08	Science (35)- Wall at 155	Stucco	White, Beige, Green	3% Cellulose 97% Minerals
Chrysotile	<1 %			
Total Asbestos	**<1%**			
239251-009 09	Science (35)- Wall at 151	Stucco	White, Grey	100% Minerals
Total Asbestos	**None Detected**			
239251-010 10	Science (35)- Room 149 Under Carpet	Vinyl Floor Tile	Tan	85% Carbonate
Chrysotile	15 %			
Total Asbestos	**15 %**			

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Polarized Light Microscopy Analysis

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Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 239251
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa, CA 92626
Claim Number:
Number of Samples: 52
PO Number:

Date Received: 1/19/2005
Date Analyzed: 2/2/2005
Date Reported: 2/9/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239251-010M 10	Science (35)- Room 149 Under Carpet	Mastic	Black	10% Cellulose 90% Tar
Total Asbestos	**None Detected**			
239251-011 11	Science (35)- Room 150	Vinyl Floor Tile	Tan	90% Carbonate
Chrysotile	10 %			
Total Asbestos	10 %			
239251-011M 11	Science (35)- Room 150	Mastic	Black	100% Tar
Total Asbestos	**None Detected**			
239251-012 12	Science (35)- Room 151 Exposed	Vinyl Floor Tile	Tan	92% Carbonate
Chrysotile	8 %			
Total Asbestos	8 %			
239251-012M 12	Science (35)- Room 151 Exposed	Mastic	Black	100% Tar
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
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Costa Mesa, CA 92626

Report Number: 239251
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa, CA 92626

Claim Number:
Number of Samples: 52
PO Number:

Date Received: 1/19/2005
Date Analyzed: 2/2/2005
Date Reported: 2/9/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239251-013 13	Science (35)- Room 151 Exposed	9 in.Vinyl Floor Tile	Tan	90% Carbonate
Chrysotile 10 %				
Total Asbestos 10 %				
239251-013M 13	Science (35)- Room 151 Exposed	Mastic	Black	3% Cellulose 97% Tar
Total Asbestos **None Detected**				
239251-014 14	Science (35)- Room 151 Exposed	9 in.Vinyl Floor Tile	Tan	90% Carbonate
Chrysotile 10 %				
Total Asbestos 10 %				
239251-014M 14	Science (35)- Room 151 Exposed	Mastic	Black	100% Tar
Total Asbestos **None Detected**				
239251-015 15	Science (35)- Room 155 Exposed	9 in.Vinyl Floor Tile	Tan	90% Carbonate
Chrysotile 10 %				
Total Asbestos 10 %				

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 239251
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa, CA 92626

Claim Number:
Number of Samples: 52
PO Number:

Date Received: 1/19/2005
Date Analyzed: 2/2/2005
Date Reported: 2/9/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239251-015M 15	Science (35)- Room 155 Exposed	Mastic	Black	93% Tar
Chrysotile	7 %			
Total Asbestos	**7 %**			
239251-016 16	Science (35)- Room 155 Exposed	9 in.Vinyl Floor Tile	Tan	92% Carbonate
Chrysotile	8 %			
Total Asbestos	**8 %**			
239251-016M 16	Science (35)- Room 155 Exposed	Mastic	Black	95% Tar
Chrysotile	5 %			
Total Asbestos	**5 %**			
239251-017 17	Science (35)- Room 154	2'x2' Acoustic Ceiling Tile- Pinhole	Grey, White	20% Cellulose 45% Mineral Wool 25% Perlite 10% Paint
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

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Costa Mesa, CA 92626

Report Number:	239251
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Drive Costa Mesa, CA 92626
Claim Number:	
Number of Samples:	52
PO Number:	

Date Received:	1/19/2005
Date Analyzed:	2/2/2005
Date Reported:	2/9/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239251-018 18	Science (35)- Room 154	2'x2' Acoustic Ceiling Tile- Pinhole	Brown, White	20% Paint 80% Cellulose
Total Asbestos	**None Detected**			
239251-019 19	Science (35)- Room 154	2'x3' Acoustic Wall Tile- Random Hole	Brown, White	10% Paint 90% Cellulose
Total Asbestos	**None Detected**			
239251-020 20	Science (35)- Room 150	2'x3' Acoustic Wall Tile- Random Hole	Brown, White	15% Paint 85% Cellulose
Total Asbestos	**None Detected**			
239251-021 21	Science (35)- Room 154 Under Carpet	Flooring Mastic	Black, Yellow	97% Non-Fibrous
Chrysotile	3 %			
Total Asbestos	3 %			
239251-022 22	Science (35)- Room 153	2'x3' Acoustic Ceiling Tile	Grey, White	15% Cellulose 55% Mineral Wool 20% Perlite 10% Paint
Total Asbestos	**None Detected**			

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Costa Mesa, CA 92626

Report Number: 239251
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa, CA 92626
Claim Number:
Number of Samples: 52
PO Number:

Date Received: 1/19/2005
Date Analyzed: 2/2/2005
Date Reported: 2/9/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239251-023 23	Science (35)- Room 152	2'x3' Acoustic Ceiling Tile	Grey, White	20% Cellulose 45% Mineral Wool 25% Perlite 10% Paint
Total Asbestos	**None Detected**			
239251-024 24	Science (35)- Room 149	Base Cove	Brown	100% Carbonate
Total Asbestos	**None Detected**			
239251-024M 24	Science (35)- Room 149	Mastic	Dark Brown	3% Cellulose 97% Non-Fibrous
Total Asbestos	**None Detected**			
239251-025 25	Science (35)- Room 150	Base Cove	Brown	2% Cellulose 98% Non-Fibrous
Total Asbestos	**None Detected**			
239251-025M 25	Science (35)- Room 150	Mastic	Yellow	100% Carbonate
Total Asbestos	**None Detected**			

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Report Number: 239251
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa, CA 92626
Claim Number:
Number of Samples: 52
PO Number:

Date Received: 1/19/2005
Date Analyzed: 2/2/2005
Date Reported: 2/9/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239251-026 26	Science (35)- Room 151	Base Cove	Brown	100% Carbonate
Total Asbestos	**None Detected**			
239251-026M 26	Science (35)- Room 151	Mastic	Brown	5% Wollastonite 95% Non-Fibrous
Total Asbestos	**None Detected**			
239251-027 27	Science (35)- Room 151	Base Cove	Brown	100% Carbonate
Total Asbestos	**None Detected**			
239251-027M 27	Science (35)- Room 151	Mastic	Tan	5% Cellulose 95% Carbonate
Total Asbestos	**None Detected**			
239251-028 28	Science (35)- Room 155	Base Cove	Brown	100% Non-Fibrous
Total Asbestos	**None Detected**			

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Report Number: 239251
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa, CA 92626

Claim Number:
Number of Samples: 52
PO Number:

Date Received: 1/19/2005
Date Analyzed: 2/2/2005
Date Reported: 2/9/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239251-029 29	Science (35)- Room 151	2'x3' Acoustic CeilingTile- Random	Brown, White	10% Paint 90% Cellulose
Total Asbestos	**None Detected**			
239251-030 30	Science (35)- Room 151	2'x3' Acoustic CeilingTile- Random	Brown, White	10% Paint 90% Cellulose
Total Asbestos	**None Detected**			
239251-031 31	Science (35)- Room 151	2'x3' Acoustic CeilingTile- Random	Brown, White	15% Paint 85% Cellulose
Total Asbestos	**None Detected**			
239251-032 32	Science (35)- Room 149	Wall Plaster	Beige, White	10% Paint 90% Minerals
Total Asbestos	**None Detected**			
239251-033 33	Science (35)- Room 150	Wall Plaster	Beige, White	20% Paint 80% Minerals
Total Asbestos	**None Detected**			
239251-034 34	Science (35)- Room 153	Wall Plaster	Beige	3% Cellulose 97% Minerals
Total Asbestos	**None Detected**			

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Report Number:	239251
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Drive Costa Mesa, CA 92626
Claim Number:	
Number of Samples:	52
PO Number:	

Date Received:	1/19/2005
Date Analyzed:	2/2/2005
Date Reported:	2/9/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239251-035 35	Science (35)- Room 153 Office	Wall Plaster	Beige	10% Paint 8% Cellulose 82% Non-Fibrous
Total Asbestos	**None Detected**			
239251-036 36	Science (35)- Room 155	Wall Plaster	Beige	25% Paint 75% Minerals
Total Asbestos	**None Detected**			
239251-037 37	Science (35)- Room 151	2'x3' Acoustic CeilingTile- Smooth	Brown, White	15% Paint 85% Cellulose
Total Asbestos	**None Detected**			
239251-038 38	Science (35)- Room 151	2'x3' Acoustic CeilingTile- Smooth	Brown, White	15% Paint 85% Cellulose
Total Asbestos	**None Detected**			
239251-039 39	Science (35)- Room 151	2'x3' Acoustic CeilingTile- Smooth	Brown, White	10% Paint 90% Cellulose
Total Asbestos	**None Detected**			

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Report Number:	239251
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Drive Costa Mesa, CA 92626
Claim Number:	
Number of Samples:	52
PO Number:	

Date Received: 1/19/2005
Date Analyzed: 2/2/2005
Date Reported: 2/9/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239251-040 40	Science (35)- Small Rear Office Dividing Wall at Door	Wallboard-Joint Compound	White, Brown	20% Cellulose 20% Paint 60% Sulfate
Total Asbestos	**None Detected**			
239251-041 41	Science (35)- Small Rear Office Dividing Wall	Wallboard-Joint Compound	White	100% Carbonate
Total Asbestos	**None Detected**			

John Lopez
Analyst

Grace Herrera
Approved Signatory

Bulk samples analyzed per 40 CFR 763, Subpart F, Appendix A; EPA-600/R-93/116 and for friable materials, EPA-600/M4-82-020. Samples are analyzed by calibrated visual estimation; therefore, results may not be reliable for samples of low concentration levels. This report applies only to the items tested. The results are representative of the samples submitted and may not represent the entire material from which samples were collected. This report was issued by a NIST/NVLAP (Lab Code 200358-0) accredited laboratory and may not be reproduced without the expressed written consent of Patriot Environmental. This report must not be used to claim product certification, approval or endorsement by NIST, NVLAP or any agency of the federal government.

Samples of wall systems containing discrete and separable layers are analyzed separately and reported as composite. Samples such as floor tiles and ceiling tiles with mastic layers are analyzed and reported separately.

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

239251

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
NOTE	Science (35)	No Access				Room 151 (Room 5A & unmarked door)
NOTE		2'X3' Smooth & Random Hole ACT				Above T-BAR Ceilings, Exposed in Room 151
01		WPTY		X	G	Exterior of #149
02						of 145
03		12" White VFT		X	G	Room 149; At Crawlspace Hatch under carpet
04						
05						
06		STC		X	G	North End of Bldg
07						Overhead At 155
08						Wall At 155
09						Wall At 151

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/19/05

Samples received by: C. Tabbatt Date/Time: 1/19/05

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

JECT NAME: Orange Coast College

239251

OJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
10	Science (35)	VFT		X	G	Room149 ; under carpet
11						150 ;
12		9" Beige VFT				151 - exposed
13						-
14						-
5						155 -
16						-
17		2'X2' ACT - Pinhole	X		G	Room 154
18						
19		2'X3' AWT - Random Hole				Room 154
20						150

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/19/05

mples received by: [signature] Date/Time: 1/19/05

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

239251

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
21	Science (35)	Flooring Mastic		X	G	Room 154; under carpet
22		2'X3' ACT	X			Room 153
23						152
24		Brown Base Cove		X	G	Room 149
25						150
26						151
27						151
28						155
29		2'X3' ACT - Random Hole	X		G	151
30						151
31						151

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/19/05

Samples received by: [signature] Date/Time: 1/19/05

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

ECT NAME: Orange Coast College

239251

JECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
32	Science (35)	WP		X	G	Room 149
33						150
34						153
35						153- Office
36						155
37		2'X3' ACT -Smooth	X		G	151
38						
39						
40		WB/JC		X	G	Small Rear Office Dividing Wall ; At Door
41						; Wall

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/19/05

mples received by: [signature] Date/Time: 1/19/05

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES, INC

NESHAP Point Counting by Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 242110
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626

Date Received: 1/19/2005
Date Analyzed: 3/4/2005
Date Reported: 3/4/2005

Claim Number: NA
Number of Samples: 1
PO Number: NA

Lab/Client ID/Layer	Location	Material Description	Color	Composition
242110-001 08	Science (35) - Wall At 155	Stucco	White Beige Green	97% Minerals 3% Cellulose
Total Asbestos	<0.1%			

EPA 400 Pt. Point Count Method Has Been Extended to 1000 pts To Meet The Cal OSHA Limit Of 0.1%

Ian Reyes
Analyst

Grace Herrera
Approved Signatory

Bulk samples analyzed per 40 CFR 763, Subpart F, Appendix A; EPA-600/R-93/116 and for friable materials, EPA-600/M4-82-020. Samples are analyzed by calibrated visual estimation; therefore, results may not be reliable for samples of low concentration levels. This report applies only to the items tested. The results are representative of the samples submitted and may not represent the entire material from which samples were collected. This report was issued by a NIST/NVLAP accredited laboratory and may not be reproduced without the expressed written consent of Patriot Environmental.

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NESHAP Point Counting by Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 243951
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626

Date Received: 3/31/2005
Date Analyzed: 3/31/2005
Date Reported: 3/31/2005

Claim Number: NA
Number of Samples: 1
PO Number: NA

Lab/Client ID/Layer	Location	Material Description	Color	Composition
243951-001 06 Point Count	Science (36) - North Middle	Stucco	Grey Beige	75% Minerals 22% Carbonate 3% Paint
Total Asbestos	**<0.1%**			

EPA 400 Pt. Point Count Method Has Been Extended to 1000 pts To Meet The Cal OSHA Limit Of 0.1%

Ian Reyes
Analyst

Cristina E. Tabatt
Approved Signatory

Bulk samples analyzed per 40 CFR 763, Subpart F, Appendix A; EPA-600/R-93/116 and for friable materials, EPA-600/M4-82-020. Samples are analyzed by calibrated visual estimation; therefore, results may not be reliable for samples of low concentration levels. This report applies only to the items tested. The results are representative of the samples submitted and may not represent the entire material from which samples were collected. This report was issued by a NIST/NVLAP accredited laboratory and may not be reproduced without the expressed written consent of Patriot Environmental.

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 239250
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa, CA 92626
Claim Number:
Number of Samples: 63
PO Number:

Date Received: 1/19/2005
Date Analyzed: 2/2/2005
Date Reported: 2/8/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239250-001 01	Science (36)- Room 148	Large Base Cove	Brown	65% Carbonate 35% Vinyl Binder
Total Asbestos	None Detected			
239250-002 02	Science (36)- Room 148	Small Base Cove	Brown	65% Carbonate 35% Vinyl Binder
Total Asbestos	None Detected			
239250-003 03	Science (36)- Room 146	Small Base Cove	Brown	65% Carbonate 35% Vinyl Binder
Total Asbestos	None Detected			
239250-004 04	Science (36)- Room 145	Small Base Cove	Brown	65% Carbonate 35% Vinyl Binder
Total Asbestos	None Detected			
239250-005 05	Science (36)- South End of Bldg.	Stucco	Grey Beige	75% Minerals 22% Carbonate 3% Paint
Total Asbestos	None Detected			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 239250
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa, CA 92626

Claim Number:
Number of Samples: 63
PO Number:

Date Received: 1/19/2005
Date Analyzed: 2/2/2005
Date Reported: 2/8/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239250-006 06	Science (36)- North Middle	Stucco	Grey Beige	75% Minerals 22% Carbonate 3% Paint
Chrysotile	<1 %			
Total Asbestos	< 1%			
239250-007 07	Science (36)- North End	Stucco	Grey Beige	75% Minerals 22% Carbonate 3% Paint
Chrysotile	<1 %			
Total Asbestos	< 1%			
239250-008 08	Science (36)- Room 146	2'x3' Acoustic Wall Tile	Brown White	96% Cellulose 4% Paint
Total Asbestos	**None Detected**			
239250-009 09	Science (36)- Room 148	2'x3' Acoustic Wall Tile	Brown White	96% Cellulose 4% Paint
Total Asbestos	**None Detected**			
239250-010 10	Science (36)- Room 141-142- Middle Office	Base Cove	Black	65% Carbonate 35% Vinyl Binder
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
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Report Number: 239250
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa, CA 92626
Claim Number:
Number of Samples: 63
PO Number:

Date Received: 1/19/2005
Date Analyzed: 2/2/2005
Date Reported: 2/8/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239250-011 11	Science (36)- Room 142	Base Cove	Black	65% Carbonate 35% Vinyl Binder
Total Asbestos	**None Detected**			
239250-012 12	Science (36)- Room 148-Desks	Base Cove	Black	65% Carbonate 35% Vinyl Binder
Total Asbestos	**None Detected**			
239250-013 13	Science (36)- Room 145	2'x3' Acoustic Ceiling Tile Random	Brown White	96% Cellulose 4% Paint
Total Asbestos	**None Detected**			
239250-014 14	Science (36)- Room 145	2'x3' Acoustic Ceiling Tile Random	Brown White	96% Cellulose 4% Paint
Total Asbestos	**None Detected**			
239250-015 15	Science (36)- Room 146	2'x3' Acoustic Ceiling Tile Random	Brown White	96% Cellulose 4% Paint
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 239250
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa, CA 92626
Claim Number:
Number of Samples: 63
PO Number:

Date Received: 1/19/2005
Date Analyzed: 2/2/2005
Date Reported: 2/8/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239250-016 16	Science (36)- Rooms 141-142 Middle Office Area	12 in. Floor Tile	White Grey	80% Carbonate 20% Vinyl Binder
Total Asbestos	**None Detected**			
239250-016M 16	Science (36)- Rooms 141-142 Middle Office Area	Floor Tile Mastic	Brown Black	70% Tar 24% Organic Binder
Chrysotile	6 %			
Total Asbestos	6 %			
239250-017 17	Science (36)- Room 142-Front	12 in. Floor Tile	White Grey	80% Carbonate 20% Vinyl Binder
Total Asbestos	**None Detected**			
239250-017M 17	Science (36)- Room 142-Front	Floor Tile Mastic	Brown Black	70% Tar 24% Organic Binder
Chrysotile	6 %			
Total Asbestos	6 %			

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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239250-018 18	Science (36)- Room 141	12 in. Floor Tile	White Grey	80% Carbonate 20% Vinyl Binder
Total Asbestos	None Detected			
239250-018M 18	Science (36)- Room 141	Floor Tile Mastic	Brown Black	70% Tar 24% Organic Binder
Chrysotile	6 %			
Total Asbestos	6 %			
239250-019 19	Science (36)- Room 141- Accent Stripe	12 in. Floor Tile	Tan	80% Carbonate 20% Vinyl Binder
Total Asbestos	None Detected			
239250-020 20	Science (36)- Room 142	12 in. Floor Tile	Tan	80% Carbonate 20% Vinyl Binder
Total Asbestos	None Detected			
239250-021 21	Science (36)- Room 145	2'x3' Smooth Acoustic Ceiling Tile	Brown White	96% Cellulose 4% Paint
Total Asbestos	None Detected			

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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239250-022 22	Science (36)- Room 145	2'x3' Smooth Acoustic Ceiling Tile	Brown White	96% Cellulose 4% Paint
Total Asbestos	**None Detected**			
239250-023 23	Science (36)- Room 146	2'x3' Smooth Acoustic Ceiling Tile	Brown White	96% Cellulose 4% Paint
Total Asbestos	**None Detected**			
239250-024 24	Science (36)- Room 143	Linoleum Cobble	Brown	15% Linoleum 65% Vinyl Binder 5% Cellulose
Chrysotile	15 %			
Total Asbestos	15 %			
239250-025 25	Science (36)- Room 145	Linoleum Cobble	Brown	15% Linoleum 65% Vinyl Binder 5% Cellulose
Chrysotile	15 %			
Total Asbestos	15 %			

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Report Number: 239250
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Costa Mesa, CA 92626
Claim Number:
Number of Samples: 63
PO Number:

Date Received: 1/19/2005
Date Analyzed: 2/2/2005
Date Reported: 2/8/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239250-026 26	Science (36)- Room 145	Linoleum Cobble	Brown	15% Linoleum 65% Vinyl Binder 5% Cellulose
Chrysotile	15 %			
Total Asbestos	15 %			
239250-027 27	Science (36)- Exterior Room 148	Window Putty	Grey	92% Carbonate 5% Paint
Chrysotile	3 %			
Total Asbestos	3 %			
239250-028 28	Science (36)- Exterior North Middle	Window Putty	Grey	92% Carbonate 5% Paint
Chrysotile	3 %			
Total Asbestos	3 %			
239250-029 29	Science (36)- Exterior North End	Window Putty	Grey	92% Carbonate 5% Paint
Chrysotile	3 %			
Total Asbestos	3 %			

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Costa Mesa, CA 92626

Claim Number:
Number of Samples: 63
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Date Received: 1/19/2005
Date Analyzed: 2/2/2005
Date Reported: 2/8/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239250-030 30	Science (36)- Room 144 Under Carpet	Vinyl Floor Tile	Beige	72% Carbonate 20% Vinyl Binder
Chrysotile	8 %			
Total Asbestos	**8 %**			
239250-030M 30	Science (36)- Room 144 Under Carpet	Floor Tile Mastic	Black	90% Tar
Chrysotile	10 %			
Total Asbestos	**10 %**			
239250-031 31	Science (36)- Room 144 Under Carpet	Vinyl Floor Tile	Beige	72% Carbonate 20% Vinyl Binder
Chrysotile	8 %			
Total Asbestos	**8 %**			
239250-031M 31	Science (36)- Room 144 Under Carpet	Floor Tile Mastic	Black	90% Tar
Chrysotile	10 %			
Total Asbestos	**10 %**			

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Report Number:	239250
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Drive Costa Mesa, CA 92626
Claim Number:	
Number of Samples:	63
PO Number:	

Date Received:	1/19/2005
Date Analyzed:	2/2/2005
Date Reported:	2/8/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239250-032 32	Science (36)- Room 145 Rear	Wall Plaster- Rough	Beige	65% Minerals 32% Carbonate 3% Paint
Total Asbestos	**None Detected**			
239250-033 33	Science (36)- Room 145 at Door	Wall Plaster- Rough	Beige	65% Minerals 32% Carbonate 3% Paint
Total Asbestos	**None Detected**			
239250-034 34	Science (36)- Room 146 Front	Wall Plaster- Rough	Beige	8% Minerals 20% Carbonate 64% Vermiculite 4% Paint
Chrysotile	4 %			
Total Asbestos	4 %			
239250-035 35	Science (36)- Room 148 Lab Prep	Wall Plaster- Rough	Beige	65% Minerals 32% Carbonate 3% Paint
Total Asbestos	**None Detected**			

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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239250-036 36	Science (36)- Room 148 Front	Wall Plaster- Rough	Beige	8% Minerals 20% Carbonate 64% Vermiculite 4% Paint
Chrysotile	4 %			
Total Asbestos	4 %			
239250-037 37	Science (36)- Room 142-141 Middle Office Area	Wall Plaster- Smooth	Beige	60% Minerals 37% Carbonate 3% Paint
Total Asbestos	**None Detected**			
239250-038 38	Science (36)- At Attic Access Door	Wall Plaster- Smooth	Beige	60% Minerals 37% Carbonate 3% Paint
Total Asbestos	**None Detected**			
239250-039 39	Science (36)- Room 142-Front	Wall Plaster- Smooth	Beige	65% Minerals 32% Carbonate 3% Paint
Chrysotile	<1 %			
Total Asbestos	< 1%			

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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239250-040 40	Science (36)- Room141 Rear	Wall board-Joint Compound	White	84% Sulfate 6% Carbonate 7% Cellulose 3% Paint
Total Asbestos	**None Detected**			
239250-041 41	Science (36)- Room 142-Front	Wall board-Joint Compound	White	86% Sulfate 4% Carbonate 7% Cellulose 3% Paint
Total Asbestos	**None Detected**			
239250-042 42	Science (36)- Room 142-141 Middle Office Area	2'x2' Acoustic Ceiling Tile Staight	Brown White	96% Cellulose 4% Paint
Total Asbestos	**None Detected**			
239250-043 43	Science (36)- Room 142	2'x2' Acoustic Ceiling Tile- Staight	Brown White	96% Cellulose 4% Paint
Total Asbestos	**None Detected**			
239250-044 44	Science (36)- Room 142	2'x2' Acoustic Ceiling Tile- Staight	Brown	96% Cellulose 4% Paint
Total Asbestos	**None Detected**			

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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239250-045A 45	Science (36)-Room 148- Lab Prep Area	12 in. Vinyl Floor Tile	White	80% Carbonate 20% Vinyl Binder
Total Asbestos	**None Detected**			
239250-045B 45	Science (36)-Room 148- Lab Prep Area	12 in. Vinyl Floor Tile	Brown	72% Carbonate 20% Vinyl Binder
Chrysotile	8 %			
Total Asbestos	8 %			
239250-045BM 45	Science (36)-Room 148- Lab Prep Area	Floor Tile Mastic	Black	90% Tar
Chrysotile	10 %			
Total Asbestos	10 %			
239250-046A 46	Science (36)-Room 148- Lab Prep Area	12 in. Vinyl Floor Tile	White	80% Carbonate 20% Vinyl Binder
Total Asbestos	**None Detected**			

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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239250-046B 46	Science (36)-Room 148-Lab Prep Area	12 in. Vinyl Floor Tile	Brown	72% Carbonate 20% Vinyl Binder
Chrysotile	8 %			
Total Asbestos	8 %			
239250-046BM 46	Science (36)-Room 148-Lab Prep Area	Floor Tile Mastic	Black	90% Tar
Chrysotile	10 %			
Total Asbestos	10 %			
239250-047A 47	Science (36)-Room 148-Lab Prep Area	12 in. Vinyl Floor Tile	White	80% Carbonate 20% Vinyl Binder
Total Asbestos	None Detected			
239250-047B 47	Science (36)-Room 148-Lab Prep Area	12 in. Vinyl Floor Tile	Brown	77% Carbonate 20% Vinyl Binder
Chrysotile	3 %			
Total Asbestos	3 %			

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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239250-047BM 47	Science (36)-Room 148-Lab Prep Area	Floor Tile Mastic	Black	90% Tar
Chrysotile 10 %				
Total Asbestos 10 %				
239250-048 48	Science (36)- Room 144-Office	12 in Acoustic Ceiling Tile- Pinhole	Grey White	20% Mineral Wool 65% Cellulose 12% Perlite 3% Paint
Total Asbestos None Detected				
239250-049 49	Science (36)- Room 144-Office	12 in Acoustic Ceiling Tile- Pinhole	Grey White	20% Mineral Wool 65% Cellulose 12% Perlite 3% Paint
Total Asbestos None Detected				
239250-050 50	Science (36)- Room 144-Computer Lab Room	12 in Acoustic Ceiling Tile- Pinhole	Grey White	20% Mineral Wool 65% Cellulose 12% Perlite 3% Paint
Total Asbestos None Detected				

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Date Received:	1/19/2005
Date Analyzed:	2/2/2005
Date Reported:	2/8/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239250-051 51	Science (36)- Room 146	Base Cove	Grey	65% Carbonate 35% Vinyl Binder
Total Asbestos	**None Detected**			
239250-052 52	Science (36)- Room 146	Base Cove	Grey	65% Carbonate 35% Vinyl Binder
Total Asbestos	**None Detected**			

Ian Reyes
Analyst

Cristina E. Tabatt
Approved Signatory

Bulk samples analyzed per 40 CFR 763, Subpart F, Appendix A; EPA-600/R-93/116 and for friable materials, EPA-600/M4-82-020. Samples are analyzed by calibrated visual estimation; therefore, results may not be reliable for samples of low concentration levels. This report applies only to the items tested. The results are representative of the samples submitted and may not represent the entire material from which samples were collected. This report was issued by a NIST/NVLAP (Lab Code 200358-0) accredited laboratory and may not be reproduced without the expressed written consent of Patriot Environmental. This report must not be used to claim product certification, approval or endorsement by NIST, NVLAP or any agency of the federal government.

Samples of wall systems containing discrete and separable layers are analyzed separately and reported as composite. Samples such as floor tiles and ceiling tiles with mastic layers are analyzed and reported separately.

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

ECT NAME: Orange Coast College

239250

JECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
01	Science (36)	Large Brown Base Cove		X	G	Room 148
NOTE		Possible Transite Tabletops in Lab Areas				Room 145 & 143 & 142
NOTE		No Access *				Attic Access Door in Mid. Lab Between Rooms 142/141
02		Small Brown Base Cove		X	G	Room 148
03						146
4						145
05		STC		X	G	South End of Bldg.
06						North Middle
07						North End
08		2'X3' AWT -Random Hole	X		G	Room 146
09						148

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/19/05

Samples received by: [signature] Date/Time: 1/19/05

PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

239250

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
10	Science (36)	Black Base Cove		X	G	Rooms 141/142 Middle office
11						142
12						148 ; Desks
13		2'X3' ACT - Random Hole	X		G	Room 145
14						Room 145
15						146
16		12" White w/Grey		X	G	Rooms 141/142 ; Middle office Area
17						142 ; Front
18						141
19		12" Tan VFT				Room 141 ; Accent Stripe
20						142 ;

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [illegible] Date/Time: 1/19/05

Samples received by: [illegible] Date/Time: 1/19/05

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

JECT NAME: Orange Coast College

239250

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
21	Science (36)	2'X3' ACT - Smooth	X		G	Room 145
22						
23						146
24		Brown Cobble Linoleum		X	G	Room 143
25						145
26						
27		WPTY		X	G	Exterior Room 148
28						; North Middle
29						; North End
30		VFT Beige		X	G	Room 144; under carpet
31						

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/19/05

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

239250

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
32	Science (36)	WP - Rough		X	G	Room 145 - Rear
33						At Door
34						146 - Front
35						148 - Lab Prep.
36						148 - Front
37		WP - Smooth		X	G	Room 142/141 - Middle Office Area
38						; At Attic Access Door
39						142 ; Front
40		WB/JC		X	G	141 ; Rear
41						142 ; Front
42		2'X2' ACT - Straight Hole	X		G	Room 142/141 ; Middle Office Area

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/19/05

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

239250

JECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
43	Science (36)	2'X2' ACT - Straight Hole	X		G	Room 142
44	↓	↓	↓		↓	↓
45	↓	12" White w/Brown VFT		X	G	Room 148; Lab Prep Area
46	↓	↓		↓	↓	↓
47	↓	↓		↓	↓	↓
48	↓	12" ACT - Pinhole	X		G	Room 144 - Office
49	↓	↓	↓		↓	↓
50	↓	↓	↓		↓	Computer Lab Room
51	↓	Grey Base Cove		X	G	Room 146
52	↓	↓		↓	↓	↓

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/19/05

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
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Costa Mesa, CA 92626

Report Number: 239413
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Dr
Costa Mesa CA 92626
Claim Number:
Number of Samples: 71
PO Number:

Date Received: 1/18/2005
Date Analyzed: 2/9/2005
Date Reported: 2/15/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239413-001 03	Reprographics (37) - Crawlspace - Under 168	TSI Elbow	Beige, Grey	60% Mineral Wool 40% Carbonate
Total Asbestos	None Detected			
239413-002 04	Reprographics (37) - Crawlspace - Debris - Under 168	Floor Tile	Tan	95% Carbonate
Chrysotile	5 %			
Total Asbestos	5 %			
239413-002M 04	Reprographics (37) - Crawlspace - Debris - Under 168	Mastic	Black	92% Tar
Chrysotile	8 %			
Total Asbestos	8 %			
239413-003 05	Reprographics (37) - Crawlspace - Debris - Under 168	Floor Tile	Tan	94% Carbonate
Chrysotile	6 %			
Total Asbestos	6 %			

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Report Number: 239413
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Dr
Costa Mesa CA 92626
Claim Number:
Number of Samples: 71
PO Number:

Date Received: 1/18/2005
Date Analyzed: 2/9/2005
Date Reported: 2/15/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239413-003M 05	Reprographics (37) - Crawlspace - Debris - Under 168	Mastic	Black	90%Tar
Chrysotile	10 %			
Total Asbestos	10 %			
239413-004 06	Reprographics (37) - Crawlspace - Debris - Under 168	Floor Tile	Tan	95% Carbonate
Chrysotile	5 %			
Total Asbestos	5 %			
239413-004M 06	Reprographics (37) - Crawlspace - Debris - Under 168	Mastic	Black	93% Tar
Chrysotile	7 %			
Total Asbestos	7 %			
239413-005 12	Reprographics (37) - Crawlspace - Under 168	Ceiling Tile	Clear, Green	5% Paint 95% Cellulose
Total Asbestos	None Detected			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 239413
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Dr
Costa Mesa CA 92626
Claim Number:
Number of Samples: 71
PO Number:

Date Received: 1/18/2005
Date Analyzed: 2/9/2005
Date Reported: 2/15/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239413-006 13	Reprographics (37) - Utility Room - Exterior - Near Mens Restroom	Wall Plaster - Rough Coat	Beige, Tan	10% Paint 5% Cellulose 85% Minerals
Total Asbestos	**None Detected**			
239413-007 14	Reprographics (37) - Interior Utility Room	Wall Plaster - Rough Coat	Beige, White	2% Cellulose 98% Minerals
Total Asbestos	**None Detected**			
239413-008 15	Reprographics (37) - Garage - Store Room	Wall Plaster	Beige, White	10% Paint 90% Minerals
Total Asbestos	**None Detected**			
239413-009 16	Reprographics (37) - Print Room	Wall Plaster	Beige, White	100% Minerals
Total Asbestos	**None Detected**			
239413-010 17	Reprographics (37) - Middle Office Area	Wall Plaster	White, Beige	5% Cellulose 95% Minerals
Total Asbestos	**None Detected**			

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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239413-011 18	Reprographics (37) - Room 164	Wall Plaster	White, Beige	3% Cellulose 97% Minerals
Total Asbestos	**None Detected**			
239413-012 19	Reprographics (37) - Room 163	Wall Plaster	Beige, Peach	20% Paint 80% Minerals
Total Asbestos	**None Detected**			
239413-013 20	Reprographics (37) - Mens Restroom	Wall Plaster	Beige	10% Paint 90% Minerals
Total Asbestos	**None Detected**			
239413-014 21	Reprographics (37) - Print Room	2x3 Acoustic Ceiling Tile	Grey, White	20% Cellulose 50% Mineral Wool 25% Perlite 5% Paint
Total Asbestos	**None Detected**			
239413-015 22	Reprographics (37) - Middle Office	2x3 Acoustic Ceiling Tile	Grey, White	20% Cellulose 45% Mineral Wool 25% Perlite 10% Paint
Total Asbestos	**None Detected**			

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Report Number:	239413
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Dr Costa Mesa CA 92626
Claim Number:	-
Number of Samples:	71
PO Number:	

Date Received:	1/18/2005
Date Analyzed:	2/9/2005
Date Reported:	2/15/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239413-016 23	Reprographics (37) - Room 165 - Office	2x3 Acoustic Ceiling Tile	Grey, White	20% Cellulose 45% Mineral Wool 25% Perlite 10% Paint
Total Asbestos	**None Detected**			
239413-017 24	Reprographics (37) - Room 168 - Office	2x3 Acoustic Ceiling Tile	Grey, White	25% Cellulose 40% Mineral Wool 25% Perlite 10% Paint
Total Asbestos	**None Detected**			
239413-018 25	Reprographics (37) - Room 169 - Office	2x3 Acoustic Ceiling Tile	Grey, White	25% Cellulose 40% Mineral Wool 25% Perlite 10% Paint
Total Asbestos	**None Detected**			
239413-019 26	Reprographics (37) - Room 169 - Under Carpet	Vinyl Floor Tile	Beige	99% Carbonate
Chrysotile	1 %			
Total Asbestos	**1 %**			

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Costa Mesa CA 92626
Claim Number:
Number of Samples: 71
PO Number:

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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239413-020 27	Reprographics (37) - Room 169 - Under Carpet	Vinyl Floor Tile	Beige, Green	98% Carbonate
Chrysotile	2 %			
Total Asbestos	2 %			
239413-021 28	Reprographics (37) - Room 169 - Under Carpet	Vinyl Floor Tile	Beige, Green	98% Carbonate
Chrysotile	2 %			
Total Asbestos	2 %			
239413-022 29	Reprographics (37) - Room 168 - Under Carpet	Vinyl Floor Tile	Beige, Green	96% Carbonate
Chrysotile	4 %			
Total Asbestos	4 %			
239413-022M 29	Reprographics (37) - Room 168 - Under Carpet	Mastic	Black	95% Tar
Chrysotile	5 %			
Total Asbestos	5 %			
239413-023 30	Reprographics (37) - Middle Office Area - Under Carpet	Vinyl Floor Tile	Beige, Green	97% Carbonate
Chrysotile	3 %			
Total Asbestos	3 %			

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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239413-023M 30	Reprographics (37) - Middle Office Area - Under Carpet	Mastic	Black	95% Tar
Chrysotile	5 %			
Total Asbestos	5 %			
239413-024 31	Reprographics (37) - Print Room - Under Carpet	Vinyl Floor Tile	Beige, Green	97% Carbonate
Chrysotile	3 %			
Total Asbestos	3 %			
239413-024M 31	Reprographics (37) - Print Room - Under Carpet	Mastic	Black	93% Tar
Chrysotile	7 %			
Total Asbestos	7 %			
239413-025 32	Reprographics (37) - Print Room	Base Cove	Orange	100% Carbonate
Total Asbestos	**None Detected**			
239413-025M 32	Reprographics (37) - Print Room	Mastic	Brown	100% Non-Fibrous
Total Asbestos	**None Detected**			

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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239413-026 33	Reprographics (37) - Print Room	Base Cove	Orange	100% Carbonate
Total Asbestos	**None Detected**			
239413-027 34	Reprographics (37) - Print Room	Base Cove	Orange	100% Carbonate
Total Asbestos	**None Detected**			
239413-028 35	Reprographics (37) - Garage - Store Room	Base Cove	Black	3% Cellulose 97% Non-Fibrous
Total Asbestos	**None Detected**			
239413-028M 35	Reprographics (37) - Garage - Store Room	Mastic	White	100% Carbonate
Total Asbestos	**None Detected**			
239413-029 36	Reprographics (37) - Garage - Store Room	Base Cove	Black	100% Non-Fibrous
Total Asbestos	**None Detected**			

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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239413-029M 36	Reprographics (37) - Garage - Store Room	Mastic	Yellow	100% Carbonate
Total Asbestos	**None Detected**			
239413-030 37	Reprographics (37) - Garage - Store Room	Base Cove	Black	100% Carbonate
Total Asbestos	**None Detected**			
239413-030M 37	Reprographics (37) - Garage - Store Room	Mastic	Yellow, White	5% Cellulose 95% Non-Fibrous
Total Asbestos	**None Detected**			
239413-031 38	Reprographics (37) - Room 163	Base Cove	Brown	100% Carbonate
Total Asbestos	**None Detected**			
239413-032 39	Reprographics (37) - Room 169	Base Cove	Brown	100% Carbonate
Total Asbestos	**None Detected**			

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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239413-032M 39	Reprographics (37) - Room 169	Mastic	Brown	2% Cellulose 98% Non-Fibrous
Total Asbestos	None Detected			
239413-033 40	Reprographics (37) - Room 169	Base Cove	Brown	100% Carbonate
Total Asbestos	None Detected			
239413-033M 40	Reprographics (37) - Room 169	Mastic	Brown	6% Wollastonite 94% Non-Fibrous
Total Asbestos	None Detected			
239413-034 41	Reprographics (37) - At Room 168	Stucco	Beige, Grey	5% Cellulose 10% Paint 85% Minerals
Total Asbestos	None Detected			
239413-035 42	Reprographics (37) - At Womens Restroom	Stucco	Grey, White	25% Paint 75% Minerals
Total Asbestos	None Detected			

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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239413-036 43	Reprographics (37) - At Room 162	Stucco	Grey, White	10% Cellulose 15% Paint 75% Non-Fibrous
Total Asbestos	None Detected			
239413-037 44	Reprographics (37) - Room 162 - Office	12 Inch Acoustic Ceiling Tile	Brown, White	30% Paint 70% Cellulose
Total Asbestos	None Detected			
239413-038 45	Reprographics (37) - Room 163 - Office	12 Inch Acoustic Ceiling Tile	Brown, White	20% Paint 80% Cellulose
Total Asbestos	None Detected			
239413-039 46	Reprographics (37) - Room 164 - Office	12 Inch Acoustic Ceiling Tile	Brown, White	15% Paint 85% Cellulose
Total Asbestos	None Detected			
239413-040 47	Reprographics (37) - Room 162 - Under Carpet	Vinyl Floor Tile	Tan	95% Carbonate
Chrysotile	5 %			
Total Asbestos	5 %			

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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239413-041 48	Reprographics (37) - Room 163 - Under Carpet	Vinyl Floor Tile	Beige	90% Carbonate
Chrysotile 10 %				
Total Asbestos 10 %				
239413-042 49	Reprographics (37) - Room 164 - Under Carpet	Vinyl Floor Tile	Tan	90% Carbonate
Chrysotile 10 %				
Total Asbestos 10 %				
239413-042M 49	Reprographics (37) - Room 164 - Under Carpet	Mastic	Yellow	100% Carbonate
Total Asbestos None Detected				
239413-043 50	Reprographics (37) - Garage - Storage	12 Inch Acoustic Ceiling Tile	Brown, White	15% Paint 85% Cellulose
Total Asbestos None Detected				
239413-044 51	Reprographics (37) - Garage - Storage	12 Inch Acoustic Ceiling Tile	Brown, White	10% Paint 90% Cellulose
Total Asbestos None Detected				

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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239413-045 52	Reprographics (37) - Garage - Storage	12 Inch Acoustic Ceiling Tile	Brown, White	30% Paint 70% Cellulose
Total Asbestos	**None Detected**			
239413-046 53	Reprographics (37) - Room 168 - Above T-Bar	2x4 Acoustic Ceiling Tile	Brown, White	40% Paint 60% Cellulose
Total Asbestos	**None Detected**			
239413-047 54	Reprographics (37) - Room 168 - Above T-Bar	2x4 Acoustic Ceiling Tile	Brown, White	30% Paint 70% Cellulose
Total Asbestos	**None Detected**			
239413-048 55	Reprographics (37) - Room 165	Wallboard - Joint Compound	White, Brown	25% Cellulose 30% Carbonate 45% Sulfate
Total Asbestos	**None Detected**			
239413-049 56	Reprographics (37) - Room 165	Wallboard - Joint Compound	White, Brown	30% Cellulose 30% Carbonate 40% Sulfate
Total Asbestos	**None Detected**			

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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239413-050 57	Reprographics (37) - Room 165 Office	Wallboard - Joint Compound	White	65% Carbonate 35% Sulfate
Total Asbestos	**None Detected**			
239413-051 58	Reprographics (37) - Garage - Storage	Wallboard - Joint Compound	White, Brown	15% Cellulose 25% Carbonate 60% Sulfate
Total Asbestos	**None Detected**			
239413-052 01	Reprographics (37) - Attic 6 Inch Elbows and 10 Inch Elbows	TSI Elbows		
Total Asbestos	**Assumed Positive**			
239413-053 02	Reprographics (37) - Attic 6 Inch Elbows and 10 Inch Elbows	TSI Pipe Insulation		
Total Asbestos	**Assumed Positive**			
239413-054 07	Reprographics (37) - Attic Above 165 and 165 Office	TSI Elbows		
Total Asbestos	**Assumed Positive**			

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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239413-055 08	Reprographics (37) - Attic Above 165 and 165 Office	TSI Pipe Insulation		
Total Asbestos	**Assumed Positive**			
239413-056 09	Reprographics (37) - Utility Room - Near Mens Restroom - Exterior	TSI Elbows		
Total Asbestos	**Assumed Positive**			
239413-057 10	Reprographics (37) - Utility Room - Near Mens Restroom - Exterior	TSI Pipe Insulation		
Total Asbestos	**Assumed Positive**			
239413-058 11	Reprographics (37) - Utility Room - Near Mens Restroom - Exterior	HVAC Cloth Gasket		
Total Asbestos	**Assumed Positive**			

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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)

John Lopez
Analyst

Grace Herrera
Approved Signatory

Bulk samples analyzed per 40 CFR 763, Subpart F, Appendix A; EPA-600/R-93/116 and for friable materials, EPA-600/M4-82-020. Samples are analyzed by calibrated visual estimation; therefore, results may not be reliable for samples of low concentration levels. This report applies only to the items tested. The results are representative of the samples submitted and may not represent the entire material from which samples were collected. This report was issued by a NIST/NVLAP (Lab Code 200358-0) accredited laboratory and may not be reproduced without the expressed written consent of Patriot Environmental. This report must not be used to claim product certification, approval or endorsement by NIST, NVLAP or any agency of the federal government.

Samples of wall systems containing discrete and separable layers are analyzed separately and reported as composite. Samples such as floor tiles and ceiling tiles with mastic layers are analyzed and reported separately.

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

239413

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
01 ASS	Reprographics (37)	T.S.I. - ELBOWS	X		G	Attic - 6" Elbows & 10" Elbows
02 ASS.	↓	T.S.I. - Pipe Insulation	↓		↓	↓ - ↓ & ↓
03 A	↓	T.S.I - Elbow	X		SD	Crawlspace - Under #168
04	↓	Floor Tile	X		SD	Crawlspace - Debris -Under #16B
05	↓	↓	↓		↓	↓
06	↓	↓	↓		↓	↓
07 ASS	↓	T.S.I. - Elbows	X		G	Attic above 165 & 165 Office
08 ASS	↓	T.S.I. - Pipe Ins.	↓		↓	↓
09 ASS.	↓	T.S.I. - Elbows	↓		↓	Utility Room ; near Mens Rest Room (Exterior)
10 ASS.	↓	T.S.I. - Pipe Ins.	↓		↓	↓
11 ASS.	↓	HVAC Cloth Gasket	↓		↓	↓

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty
RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/18/05

Samples received by: Candy Campos Date/Time: 1/18/05 @ 4:00pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

239413

JECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
NOTE	Reprographics (37)	No Access - Door Stuck				Telephone Equipment Room 1 At Exterior Utility Room
12		Ceiling Tile	X		SD	Crawlspace Under #168
13		WP - Rough Coat		X	G	Utility Room (Exterior) near Mens RestRoom
14						Interior Utility Room
15		WP		X	G	Garage / Store Room
16						Print Room
17						Middle Office Area
18						Room #164
19						163
20						Mens Restroom
21		2'X3' ACT	X		G	Print Room

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/18/05

Samples received by: Candy Campos Date/Time: 1/18/05 @ 4:00pm

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DUE DATE:

239413

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
22	Reprographics (37)	2'x3' ACT	X		G	Middle Office
23						Room 165 - Office
24						168
25						169
26		VFT		X	G	169 - Under Carpet
27						
28						
29						168
30						Middle Office Area - Under Carpet
31						Print Room - - Under Carpet
32		Orange Base Cove		X	G	Print Room

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/18/05

Samples received by: Candy Campus Date/Time: 1/18/05 @ 4:00pm

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DUE DATE:

239413

JECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
33	Reprographics (37)	Orange Base Cove		X	G	Print Room
34						
35		Black Base Cove		X	G	Garage/Store Room.
36						
37						
38		Brown Base Cove				Room 163
39						169
40						
41		STC		X	G	At Room 168
42						Women's Rest Room
43						Room 162

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [illegible] Date/Time: 1/18/05

nples received by: Candy Campos Date/Time: 1/18/05 @ 4:00pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

239413

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
44	Reprographics (37)	12" ACT	X		G	Room 162 - Office
45						163 -
46						164 -
47		VFT		X	G	Room 162 - under carpet
48						163 -
49						164 -
50		12" ACT - Random	X		G	Garage / Storage
51						
52						
53		2'x4' ACT				Room 168 - Above T-Bar
54						

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/18/05

Samples received by: Candy Campos Date/Time: 1/18/05 @ 4:00pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

239413

JECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
55	Reprographics (37)	WB/JC		X	G	Room 165
56						
57						- Office
58						Garage/Storage

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty
RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/18/05

Samples received by: Candy Campos Date/Time: 1/18/05 @ 4:00pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES, INC.

Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number:	239412
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Dr Costa Mesa CA 92626
Claim Number:	
Number of Samples:	18
PO Number:	

Date Received: 1/18/2005
Date Analyzed: 2/9/2005
Date Reported: 2/9/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239412-001 01	Planetarium (39) - Viewing Room - Under Carpet	Vinyl Floor Tile	Tan	93% Carbonate
Chrysotile 7 %				
Total Asbestos 7 %				
239412-004A 04	Planetarium (39) - Hallway - S	Joint Compound	White	98% Carbonate
Chrysotile 2 %				
Total Asbestos 2 %				
239412-004B 04	Planetarium (39) - Hallway - S	Wallboard - Joint Compound	White, Brown	15% Cellulose 60% Carbonate 25% Sulfate
Chrysotile < 1 %				
Total Asbestos < 1%				
239412-005A 05	Planetarium (39) - Hallway - S	Joint Compound	White	98% Carbonate
Chrysotile 2 %				
Total Asbestos 2 %				

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 239412
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Dr
Costa Mesa CA 92626
Claim Number:
Number of Samples: 18
PO Number:

Date Received: 1/18/2005
Date Analyzed: 2/9/2005
Date Reported: 2/9/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239412-005B 05	Planetarium (39) - Hallway - S	Wallboard - Joint Compound	White, Brown	10% Cellulose 60% Carbonate 30% Sulfate
Chrysotile	< 1 %			
Total Asbestos	< 1%			
239412-006 06	Planetarium (39) - Physiology Lab - At Entry	Wallboard - Joint Compound	White, Green, Brown	20% Cellulose 15% Paint 65% Sulfate
Total Asbestos	**None Detected**			
239412-007 07	Planetarium (39) - Physiology Lab - At Sink Area	Wallboard - Joint Compound	Tan, White	10% Cellulose 30% Carbonate 60% Sulfate
Total Asbestos	**None Detected**			
239412-008 08	Planetarium (39) - Physiology Lab - At Refrigerator Area	Wallboard - Joint Compound	White, Tan	5% Cellulose 60% Carbonate 35% Sulfate
Total Asbestos	**None Detected**			
239412-009 09	Planetarium (39) - Hallway - S	Base	Brown	100% Carbonate
Total Asbestos	**None Detected**			

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Report Number: 239412
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Dr
Costa Mesa CA 92626
Claim Number:
Number of Samples: 18
PO Number:

Date Received: 1/18/2005
Date Analyzed: 2/9/2005
Date Reported: 2/9/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239412-009M 09	Planetarium (39) - Hallway - S	Mastic	White	100% Carbonate
Total Asbestos	**None Detected**			
239412-010 10	Planetarium (39) - Hallway - N	Base	Brown	3% Cellulose 97% Carbonate
Total Asbestos	**None Detected**			
239412-010M 10	Planetarium (39) - Hallway - N	Mastic	White	100% Non-Fibrous
Total Asbestos	**None Detected**			
239412-011 11	Planetarium (39) - Hallway - N	Wall Plaster - Rough	Beige	3% Cellulose 15% Paint 82% Minerals
Total Asbestos	**None Detected**			
239412-012 12	Planetarium (39) - Hallway - N	Wall Plaster - Rough	White	5% Cellulose 10% Paint 85% Minerals
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 239412
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Dr
Costa Mesa CA 92626
Claim Number:
Number of Samples: 18
PO Number:

Date Received: 1/18/2005
Date Analyzed: 2/9/2005
Date Reported: 2/9/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239412-013 13	Planetarium (39) - Round Bldg	Exterior Covering - Rough Coat	Tan, White	3% Cellulose 97% Non-Fibrous
Total Asbestos	**None Detected**			
239412-014 14	Planetarium (39) - Round Bldg	Exterior Covering - Rough Coat	White	100% Non-Fibrous
Total Asbestos	**None Detected**			
239412-015 15	Planetarium (39) - At South Entry	Stucco	Grey	4% Cellulose 96% Minerals
Total Asbestos	**None Detected**			
239412-016 16	Planetarium (39) - Northeast Hallway	Stucco	Grey, Tan	2% Cellulose 98% Minerals
Total Asbestos	**None Detected**			

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Report Number: 239412
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Costa Mesa CA 92626
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PO Number:

Date Received: 1/18/2005
Date Analyzed: 2/9/2005
Date Reported: 2/9/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)

John Lopez
Analyst

Cristina E. Tabatt
Approved Signatory

Bulk samples analyzed per 40 CFR 763, Subpart F, Appendix A; EPA-600/R-93/116 and for friable materials, EPA-600/M4-82-020. Samples are analyzed by calibrated visual estimation; therefore, results may not be reliable for samples of low concentration levels. This report applies only to the items tested. The results are representative of the samples submitted and may not represent the entire material from which samples were collected. This report was issued by a NIST/NVLAP (Lab Code 200358-0) accredited laboratory and may not be reproduced without the expressed written consent of Patriot Environmental. This report must not be used to claim product certification, approval or endorsement by NIST, NVLAP or any agency of the federal government.

Samples of wall systems containing discrete and separable layers are analyzed separately and reported as composite. Samples such as floor tiles and ceiling tiles with mastic layers are analyzed and reported separately.

239412-001 Stop on Positive.

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 239833
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626
Claim Number:
Number of Samples: 39
PO Number:

Date Received: 1/31/2005
Date Analyzed: 2/21/2005
Date Reported: 2/22/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239833-001 01	Science Hall (40) - Seating Area	Acoustic Ceiling Spray	Beige	64% Carbonate 30% Vermiculite
Chrysotile	6 %			
Total Asbestos	6 %			
239833-002 02	Science Hall (40) - Seating Area	Acoustic Ceiling Spray	Beige	64% Carbonate 30% Vermiculite
Chrysotile	6 %			
Total Asbestos	6 %			
239833-003 03	Science Hall (40) - Seating Area	Acoustic Ceiling Spray	Beige	64% Carbonate 30% Vermiculite
Chrysotile	6 %			
Total Asbestos	6 %			
239833-004 04	Science Hall (40) - Seating Area	Wallboard	White	92% Sulfate 2% Glass Fibers 6% Cellulose
Total Asbestos	**None Detected**			
239833-005 05	Science Hall (40) - Foyer	Wallboard	White	92% Sulfate 2% Glass Fibers 6% Cellulose
Total Asbestos	**None Detected**			

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Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626
Claim Number:
Number of Samples: 39
PO Number:

Date Received: 1/31/2005
Date Analyzed: 2/21/2005
Date Reported: 2/22/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239833-006 06	Science Hall (40) - Stage Area	Wallboard	White	92% Sulfate 2% Glass Fibers 6% Cellulose
Total Asbestos	**None Detected**			
239833-007 07	Science Hall (40) - Stage Area	Base Cove	Black	65% Carbonate 35% Vinyl Binder
Total Asbestos	**None Detected**			
239833-007M 07	Science Hall (40) - Stage Area	Base Cove Mastic	White	100% Organic Binder
Total Asbestos	**None Detected**			
239833-008 08	Science Hall (40) - Rear - Seating Area	Acoustic Ceiling	Beige	64% Carbonate 30% Vermiculite
Chrysotile	6 %			
Total Asbestos	6 %			
239833-009 09	Science Hall (40) - Lobby	Wall Plaster	Beige	65% Minerals 32% Carbonate 3% Paint
Total Asbestos	**None Detected**			

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Costa Mesa, CA 92626

Report Number: 239833
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626
Claim Number:
Number of Samples: 39
PO Number:

Date Received: 1/31/2005
Date Analyzed: 2/21/2005
Date Reported: 2/22/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239833-010 10	Science Hall (40) - Seating Area	Acoustic Ceiling	Beige	64% Carbonate 30% Vermiculite
Chrysotile	6 %			
Total Asbestos	6 %			
239833-011 11	Science Hall (40) - Room 110	Acoustic Ceiling Tile Mastic	Brown	100% Organic Binder
Total Asbestos	**None Detected**			
239833-012 12	Science Hall (40) - Room 110	Acoustic Ceiling Tile Mastic	Brown	100% Organic Binder
Total Asbestos	**None Detected**			
239833-013 13	Science Hall (40) - Room 110A	Acoustic Ceiling Tile Mastic	Brown	100% Organic Binder
Total Asbestos	**None Detected**			
239833-014 14	Science Hall (40) - Room 131	Base Cove	Black	65% Carbonate 35% Vinyl Binder
Total Asbestos	**None Detected**			

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Report Number: 239833
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Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626
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Date Received: 1/31/2005
Date Analyzed: 2/21/2005
Date Reported: 2/22/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239833-015 15	Science Hall (40) - Room 131	Base Cove Mastic	White	100% Organic Binder
Total Asbestos	**None Detected**			
239833-016 16	Science Hall (40) - Room 110A	Fire Rated Door		
Total Asbestos	**Assumed Positive**			
239833-017 17	Science Hall (40) - Below Windows Of Office Area	Transite Panels		
Total Asbestos	**Assumed Positive**			
239833-018 18	Science Hall (40) - Room 110	Acoustic Ceiling Tile Mastic	Brown	100% Organic Binder
Total Asbestos	**None Detected**			
239833-019 19	Science Hall (40) - Office Area	Base Cove	Black	65% Carbonate 35% Vinyl Binder
Total Asbestos	**None Detected**			

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Costa Mesa, CA 92626

Report Number:	239833
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Drive Costa Mesa CA 92626
Claim Number:	
Number of Samples:	39
PO Number:	

Date Received:	1/31/2005
Date Analyzed:	2/21/2005
Date Reported:	2/22/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239833-019M 19	Science Hall (40) - Office Area	Base Cove Mastic	White	100% Organic Binder
Total Asbestos	**None Detected**			
239833-020 20	Science Hall (40) - Near Room 134	HVAC Duct Seam Tape - Tap	Beige	95% Cellulose 5% Binder
Total Asbestos	**None Detected**			
239833-021 21	Science Hall (40) - Near Room 134	HVAC Duct Seam Tape - Tap	Beige	95% Cellulose 5% Binder
Total Asbestos	**None Detected**			
239833-022 22	Science Hall (40) - Near Room 134	HVAC Duct Seam Tape - Tap	Beige	95% Cellulose 5% Binder
Total Asbestos	**None Detected**			
239833-023 23	Science Hall (40) - Entry At Offices	Wall Plaster	Beige	65% Minerals 32% Carbonate 3% Paint
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 239833
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626

Claim Number:
Number of Samples: 39
PO Number:

Date Received: 1/31/2005
Date Analyzed: 2/21/2005
Date Reported: 2/22/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239833-024 24	Science Hall (40) - Stage Prep. Area	Wall Plaster	Beige	65% Minerals 32% Carbonate 3% Paint
Total Asbestos	**None Detected**			
239833-025 25	Science Hall (40) - Office Area	2x3 Acoustic Ceiling Tile	Grey White	20% Mineral Wool 65% Cellulose 12% Perlite 3% Paint
Total Asbestos	**None Detected**			
239833-026 26	Science Hall (40) - North Side At Offices - Tiled Lower Area	Grout	Grey	85% Minerals 15% Carbonate
Total Asbestos	**None Detected**			
239833-027 27	Science Hall (40) - At Offices	12 Inch Acoustic Ceiling Tile - Pinhole	Brown White	96% Cellulose 4% Paint
Total Asbestos	**None Detected**			
239833-028 28	Science Hall (40) - Stage Prep Area	Wallboard - Joint Compound	Beige	97% Carbonate
Chrysotile	3 %			
Total Asbestos	**3 %**			

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Report Number: 239833
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Costa Mesa CA 92626
Claim Number:
Number of Samples: 39
PO Number:

Date Received: 1/31/2005
Date Analyzed: 2/21/2005
Date Reported: 2/22/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239833-029 29	Science Hall (40) - Stage Prep Area	Wallboard - Joint Compound	Beige White	88% Sulfate 3% Carbonate 7% Cellulose 2% Glass Fibers
Chrysotile	<1 %			
Total Asbestos	**<1%**			
239833-030 30	Science Hall (40) - Stage Prep Area	Wallboard - Joint Compound	Beige White	88% Sulfate 3% Carbonate 7% Cellulose 2% Glass Fibers
Chrysotile	<1 %			
Total Asbestos	**<1%**			
239833-031 31	Science Hall (40) - North Side Of Bldg	Window Putty	Beige	100% Carbonate
Total Asbestos	**None Detected**			
239833-032 32	Science Hall (40) - North Side Of Bldg	Window Putty	Beige	100% Carbonate
Total Asbestos	**None Detected**			
239833-033 33	Science Hall (40) - North Side Of Bldg	Window Putty	Beige	100% Carbonate
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College		Report Number:	239833
Attn: Michael Collins		Project Number:	19378
1370 Adams Avenue - Bldg D		Project Name:	Orange Coast College
Costa Mesa, CA 92626		Project Location:	2701 Fairview Drive Costa Mesa CA 92626
		Claim Number:	
Date Received:	1/31/2005	Number of Samples:	39
Date Analyzed:	2/21/2005	PO Number:	
Date Reported:	2/22/2005		

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239833-034 34	Science Hall (40) - North Side Of Bldg	Window Putty	Beige	100% Carbonate
Total Asbestos	**None Detected**			
239833-035 35	Science Hall (40) - South Side	Stucco	Grey Beige	75% Minerals 22% Carbonate 3% Paint
Chrysotile	<1 %			
Total Asbestos	**< 1%**			
239833-036 36	Science Hall (40) - At Telephone Equipment	Stucco	Grey Beige	75% Minerals 22% Carbonate 3% Paint
Chrysotile	<1 %			
Total Asbestos	**< 1%**			
239833-037 37	Science Hall (40) - South Side	Stucco	Grey Beige	75% Minerals 22% Carbonate 3% Paint
Chrysotile	<1 %			
Total Asbestos	**< 1%**			

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Polarized Light Microscopy Analysis

Coast Community College
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Report Number:	239833
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Drive Costa Mesa CA 92626
Claim Number:	
Number of Samples:	39
PO Number:	

Date Received:	1/31/2005
Date Analyzed:	2/21/2005
Date Reported:	2/22/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)

Ian Reyes
Analyst

Grace Herrera
Approved Signatory

Bulk samples analyzed per 40 CFR 763, Subpart F, Appendix A; EPA-600/R-93/116 and for friable materials, EPA-600/M4-82-020. Samples are analyzed by calibrated visual estimation; therefore, results may not be reliable for samples of low concentration levels. This report applies only to the items tested. The results are representative of the samples submitted and may not represent the entire material from which samples were collected. This report was issued by a NIST/NVLAP (Lab Code 200358-0) accredited laboratory and may not be reproduced without the expressed written consent of Patriot Environmental. This report must not be used to claim product certification, approval or endorsement by NIST, NVLAP or any agency of the federal government.

Samples of wall systems containing discrete and separable layers are analyzed separately and reported as composite. Samples such as floor tiles and ceiling tiles with mastic layers are analyzed and reported separately.

239833-028 No Drywall Present

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

239833

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
01	Science Hall (40)	A/C - Acoustic Ceiling Spray	X		G	Seating Area
02						
03						
04		Wallboard		X	G	Seating Area
05						Foyer
06						Stage Area
07		Black Base Cove w/Mastic		X	G	
08		A/C	X		G	Rear - Seating Area
09		WP		X	G	Lobby
10		A/C	X		G	Seating Area
NOTE		STUCCO - NOTE				Exterior of Bldg.

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/28/05

Samples received by: Candy Campos Date/Time: 1/28/05 @ 4:00pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

239833

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Coud	Material Location
NOTE	Science Hall (40)	Brown ACT Mastic Dots				Stage - Rear Prop Room Above T-Bar (12" ACT Pinhole)
11				X	G	Room 110
12						
13						110A
14		Black Base Cove				Room 131
5		Brown Base Cove Mastic				
16 ASS.		Fire Rated Door (FRD)		X	G	Room 110A
17 ASS.		Transite Panels Below Windows of Offices		X	G	Office Area
18		Brown ACT Mastic		X	G	Room 110
19		Black Base Cove & Mastic		X	G	Office Area

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty
RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/28/05

Samples received by: Candy Campos Date/Time: 1/28/05 @ 4:00pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

239833

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
20	Science Hall (40)	HVAC DUCT SEAM TAPE (TAP)	X		G	Near Room 134
21						
22						
23		WP		X	G	Entry At Offices
24						Stage Prep. Area
25		2'X3' ACT	X		G	Office Area
26		Grout		X	G	North Side At Offices; Tiled Lower Area
27		12" ACT - Pinhole Pattern	X		G	At Offices
28		WB/JC		X	G	Stage Prep Area
29						Stage Prep Area
30						

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/20/05

Samples received by: Candy Campos Date/Time: 1/28/05 @ 4:00pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

239833

..JECT NAME: Orange Coast College

..JECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
31	Science Hall (40)	WPTY		X	G	North Side of Bldg.
32						
33						
34						
35		Stucco		X	G	South Side
6						At Telephone Equipment
37						South Side

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putt
RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/28/05

..mples received by: Candy Campos Date/Time: 1/28/05 @ 4:00pm.

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES, INC

NESHAP Point Counting by Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number:	242082
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Drive Costa Mesa Drive CA 92626
Claim Number:	NA
Number of Samples:	1
PO Number:	NA

Date Received:	1/31/2005
Date Analyzed:	3/4/2005
Date Reported:	3/4/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition
242082-001 35	Science Hall (40) - Southside	Stucco	Grey Beige	75% Minerals 22% Carbonate 3% Paint

Total Asbestos **0.5%**

EPA 400 Pt Point Count Method Has Been Extended to 1000 pts To Meet The Cal OSHA Limit Of 0.1%

Ian Reyes
Analyst

Grace Herrera
Approved Signatory

Bulk samples analyzed per 40 CFR 763, Subpart F, Appendix A; EPA-600/R-93/116 and for friable materials, EPA-600/M4-82-020. Samples are analyzed by calibrated visual estimation; therefore, results may not be reliable for samples of low concentration levels. This report applies only to the items tested. The results are representative of the samples submitted and may not represent the entire material from which samples were collected. This report was issued by a NIST/NVLAP accredited laboratory and may not be reproduced without the expressed written consent of Patriot Environmental.

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 240797
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626
Claim Number:
Number of Samples: 34
PO Number:

Date Received: 1/26/2005
Date Analyzed: 2/22/2005
Date Reported: 2/22/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
240797-001 01	Science Lecture (41) - Foyer Ceiling	Cementous Ceiling Material	Beige	55% Minerals 35% Carbonate 7% Vermiculite 3% Paint
Chrysotile <1 %				
Total Asbestos < 1%				
240797-002 02	Science Lecture (41) - Foyer Ceiling	Cementous Ceiling Material	Beige	55% Minerals 35% Carbonate 7% Vermiculite 3% Paint
Chrysotile <1 %				
Total Asbestos < 1%				
240797-003 03	Science Lecture (41) - Foyer Ceiling	Cementous Ceiling Material	White	55% Minerals 35% Carbonate 7% Vermiculite 3% Paint
Chrysotile <1 %				
Total Asbestos < 1%				
240797-004 04	Science Lecture (41) - Rear Prep - Storage At Stage Area	12 Inch Vinyl Floor Tile	Beige	77% Carbonate 20% Vinyl Binder
Chrysotile 3 %				
Total Asbestos 3 %				

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Polarized Light Microscopy Analysis

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Attn: Michael Collins
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Costa Mesa, CA 92626

Report Number: 240797
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626
Claim Number:
Number of Samples: 34
PO Number:

Date Received: 1/26/2005
Date Analyzed: 2/22/2005
Date Reported: 2/22/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
240797-004M 04	Science Lecture (41) - Rear Prep - Storage At Stage Area	Floor Tile Mastic	Black	90% Tar
Chrysotile 10 %				
Total Asbestos 10 %				
240797-005 05	Science Lecture (41) - Rear Prep - Storage At Stage Area	12 Inch Vinyl Floor Tile	Beige	77% Carbonate 20% Vinyl Binder
Chrysotile 3 %				
Total Asbestos 3 %				
240797-005M 05	Science Lecture (41) - Rear Prep - Storage At Stage Area	Floor Tile Mastic	Black	90% Tar
Chrysotile 10 %				
Total Asbestos 10 %				
240797-006 06	Science Lecture (41) - Rear Prep - Storage At Stage Area	Base Mastic	Brown	96% Organic Binder
Anthophyllite 4 %				
Total Asbestos 4 %				

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Coast Community College
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Costa Mesa, CA 92626

Report Number: 240797
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626
Claim Number:
Number of Samples: 34
PO Number:

Date Received: 1/26/2005
Date Analyzed: 2/22/2005
Date Reported: 2/22/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
240797-007 07	Science Lecture (41) - Rear Prep - Storage At Stage Area	Base Mastic	Brown	96% Organic Binder
Anthophyllite 4 %				
Total Asbestos 4 %				
240797-008 08	Science Lecture (41) - Rear Prep - Storage At Stage Area	Base Mastic	Brown	96% Organic Binder
Anthophyllite 4 %				
Total Asbestos 4 %				
240797-009 09	Science Lecture (41) - Rear Prep Area - Present Stage Area	12 Inch Vinyl Floor Tile	Beige	77% Carbonate 20% Vinyl Binder
Chrysotile 3 %				
Total Asbestos 3 %				
240797-009M 09	Science Lecture (41) - Rear Prep Area - Present Stage Area	Floor Tile Mastic	Black	90% Tar
Chrysotile 10 %				
Total Asbestos 10 %				

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Costa Mesa, CA 92626

Report Number: 240797
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626

Claim Number:
Number of Samples: 34
PO Number:

Date Received: 1/26/2005
Date Analyzed: 2/22/2005
Date Reported: 2/22/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
240797-010 10	Science Lecture (41) - Rear Prep Area - Present Stage Area	Base Cove	Black	65% Carbonate 35% Vinyl Binder
Total Asbestos	None Detected			
240797-011 11	Science Lecture (41) - Rear Prep Area - Present Stage Area	Base Cove	Black	65% Carbonate 35% Vinyl Binder
Total Asbestos	None Detected			
240797-012 12	Science Lecture (41) - Rear Prep Area - Present Stage Area	Base Cove	Black	65% Carbonate 35% Vinyl Binder
Total Asbestos	None Detected			
240797-013 13	Science Lecture (41) - Room 101	Acoustic Ceiling	Beige	60% Carbonate 15% Vermiculite 22% Minerals
Chrysotile	3 %			
Total Asbestos	3 %			

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Report Number: 240797
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626

Claim Number:
Number of Samples: 34
PO Number:

Date Received: 1/26/2005
Date Analyzed: 2/22/2005
Date Reported: 2/22/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
240797-014 14	Science Lecture (41) - Room 101	Acoustic Ceiling	Beige	60% Carbonate 15% Vermiculite 22% Minerals
Chrysotile	3 %			
Total Asbestos	3 %			
240797-015 15	Science Lecture (41) - Room 102	Acoustic Ceiling	Beige	60% Carbonate 15% Vermiculite 22% Minerals
Chrysotile	3 %			
Total Asbestos	3 %			
240797-016 16	Science Lecture (41) - Room 102	Acoustic Ceiling	Beige	60% Carbonate 15% Vermiculite 22% Minerals
Chrysotile	3 %			
Total Asbestos	3 %			
240797-017 17	Science Lecture (41) - Room 5 - Storage	12 Inch Acoustic Ceiling Tile - Rough	Grey White	96% Mineral Wool 4% Paint
Total Asbestos	**None Detected**			

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Report Number: 240797
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626
Claim Number:
Number of Samples: 34
PO Number:

Date Received: 1/26/2005
Date Analyzed: 2/22/2005
Date Reported: 2/22/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
240797-018 18	Science Lecture (41) - Room 5 - Storage	12 Inch Acoustic Ceiling Tile - Rough	Grey White	96% Mineral Wool 4% Paint
Total Asbestos	None Detected			
240797-019 19	Science Lecture (41) - Projection Room 6 (101)	12 Inch Acoustic Ceiling Tile - Rough	Grey White	96% Mineral Wool 4% Paint
Total Asbestos	None Detected			
240797-020 20	Science Lecture (41) - Projection Rooms 6 and Platforms	12 Inch Vinyl Floor Tile	Brown	77% Carbonate 20% Vinyl Binder
Chrysotile	3 %			
Total Asbestos	3 %			
240797-020M 20	Science Lecture (41) - Projection Rooms 6 and Platforms	Floor Tile Mastic	Black	90% Tar
Chrysotile	10 %			
Total Asbestos	10 %			

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Report Number: 240797
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626
Claim Number:
Number of Samples: 34
PO Number:

Date Received: 1/26/2005
Date Analyzed: 2/22/2005
Date Reported: 2/22/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
240797-021 21	Science Lecture (41) - Projection Rooms 6 and Platforms	Fireproofing	Beige	64% Sulfate 30% Vermiculite
Chrysotile 6 %				
Total Asbestos 6 %				
240797-022 22	Science Lecture (41) - Projection Rooms 6 and Platforms	Fireproofing	Beige	64% Sulfate 30% Vermiculite
Chrysotile 6 %				
Total Asbestos 6 %				
240797-023 23	Science Lecture (41) - Projection Room 6	12 Inch Vinyl Floor Tile	Brown	77% Carbonate 20% Vinyl Binder
Chrysotile 3 %				
Total Asbestos 3 %				
240797-023M 23	Science Lecture (41) - Projection Room 6	Floor Tile Mastic	Black	90% Tar
Chrysotile 10 %				
Total Asbestos 10 %				

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Report Number: 240797
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626
Claim Number:
Number of Samples: 34
PO Number:

Date Received: 1/26/2005
Date Analyzed: 2/22/2005
Date Reported: 2/22/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
240797-024 24	Science Lecture (41) - Projection Room 5	12 Inch Vinyl Floor Tile	Brown	77% Carbonate 20% Vinyl Binder
Chrysotile	3 %			
Total Asbestos	**3 %**			
240797-024M 24	Science Lecture (41) - Projection Room 5	Floor Tile Mastic	Black	90% Tar
Chrysotile	10 %			
Total Asbestos	**10 %**			
240797-025 25	Science Lecture (41) - Projection Room 5	Firepoofing	Beige	64% Sulfate 30% Vermiculite
Chrysotile	6 %			
Total Asbestos	**6 %**			
240797-026 26	Science Lecture (41) - Projection Room 7	Wall Plaster	Beige	65% Minerals 32% Carbonate 3% Paint
Total Asbestos	**None Detected**			
240797-027 27	Science Lecture (41) - Projection Room 5	Wall Plaster	Beige	65% Minerals 32% Carbonate 3% Paint
Total Asbestos	**None Detected**			

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Report Number: 240797
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626
Claim Number:
Number of Samples: 34
PO Number:

Date Received: 1/26/2005
Date Analyzed: 2/22/2005
Date Reported: 2/22/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
240797-028 28	Science Lecture (41) - Projection Room 5	Wall Plaster	Beige	65% Minerals 32% Carbonate 3% Paint

Total Asbestos **None Detected**

Ian Reyes
Analyst

Grace Herrera
Approved Signatory

Bulk samples analyzed per 40 CFR 763, Subpart F, Appendix A; EPA-600/R-93/116 and for friable materials, EPA-600/M4-82-020. Samples are analyzed by calibrated visual estimation; therefore, results may not be reliable for samples of low concentration levels. This report applies only to the items tested. The results are representative of the samples submitted and may not represent the entire material from which samples were collected. This report was issued by a NIST/NVLAP (Lab Code 200358-0) accredited laboratory and may not be reproduced without the expressed written consent of Patriot Environmental. This report must not be used to claim product certification, approval or endorsement by NIST, NVLAP or any agency of the federal government.

Samples of wall systems containing discrete and separable layers are analyzed separately and reported as composite. Samples such as floor tiles and ceiling tiles with mastic layers are analyzed and reported separately.

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

240797

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
01	Science Lecture (41)	Cementous Ceiling Material		X	G	Foyer - Ceiling
02						
03						
04		12" Beige VFT w/Mastic		X		Rear Prep - Storage At Stage Area
05						
06		Brown Base Mastic		X	G	
07/08						
09		12" Beige VFT w/Mastic		X	G	Rear Prep - Area NOTE*: - Present Stage Area
10		Black Base Cove		X	G	
11						
12						

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: Date/Time: 1/26/05

Samples received by: Date/Time: 1-26-05

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

240797

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
13	Science Lecture (41)	A/C	X		G	Rm 101
14						
15						Rm 102
16						
17		12" ACT - Rough	X		G	Room 5 ; Storage
18						
19						Projection Room 6 (101)
20		12" Brown VFT		X	G	Projection Rooms 6 & Platforms
21		Fireproofing	X		G	
22						
23		12" Brown VFT		X	G	Projection Room 6

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty
RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/26/05

Samples received by: [signature] Date/Time: 1-26-05

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

240797

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
24	Science Lecture (41)	12" BROWN VFT		X	G	Projection Room 5
25	↓	Fireproofing	X		G	Proj. Rm. ↓
26	↓	WP		X	G	Proj. Rm. 7
27	↓	↓		↓	↓	↓ 5
28	↓	↓		↓	↓	↓ 5

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: EO [signature] Date/Time: 1/26/05

Samples received by: [signature] Date/Time: 1-26-05

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES, INC.

Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 239834
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626

Claim Number:
Number of Samples: 21
PO Number:

Date Received: 1/31/2005
Date Analyzed: 2/18/2005
Date Reported: 2/18/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239834-001 01	Allied Health (50) - Room 110	Carpet Glue	Yellow	100% Organic Binder
Total Asbestos	**None Detected**			
239834-002 02	Allied Health (50) - Room 110	2x3 Acoustic Ceiling Tile - Random	Grey White	20% Mineral Wool 65% Cellulose 12% Perlite 3% Paint
Total Asbestos	**None Detected**			
239834-003 03	Allied Health (50) - Middle Lab Area - Prep Room	2x3 Acoustic Ceiling Tile - Random	Grey White	20% Mineral Wool 65% Cellulose 12% Perlite 3% Paint
Total Asbestos	**None Detected**			
239834-004 04	Allied Health (50) - Room 110	2x3 Acoustic Ceiling Tile - Random	Grey White	20% Mineral Wool 65% Cellulose 12% Perlite 3% Paint
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 239834
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626
Claim Number:
Number of Samples: 21
PO Number:

Date Received: 1/31/2005
Date Analyzed: 2/18/2005
Date Reported: 2/18/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239834-005 05	Allied Health (50) - Room 110 - East	Base Cove	Tan	65% Carbonate 35% Vinyl Binder
Total Asbestos	**None Detected**			
239834-005M 05	Allied Health (50) - Room 110 - East	Base Cove Mastic	White	100% Organic Binder
Total Asbestos	**None Detected**			
239834-006 06	Allied Health (50) - Room 110 - West	Base Cove	Tan	65% Carbonate 35% Vinyl Binder
Total Asbestos	**None Detected**			
239834-006M 06	Allied Health (50) - Room 110 - West	Base CoveMastic	White	100% Organic Binder
Total Asbestos	**None Detected**			
239834-007 07	Allied Health (50) - Room 110 - North	Wallboard - Joint Compound	White	84% Sulfate 4% Carbonate 7% Cellulose 2% Glass Fibers 3% Paint
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

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Attn: Michael Collins
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Report Number: 239834
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626

Claim Number:
Number of Samples: 21
PO Number:

Date Received: 1/31/2005
Date Analyzed: 2/18/2005
Date Reported: 2/18/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239834-008 08	Allied Health (50) - Room 110 - South	Wallboard - Joint Compound	White	84% Sulfate 4% Carbonate 7% Cellulose 2% Glass Fibers 3% Paint
Total Asbestos	**None Detected**			
239834-009 09	Allied Health (50) - Middle Lab Area - Prep Room	Wallboard - Joint Compound	White	84% Sulfate 4% Carbonate 7% Cellulose 2% Glass Fibers 3% Paint
Total Asbestos	**None Detected**			
239834-010 10	Allied Health (50) - Room 110 - Equipment Storage	Wall Plaster	Beige	65% Minerals 32% Carbonate 3% Paint
Total Asbestos	**None Detected**			
239834-011 11	Allied Health (50) - Custodial Room 112	Wall Plaster	Grey White	70% Minerals 27% Carbonate 3% Paint
Chrysotile	<1 %			
Total Asbestos	< 1%			

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Polarized Light Microscopy Analysis

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Attn: Michael Collins
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Report Number: 239834
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626
Claim Number:
Number of Samples: 21
PO Number:

Date Received: 1/31/2005
Date Analyzed: 2/18/2005
Date Reported: 2/18/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239834-012 12	Allied Health (50) - Rear Area At 110 - Exterior	Vapor Barrier Paper	Black	85% Cellulose 15% Tar
Total Asbestos	**None Detected**			
239834-013 13	Allied Health (50) - Rear Area At 110 - Exterior	Vapor Barrier Paper	Black	85% Cellulose 15% Tar
Total Asbestos	**None Detected**			
239834-014 14	Allied Health (50) - Rear Area At 110 - Exterior	Vapor Barrier Paper	Black	85% Cellulose 15% Tar
Total Asbestos	**None Detected**			
239834-015 15	Allied Health (50) - Rear Exterior	Stucco	Grey Beige	75% Minerals 22% Carbonate 3% Paint
Chrysotile	<1 %			
Total Asbestos	< 1%			
239834-016 16	Allied Health (50) - Front Entry	Stucco	Beige	72% Minerals 25% Carbonate 3% Paint
Total Asbestos	**None Detected**			

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Report Number:	239834
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Drive Costa Mesa CA 92626
Claim Number:	
Number of Samples:	21
PO Number:	

Date Received:	1/31/2005
Date Analyzed:	2/18/2005
Date Reported:	2/18/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239834-017 17	Allied Health (50) - At Mens Restroom	Stucco	Grey White	75% Minerals 22% Carbonate 3% Paint

Chrysotile <1 %
Total Asbestos < 1%

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239834-018 18	Allied Health (50) - Rear Exterior	Stucco	Grey Beige	75% Minerals 22% Carbonate 3% Paint

Chrysotile <1 %
Total Asbestos < 1%

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239834-019 19	Allied Health (50) - Rear Exterior	Stucco	Grey Beige	75% Minerals 22% Carbonate 3% Paint

Chrysotile <1 %
Total Asbestos < 1%

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 239834
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626
Claim Number:
Number of Samples: 21
PO Number:

Date Received: 1/31/2005
Date Analyzed: 2/18/2005
Date Reported: 2/18/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)

Ian Reyes
Analyst

Grace Herrera
Approved Signatory

Bulk samples analyzed per 40 CFR 763, Subpart F, Appendix A; EPA-600/R-93/116 and for friable materials, EPA-600/M4-82-020. Samples are analyzed by calibrated visual estimation; therefore, results may not be reliable for samples of low concentration levels. This report applies only to the items tested. The results are representative of the samples submitted and may not represent the entire material from which samples were collected. This report was issued by a NIST/NVLAP (Lab Code 200358-0) accredited laboratory and may not be reproduced without the expressed written consent of Patriot Environmental. This report must not be used to claim product certification, approval or endorsement by NIST, NVLAP or any agency of the federal government.

Samples of wall systems containing discrete and separable layers are analyzed separately and reported as composite. Samples such as floor tiles and ceiling tiles with mastic layers are analyzed and reported separately.

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JM 2/21

Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 239834
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626

Claim Number:
Number of Samples: 21
PO Number:

Date Received: 1/31/2005
Date Analyzed: 2/18/2005
Date Reported: 2/18/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239834-001 01	Allied Health (50) - Room 110	Carpet Glue	Yellow	100% Organic Binder
Total Asbestos	**None Detected**			
239834-002 02	Allied Health (50) - Room 110	2x3 Acoustic Ceiling Tile - Random	Grey White	20% Mineral Wool 65% Cellulose 12% Perlite 3% Paint
Total Asbestos	**None Detected**			
239834-003 03	Allied Health (50) - Middle Lab Area - Prep Room	2x3 Acoustic Ceiling Tile - Random	Grey White	20% Mineral Wool 65% Cellulose 12% Perlite 3% Paint
Total Asbestos	**None Detected**			
239834-004 04	Allied Health (50) - Room 110	2x3 Acoustic Ceiling Tile - Random	Grey White	20% Mineral Wool 65% Cellulose 12% Perlite 3% Paint
Total Asbestos	**None Detected**			

Polarized Light Microscopy Analysis

Coast Community College
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Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626
Claim Number:
Number of Samples: 21
PO Number:

Date Received: 1/31/2005
Date Analyzed: 2/18/2005
Date Reported: 2/18/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239834-005 05	Allied Health (50) - Room 110 - East	Base Cove	Tan	65% Carbonate 35% Vinyl Binder
Total Asbestos	**None Detected**			
239834-005M 05	Allied Health (50) - Room 110 - East	Base Cove Mastic	White	100% Organic Binder
Total Asbestos	**None Detected**			
239834-006 06	Allied Health (50) - Room 110 - West	Base Cove	Tan	65% Carbonate 35% Vinyl Binder
Total Asbestos	**None Detected**			
239834-006M 06	Allied Health (50) - Room 110 - West	Base Cove Mastic	White	100% Organic Binder
Total Asbestos	**None Detected**			
239834-007 07	Allied Health (50) - Room 110 - North	Wallboard - Joint Compound	White	84% Sulfate 4% Carbonate 7% Cellulose 2% Glass Fibers 3% Paint
Total Asbestos	**None Detected**			

Polarized Light Microscopy Analysis

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Project Location: 2701 Fairview Drive
Costa Mesa CA 92626
Claim Number:
Number of Samples: 21
PO Number:

Date Received: 1/31/2005
Date Analyzed: 2/18/2005
Date Reported: 2/18/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239834-008 08	Allied Health (50) - Room 110 - South	Wallboard - Joint Compound	White	84% Sulfate 4% Carbonate 7% Cellulose 2% Glass Fibers 3% Paint
Total Asbestos	**None Detected**			
239834-009 09	Allied Health (50) - Middle Lab Area - Prep Room	Wallboard - Joint Compound	White	84% Sulfate 4% Carbonate 7% Cellulose 2% Glass Fibers 3% Paint
Total Asbestos	**None Detected**			
239834-010 10	Allied Health (50) - Room 110 - Equipment Storage	Wall Plaster	Beige	65% Minerals 32% Carbonate 3% Paint
Total Asbestos	**None Detected**			
239834-011 11	Allied Health (50) - Custodial Room 112	Wall Plaster	Grey White	70% Minerals 27% Carbonate 3% Paint
Chrysotile	<1 %			
Total Asbestos	< 1%			

Polarized Light Microscopy Analysis

Coast Community College
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Report Number: 239834
Project Number:
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626

Claim Number:
Number of Samples: 21
PO Number:

Date Received: 1/31/2005
Date Analyzed: 2/18/2005
Date Reported: 2/18/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239834-012 12	Allied Health (50) - Rear Area At 110 - Exterior	Vapor Barrier Paper	Black	85% Cellulose 15% Tar
Total Asbestos	**None Detected**			
239834-013 13	Allied Health (50) - Rear Area At 110 - Exterior	Vapor Barrier Paper	Black	85% Cellulose 15% Tar
Total Asbestos	**None Detected**			
239834-014 14	Allied Health (50) - Rear Area At 110 - Exterior	Vapor Barrier Paper	Black	85% Cellulose 15% Tar
Total Asbestos	**None Detected**			
239834-015 15	Allied Health (50) - Rear Exterior	Stucco	Grey Beige	75% Minerals 22% Carbonate 3% Paint
Chrysotile	<1 %			
Total Asbestos	< 1%			
239834-016 16	Allied Health (50) - Front Entry	Stucco	Beige	72% Minerals 25% Carbonate 3% Paint
Total Asbestos	**None Detected**			

Polarized Light Microscopy Analysis

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Project Location: 2701 Fairview Drive
Costa Mesa CA 92626

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Date Received: 1/31/2005
Date Analyzed: 2/18/2005
Date Reported: 2/18/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239834-017 17	Allied Health (50) - At Mens Restroom	Stucco	Grey White	75% Minerals 22% Carbonate 3% Paint
Chrysotile	<1 %			
Total Asbestos	< 1%			
239834-018 18	Allied Health (50) - Rear Exterior	Stucco	Grey Beige	75% Minerals 22% Carbonate 3% Paint
Chrysotile	<1 %			
Total Asbestos	< 1%			
239834-019 19	Allied Health (50) - Rear Exterior	Stucco	Grey Beige	75% Minerals 22% Carbonate 3% Paint
Chrysotile	<1 %			
Total Asbestos	< 1%			

Polarized Light Microscopy Analysis

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Project Number:
Project Name: Orange Coast College
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Costa Mesa CA 92626

Claim Number:
Number of Samples: 21
PO Number:

Date Received: 1/31/2005
Date Analyzed: 2/18/2005
Date Reported: 2/18/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)

Ian Reyes
Analyst

Cristina E. Tabatt
Approved Signatory

Bulk samples analyzed per 40 CFR 763, Subpart F, Appendix A; EPA-600/R-93/116 and for friable materials, EPA-600/M4-82-020. Samples are analyzed by calibrated visual estimation; therefore, results may not be reliable for samples of low concentration levels. This report applies only to the items tested. The results are representative of the samples submitted and may not represent the entire material from which samples were collected. This report was issued by a NIST/NVLAP (Lab Code 200358-0) accredited laboratory and may not be reproduced without the expressed written consent of Patriot Environmental. This report must not be used to claim product certification, approval or endorsement by NIST, NVLAP or any agency of the federal government.

Samples of wall systems containing discrete and separable layers are analyzed separately and reported as composite. Samples such as floor tiles and ceiling tiles with mastic layers are analyzed and reported separately.

PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

239834

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
01	Allied Health (50)	Carpet Glue		X	G	Room 110
NOTE		*No Access*				No Access - Rear Utility Area Behind Cove
02		2'x3' ACT - Random Pinhole	X		G	~~MEAT LAB~~ Room 110
03						Middle Lab Area - Prep Room
04						Room 110
5		Tan Base Cove & Mastic		X	G	Room 110 (East)
06						(West)
07		WB/JC		X	G	Room 110 (North)
08						(South)
09						Middle Lab Area - Prep Room
10		WP		X	G	Room110; Equipment Storage

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty
RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/28/05

Samples received by: Candy Campos Date/Time: 1/28/05 @ 4:00pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

239834

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
11	Allied Health (50)	WP		X	G	Custodial Room 112
12		Vapor Barrier Paper	X		G	Rear Area At 110 - Exterior
13						
14						
15		Stucco		X	G	Rear Exterior
16						Front Entry
17						At Mens Restroom
18						Rear Exterior
19						

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/28/05

Samples received by: Candy Campos Date/Time: 1/28/05 @ 4:00pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES, INC.

Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number:	238352
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Drive Costa Mesa CA 92626
Claim Number:	
Number of Samples:	50
PO Number:	

Date Received:	1/10/2005
Date Analyzed:	2/2/2005
Date Reported:	2/8/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
238352-001 07	Home Economics (72) - Room 103 Front	2ft Acoustic Wall Tiles - Straight	Brown White	96% Cellulose 4% Paint
Total Asbestos	**None Detected**			
238352-002 08	Home Economics (72) - Rm 103 - Side W	2ft Acoustic Wall Tiles - Straight	Brown White	96% Cellulose 4% Paint
Total Asbestos	**None Detected**			
238352-003 09	Home Economics (72) - Rm 103 - Side NW	2ft Acoustic Wall Tiles - Straight	Brown White	96% Cellulose 4% Paint
Total Asbestos	**None Detected**			
238352-004 10	Home Economics (72) - Rm 107	2ft Acoustic Wall Tiles - Straight	Brown White	96% Cellulose 4% Paint
Total Asbestos	**None Detected**			
238352-005 11	Home Economics (72) - Classroom 101 At Front	Acoustic Ceiling	White	70% Carbonate 30% Foam
Total Asbestos	**None Detected**			
238352-006 12	Home Economics (72) - Rm 102 - Office Area Faculty	Acoustic Ceiling	White	70% Carbonate 30% Foam
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 238352
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626
Claim Number:
Number of Samples: 50
PO Number:

Date Received: 1/10/2005
Date Analyzed: 2/2/2005
Date Reported: 2/8/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
238352-007 13	Home Economics (72) - Fitting Rooms	Acoustic Ceiling	White	70% Carbonate 30% Foam
Total Asbestos	**None Detected**			
238352-008 14	Home Economics (72) - Room 106 - Office 6B	Acoustic Ceiling	White	70% Carbonate 30% Foam
Total Asbestos	**None Detected**			
238352-009 15	Home Economics (72) - Room 107 - Rear	12 Inch Vinyl Floor Tile	Peach	80% Carbonate 20% Vinyl Binder
Total Asbestos	**None Detected**			
238352-009M 15	Home Economics (72) - Room 107 - Rear	Floor Tile Mastic	Black	75% Tar 17% Organic Binder
Chrysotile	8 %			
Total Asbestos	**8 %**			
238352-010 16	Home Economics (72) - Room 107 - Rear	12 Inch Vinyl Floor Tile	Peach	80% Carbonate 20% Vinyl Binder
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

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Costa Mesa, CA 92626

Report Number: 238352
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626

Claim Number:
Number of Samples: 50
PO Number:

Date Received: 1/10/2005
Date Analyzed: 2/2/2005
Date Reported: 2/8/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
238352-010M 16	Home Economics (72) - Room 107 - Rear	Floor Tile Mastic	Yellow	100% Organic Binder
Total Asbestos	None Detected			
238352-011 17	Home Economics (72) - Room 107 - Rear	12 Inch Vinyl Floor Tile	Peach	80% Carbonate 20% Vinyl Binder
Total Asbestos	None Detected			
238352-011M 17	Home Economics (72) - Room 107 - Rear	Floor Tile Mastic	Black	75% Tar 17% Organic Binder
Chrysotile	8 %			
Total Asbestos	8 %			
238352-012 18	Home Economics (72) - Room 102 - Office Hallway	Carpet Glue	Yellow	100% Organic Binder
Total Asbestos	None Detected			
238352-013 19	Home Economics (72) - Room 101 At Entry	Wall Plaster	Beige	65% Minerals 32% Carbonate 3% Paint
Total Asbestos	None Detected			

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Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626
Claim Number:
Number of Samples: 50
PO Number:

Date Received: 1/10/2005
Date Analyzed: 2/2/2005
Date Reported: 2/8/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
238352-014 20	Home Economics (72) - Room 102 - Office Hallway	Wall Plaster	Beige	65% Minerals 32% Carbonate 3% Paint
Total Asbestos	**None Detected**			
238352-015 21	Home Economics (72) - Room 108 Front	Wall Plaster	Beige	65% Minerals 32% Carbonate 3% Paint
Total Asbestos	**None Detected**			
238352-016 22	Home Economics (72) - Room 104	2x3 Acoustic Ceiling Tile	Grey White	20% Mineral Wool 65% Cellulose 12% Perlite 3% Paint
Total Asbestos	**None Detected**			
238352-017 23	Home Economics (72) - Room 104	2x3 Acoustic Ceiling Tile	Grey White	20% Mineral Wool 65% Cellulose 12% Perlite 3% Paint
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

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Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626

Claim Number:
Number of Samples: 50
PO Number:

Date Received: 1/10/2005
Date Analyzed: 2/2/2005
Date Reported: 2/8/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
238352-018 24	Home Economics (72) - Room 104	2x3 Acoustic Ceiling Tile	Grey White	20% Mineral Wool 65% Cellulose 12% Perlite 3% Paint
Total Asbestos	None Detected			
238352-019 25	Home Economics (72) - Room 105 - Food Lab	12 Inch Vinyl Floor Tile	White	80% Carbonate 20% Vinyl Binder
Total Asbestos	None Detected			
238352-020 26	Home Economics (72) - Room 106 - Entry	12 Inch Vinyl Floor Tile	White	80% Carbonate 20% Vinyl Binder
Total Asbestos	None Detected			
238352-021 27	Home Economics (72) - At Room 105-106 - Rear Door	12 Inch Vinyl Floor Tile	White	80% Carbonate 20% Vinyl Binder
Total Asbestos	None Detected			

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Claim Number:
Number of Samples: 50
PO Number:

Date Received: 1/10/2005
Date Analyzed: 2/2/2005
Date Reported: 2/8/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
238352-022A 28	Home Economics (72) - Room 103 - Front At Fitting Room	Joint Compound	White	93% Carbonate 5% Paint
Chrysotile	2 %			
Total Asbestos	2 %			
238352-022B 28	Home Economics (72) - Room 103 - Front At Fitting Room	Wallboard - Joint Compound	White	80% Sulfate 10% Carbonate 7% Cellulose 3% Paint
Chrysotile	<1 %			
Total Asbestos	< 1%			
238352-023 29	Home Economics (72) - Room 104 Front	Wallboard - Joint Compound	White	95% Carbonate 5% Paint
Total Asbestos	**None Detected**			
238352-024 30	Home Economics (72) - Room 105 - Storage Closet	Wallboard - Joint Compound	White	95% Carbonate 5% Paint
Total Asbestos	**None Detected**			
238352-025 31	Home Economics (72) - Room 106 - Office Area	Wallboard - Joint Compound	White	95% Carbonate 5% Paint
Total Asbestos	**None Detected**			

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES, INC.

NESHAP Point Counting by Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number:	242083
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Drive Costa Mesa Drive CA 92626
Claim Number:	NA
Number of Samples:	2
PO Number:	NA

Date Received:	1/31/2005
Date Analyzed:	3/4/2005
Date Reported:	3/4/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition
242083-001 11	Allied Health (50) - Custodial Room 112	Wall Plaster	Grey White	70% Minerals 27% Carbonate 3% Paint
Total Asbestos	<0.1%			
242083-002 15	Allied Health (50) - Rear Exterior	Stucco	Grey Beige	75% Minerals 22% Carbonate 3% Paint
Total Asbestos	<0.1%			

EPA 400 Pt. Point Count Method Has Been Extended to 1000 pts To Meet The Cal OSHA Limit Of 0.1%

Ian Reyes
Analyst

Grace Herrera
Approved Signatory

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 239252
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa mesa, CA 92626
Claim Number:
Number of Samples: 31
PO Number:

Date Received: 1/17/2005
Date Analyzed: 2/7/2005
Date Reported: 2/8/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239252-001 01	Home Economics (71)- Room 114- Rear Utility Closet	Fire Door		
Total Asbestos	**Assumed Positive**			
239252-002 02	Home Economics (71)- Room 114- Rear Utility Closet	HVAC Joint Tape		
Total Asbestos	**Assumed Positive**			
239252-003 03	Home Economics (71)- Panels Below Windows	Transite Panels	Green Grey	85% Carbonate 3% Paint
Chrysotile	12 %			
Total Asbestos	12 %			
239252-004 04	Home Economics (71)- Room 112- Interior Utility Closet	Wall Plaster	Beige	65% Minerals 32% Carbonate 3% Paint
Total Asbestos	**None Detected**			
239252-005 05	Home Economics (71)- Room 111- Front Wall	Wall Plaster	Beige	65% Minerals 32% Carbonate 3% Paint
Total Asbestos	**None Detected**			

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Report Number: 239252
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa mesa, CA 92626

Claim Number:
Number of Samples: 31
PO Number:

Date Received: 1/17/2005
Date Analyzed: 2/7/2005
Date Reported: 2/8/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239252-006 06	Home Economics (71)- Ladies' Restroom	Wall Plaster	Beige	65% Minerals 32% Carbonate 3% Paint
Total Asbestos	**None Detected**			
239252-007 07	Home Economics (71)- Room 114- Front	Wall Plaster	Beige	65% Minerals 32% Carbonate 3% Paint
Total Asbestos	**None Detected**			
239252-008 08	Home Economics (71)- Mens Restroom	Wall Plaster	Beige	65% Minerals 32% Carbonate 3% Paint
Total Asbestos	**None Detected**			
239252-009 09	Home Economics (71)- Room 113- Interior	Wall Plaster	Beige	65% Minerals 32% Carbonate 3% Paint
Total Asbestos	**None Detected**			
239252-010 10	Home Economics (71)- Room 112 Under Carpet	Vinyl Floor Tile	Green	76% Carbonate 20% Vinyl Binder
Chrysotile	4 %			
Total Asbestos	4 %			

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Polarized Light Microscopy Analysis

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Report Number: 239252
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa mesa, CA 92626
Claim Number:
Number of Samples: 31
PO Number:

Date Received: 1/17/2005
Date Analyzed: 2/7/2005
Date Reported: 2/8/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239252-010M 10	Home Economics (71)- Room 112 Under Carpet	Floor Tile Mastic	Black	90% Tar
Chrysotile 10 %				
Total Asbestos 10 %				
239252-011 11	Home Economics (71)- Room 113- Under Carpet	Vinyl Floor Tile	Green	76% Carbonate 20% Vinyl Binder
Chrysotile 4 %				
Total Asbestos 4 %				
239252-011M 11	Home Economics (71)- Room 113- Under Carpet	Floor Tile Mastic	Black	90% Tar
Chrysotile 10 %				
Total Asbestos 10 %				
239252-012 12	Home Economics (71)- Room 114- Under Carpet	Vinyl Floor Tile	Green	76% Carbonate 20% Vinyl Binder
Chrysotile 4 %				
Total Asbestos 4 %				

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 239252
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa mesa, CA 92626
Claim Number:
Number of Samples: 31
PO Number:

Date Received: 1/17/2005
Date Analyzed: 2/7/2005
Date Reported: 2/8/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239252-012M 12	Home Economics (71)- Room 114- Under Carpet	Floor Tile Mastic	Black	90% Tar
Chrysotile	10 %			
Total Asbestos	**10 %**			
239252-013 13	Home Economics (71)- Room 113	Base Cove	Tan	65% Carbonate 35% Vinyl Binder
Total Asbestos	**None Detected**			
239252-014 14	Home Economics (71)- Room 112 Front	Base Cove	Brown	65% Carbonate 35% Vinyl Binder
Total Asbestos	**None Detected**			
239252-015 15	Home Economics (71)- Room 114	Base Cove	Grey	65% Carbonate 35% Vinyl Binder
Total Asbestos	**None Detected**			
239252-016 16	Home Economics (71)- Room 111	Base Cove	Grey	65% Carbonate 35% Vinyl Binder
Total Asbestos	None Detected			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number:	239252
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Drive Costa mesa, CA 92626
Claim Number:	
Number of Samples:	31
PO Number:	

Date Received:	1/17/2005
Date Analyzed:	2/7/2005
Date Reported:	2/8/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239252-017 17	Home Economics (71)-Room 112	Base Cove	Grey	65% Carbonate 35% Vinyl Binder
Total Asbestos	**None Detected**			
239252-018 18	Home Economics (71)-Room 111	2' Acoustic Wall Tile	Brown White	96% Cellulose 4% Paint
Total Asbestos	**None Detected**			
239252-019 19	Home Economics (71)-Room 113	2' Acoustic Wall Tile	Brown White	96% Cellulose 4% Paint
Total Asbestos	**None Detected**			
239252-020 20	Home Economics (71)-Room 114	2' Acoustic Wall Tile	Brown White	96% Cellulose 4% Paint
Total Asbestos	**None Detected**			
239252-021 21	Home Economics (71)-South End of Bldg.	Window Putty	Grey	100% Carbonate
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

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Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 239252
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa mesa, CA 92626
Claim Number:
Number of Samples: 31
PO Number:

Date Received: 1/17/2005
Date Analyzed: 2/7/2005
Date Reported: 2/8/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239252-022 22	Home Economics (71)-Room 109	Window Putty	Grey	100% Carbonate
Total Asbestos	**None Detected**			
239252-023 23	Home Economics (71)-Room 110	12" Acoustic Ceiling Tile- Random Pattern	Brown White	96% Cellulose 4% Paint
Total Asbestos	**None Detected**			
239252-024 24	Home Economics (71)-Room 113	12" Acoustic Ceiling Tile- Random Pattern	Brown White	96% Cellulose 4% Paint
Total Asbestos	**None Detected**			
239252-025 25	Home Economics (71)-Room 114	12" Acoustic Ceiling Tile- Random Pattern	Brown	96% Cellulose 4% Paint
Total Asbestos	**None Detected**			
239252-026 26	Home Economics (71)-Room 114- Rear Utility Closet	Stucco	Grey Beige	75% Minerals 22% Carbonate 3% Paint
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

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Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 239252
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa mesa, CA 92626

Claim Number:
Number of Samples: 31
PO Number:

Date Received: 1/17/2005
Date Analyzed: 2/7/2005
Date Reported: 2/8/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239252-027 27	Home Economics (71)- Restrooms Wall	Stucco	Grey Beige	75% Minerals 22% Carbonate 3% Paint
Total Asbestos	**None Detected**			
239252-028 28	Home Economics (71)- Overhang at Rooms 110-109	Stucco	Grey Beige	75% Minerals 22% Carbonate 3% Paint
Total Asbestos	**None Detected**			

Ian Reyes
Analyst

Cristina E. Tabatt
Approved Signatory

Bulk samples analyzed per 40 CFR 763, Subpart F, Appendix A; EPA-600/R-93/116 and for friable materials, EPA-600/M4-82-020. Samples are analyzed by calibrated visual estimation; therefore, results may not be reliable for samples of low concentration levels. This report applies only to the items tested. The results are representative of the samples submitted and may not represent the entire material from which samples were collected. This report was issued by a NIST/NVLAP (Lab Code 200358-0) accredited laboratory and may not be reproduced without the expressed written consent of Patriot Environmental. This report must not be used to claim product certification, approval or endorsement by NIST, NVLAP or any agency of the federal government.

Samples of wall systems containing discrete and separable layers are analyzed separately and reported as composite. Samples such as floor tiles and ceiling tiles with mastic layers are analyzed and reported separately.

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

239252

...CT NAME: Orange Coast College

...JECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

...ample ID	Sample Location	Material Type	F	NF	Cond	Material Location
01 ASS	Home Economics (71)	Firedoor (FRD)		X	G	Room 114; Rear Utility Closet
02 ASS		TAP - (HVAC JOINT TAPE)	X		G	
NOTE	No Access	* NOTE *				Room 110 - Rear Utility Closets Door is "Rain-Swollen" Shut
NOTE	NOTE	* NOTE *				VFT - under carpet in all rooms of Bldg. 71
03	Home Economics (71)	Transite Panels		X	G	Panels Below Windows
4		WP		X	G	Room #112 - Interior Utility Closet
05						Room #111 - Front Wall
06						Ladies Restroom
07						Room #114 - Front
08						Mens Restroom
09						Room #113 - Interior

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty
RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/17/05

...mples received by: [signature] Date/Time: 1/17/05

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

239252

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
10	Home Economics (TI)	Green VFT		X	G	Room 112; under carpet
11						113 ;
12						114 ;
13		Tan Base Cove		X		Room 113
14		Brown Base Cove				Room 112 - Front
15		Grey Base Cove				Room 114
16						Room 111
17						112
18		2' AWT	X		G	Room 111
19						Room 113
20						Room 114

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [illegible] Date/Time: 1/17/05

Samples received by: [illegible] Date/Time: 1/17/05

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

239252

JECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
21	Home Economics (71)	WPTY		X	G	South End of Bldg.
22		↓		↓	↓	At Room 109
23		12" ACT - Random Pattern	X		G	Room 110
24						Room 113
25		↓	↓		↓	Room 114
26		Stucco		X	G	Room 114; Rear Utility Closet
27						At Restrooms; Wall
28		↓		↓	↓	Overhang At Rooms 110/109

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/17/04

Samples received by: [signature] Date/Time: 1/17/05

Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 238352
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626
Claim Number:
Number of Samples: 50
PO Number:

Date Received: 1/10/2005
Date Analyzed: 2/2/2005
Date Reported: 2/8/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
238352-041 1	Home Economics (72) - Room 102 Offices At HVAC Closet	Metal Fire Doors (x2)		
Total Asbestos	**Assumed Positive**			
238352-042 2	Home Economics (72) - Attic Access At Hallway Between 101 & 103	TSI - Pipe Insulation		
Total Asbestos	**Assumed Positive**			
238352-043 3	Home Economics (72) - Attic Access At Hallway Between 101 & 103	TSI - Pipe Elbows		
Total Asbestos	**Assumed Positive**			
238352-044 4	Home Economics (72) - At Room 108 - Exterior HVAC Closet	Metal Fire Doors (x2)		
Total Asbestos	**Assumed Positive**			
238352-045 5	Home Economics (72) - Exterior Utility Closets At Room 107 Play Area	Metal Fire Doors (x3)		
Total Asbestos	**Assumed Positive**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 238352
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626
Claim Number:
Number of Samples: 50
PO Number:

Date Received: 1/10/2005
Date Analyzed: 2/2/2005
Date Reported: 2/8/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
238352-026 32	Home Economics (72) - Room 108 - Middle Entry	Wallboard - Joint Compound	White	80% Sulfate 10% Carbonate 7% Cellulose 3% Paint
Total Asbestos	**None Detected**			
238352-027 33	Home Economics (72) - Room 104	Base Cove	Tan	65% Carbonate 35% Vinyl Binder
Total Asbestos	**None Detected**			
238352-028 34	Home Economics (72) - Room 106 - At Office 6A	Base Cove	Tan	65% Carbonate 35% Vinyl Binder
Total Asbestos	**None Detected**			
238352-029 35	Home Economics (72) - Room 108 - At Middle Entry	Base Cove	Tan	65% Carbonate 35% Vinyl Binder
Total Asbestos	**None Detected**			
238352-030 36	Home Economics (72) - Room 101	12 Inch Acoustic Ceiling Tile -	Brown White	96% Cellulose 4% Paint
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
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Costa Mesa, CA 92626

Report Number: 238352
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626
Claim Number:
Number of Samples: 50
PO Number:

Date Received: 1/10/2005
Date Analyzed: 2/2/2005
Date Reported: 2/8/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
238352-031 37	Home Economics (72) - Room 103	12 Inch Acoustic Ceiling Tile -	Brown White	96% Cellulose 4% Paint
Total Asbestos	**None Detected**			
238352-032 38	Home Economics (72) - Room 103	12 Inch Acoustic Ceiling Tile -	Brown White	96% Cellulose 4% Paint
Total Asbestos	**None Detected**			
238352-033 39	Home Economics (72) - Room 105 - Food Lab	12 Inch Acoustic Ceiling Tile -	Brown White	96% Cellulose 4% Paint
Total Asbestos	**None Detected**			
238352-034 40	Home Economics (72) - Room 107	12 Inch Acoustic Ceiling Tile -	Brown White	96% Cellulose 4% Paint
Total Asbestos	**None Detected**			
238352-035 41	Home Economics (72) - Room 101 - Front	Base Cove	Black	65% Carbonate 35% Vinyl Binder
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 238352
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626
Claim Number:
Number of Samples: 50
PO Number:

Date Received: 1/10/2005
Date Analyzed: 2/2/2005
Date Reported: 2/8/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
238352-036 42	Home Economics (72) - Room 102 - Office Hall	Base Cove	Black	65% Carbonate 35% Vinyl Binder
Total Asbestos	**None Detected**			
238352-037 43	Home Economics (72) - Room 103 - Front	Base Cove	Black	65% Carbonate 35% Vinyl Binder
Total Asbestos	**None Detected**			
238352-038 44	Home Economics (72) - Walkway Overhang At Room 101	Stucco	Grey Beige	75% Minerals 22% Carbonate 3% Paint
Total Asbestos	**None Detected**			
238352-039 45	Home Economics (72) - Room 107 Exterior Utility Room	Stucco	Grey Beige	75% Minerals 22% Carbonate 3% Paint
Total Asbestos	**None Detected**			
238352-040 46	Home Economics (72) - Room 108	Stucco	Grey Beige	75% Minerals 22% Carbonate 3% Paint
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 238352
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626

Claim Number:
Number of Samples: 50
PO Number:

Date Received: 1/10/2005
Date Analyzed: 2/2/2005
Date Reported: 2/8/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
238352-046 6	Home Economics (72) - Throughout Bldg 72	Panels Below Windows		

Total Asbestos **Assumed Positive**

Ian Reyes
Analyst

Cristina E. Tabatt
Approved Signatory

Bulk samples analyzed per 40 CFR 763, Subpart F, Appendix A, EPA-600/R-93/116 and for friable materials, EPA-600/M4-82-020. Samples are analyzed by calibrated visual estimation; therefore, results may not be reliable for samples of low concentration levels. This report applies only to the items tested. The results are representative of the samples submitted and may not represent the entire material from which samples were collected. This report was issued by a NIST/NVLAP (Lab Code 200358-0) accredited laboratory and may not be reproduced without the expressed written consent of Patriot Environmental. This report must not be used to claim product certification, approval or endorsement by NIST, NVLAP or any agency of the federal government.

Samples of wall systems containing discrete and separable layers are analyzed separately and reported as composite. Samples such as floor tiles and ceiling tiles with mastic layers are analyzed and reported separately.

PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

238352

ECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
01 ASS.	Home Economics (72)	Metal Fire Doors FRD (X2)		X	G	Room 102 Offices At HVAC Closet
02 ASS.	↓	T.S.I. - Pipe Insulation	X		↓	Attic Access At Hallway Between #101 #103
03 ASS.	↓	T.S.I. - Pipe Elbows	↓		↓	↓
04 ASS.	↓	Metal Fire Doors FRD (X2)		X	G	At Room 108 - Exterior HVAC Closet
NOTE	No Access	* NOTE *				No Access To Closet in Food Lab Faculty Area at Room 107
ASS.	Home Economics (72)	Metal Fire Doors (X3) FRD		X	G	Exterior Utility Closets At Room 107 Play Area
06 ASS.	↓	Panels below windows		X	G	Throughout Building 72
07	↓	2' Acoustic Wall Tiles - Straigh Pattern	X		G	Room #103 Front
08	↓	↓	↓		↓	; Side (W)
09	↓	↓	↓		↓	; Side (NW)
10	↓	↓	↓		↓	Room #107

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty
RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/10/05 EP

Samples received by: Candy Campos Date/Time: 1/10/05 @ 3:00pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

238352

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
11	Home Economics (72)	A/C	X		G	Classroom #101 - At Front
12						Room 102 Office Area - Faculty
13						Fitting Rooms
14						Room 106 - Office 6B
15		12" Peach VFT		X	G	Room 107 - Rear
16						
17						
18		Carpet Glue		X	G	Room 102 - Office Hallway
19		WP		X	G	Room 101 - At Entry
20						Room 102 - Office Hallway
21						Room 108 - Front

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/10/05

Samples received by: Candy Campos Date/Time: 1/10/05 @ 3:00pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

238352

ECT NAME: Orange Coast College

JECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
22	Home Economics (72)	2'x3' ACT	X		G	Room 104
23						
24						
25		12" White VFT		X	G	Room 105 - Food Lab
26						Room 106 - Entry
1						At Rooms 105/106 - Rear Door
28		WB/JC		X	G	Room 103 - Front At Fitting Room
29						Room 104 - Front
30						Room 105 - Storage Closet
31						Room 106 - Office Area
32						Room 108 - Middle Entry

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty
RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/10/05

Samples received by: Candy Campos Date/Time: 1/10/05 @ 3:00pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

238252

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
33	Home Economics (72)	Tan Base Cove		X	G	Room 104
34						Room 106 - At office 6A
35						Room 108 - At Middle Entry
36		12" ACT - Random Hole Pattern	X		G	Room 101
37						103
38						103
39						105 - Food Lab
40						107
41		Black Base Cove		X	G	Room 101 - Front
42						102 - office Hall
43						103 - Front

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty
RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/10/05

Samples received by: Sandy Campos Date/Time: 1/10/05 @ 3:00pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

238352

ECT NAME: Orange Coast College

…JECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
44	Home Economics (72)	Stucco		X	G	Walkway Overhang At Room 101
45	↓	↓		↓	↓	Room 107 Exterior Utility Room
46	↓	↓		↓	↓	Room 108

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/10/05

Samples received by: Candy Campos Date/Time: 1/10/05 @ 3:00pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES, INC.

Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 237679
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa, CA 92626

Claim Number:
Number of Samples: 73
PO Number:

Date Received: 12/29/2004
Date Analyzed: 12/30/2004
Date Reported: 1/4/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237679-001 01	Forum (81)- Rear Exit Near Utility Closet	Stucco- Rough Coat	Beige	3% Cellulose 97% Minerals
Chrysotile	< 1 %			
Total Asbestos	< 1%			
237679-002 02	Forum (81)- At Rear Exit Door	Stucco- Rough Coat	Grey, Tan	100% Minerals
Total Asbestos	None Detected			
237679-003 03	Forum (81)- At Main Entry to Seating Area	Stucco- Rough Coat	Grey	2% Cellulose 98% Minerals
Chrysotile	< 1 %			
Total Asbestos	< 1%			
237679-004 04	Forum (81)- Overhang Above Walkways at Bathrooms	Stucco- Rough Coat	Beige	6% Cellulose 94% Minerals
Chrysotile	< 1 %			
Total Asbestos	< 1%			
237679-005 05	Forum (81)- At Disabled Entry/Exit South	Stucco- Rough Coat	Grey	100% Minerals
Chrysotile	< 1 %			
Total Asbestos	< 1%			

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Polarized Light Microscopy Analysis

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Costa Mesa, CA 92626

Report Number: 237679
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa, CA 92626
Claim Number:
Number of Samples: 73
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Date Received: 12/29/2004
Date Analyzed: 12/30/2004
Date Reported: 1/4/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237679-006 06	Forum (81)- Office Area Facing Social Sciences- Below Windows	Window Area Panels	Green, Grey	85% Minerals
Chrysotile	15 %			
Total Asbestos	**15 %**			
237679-007 07	Forum (81)- Office Area Facing Social Sciences- Below Windows	Window Area Panels	Grey, Tan	80% Carbonate
Chrysotile	20 %			
Total Asbestos	**20 %**			
237679-008 08	Forum (81)- Office Area Hallway near Bath	Acoustic Ceiling	White	100% Carbonate
Total Asbestos	**None Detected**			
237679-009 09	Forum (81)- Office Area Hallway at Sink Room Off Forum	Fire Rated Door		
Total Asbestos	**Assumed Positive**			
237679-010 10	Forum (81)- Office Area Hall at HVAC Closet	Fire Rated Door (x2)		
Total Asbestos	**Assumed Positive**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 237679
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa, CA 92626
Claim Number:
Number of Samples: 73
PO Number:

Date Received: 12/29/2004
Date Analyzed: 12/30/2004
Date Reported: 1/4/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237679-011 11	Forum (81)- Seating Area North Entry Attic Access Door	Fire Rated Door		

Total Asbestos **Assumed Positive**

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237679-012 12	Forum (81)- Attic Above North Entry to Seating Area	Duct Tape		

Total Asbestos **Assumed Positive**

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237679-013 13	Forum (81)- Overhang At Offices (near Disabled Entry/Exit)	Stucco	Grey	2% Cellulose 98% Minerals

Chrysotile < 1 %
Total Asbestos **< 1%**

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237679-014 14	Forum (81)- Offices at Hall Bathrooms	Stucco	Grey	100% Minerals

Chrysotile < 1 %
Total Asbestos **< 1%**

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237679-015 15	Forum (81)- Office Area Facing Social Sciences	Window Putty	Grey	98% Carbonate

Chrysotile 2 %
Total Asbestos **2 %**

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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237679-016 16	Forum (81)- Office Area Facing Quad	Window Putty	Grey	97% Carbonate
Chrysotile	3 %			
Total Asbestos	**3 %**			
237679-017 17	Forum (81)- Division Office Storage Room	Base Cove	Brown	2% Cellulose 98% Non-Fibrous
Total Asbestos	**None Detected**			
237679-017M 17	Forum (81)- Division Office Storage Room	Mastic	Yellow, Tan	100% Carbonate
Total Asbestos	**None Detected**			
237679-018 18	Forum (81)- Office - 6	Base Cove	Brown	100% Carbonate
Total Asbestos	**None Detected**			
237679-018M 18	Forum (81)- Office - 6	Mastic	Brown, White	5% Fibrous Talc 95% Non-Fibrous
Total Asbestos	**None Detected**			

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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237679-019 19	Forum (81)- Office Area Hall	Base Cove	Brown	100% Carbonate
Total Asbestos	**None Detected**			
237679-019M 19	Forum (81)- Office Area Hall	Mastic	Brown, White	10% Fibrous Talc 90% Non-Fibrous
Total Asbestos	**None Detected**			
237679-020 20	Forum (81)- Storage Room into Forum	Base Cove	Brown	100% Carbonate
Total Asbestos	**None Detected**			
237679-020M 20	Forum (81)- Storage Room into Forum	Mastic	Yellow, Brown	3% Cellulose 5% Fibrous Talc 92% Non-Fibrous
Total Asbestos	**None Detected**			
237679-021 21	Forum (81)- Division Office Dean's Office	Base Cove	Black	100% Carbonate
Total Asbestos	**None Detected**			

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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237679-021M 21	Forum (81)- Division Office Dean's Office	Mastic	White	100% Carbonate
Total Asbestos	**None Detected**			
237679-022 22	Forum (81)- Division Office at Film Room	Base Cove	Black	3% Cellulose 97% Non-Fibrous
Total Asbestos	**None Detected**			
237679-022M 22	Forum (81)- Division Office at Film Room	Mastic	White	100% Carbonate
Total Asbestos	**None Detected**			
237679-023 23	Forum (81)- Forum Projection Room	Acoustic Ceiling	White	40% Vermiculite 60% Carbonate
Total Asbestos	**None Detected**			
237679-024 24	Forum (81)- Seating Area at South Entry	Acoustic Ceiling	White	35% Vermiculite 65% Carbonate
Total Asbestos	**None Detected**			

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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237679-025 25	Forum (81)- Sealing Area in Front of Projection Room	Acoustic Ceiling	Beige, Gold, White	96% Vermiculite
Chrysotile 4 %				
Total Asbestos 4 %				
237679-026 26	Forum (81)- Rear (N)	Acoustic Ceiling	White, Gold	60% Vermiculite 40% Carbonate
Chrysotile <1 %				
Total Asbestos				
237679-027 27	Forum (81)- Rear (S)	Acoustic Ceiling	Beige, White	96% Vermiculite
Chrysotile 4 %				
Total Asbestos 4 %				
237679-028 28	Forum (81)- Disabled Entry/ Exit Hall	Acoustic Ceiling	Beige, Gold, White	97% Vermiculite
Chrysotile 3 %				
Total Asbestos 3 %				
237679-029 29	Forum (81)- Division Office- Dean's Office	Acoustic Ceiling	Beige, Gold, White	95% Vermiculite
Chrysotile 5 %				
Total Asbestos 5 %				

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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237679-030 30	Forum (81)- Division Office- Main Area	Acoustic Ceiling	Beige, Gold	93% Vermiculite
Chrysotile	7 %			
Total Asbestos	7 %			
237679-031 31	Forum (81)- Office Area Sink Room at Forum Entry	Acoustic Ceiling	White	2% Cellulose 98% Carbonate
Total Asbestos	**None Detected**			
237679-032 32	Forum (81)- Office Area Middle Work Area	Acoustic Ceiling	White	100% Carbonate
Total Asbestos	**None Detected**			
237679-033 33	Forum (81)- Seating Area Rear- Upper Walls	2'x2' Acoustic Ceiling Tile- Wall	Brown, White	15% Paint 85% Cellulose
Total Asbestos	**None Detected**			
237679-034 34	Forum (81)- Seating Area Rear- Upper Walls	2'x2' Acoustic Ceiling Tile- Wall	Brown, White	25% Paint 75% Cellulose
Total Asbestos	**None Detected**			

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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237679-035 35	Forum (81)- Seating Area North Entry	Wallboard and Joint Compound	White	15% Cellulose 20% Carbonate 65% Sulfate
Total Asbestos	**None Detected**			
237679-036A 36	Forum (81)- Exterior Mechanical Room	Joint Compound	White	97% Carbonate
Chrysotile	3 %			
Total Asbestos	3 %			
237679-036B 36	Forum (81)- Exterior Mechanical Room	Wallboard and Joint Compound	White	15% Cellulose 10% Carbonate 75% Sulfate
Chrysotile	< 1 %			
Total Asbestos	< 1%			
237679-037A 37	Forum (81)- Division Office- North Wall	Joint Compound	White	98% Carbonate
Chrysotile	2 %			
Total Asbestos	2 %			

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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237679-037B 37	Forum (81)- Division Office- North Wall	Wallboard and Joint Compound	White	35% Carbonate 65% Sulfate
Chrysotile	< 1 %			
Total Asbestos	< 1%			
237679-038A 38	Forum (81)- Division Office at Forum Side Entry	Joint Compound	White	97% Carbonate
Chrysotile	3 %			
Total Asbestos	3 %			
237679-038B 38	Forum (81)- Division Office at Forum Side Entry	Wallboard and Joint Compound	White, Brown	15% Cellulose 10% Carbonate 75% Sulfate
Chrysotile	< 1 %			
Total Asbestos	< 1%			
237679-039 39	Forum (81)- Office #10	12" Acoustic Ceiling Tile- Ceiling	Brown, White	15% Paint 85% Cellulose
Total Asbestos	None Detected			
237679-040 40	Forum (81)- Office Area, Middle Work Area	12" Acoustic Ceiling Tile- Ceiling	Brown, White	10% Paint 90% Cellulose
Total Asbestos	None Detected			

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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237679-041 41	Forum (81)- Office # 7	12" Acoustic Ceiling Tile- Ceiling	Brown, White	10% Paint 90% Cellulose
Total Asbestos	**None Detected**			
237679-042 42	Forum (81)- Seating Area at Disabled Entry/ Exit	9" Vinyl Floor Tile	Brown	96% Carbonate
Chrysotile	4 %			
Total Asbestos	4 %			
237679-043 43	Forum (81)- Seating Area North Entry/ Exit	9" Vinyl Floor Tile	Brown	95% Carbonate
Chrysotile	5 %			
Total Asbestos	5			
237679-043M 43	Forum (81)- Seating Area North Entry/ Exit	Mastic	Black	100% Tar
Total Asbestos	**None Detected**			
237679-044 44	Forum (81)- Seating Area North Entry/ Exit	9" Vinyl Floor Tile	Brown	94% Carbonate
Chrysotile	6 %			
Total Asbestos	6 %			

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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237679-044M 44	Forum (81)- Seating Area North Entry/ Exit	Mastic	Black	100% Tar
Total Asbestos	**None Detected**			
237679-045 45	Forum (81)- Division Office File Room	9" Vinyl Floor Tile	Grey	96% Carbonate
Chrysotile	4 %			
Total Asbestos	**4 %**			
237679-045M 45	Forum (81)- Division Office File Room	Mastic	Black, Tan	100% Non-Fibrous
Total Asbestos	**None Detected**			
237679-046 46	Forum (81)- Division Office File Room	9" Vinyl Floor Tile	Grey	95% Carbonate
Chrysotile	5 %			
Total Asbestos	**5 %**			
237679-047 47	Forum (81)- Women's Bathroom Ceiling	Wall Plaster	White, Beige	2% Cellulose 98% Minerals
Total Asbestos	**None Detected**			

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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237679-048 48	Forum (81)- Hallway at Bathrooms	Wall Plaster	Tan	100% Minerals
Total Asbestos	**None Detected**			
237679-049 49	Forum (81)- Hallway at Middle Work Area	Wall Plaster	Tan	3% Cellulose 97% Minerals
Total Asbestos	**None Detected**			
237679-050 50	Forum (81)- Hallway at Sink Room Custodial Closet	Wall Plaster	Tan	5% Paint 95% Non-Fibrous
Total Asbestos	**None Detected**			
237679-051 51	Forum (81)- Seating Area-Side Exit North Side	Wall Plaster	Tan	8% Cellulose 92% Minerals
Total Asbestos	**None Detected**			
237679-052 52	Forum (81)- Seating Area-North Wall	Wall Plaster	Tan, Beige	10% Paint 90% Minerals
Total Asbestos	**None Detected**			

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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237679-053 53	Forum (81)- Division Office at Storage Room Entry	Wall Plaster	Tan, Beige	10% Paint 90% Minerals
Total Asbestos	**None Detected**			
237679-054 54	Forum (81)- Division Office at Storage Room Entry	Wall Plaster	Beige	100% Vermiculite
Total Asbestos	**None Detected**			
237679-055 55	Forum (81)- Division Office at Film Room	9" Vinyl Floor Tile	Beige	94% Carbonate
Chrysotile	6 %			
Total Asbestos	6 %			
237679-055M 55	Forum (81)- Division Office at Film Room	Mastic	Black	90% Tar
Chrysotile	10 %			
Total Asbestos	**10** %			
237679-056 56	Forum (81)- Hallway sink room at Custodial Closet	9" Vinyl Floor Tile	Beige	92% Carbonate
Crocidolite	8 %			
Total Asbestos	8 %			

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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237679-056M 56	Forum (81)- Hallway sink room at Custodial Closet	Mastic	Black	95%Tar
Chrysotile	5 %			
Total Asbestos	**5 %**			
237679-057 57	Forum (81)- Office #6	9" Vinyl Floor Tile	Beige	95% Carbonate
Chrysotile	5 %			
Total Asbestos	**5 %**			
237679-057M 57	Forum (81)- Office #6	Mastic	Black	90% Tar
Chrysotile	10 %			
Total Asbestos	**10 %**			
237679-058 58	Forum (81)- Office Hallway at Bathrooms	9" Vinyl Floor Tile	Beige	93% Carbonate
Chrysotile	7 %			
Total Asbestos	**7 %**			

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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)

John Lopez
Analyst

Grace Herrera
Approved Signatory

Bulk samples analyzed per 40 CFR 763, Subpart F, Appendix A; EPA-600/R-93/116 and for friable materials, EPA-600/M4-82-020. Samples are analyzed by calibrated visual estimation; therefore, results may not be reliable for samples of low concentration levels. This report applies only to the items tested. The results are representative of the samples submitted and may not represent the entire material from which samples were collected. This report was issued by a NIST/NVLAP (Lab Code 200358-0) accredited laboratory and may not be reproduced without the expressed written consent of Patriot Environmental. This report must not be used to claim product certification, approval or endorsement by NIST, NVLAP or any agency of the federal government.

Samples of wall systems containing discrete and separable layers are analyzed separately and reported as composite. Samples such as floor tiles and ceiling tiles with mastic layers are analyzed and reported separately.

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

237679

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
01	Forum (81)	Stucco - Rough Coat				Rear Exit Near Utility Closet
02						At Rear Exit Door
03						At Main Entry to Seating Area
04				X	G	Overhang above walkways at Bathrooms - (towards Social Sciences)
05						At Disabled Entry/Exit - South
06		Window Area Panels		X	G	Office Area facing Social Sci - Below Windows
07					D	Office Area facing Social Sciences - Below Windows
08		A/C	X		G	Office Area Hallway near Bath
09 ASS		Fire Rated Door		X	G	at Sink Room off Forum
10 ASS		(x 2)				Office Area Hall At HVAC Closet
11 ASS						Seating Area - North Entry Attic Access Door

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 12/29/04 @ 3:30pm

Samples received by: N. Coleman Date/Time 12/29/04 3:30 pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

237679

CT NAME: Orange Coast College

JECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
12	Forum (B1)	TAP	X		G	Attic Above North Entry to Seating Area
13		Stucco		X	G	Overhang At Offices (near Disabled Entry/Exit)
14						Offices At Hall Bathrooms
15		WPTY				Office Area - Facing Social Sciences
16						Office Area - Facing Quad
1		Brown Base Cove		X	G	Division Office Storage Room
18						Office #6
19						Office Area - Hall
20						Storage Room into Forum
21		Black Base Cove				Division Office - Dean's Ofc.
22						Division Office At Film Room

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 12/29/04 @ 3:30pm

amples received by: Date/Time:

PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

237679

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
23	Forum (81)	A/C	X		G	Forum · Projection Room
24						Seating Area at South Entry
25						in front of Projection Room
26						· Rear (N)
27						· Rear (S)
28						Disabled Entry/Exit - Hall
29						Division Office · Dean's Ofc.
30						· Main Area
31						Office Area · Sink Room at Forum Entry
32						Office Area; Middle Work Area
33		2'x2' ACT - Wall		X		Seating Area Rear; Upper Walls

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty
RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 12/29/04 @ 3:30pm

Samples received by: Date/Time:

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DUE DATE:

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..CT NAME: Orange Coast College

...JECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
34	Forum (B1)	2'x2' ACT-Wall		X	G	Seating Area Rear; Upper Walls
35		WB/JC		X		Seating Area · North Entry
36						Exterior Mech. Room
37						Division Office · North Wall
38						· At Forum Side Entry
,9		12" ACT - Ceiling		X	G	Office #10
40						Office Area; Middle Work Area
41						Office #7
42		9" Brown VFT		X	G	Seating Area · At Disabled Entry/Exit
43						· (N) Entry/Exit
44						· (N) Entry/Exit

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty
RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 12/29/04 @ 3:30pm

..mples received by: Date/Time:

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

237679

ROJECT NAME: Orange Coast College

ROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
45	Forum (81)	9" Grey VFT		X	G	Division Office ; Film Room
46						
47		WP		X	G	Womens Bathroom - Ceiling
48						Hallway At Bathrooms
49						; Middle Work Area
50						; Sink Room Custodia' Closet
51						Seating Area ; Side Exit - North Side
52						; North Wall
53						Division Office At Film Room Door
54						; At Storage Room Entry
55		9" Beige VFT w/ spots		X	G	Division Office ; At Film Room

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty
RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 12/29/04 @ 3:30pm

Samples received by: ______ Date/Time: ______

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

237679

:CT NAME: Orange Coast College

JECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
56	Forum (81)	9" Beige VFT w/spots		+	G	Hallway Sink Room At Custodial Closet
57	↓	↓		↓	↓	Office #6
58						Office Hallway at Bathrooms
~~59~~						
~~60~~						
~~62~~						

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 12/29/04 @ 3:30pm

Samples received by: Date/Time:

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES, INC.

NESHAP Point Counting by Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 238141
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626
Claim Number:
Number of Samples: 4
PO Number:

Date Received: 1/7/2005
Date Analyzed: 1/14/2005
Date Reported: 1/14/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition
238141-001 01	Point Count - Forum 81 - Rear Exit Near Utility Closet	Stucco - Rough Coat	Beige	97% Minerals 3% Cellulose
Total Asbestos	<0.1%			
238141-002 03	Point Count - Forum 81 - At Main Entry To Seating Area	Stucco - Rough Coat	Grey	98% Minerals 2% Cellulose
Total Asbestos	<0.1%			
238141-003 04	Point Count - Forum 81 - Overhang Above Walkways At Bathrooms	Stucco - Rough Coat	Beige	96% Minerals 4% Cellulose
Total Asbestos	<0.1%			
238141-004 05	Point Count - Forum 81 - At Disabled Entry - Exit South	Stucco - Rough Coat	Grey	100% Minerals
Total Asbestos	<0.1%			

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NESHAP Point Counting by Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number:	238141
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Drive Costa Mesa CA 92626
Claim Number:	
Number of Samples:	4
PO Number:	

Date Received:	1/7/2005
Date Analyzed:	1/14/2005
Date Reported:	1/14/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition

EPA 400 Pt. Point Count Method Has Been Extended to 1000 pts To Meet The Cal OSHA Limit Of 0.1%

Ian Reyes
Analyst

Cristina E. Tabatt
Approved Signatory

Bulk samples analyzed per 40 CFR 763, Subpart F, Appendix A; EPA-600/R-93/116 and for friable materials, EPA-600/M4-82-020. Samples are analyzed by calibrated visual estimation; therefore, results may not be reliable for samples of low concentration levels. This report applies only to the items tested. The results are representative of the samples submitted and may not represent the entire material from which samples were collected. This report was issued by a NIST/NVLAP accredited laboratory and may not be reproduced without the expressed written consent of Patriot Environmental.

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 238427
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Dr
Costa Mesa CA 92626
Claim Number:
Number of Samples: 27
PO Number:

Date Received: 1/12/2005
Date Analyzed: 2/2/2005
Date Reported: 2/2/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
238427-001 03	Portside Café 85 - Retail and Kitchen Area	Sheet Flooring	Grey	100% Carbonate
Total Asbestos	**None Detected**			
238427-002 04	Portside Café 85 - Retail and Kitchen Area	Sheet Flooring	Grey	100% Carbonate
Total Asbestos	**None Detected**			
238427-003 05	Portside Café 85 - Retail and Kitchen Area	Sheet Flooring	Grey	4% Cellulose 96% Carbonate
Total Asbestos	**None Detected**			
238427-004 061	Portside Café 85 - Kitchen Area - Hallway	Wall Plaster	Grey	3% Cellulose 97% Minerals
Total Asbestos	**None Detected**			
238427-005 07	Portside Café 85 - Store Room - Hallway	Wall Plaster	White	100% Minerals
Total Asbestos	**None Detected**			
238427-006 08	Portside Café 85 - Breakroom	Wall Plaster	White, Grey	3% Cellulose 97% Minerals
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number:	238427
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Dr Costa Mesa CA 92626
Claim Number:	
Number of Samples:	27
PO Number:	

Date Received:	1/12/2005
Date Analyzed:	2/2/2005
Date Reported:	2/2/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
238427-007 09	Portside Café 85 - Exterior Utility Closet At Sink Area	Wall Plaster	Grey, White	10% Paint 90% Minerals
Total Asbestos	**None Detected**			
238427-008 10	Portside Café 85 - Exterior Office	2x3 Acoustic Ceiling Tile	Beige, White	20% Cellulose 45% Mineral Wool 25% Perlite 10% Paint
Total Asbestos	**None Detected**			
238427-009 11	Portside Café 85 - Exterior Office	2x3 Acoustic Ceiling Tile	Beige, White	20% Cellulose 50% Mineral Wool 25% Perlite 5% Paint
Total Asbestos	**None Detected**			
238427-010 12	Portside Café 85 - Store Room	Base	Black	100% Carbonate
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number:	238427
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Dr Costa Mesa CA 92626
Claim Number:	
Number of Samples:	27
PO Number:	

Date Received: 1/12/2005
Date Analyzed: 2/2/2005
Date Reported: 2/2/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
238427-010M 12	Portside Café 85 - Store Room	Base	Tan, White	2% Cellulose 98% Non-Fibrous
Total Asbestos	**None Detected**			
238427-011 13	Portside Café 85 - Exterior Office	Base	Black	100% Carbonate
Total Asbestos	**None Detected**			
238427-012 14	Portside Café 85 - Retail - Kitchen Area	Base	Black	2% Cellulose 98% Carbonate
Total Asbestos	**None Detected**			
238427-013 15	Portside Café 85 - Breakroom	12 Inch Acoustic Ceiling Tile - Rough	Grey, White	100% Mineral Wool
Total Asbestos	**None Detected**			
238427-014 16	Portside Café 85 - Breakroom	12 Inch Acoustic Ceiling Tile - Rough	Grey, White	100% Mineral Wool
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 238427
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Dr
Costa Mesa CA 92626
Claim Number:
Number of Samples: 27
PO Number:

Date Received: 1/12/2005
Date Analyzed: 2/2/2005
Date Reported: 2/2/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
238427-015 17	Portside Café 85 - Breakroom	12 Inch Acoustic Ceiling Tile - Rough	Grey, White	95% Mineral Wool 5% Non-Fibrous
Total Asbestos	**None Detected**			
238427-016 18	Portside Café 85 - Exterior Office Rear	Stucco	Grey	4% Cellulose 96% Minerals
Total Asbestos	**None Detected**			
238427-017 19	Portside Café 85 - Overhang Near Bookstore	Stucco	Grey	2% Cellulose 98% Minerals
Total Asbestos	**None Detected**			
238427-018 20	Portside Café 85 - At Exterior Office Doorway Base	Stucco	Grey	100% Minerals
Total Asbestos	**None Detected**			
238427-019 21	Portside Café 85 - Exterior Office	Wallboard - Joint Compound	White, Green, Brown	5% Cellulose 90% Carbonate 5% Sulfate
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 238427
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Dr
Costa Mesa CA 92626

Claim Number:
Number of Samples: 27
PO Number:

Date Received: 1/12/2005
Date Analyzed: 2/2/2005
Date Reported: 2/2/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
238427-020 22	Portside Café 85 - Exterior Office	Wallboard - Joint Compound	White, Blue, Brown	15% Cellulose 70% Carbonate 15% Sulfate
Total Asbestos	**None Detected**			
238427-021 23	Portside Café 85 - Retail - Kitchen Area - Hallway	Base Cove Mastic	Brown	3% Cellulose 97% Non-Fibrous
Total Asbestos	**None Detected**			
238427-022 24	Portside Café 85 - Retail Area	12 Inch Acoustic Ceiling Tile - Semi	Brown	100% Cellulose
Total Asbestos	**None Detected**			
238427-023 25	Portside Café 85 - Retail Area	12 Inch Acoustic Ceiling Tile - Semi	Brown, Black	70% Cellulose 30% Paint
Total Asbestos	**None Detected**			
238427-024 26	Portside Café 85 - Retail Area	12 Inch Acoustic Ceiling Tile - Semi	Brown, White	80% Cellulose 20% Paint
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 238427
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Dr
Costa Mesa CA 92626

Claim Number:
Number of Samples: 27
PO Number:

Date Received: 1/12/2005
Date Analyzed: 2/2/2005
Date Reported: 2/2/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
238427-025 1	Portside Café 85-Store Room Attic	TSI Pipe Elbow 4" Diameter		
Total Asbestos	**Assumed Positive**			
238427-026 2	Portside Café 85-Service Entrance Side S (S)	Transite Panels Under Windows		
Total Asbestos	**Assumed Positive**			

John Lopez
Analyst

Cristina E. Tabatt
Approved Signatory

Bulk samples analyzed per 40 CFR 763, Subpart F, Appendix A; EPA-600/R-93/116 and for friable materials, EPA-600/M4-82-020. Samples are analyzed by calibrated visual estimation; therefore, results may not be reliable for samples of low concentration levels. This report applies only to the items tested. The results are representative of the samples submitted and may not represent the entire material from which samples were collected. This report was issued by a NIST/NVLAP (Lab Code 200358-0) accredited laboratory and may not be reproduced without the expressed written consent of Patriot Environmental. This report must not be used to claim product certification, approval or endorsement by NIST, NVLAP or any agency of the federal government.

Samples of wall systems containing discrete and separable layers are analyzed separately and reported as composite. Samples such as floor tiles and ceiling tiles with mastic layers are analyzed and reported separately.

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

238427

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
01 ASS	Portside Cafe (85)	T.S.I. Pipe Elbow 4" Diameter	X		D	Store Room - Attic (4" Dia)
02 ASS		Transite Panels - Under Windows		X	G	Service Entrance - Side (s)
03		Grey Sheet Flooring		X	G	Retail & Kitchen Area
04						
05						
06		WP		X	G	Kitchen Area ; Hallway
07						Store Room ; Hallway
08						Breakroom
09						Exterior Utility Closet At Sink Area
10		2'x3' ACT	X			Exterior Office
11						

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/12/05

Samples received by: Candy Campos Date/Time: 1/12/05 @ 11:05am

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

238427

ECT NAME: Orange Coast College

ROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
12	Portside Cafe (85)	Black Base		X	G	Store Room
13		↓		↓	↓	Exterior Office
14		↓		↓	↓	Retail/Kitchen Area
15		12" ACT -Rough	X		G	Breakroom
16		↓	↓		↓	↓
		↓	↓		↓	↓
18		Stucco		X	G	Ext. office Rear
19		↓		↓	↓	Overhang near Bookstore
20		↓		↓	↓	At Exterior Office Doorway Base
21		WB/JC		X	G	Exterior office
22		↓		↓	↓	↓

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty
RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/12/05

Samples received by: Andy Campos Date/Time: 1/12/05 @ 11:05am

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

238427

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
23	Portside Cafe (85)	Base Cove Mastic		X	G	Retail/Kitchen Area - Hallway
24		12" ACT - Semi Rough	X		G	Retail Area
25						
26						

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/12/05

Samples received by: Candy Campos Date/Time: 1/12/05 @ 11:05am

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES, INC.

Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue
Costa Mesa, CA 92626

Report Number: 236315
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Road
Costa Mesa CA 92626

Claim Number:
Number of Samples: 11
PO Number:

Date Received: 12/9/2004
Date Analyzed: 12/17/2004
Date Reported: 12/17/2004

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
236315-001 01	Admin At Workroom 123	Wallboard - Joint Compound	White	80% Sulfate 10% Carbonate 7% Cellulose 3% Paint
Total Asbestos	**None Detected**			
236315-002 02	Admin At Reception	Wallboard - Joint Compound	White	80% Sulfate 10% Carbonate 7% Cellulose 3% Paint
Total Asbestos	**None Detected**			
236315-003A 03	Admin Conference Room	Joint Compound	White	92% Carbonate 5% Paint
Chrysotile	3 %			
Total Asbestos	3 %			
236315-003B 03	Admin Conference Room	Wallboard - Joint Compound	White	80% Sulfate 10% Carbonate 7% Cellulose 3% Paint
Chrysotile	<1 %			
Total Asbestos	**< 1%**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue
Costa Mesa, CA 92626

Report Number:	236315
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Road Costa Mesa CA 92626
Claim Number:	-
Number of Samples:	11
PO Number:	

Date Received:	12/9/2004
Date Analyzed:	12/17/2004
Date Reported:	12/17/2004

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
236315-004 04	Admin At Side Entry Near Theatre	Stucco	Grey	80% Minerals 20% Carbonate
Total Asbestos	**None Detected**			
236315-005 05	Admin Telephone Room	Stucco	Grey	80% Minerals 20% Carbonate
Total Asbestos	**None Detected**			
236315-006 06	Admin Near Parking Lot	Stucco	Grey	80% Minerals 20% Carbonate
Total Asbestos	**None Detected**			
236315-007 07	Admin Conference Room - Beam	Fire Proofing	Tan	70% Sulfate 10% Vermiculite 8% Glass Fibers 12% Cellulose
Total Asbestos	**None Detected**			
236315-008 08	Admin Conference Room Ceiling	Fire Proofing	Tan	70% Sulfate 10% Vermiculite 8% Glass Fibers 12% Cellulose
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue
Costa Mesa, CA 92626

Report Number: 236315
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Road
Costa Mesa CA 92626

Claim Number:
Number of Samples: 11
PO Number:

Date Received: 12/9/2004
Date Analyzed: 12/17/2004
Date Reported: 12/17/2004

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
236315-009 09	Admin At Reception	12 Inch Ceiling Tile	Grey White	95% Mineral Wool 5% Paint
Total Asbestos	**None Detected**			
236315-010 10	Admin At Custodial Room 114	12 Inch Ceiling Tile	Grey White	95% Mineral Wool 5% Paint
Total Asbestos	**None Detected**			

Jan Reyes
Analyst

Grace Herrera
Approved Signatory

Bulk samples analyzed per 40 CFR 763, Subpart F, Appendix A; EPA-600/R-93/116 and for friable materials, EPA-600/M4-82-020. Samples are analyzed by calibrated visual estimation; therefore, results may not be reliable for samples of low concentration levels. This report applies only to the items tested. The results are representative of the samples submitted and may not represent the entire material from which samples were collected. This report was issued by a NIST/NVLAP (Lab Code 200358-0) accredited laboratory and may not be reproduced without the expressed written consent of Patriot Environmental. This report must not be used to claim product certification, approval or endorsement by NIST, NVLAP or any agency of the federal government.

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

236315

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
01	Administration	WB/JC		X	G	At Workroom #123
02						At Reception
03						Conference Room
04		Stucco				At Side Entry near theatre
05						Telephone Room
06						Near Parking lot
07		Fireproofing	X		G	Conference Room (Beam)
08						(Ceiling)
09		12" Ceiling Tile	X		G	At Reception
10						At Custodial Room #114

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 12/9/04 @ 9:00am

Samples received by: Candy Campos Date/Time: 12/9/04 @ 9:00am

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES, INC.

Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 237989
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Dr
Costa Mesa CA 92626
Claim Number:
Number of Samples: 38
PO Number:

Date Received: 1/6/2005
Date Analyzed: 1/28/2005
Date Reported: 2/8/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237989-001 04	Student Health Ctr (89) - Telephone Room - West Side	Fireproofing - Spray Apply	Tan	15% Cellulose 85% Vermiculite
Total Asbestos	**None Detected**			
237989-002 05	Student Health Ctr (89) - Plenum Above North Entry	Fireproofing - Spray Apply	Tan	15% Cellulose 85% Vermiculite
Total Asbestos	**None Detected**			
237989-003 06	Student Health Ctr (89) - Exterior Boiler Room At Roof Access Ladder	Fireproofing - Spray Apply	Tan	20% Cellulose 80% Vermiculite
Total Asbestos	**None Detected**			
237989-004 07	Student Health Ctr (89) - Plenum Above Blood Lab Area	Fireproofing - Spray Apply	Tan	15% Cellulose 85% Vermiculite
Total Asbestos	**None Detected**			
237989-005A 08	Student Health Ctr (89) - At North Entry	12 Inch Vinyl Floor Tile	White, Blue	3% Cellulose 97% Carbonate
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number:	237989
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Dr Costa Mesa CA 92626
Claim Number:	
Number of Samples:	38
PO Number:	

Date Received:	1/6/2005
Date Analyzed:	1/28/2005
Date Reported:	2/8/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237989-005B 08	Student Health Ctr (89) - At North Entry	12 Inch Vinyl Floor Tile	Yellow	80% Vinyl Binder
Chrysotile	20 %			
Total Asbestos	**20 %**			
237989-006A 09	Student Health Ctr (89) - Center Lab Area At Back Hall Office	12 Inch Vinyl Floor Tile	White, Blue	100% Carbonate
Total Asbestos	**None Detected**			
237989-006B 09	Student Health Ctr (89) - Center Lab Area At Back Hall Office	12 Inch Vinyl Floor Tile	Yellow	85% Vinyl Bindr
Chrysotile	15 %			
Total Asbestos	**15 %**			
237989-007A 10	Student Health Ctr (89) - East Custodial Closet	12 Inch Vinyl Floor Tile	White, Blue	100% Carbonate
Total Asbestos	**None Detected**			
237989-007B 10	Student Health Ctr (89) - East Custodial Closet	12 Inch Vinyl Floor Tile	Yellow	75% Vinyl Binder
Chrysotile	25 %			
Total Asbestos	**25 %**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 237989
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Dr
Costa Mesa CA 92626
Claim Number:
Number of Samples: 38
PO Number:

Date Received: 1/6/2005
Date Analyzed: 1/28/2005
Date Reported: 2/8/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237989-008 11	Student Health Ctr (89) - West Custodial Closet	Wallboard - Joint Compound	White, Brown	20% Cellulose 20% Paint 60% Sulfate
Total Asbestos	**None Detected**			
237989-009 12	Student Health Ctr (89) - Hallway At Restrooms	Wallboard - Joint Compound	White	35% Cellulose 15% Carbonate 50% Sulfate
Total Asbestos	**None Detected**			
237989-010 13	Student Health Ctr (89) - East Custodial Closet	Wallboard - Joint Compound	White, Brown	15% Cellulose 25% Carbonate 60% Sulfate
Total Asbestos	**None Detected**			
237989-011 14	Student Health Ctr (89) - West Custodial Closet	Linoleum	White	75% Vinyl Binder
Chrysotile	25 %			
Total Asbestos	**25 %**			
237989-012 15	Student Health Ctr (89) - West Custodial Closet	Linoleum	White	70%Vinyl Binder
Chrysotile	30 %			
Total Asbestos	**30 %**			

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Attn: Michael Collins
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Costa Mesa, CA 92626

Report Number: 237989
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Dr
Costa Mesa CA 92626

Claim Number:
Number of Samples: 38
PO Number:

Date Received: 1/6/2005
Date Analyzed: 1/28/2005
Date Reported: 2/8/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237989-013 16	Student Health Ctr (89) - West Custodial Closet	Linoleum	White	75% Vinyl Binder
Chrysotile	25 %			
Total Asbestos	**25 %**			
237989-014 17	Student Health Ctr (89) - East Side At Staff Entry	Exterior Cement	Grey	100% Minerals
Total Asbestos	**None Detected %**			
237989-015 18	Student Health Ctr (89) - At Front - West Exit Only	Exterior Cement	Grey	100% Minerals
Total Asbestos	**None Detected %**			
237989-016 19	Student Health Ctr (89) - West Side At Window Area	Exterior Cement	Grey	3% Cellulose 97% Minerals
Total Asbestos	**None Detected**			
237989-017 20	Student Health Ctr (89) - Room 110	12 Inch Acoustic Ceiling Tile	White	100% Minerals Wool
Total Asbestos	**None Detected**			

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Report Number: 237989
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Dr
Costa Mesa CA 92626

Claim Number:
Number of Samples: 38
PO Number:

Date Received: 1/6/2005
Date Analyzed: 1/28/2005
Date Reported: 2/8/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237989-018 21	Student Health Ctr (89) - Room 110	12 Inch Acoustic Ceiling Tile	White	5% Cellulose 10% Carbonate 85% Mineral Wool
Total Asbestos	**None Detected**			
237989-019 22	Student Health Ctr (89) - Exterior Telephone Room	Base Cove	Black	100% Carbonate
Total Asbestos	**None Detected**			
237989-019M 22	Student Health Ctr (89) - Exterior Telephone Room	Mastic	Brown	5% Cellulose 95% Non-Fibrous
Total Asbestos	**None Detected**			
237989-020 23	Student Health Ctr (89) - Center Lab Area	Base Cove	Grey	100% Carbonate
Total Asbestos	**None Detected**			
237989-021 24	Student Health Ctr (89) - Room 110	Base Cove	Grey	100% Carbonate
Total Asbestos	**None Detected**			

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Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Dr Costa Mesa CA 92626
Claim Number:	
Number of Samples:	38
PO Number:	

Date Received:	1/6/2005
Date Analyzed:	1/28/2005
Date Reported:	2/8/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237989-021M 24	Student Health Ctr (89) - Room 110	Mastic	White, Yellow	4% Cellulose 96% Carbonate
Total Asbestos	**None Detected**			
237989-022 25	Student Health Ctr (89) - East Custodial Closet	Base Cove	Grey	100% Non-Fibrous
Total Asbestos	**None Detected**			
237989-022M 25	Student Health Ctr (89) - East Custodial Closet	Mastic	White, Brown	10% Cellulose 90% Non-Fibrous
Total Asbestos	**None Detected**			
237989-023 26	Student Health Ctr (89) - Room 139	2ft Acoustic Ceiling Tile - Smooth Pinhole	Beige, White	20% Cellulose 50% Mineral Wool 20% Perlite 10% Paint
Total Asbestos	**None Detected**			

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Date Received:	1/6/2005
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Date Reported:	2/8/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237989-024 27	Student Health Ctr (89) - At Room 130 - Near Restroom	2ft Acoustic Ceiling Tile - Smooth Pinhole	Beige, White	20% Cellulose 50% Mineral Wool 20% Perlite 10% Paint
Total Asbestos	**None Detected**			
237989-025 28	Student Health Ctr (89) - Entry Center Lab Area	2ft Acoustic Ceiling Tile - Smooth Pinhole	Grey, White	20% Cellulose 55% Mineral Wool 20% Perlite 5% Paint
Total Asbestos	**None Detected**			
237989-026 29	Student Health Ctr (89) - Room 110	Carpet Glue	Yellow	3% Synthetic Fibers 97% Non-Fibrous
Total Asbestos	**None Detected**			
237989-027 30	Student Health Ctr (89) - At North Entry	2ft Acoustic Ceiling Tile - Rough	White	95% Mineral Wool 5% Cellulose
Total Asbestos	**None Detected**			

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Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Dr
Costa Mesa CA 92626
Claim Number:
Number of Samples: 38
PO Number:

Date Received: 1/6/2005
Date Analyzed: 1/28/2005
Date Reported: 2/8/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237989-028 31	Student Health Ctr (89) - At Middle Entry	2ft Acoustic Ceiling Tile - Rough	White	95% Mineral Wool 5% Non-Fibrous
Total Asbestos	**None Detected**			
237989-029 32	Student Health Ctr (89) - Rear Hallway	2ft Acoustic Ceiling Tile - Rough	White	100% Mineral Wool
Total Asbestos	**None Detected**			
237989-030 1	Student Health Ctr (89) - Plenum Above T-Bar On Beams Throughout	Fireproofing		
Total Asbestos	**Assumed Positive**			
237989-031 2	Student Health Ctr (89) - Plenum Above Hallway Near West Restrooms	TSI - Pipe Insulation		
Total Asbestos	**Assumed Positive**			
237989-032 3	Student Health Ctr (89) - Plenum Above Hallway Near West Restrooms	TSI - Pipe Elbows		
Total Asbestos	**Assumed Positive**			

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Date Received:	1/6/2005
Date Analyzed:	1/28/2005
Date Reported:	2/8/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)

John Lopez
Analyst

Cristina E. Tabatt
Approved Signatory

Bulk samples analyzed per 40 CFR 763, Subpart F, Appendix A; EPA-600/R-93/116 and for friable materials, EPA-600/M4-82-020. Samples are analyzed by calibrated visual estimation; therefore, results may not be reliable for samples of low concentration levels. This report applies only to the items tested. The results are representative of the samples submitted and may not represent the entire material from which samples were collected. This report was issued by a NIST/NVLAP (Lab Code 200358-0) accredited laboratory and may not be reproduced without the expressed written consent of Patriot Environmental. This report must not be used to claim product certification, approval or endorsement by NIST, NVLAP or any agency of the federal government.

Samples of wall systems containing discrete and separable layers are analyzed separately and reported as composite. Samples such as floor tiles and ceiling tiles with mastic layers are analyzed and reported separately.

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

237989

..OJECT NAME: Orange Coast College

..OJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

..PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
01 ASS.	Student Health Ctr. (89)	Fireproofing	X		G	Plenum above T-Bar on Beams Throughout
02 ASS.		T.S.I. - Pipe Insulation				Plenum above Hallway near West Restrooms
03 ASS.		T.S.I. - Pipe Elbows				
NOTE	No Access	* NOTE *				Exterior Biohazardous Waste Storage Area - No Access.
04	Student Health Ctr. (89)	Fireproofing - Spray Apply	X		G	Telephone Room - West Side
05					D	Plenum above North Entry
06					D	Exterior Boiler Room At Roof Access Ladder
07					D	Plenum above Blood Lab Area
08		12" White w/Blue VFT		X	G	At North Entry
09						Center Lab Area At Back Hall Office
10						East Custodial Closet

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty
RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/6/05

Samples received by: Candy Campos Date/Time: 1/6/05 @ 11:30am

PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

2379189

ECT NAME: Orange Coast College

ROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
11	Student Health Ctr. (89)	WB/JC		X	G	West Custodial Closet
12						Hallway at Rest Rooms
13						East Custodial Closet
14		White Cobble Linoleum		X	G	West Custodial Closet
15						
16						
17		Ext. Cement		X	G	East Side At Staff Entry
18						At Front ; West Exit ONLY
19						West Side At Window Area
20		12" ACT	X		G	Room 110
21						

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/6/05

Samples received by: Candy Campos Date/Time: 1/6/05 @ 11:30am

PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

237989

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
22	Student Health Ctr. (89)	Black Base Cove		X	G	Exterior Telephone Room
23	↓	Grey Base Cove		↓	↓	Center Lab Area
24	↓	↓		↓	↓	Room 110
25	↓	↓		↓	↓	East Custodial Closet
26	↓	2' ACT Smooth Pinhole	X		G	Room #139
27	↓	↓	↓		↓	At Room 130; near Restroom
28	↓	↓	↓		↓	Entry to Center Lab Area
29	↓	Carpet Glue		X	G	Rm 110
30	↓	2' ACT - Rough	X		G	At North Entry
31	↓	↓	↓		↓	At Middle Entry
32	↓	↓	↓		↓	Rear Hallway

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty
RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/6/05

Samples received by: Candy Campoo Date/Time: 1/6/05 @ 11:30am

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES, INC.

Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number:	237464
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Road Costa Mesa, CA 92626
Claim Number:	
Number of Samples:	34
PO Number:	

Date Received:	12/23/2004
Date Analyzed:	12/27/2004
Date Reported:	12/28/2004

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237464-001 01	Gymnasium (91) - Copy Room Attic at Dance B	WOV		
Total Asbestos	**Assumed Positive**			
237464-002 02	Gymnasium (91) - Copy Room Attic at Dance B	TAP		
Total Asbestos	**Assumed Positive**			
237464-003 03	Gymnasium (91) - Copy Room Attic Access Door at Dance B	FDR		
Total Asbestos	**Assumed Positive**			
237464-004 04	Gymnasium (91) - Dance B, Storage Room	WOV		
Total Asbestos	**Assumed Positive**			
237464-005 05	Gymnasium (91) - Dance B, Storage Room	TAP		
Total Asbestos	**Assumed Positive**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 237464
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Road
Costa Mesa, CA 92626
Claim Number:
Number of Samples: 34
PO Number:

Date Received: 12/23/2004
Date Analyzed: 12/27/2004
Date Reported: 12/28/2004

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237464-006 06	Gymnasium (91) - Dance B, Storage Room	FDR		
Total Asbestos	**Assumed Positive**			
237464-007 07	Gymnasium (91) - Fitness Studio- Aerobics Room	12" Pinhole Acoustic Ceiling Tile		
Total Asbestos	**Assumed Positive**			
237464-008 08	Gymnasium (91) - Dance Room B	Wall Plaster	Beige Grey	40% Minerals 40% Sulfate 15% Carbonate 3% Cellulose 2% Paint
Total Asbestos	**None Detected**			
237464-009 09	Gymnasium (91) - Entry Foyer	2'x3' Acoustic Ceiling Tile	Grey White	20% Mineral Wool 65% Cellulose 12% Perlite 3% Paint
Total Asbestos	**None Detected**			

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Claim Number:
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PO Number:

Date Received: 12/23/2004
Date Analyzed: 12/27/2004
Date Reported: 12/28/2004

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237464-010 10	Gymnasium (91) - Entry Foyer	2'x3' Acoustic Ceiling Tile	Grey White	20% Mineral Wool 65% Cellulose 12% Perlite 3% Paint
Total Asbestos	**None Detected**			
237464-011 11	Gymnasium (91) - Entry Foyer	2'x3' Acoustic Ceiling Tile	Grey White	20% Mineral Wool 65% Cellulose 12% Perlite 3% Paint
Total Asbestos	**None Detected**			
237464-012 12	Gymnasium (91) - Ladies Restroom at Foyer	12" Pinhole Acoustic Ceiling Tile	Brown White	97% Cellulose 3% Paint
Total Asbestos	**None Detected**			
237464-013 13	Gymnasium (91) - Trophy Room-Ticket Counter	12" Pinhole Acoustic Ceiling Tile	Brown White	97% Cellulose 3% Paint
Total Asbestos	**None Detected**			

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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237464-014A 14	Gymnasium (91) - Ladies Restroom- Foyer	12" Vinyl Floor Tile	White Blue	80% Carbonate 20% Vinyl Binder
Total Asbestos	None Detected			
237464-014AM 14	Gymnasium (91) - Ladies Restroom- Foyer	12" Vinyl Floor Tile	Yellow	100% Organic Binder
Total Asbestos	None Detected			
237464-014B 14	Gymnasium (91) - Ladies Restroom- Foyer	12" Vinyl Floor Tile	Light Green	74% Carbonate 20% Vinyl Binder
Chrysotile	6 %			
Total Asbestos	6 %			
237464-014BM 14	Gymnasium (91) - Ladies Restroom- Foyer	12" Vinyl Floor Tile	Black	90% Tar
Chrysotile	10 %			
Total Asbestos	10 %			
237464-015A 15	Gymnasium (91) - at Adapted PE- Foyer	12" Vinyl Floor Tile	White Blue	80% Carbonate 20% Vinyl Binder
Total Asbestos	None Detected			

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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237464-015AM 15	Gymnasium (91) - at Adapted PE- Foyer	12" Vinyl Floor Tile	Yellow	100% Organic Binder
Total Asbestos	**None Detected**			
237464-015B 15	Gymnasium (91) - at Adapted PE- Foyer	12" Vinyl Floor Tile	Light Green	74% Carbonate 20% Vinyl Binder
Chrysotile	6 %			
Total Asbestos	6 %			
237464-015BM 15	Gymnasium (91) - at Adapted PE- Foyer	12" Vinyl Floor Tile	Black	90% Tar
Chrysotile	10 %			
Total Asbestos	10 %			
237464-016A 16	Gymnasium (91) - At Mens Restroom	12" Vinyl Floor Tile	White Blue	80% Carbonate 20% Vinyl Binder
Total Asbestos	**None Detected**			
237464-016AM 16	Gymnasium (91) - At Mens Restroom	12" Vinyl Floor Tile	Yellow	100% Organic Binder
Total Asbestos	**None Detected**			

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Date Received:	12/23/2004
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Date Reported:	12/28/2004

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237464-016B 16	Gymnasium (91) - At Mens Restroom	12" Vinyl Floor Tile	Light Green	74% Carbonate 20% Vinyl Binder
Chrysotile	6 %			
Total Asbestos	6 %			
237464-016BM 16	Gymnasium (91) - At Mens Restroom	12" Vinyl Floor Tile	Black	90% Tar
Chrysotile	10 %			
Total Asbestos	10 %			
237464-017 17	Gymnasium (91) - Above T-Bar in Foyer	Acoustic Ceiling Tile Mastic	Brown	100% Organic Binder
Total Asbestos	None Detected			
237464-018 18	Gymnasium (91) - Above T-Bar in Foyer	Acoustic Ceiling Tile Mastic	Brown	100% Organic Binder
Total Asbestos	None Detected			
237464-019 19	Gymnasium (91) - at PE Division Office	Stucco	Grey Beige	75% Minerals 22% Carbonate 3% Paint
Total Asbestos	None Detected			

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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237464-020 20	Gymnasium (91) - at Dance Room C	Smooth Cement	Grey Beige	70% Minerals 23% Carbonate 7% Paint
Chrysotile	<1 %			
Total Asbestos	< 1%			
237464-021 21	Gymnasium (91) - Above T-Bar in Foyer	Drywall Tape and Mud	Beige	70% Carbonate 27% Cellulose
Chrysotile	3 %			
Total Asbestos	3 %			
237464-022 22	Gymnasium (91) - At Foyer Offices	Wallboard -Joint Compound	White	75% Sulfate 14% Carbonate 6% Cellulose 2% Glass Fibers 3% Paint
Total Asbestos	**None Detected**			
237464-023 23	Gymnasium (91) - Court Area- Elec. Room	Wallboard -Joint Compound	White	93% Sulfate 2% Glass Fibers 5% Cellulose
Total Asbestos	**None Detected**			

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1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 237464
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Road
Costa Mesa, CA 92626

Claim Number:
Number of Samples: 34
PO Number:

Date Received: 12/23/2004
Date Analyzed: 12/27/2004
Date Reported: 12/28/2004

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237464-024 24	Gymnasium (91) - Mens Restroom- Foyer	Wallboard -Joint Compound	White	88% Sulfate 7% Cellulose 2% Glass Fibers 3% Paint
Total Asbestos	**None Detected**			
237464-025 25	Gymnasium (91) - Trophy Room at Front	Wallboard -Joint Compound	White	84% Sulfate 4% Carbonate 7% Cellulose 2% Glass Fibers 3% Paint
Total Asbestos	**None Detected**			

Ian Reyes
Analyst

Cristina E. Tabatt
Approved Signatory

Bulk samples analyzed per 40 CFR 763, Subpart F, Appendix A; EPA-600/R-93/116 and for friable materials, EPA-600/M4-82-020. Samples are analyzed by calibrated visual estimation; therefore, results may not be reliable for samples of low concentration levels. This report applies only to the items tested. The results are representative of the samples submitted and may not represent the entire material from which samples were collected. This report was issued by a NIST/NVLAP (Lab Code 200358-0) accredited laboratory and may not be reproduced without the expressed written consent of Patriot Environmental. This report must not be used to claim product certification, approval or endorsement by NIST, NVLAP or any agency of the federal government.

Samples of wall systems containing discrete and separable layers are analyzed separately and reported as composite. Samples such as floor tiles and ceiling tiles with mastic layers are analyzed and reported separately.

PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

ECT NAME: Orange Coast College

237464

ROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
01 Ass.	Gymnasium	WOV	X		D	Copy Room Attic At Dance B
02 Ass.	↓	TAP	↓		↓	↓
03 Ass.	↓	FDR		X	G	Copy Room - Attic Access Door At Dance B
04 Ass.	↓	WOV	X		D	Dance B; Storage Room
05 Ass.	↓	TAP	↓		↓	↓
? Ass.	↓	FDR		X	G	↓
07 Ass	↓	12" Pinhole ACT	X		G	Fitness Studio/Aerobics Room
08	↓	WP		X	G	Dance Room B
09	↓	2'X3' ACT	X		G	Entry Foyer
10	↓	↓	↓		↓	↓
11	↓	↓	↓		↓	↓

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty
RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 12/23/04 @ 2:30pm

Samples received by: C. Tebbitt Date/Time: 12/23/04 2:30 pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

2372464

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
12	Gymnasium (91)	12" "Pinhole" ACT	X		G	Ladies Restroom At Foyer
13	↓	↓	↓		↓	Trophy Room/Ticket Counter
14	↓	12" White w/Blue VFT		X	G	Ladies Restroom • Foyer
15	↓	↓		↓	↓	At Adapted P.E. • Foyer
16	↓	↓		↓	↓	At Mens Restroom
17	↓	ACT Mastic		X	G	Above T-Bar in Foyer
18	↓	↓		↓	↓	↓
19	↓	Stucco		X	G	At P.E. Division Office
20	↓	Smooth Cement		↓	↓	At Dance Room C
21	↓	Drywall Tape & Mud		X	G	Above T-Bar in Foyer
22	↓	WB/JC		X	↓	Foyer Offices

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 12/23/04 @ 2:30pm

Samples received by: [signature] Date/Time: 12/23/04 2:30pm

PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

2374464

C ' NAME: Orange Coast College

OJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

ROJECT #: 19378

ample ID	Sample Location	Material Type	F	NF	Cond	Material Location
23	Gymnasium (91)	WB/JC		X	G	Court Area ; Elec. Room
24						Men's Restroom • Foyer
25						Trophy Room at Front

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty
RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 12/23/04 @ 2:30pm

Samples received by: [signature] Date/Time: 12/23/04 2:30pm

PATRIOT ENVIRONMENTAL LABORATORY SERVICES, INC.

NESHAP Point Counting by Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number:	238140
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Road Costa Mesa CA 92626
Claim Number:	
Number of Samples:	1
PO Number:	

Date Received:	1/7/2005
Date Analyzed:	1/14/2005
Date Reported:	1/14/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition
238140-001 20	Point Count - Gymnasium 91 - At Dance Room C	Smooth Cement	Grey Beige	70% Minerals 23% Carbonate 7% Paint

Total Asbestos <0.1%

EPA 400 Pt. Point Count Method Has Been Extended to 1000 pts To Meet The Cal OSHA Limit Of 0.1%

Ian Reyes
Analyst

Cristina E. Tabatt
Approved Signatory

Bulk samples analyzed per 40 CFR 763, Subpart F, Appendix A; EPA-600/R-93/116 and for friable materials, EPA-600/M4-82-020. Samples are analyzed by calibrated visual estimation; therefore, results may not be reliable for samples of low concentration levels. This report applies only to the items tested. The results are representative of the samples submitted and may not represent the entire material from which samples were collected. This report was issued by a NIST/NVLAP accredited laboratory and may not be reproduced without the expressed written consent of Patriot Environmental.

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES, INC.

Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 243545
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa 92626
Claim Number: NA
Number of Samples: 14
PO Number: NA

Date Received: 3/25/2005
Date Analyzed: 3/29/2005
Date Reported: 3/29/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
243545-001A 101	Gymnasium 91 Foyer Above Drop Ceiling	Joint Compound	Beige	92% Carbonate 5% Paint
Chrysotile 3 %				
Total Asbestos 3 %				
243545-001B 101	Gymnasium 91 Foyer Above Drop Ceiling	Wallboard And Joint Compound	Beige White	85% Sulfate 5% Carbonate 7% Cellulose 3% Paint
Chrysotile <1 %				
Total Asbestos < 1%				
243545-002A 102	Gymnasium 91 Foyer Above Drop Ceiling	Joint Compound	White	92% Carbonate 5% Paint
Chrysotile 3 %				
Total Asbestos 3 %				
243545-002B 102	Gymnasium 91 Foyer Above Drop Ceiling	Wallboard And Joint Compound	White	87% Sulfate 3% Carbonate 7% Cellulose 3% Paint
Chrysotile <1 %				
Total Asbestos < 1%				

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number:	243545
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Drive Costa Mesa 92626
Claim Number:	NA
Number of Samples:	14
PO Number:	NA

Date Received:	3/25/2005
Date Analyzed:	3/29/2005
Date Reported:	3/29/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
243545-003 103	Gymnasium 91 Foyer Above Drop Ceiling	Ceiling Tile Mastic	Brown	100% Organic Binder
Total Asbestos	**None Detected**			
243545-004 104	Gymnasium 91 Foyer Above Drop Ceiling	Ceiling Tile Mastic	Brown	100% Organic Binder
Total Asbestos	**None Detected**			
243545-005 105	Gymnasium 91 West Side	Smooth Cement Exterior Wall Finish	Grey	80% Minerals 18% Carbonate 2% Paint
Total Asbestos	**None Detected**			
243545-006 106	Gymnasium 91 Northwest Side	Smooth Cement Exterior Wall Finish	Grey	80% Minerals 18% Carbonate 2% Paint
Total Asbestos	**None Detected**			
243545-007 107	Gymnasium 91 West Side	Smooth Cement Exterior Wall Finish	Grey	80% Minerals 18% Carbonate 2% Paint
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number:	243545
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Drive Costa Mesa 92626
Claim Number:	NA
Number of Samples:	14
PO Number:	NA

Date Received:	3/25/2005
Date Analyzed:	3/29/2005
Date Reported:	3/29/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
243545-008 108	Gymnasium 91 Division Offices	Stucco	Grey Beige	78% Minerals 20% Carbonate 2% Paint
Total Asbestos	**None Detected**			
243545-009 109	Gymnasium 91 Division Offices	Stucco	Grey Beige	78% Minerals 20% Carbonate 2% Paint
Total Asbestos	**None Detected**			
243545-010 110	Gymnasium 91 Division Offices	Stucco	Grey Beige	78% Minerals 20% Carbonate 2% Paint
Total Asbestos	**None Detected**			
243545-011 111	Gymnasium 91 At Dance B	Stucco	Grey Beige	78% Minerals 20% Carbonate 2% Paint
Total Asbestos	**None Detected**			
243545-012 112	Gymnasium 91 At Dance C	Stucco	Grey Beige	78% Minerals 20% Carbonate 2% Paint
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 243545
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa 92626
Claim Number: NA
Number of Samples: 14
PO Number: NA

Date Received: 3/25/2005
Date Analyzed: 3/29/2005
Date Reported: 3/29/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)

Ian Reyes
Analyst

Grace Herrera
Approved Signatory

Bulk samples analyzed per 40 CFR 763, Subpart F, Appendix A; EPA-600/R-93/116 and for friable materials, EPA-600/M4-82-020. Samples are analyzed by calibrated visual estimation; therefore, results may not be reliable for samples of low concentration levels. This report applies only to the items tested. The results are representative of the samples submitted and may not represent the entire material from which samples were collected. This report was issued by a NIST/NVLAP (Lab Code 200358-0) accredited laboratory and may not be reproduced without the expressed written consent of Patriot Environmental. This report must not be used to claim product certification, approval or endorsement by NIST, NVLAP or any agency of the federal government.

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

243545

JECT NAME: Orange Coast College

OJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
101	Gymnasium (91)	WB/JC		X	G	Foyer; above drop ceiling
102						;
103		Ceiling Tile Mastic		X	G	;
104					D	;
105		Smooth Cement Exterior Wall Finish		X	G	West Side
106						North West
107						West Side
108		Stucco		X	G	Division Offices
109						
110						
111						At Dance B

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putt
RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [illegible] Date/Time: 3/24/05 @ 11:40am

Samples received by: [illegible] Date/Time: 3/25/05 8:45

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

243545

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
112	Gymnasium (91)	Stucco		X	G	At Dance C

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 3/24/05 @ 11:40am

Samples received by: [signature] Date/Time: 3/25/05 8:45

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 238011
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626
Claim Number:
Number of Samples: 31
PO Number:

Date Received: 1/6/2005
Date Analyzed: 1/31/2005
Date Reported: 1/31/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
238011-001 04	Womens Locker (92) - Equp. Room At Washer-Dryer	TSI Pipe Cover Tape	Beige White	80% Cellulose 11% Binder 4% Carbonate 5% Paint
Total Asbestos	None Detected			
238011-002 05	Womens Locker (92) - Faculty Locker Area In Hallway Near Offices	2x4 Acoustic Ceiling Tile	Grey White	20% Mineral Wool 65% Cellulose 12% Perlite 3% Paint
Total Asbestos	None Detected			
238011-003 06	Womens Locker (92) - Faculty Locker Area In Hallway Near Offices	2x4 Acoustic Ceiling Tile	Grey White	20% Mineral Wool 65% Cellulose 12% Perlite 3% Paint
Total Asbestos	None Detected			
238011-004 07	Womens Locker (92) - Faculty Locker Area In Hallway Near Offices	2x4 Acoustic Ceiling Tile	Grey White	20% Mineral Wool 65% Cellulose 12% Perlite 3% Paint
Total Asbestos	None Detected			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number:	238011
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Drive Costa Mesa CA 92626
Claim Number:	
Number of Samples:	31
PO Number:	

Date Received:	1/6/2005
Date Analyzed:	1/31/2005
Date Reported:	1/31/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
238011-005 08	Womens Locker (92) - At Locker Rm Office Hall	12 Inch Vinyl Floor Tile	Blue White	80% Carbonate 20% Vinyl Binder
Total Asbestos	**None Detected**			
238011-006 09	Womens Locker (92) - At Equip Rm Offices	12 Inch Vinyl Floor Tile	Blue White	80% Carbonate 20% Vinyl Binder
Total Asbestos	**None Detected**			
238011-007 10	Womens Locker (92) - Front Entry Overhang	Stucco	Grey Beige	75% Minerals 22% Carbonate 3% Paint
Chrysotile	<1 %			
Total Asbestos	**< 1%**			
238011-008 11	Womens Locker (92) - At Faculty Offices - Near Window Area	Stucco	Grey Beige	75% Minerals 22% Carbonate 3% Paint
Chrysotile	<1 %			
Total Asbestos	**< 1%**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 238011
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626
Claim Number:
Number of Samples: 31
PO Number:

Date Received: 1/6/2005
Date Analyzed: 1/31/2005
Date Reported: 1/31/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
238011-009 12	Womens Locker (92) - Faculty Locker Rm Restroom - Hallway At Offices	Linoleum	White	15% Linoleum 55% Vinyl Binder 20% Cellulose 10% Glass Fibers
Total Asbestos	**None Detected**			
238011-010 13	Womens Locker (92) - Faculty Locker Rm Restroom - Hallway At Offices	Linoleum	White	15% Linoleum 55% Vinyl Binder 20% Cellulose 10% Glass Fibers
Total Asbestos	**None Detected**			
238011-011 14	Womens Locker (92) - Faculty Locker Rm Restroom - Hallway At Offices	Linoleum	White	15% Linoleum 55% Vinyl Binder 20% Cellulose 10% Glass Fibers
Total Asbestos	**None Detected**			
238011-012 15	Womens Locker (92) - Faculty Office 4	12 Inch Acoustic Ceiling Tile -	Brown White	96% Cellulose 4% Paint
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 238011
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626
Claim Number:
Number of Samples: 31
PO Number:

Date Received: 1/6/2005
Date Analyzed: 1/31/2005
Date Reported: 1/31/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
238011-013 16	Womens Locker (92) - Faculty Office 4	12 Inch Acoustic Ceiling Tile -	Brown White	96% Cellulose 4% Paint
Total Asbestos	**None Detected**			
238011-014 17	Womens Locker (92) - Faculty Office 4	12 Inch Acoustic Ceiling Tile -	Brown White	96% Cellulose 4% Paint
Total Asbestos	**None Detected**			
238011-015 18	Womens Locker (92) - Above T-Bar Ceiling In Faculty Locker Rm - Office Area	Acoustic Ceiling Tile - Mastic Dot	Brown	100% Organic Binder
Total Asbestos	**None Detected**			
238011-016 19	Womens Locker (92) - Above T-Bar Ceiling In Faculty Locker Rm - Office Area	Joint Compound	White	100% Carbonate
Total Asbestos	**None Detected**			
238011-017 20	Womens Locker (92) - At Co-Ed Team Rm	Base Cove	Black	65% Carbonate 35% Vinyl Binder
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 238011
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626
Claim Number:
Number of Samples: 31
PO Number:

Date Received: 1/6/2005
Date Analyzed: 1/31/2005
Date Reported: 1/31/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
238011-018 21	Womens Locker (92) - Locker Rm At Womens Swim Restroom	Base Cove	Black	65% Carbonate 35% Vinyl Binder
Total Asbestos	**None Detected**			
238011-019 22	Womens Locker (92) - At Equip Issue Door - Locker Rm	Base Cove	Black	65% Carbonate 35% Vinyl Binder
Total Asbestos	**None Detected**			
238011-020 23	Womens Locker (92) - Faculty Office Hallway - Near Pool Door	Wall Plaster	Beige	65% Minerals 32% Carbonate 3% Paint
Total Asbestos	**None Detected**			
238011-021 24	Womens Locker (92) - Faculty Office 4	Wall Plaster	Beige White	80% Sulfate 10% Carbonate 7% Cellulose 3% Paint
Total Asbestos	**None Detected**			
238011-022 25	Womens Locker (92) - Womens Swim Restroom	Wall Plaster	Beige	55% Minerals 42% Carbonate 3% Paint
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
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Report Number: 238011
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626
Claim Number:
Number of Samples: 31
PO Number:

Date Received: 1/6/2005
Date Analyzed: 1/31/2005
Date Reported: 1/31/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
238011-023 26	Womens Locker (92) - Faculty Locker Rm At Sink Area	Wall Plaster	Beige	55% Minerals 42% Carbonate 3% Paint
Total Asbestos	**None Detected**			
238011-024 27	Womens Locker (92) - Co-Ed Team Rm	Wall Plaster	White	80% Sulfate 10% Carbonate 7% Cellulose 3% Paint
Total Asbestos	**None Detected**			
238011-025 28	Womens Locker (92) - Faculty Locker Rm Above T-Bar	Wallboard - Joint Compound	Beige White	80% Sulfate 10% Carbonate 7% Cellulose 3% Paint
Chrysotile	<1 %			
Total Asbestos	< 1%			
238011-026 29	Womens Locker (92) - Equip Rm At Office Area	Wallboard - Joint Compound	White	78% Sulfate 10% Carbonate 7% Cellulose 2% Glass Fibers 3% Paint
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 238011
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626

Claim Number:
Number of Samples: 31
PO Number:

Date Received: 1/6/2005
Date Analyzed: 1/31/2005
Date Reported: 1/31/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
238011-027 30	Womens Locker (92) - Locker Rm At Co-Ed Team Rm	Wallboard - Joint Compound	Beige	78% Sulfate 10% Carbonate 7% Cellulose 2% Glass Fibers 3% Paint
Total Asbestos	**None Detected**			
238011-028 31	Womens Locker (92) - Co-Ed Team Room	Wallboard - Joint Compound	Beige	78% Sulfate 10% Carbonate 7% Cellulose 2% Glass Fibers 3% Paint
Total Asbestos	**None Detected**			
238011-029 1	Womens Locker (92) - Coed Team Room	TSI - Pipe Elbow		
Total Asbestos	**Assumed Positive**			
238011-030 2	Womens Locker (92) - On Duct Lines Throughout	HVAC Duct Tape		
Total Asbestos	**Assumed Positive**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
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Costa Mesa, CA 92626

Report Number: 238011
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626

Claim Number:
Number of Samples: 31
PO Number:

Date Received: 1/6/2005
Date Analyzed: 1/31/2005
Date Reported: 1/31/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
238011-031 3	Womens Locker (92) - Equipment Rm At Washer-Dryer	TSI Pipe Elbows		

Total Asbestos **Assumed Positive**

Ian Reyes
Analyst

Cristina E. Tabatt
Approved Signatory

Bulk samples analyzed per 40 CFR 763, Subpart F, Appendix A; EPA-600/R-93/116 and for friable materials, EPA-600/M4-82-020. Samples are analyzed by calibrated visual estimation; therefore, results may not be reliable for samples of low concentration levels. This report applies only to the items tested. The results are representative of the samples submitted and may not represent the entire material from which samples were collected. This report was issued by a NIST/NVLAP (Lab Code 200358-0) accredited laboratory and may not be reproduced without the expressed written consent of Patriot Environmental. This report must not be used to claim product certification, approval or endorsement by NIST, NVLAP or any agency of the federal government.

Samples of wall systems containing discrete and separable layers are analyzed separately and reported as composite. Samples such as floor tiles and ceiling tiles with mastic layers are analyzed and reported separately.

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

238011

CT NAME: Orange Coast College

ROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
01 Ass.	Women's Locker (92)	T.S.I. - Pipe Elbow	X		G	Coed Team Room
02 Ass		HVAC Duct Tape	X			On Duct lines Throughout
03 Ass		T.S.I. Pipe Elbows	X			Equipment Room At Washer/Dryer
04		T.S.I. Pipe Cover Tape	X		D	
05		2'x4' ACT	X		G	Faculty Locker Area in Hallway near Offices
06						
07						
08		12" Blue/White VFT		X	G	At Lockeroom Office Hall
09						At Equip Room Offices
10		Stucco		X	G	Front Entry Overhang
11						At Faculty Offices - near window area

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/6/05

Samples received by: Candy Campos Date/Time: 1/6/05 11:45am

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

238011

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
12	Women's Locker (92)	White Linoleum		X	G	Faculty Locker Room Restroom (Hallway at Offices)
13	↓	↓		↓	↓	↓
14	↓	↓		↓	↓	↓
15	↓	12" ACT - Random Hole	X		G	Faculty Office #4
16	↓	↓	↓		↓	↓
17	↓	↓	↓		↓	↓
18	↓	ACT - Mastic Dot	X		D	Above T-Bar Ceiling in Faculty Locker Room (office Area)
19	↓	Joint Compound		X	G	↓
20	↓	Black Base Cove		X	G	At Co-Ed Team Room
21	↓	↓		↓	↓	Locker Room At Womens Swim Restroom
22	↓	↓		↓	↓	At Equipment Issue Door - Locker Room

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/6/05

Samples received by: Candy Campos Date/Time: 1/6/05 @ 11:45AM

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

236771

ECT NAME: Orange Coast College

JECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
12	Bookstore	White Lin		X	G	Womens Restroom
13						Mens Restroom
14		FLOOR TILE				
15		A/C		X	G	Front Store Area - Upper Wall
16						Mid. Store - Wall Cover
17						Upper Office Area - Wall
18		Stucco		X	G	Exterior
19						
20						
21		Cement				; Smooth Wall Cover

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty
RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 12/9/04 @ 9:00am

Samples received by: C. Tibbatt Date/Time: 12/9/04 9 am

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES, INC.

Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number:	236317
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Road Costa Mesa CA 92626
Claim Number:	
Number of Samples:	15
PO Number:	

Date Received:	12/9/2004
Date Analyzed:	12/17/2004
Date Reported:	12/20/2004

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
236317-001 01	Mens Locker Rm - Mech Equip Rm - HVAC Loft - Attic Space	PC		
Total Asbestos	Assumed Positive			
236317-002 02	Mens Locker Rm - Mech Equip Rm - HVAC Loft - Attic Space	ELB		
Total Asbestos	Assumed Positive			
236317-003 03	Mens Locker Rm - Mech Equip Rm - HVAC Loft Area	ELB	Grey	65% Carbonate 15% Glass Fibers 17% Cellulose
Chrysotile	3 %			
Total Asbestos	3 %			
236317-004 04	Mens Locker Rm - HVAC Loft Area	WOV - Duct Ins	Brown	100% Cellulose
Total Asbestos	None Detected			
236317-005 05	Mens Locker Rm - Locker Rm Entry Near Offices	12 Inch Vinyl Floor Tile	White Blue	80% Carbonate 20% Vinyl Binder
Total Asbestos	None Detected			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 236317
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Road
Costa Mesa CA 92626

Claim Number:
Number of Samples: 15
PO Number:

Date Received: 12/9/2004
Date Analyzed: 12/17/2004
Date Reported: 12/20/2004

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
236317-006 06	Mens Locker Rm - Locker Rm Entry Near Offices	12 Inch Vinyl Floor Tile	White Blue	80% Carbonate 20% Vinyl Binder
Total Asbestos	**None Detected**			
236317-007 07	Mens Locker Rm - Locker Rm Entry Near Offices	12 Inch Vinyl Floor Tile	White Blue	80% Carbonate 20% Vinyl Binder
Total Asbestos	**None Detected**			
236317-008 08	Mens Locker Rm - Hallway To Pool At Equip Rm	Wallboard - Joint Compound	White	90% Sulfate 7% Cellulose 3% Paint
Total Asbestos	**None Detected**			
236317-009 09	Mens Locker Rm - At Emergency Exit - Near Handball	Wallboard - Joint Compound	Beige White	78% Sulfate 10% Carbonate 7% Cellulose 2% Glass Fibers 3% Paint
Total Asbestos	**None Detected**			
236317-010 10	Mens Locker Rm - At Offices	Stucco	Grey Beige	75% Minerals 22% Carbonate 3% Paint
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 236317
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Road
Costa Mesa CA 92626

Claim Number:
Number of Samples: 15
PO Number:

Date Received: 12/9/2004
Date Analyzed: 12/17/2004
Date Reported: 12/20/2004

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
236317-011 11	Mens Locker Rm - At Advisor	Stucco	Grey Beige	75% Minerals 22% Carbonate 3% Paint
Total Asbestos	**None Detected**			
236317-012 12	Mens Locker Room - At Pool Storage Rm	Stucco	Grey Beige	75% Minerals 22% Carbonate 3% Paint
Total Asbestos	**None Detected**			
236317-013 13	Mens Locker Room - At Offices	Stucco	Grey Beige	75% Minerals 22% Carbonate 3% Paint
Total Asbestos	**None Detected**			
236317-014 14	Mens Locker Room - At Front Entry	Stucco	Grey Beige	75% Minerals 22% Carbonate 3% Paint
Total Asbestos	**None Detected**			
236317-015 15	Mens Locker Room - At HVAC Loft	Stucco	Grey Beige	75% Minerals 22% Carbonate 3% Paint
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number:	236317
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Road Costa Mesa CA 92626
Claim Number:	
Number of Samples:	15
PO Number:	

Date Received:	12/9/2004
Date Analyzed:	12/17/2004
Date Reported:	12/20/2004

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)

Ian Reyes
Analyst

Cristina E. Tabatt
Approved Signatory

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

236317

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	N F	Cond	Material Location
01 ASSUMED	Men's Locker Room: Mechanical Equip. Rm	P/C	X		G	HVAC Loft - Attic Space
02 ASSUMED		ELB			G	
03		ELB			SD	HVAC Loft Area
04		WOV - Duct Ins.	X		G	
05		12" White w/blue VFT		X	G	Locker Room Entry near Offices
06						
07						
08		WB/JC		X	G	Hallway To Pool (At Equip. Rm.)
09						At Emergency Exit (near Handball)
10		Stucco		X	G	At Offices
11						At Advisor

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty
RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 12/9/04 @ 9:30am

Samples received by: Candy Campos Date/Time: 12/9/04 @ 9:30am

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

2-36317

ECT NAME: Orange Coast College

ROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
12	Men's LockerRoom	Stucco		X	G	At Pool Storage Rm.
13						At Offices
14						At Front Entry
15						At HVAC Loft

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 12/9/04 @ 9:30am

Samples received by: [signature] Date/Time: 12/9/04 @ 9:30am

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number:	243548
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Road Costa Mesa CA 92626
Claim Number:	NA
Number of Samples:	4
PO Number:	

Date Received:	3/25/2005
Date Analyzed:	3/28/2005
Date Reported:	3/28/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
243548-001 101	Mens Locker Room 96 Foyer	Wallboard and Joint Compound	White	82% Sulfate 8% Carbonate 7% Cellulose 3% Paint
Total Asbestos	**None Detected**			
243548-002 102	Mens Locker Room 96 Pirate Team Room	Wallboard and Joint Compound	White	82% Sulfate 8% Carbonate 7% Cellulose 3% Paint
Total Asbestos	**None Detected**			
243548-003 103	Mens Locker Room 96 At Restroom	Wallboard and Joint Compound	White	82% Sulfate 8% Carbonate 7% Cellulose 3% Paint
Total Asbestos	**None Detected**			
243548-004 104	Mens Locker Room 96 At Locker Area	Wallboard and Joint Compound	White	78% Sulfate 12% Carbonate 7% Cellulose 3% Paint
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 243548
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Road
Costa Mesa CA 92626
Claim Number: NA
Number of Samples: 4
PO Number:

Date Received: 3/25/2005
Date Analyzed: 3/28/2005
Date Reported: 3/28/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)

Ian Reyes
Analyst

Grace Herrera
Approved Signatory

Bulk samples analyzed per 40 CFR 763, Subpart F, Appendix A; EPA-600/R-93/116 and for friable materials, EPA-600/M4-82-020. Samples are analyzed by calibrated visual estimation; therefore, results may not be reliable for samples of low concentration levels. This report applies only to the items tested. The results are representative of the samples submitted and may not represent the entire material from which samples were collected. This report was issued by a NIST/NVLAP (Lab Code 200358-0) accredited laboratory and may not be reproduced without the expressed written consent of Patriot Environmental. This report must not be used to claim product certification, approval or endorsement by NIST, NVLAP or any agency of the federal government.

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

243548

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
101	Men's Locker Room (96 98)	WB/JC		X	G	Foyer
102	↓	↓		↓	↓	Pirate Team Room
103	↓	↓		↓	↓	At Rest Room
104	↓	↓		↓	↓	At Locker Area

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 3/24/05 @ 11:50am

Samples received by: [signature] Date/Time: 3/25/05 9:30

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES, INC.

Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number:	243543
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Road Costa Mesa CA 92626
Claim Number:	NA
Number of Samples:	4
PO Number:	NA

Date Received:	3/25/2005
Date Analyzed:	3/28/2005
Date Reported:	3/28/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
243543-001 101	Pool Equipment Bleachers Exterior Hallway At Bleachers	Stucco	Grey Beige	78% Minerals 20% Carbonate 2% Paint
Total Asbestos	None Detected			
243543-002 102	Pool Equipment Bleachers Exterior Hallway At Bleachers	Stucco	Grey Beige	78% Minerals 20% Carbonate 2% Paint
Total Asbestos	None Detected			
243543-003 103	Pool Equipment Bleachers Exterior Hallway At Bleachers	Stucco	Grey Beige	78% Minerals 20% Carbonate 2% Paint
Total Asbestos	None Detected			
243543-004 104	Pool Equipment Bleachers Pool Equipment Room	TSI Pipe Cover and Pipe Elbows		
Total Asbestos	Assumed Positive			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number:	243543
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Road Costa Mesa CA 92626
Claim Number:	NA
Number of Samples:	4
PO Number:	NA

Date Received:	3/25/2005
Date Analyzed:	3/28/2005
Date Reported:	3/28/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)

Ian Reyes
Analyst

Grace Herrera
Approved Signatory

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

243543

JECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
101	Pool Equipment / Bleachers	Stucco		X	G	Ext. Hallway At Bleaches
102						
103						
104 ASS.		T.S.I. PIPE OVER & PIPE ELBOWS	X		D	Pool Equipment Room

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 3/24/05 @ 11:55AM

uples received by: [signature] Date/Time: 3/25/05 8:25

PATRIOT ENVIRONMENTAL LABORATORY SERVICES, INC.

Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue
Costa Mesa, CA 92626

Report Number: 236339
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Rd
Costa Mesa CA92626
Claim Number:
Number of Samples: 11
PO Number:

Date Received: 12/9/2004
Date Analyzed: 12/17/2004
Date Reported: 12/17/2004

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
236339-001 01	Bursars Office - Attic - Plenum Above Copy Rm	Tap		
Total Asbestos	**Assumed Positive**			
236339-002 02	Bursars Office - Copy Rm - HVAC Closet	Tap	White	85% Cellulose 15% Binder
Total Asbestos	**None Detected**			
236339-003 03	Bursars Office - Copy Rm	Linoleum	Yellow	10% Carbonate 40% Vinyl Binder 50% Cellulose
Total Asbestos	**None Detected**			
236339-004 04	Bursars Office - Copy Rm	Linoleum	Yellow	10% Carbonate 40% Vinyl Binder 50% Cellulose
Total Asbestos	**None Detected**			
236339-005 05	Bursars Office - Copy Rm	Linoleum	Yellow	10% Carbonate 40% Vinyl Binder 50% Cellulose
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue
Costa Mesa, CA 92626

Report Number: 236339
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Rd
Costa Mesa CA92626
Claim Number:
Number of Samples: 11
PO Number:

Date Received: 12/9/2004
Date Analyzed: 12/17/2004
Date Reported: 12/17/2004

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
236339-006 06	Bursars Office - At HVAC Pad - North Side	Stucco	Grey Beige	75% Minerals 22% Carbonate 3% Paint
Total Asbestos	**None Detected**			
236339-007 07	Bursars Office - Column At Front	Stucco	Grey Beige	75% Minerals 22% Carbonate 3% Paint
Total Asbestos	**None Detected**			
236339-008 08	Bursars Office - Near Parking Lot - South Side	Stucco	Grey Beige	75% Minerals 22% Carbonate 3% Paint
Total Asbestos	**None Detected**			
236339-009 09	Bursars Office - Near Bathroom - Rear	Wallboard - Joint Compound	White	84% Sulfate 6% Carbonate 7% Cellulose 3% Paint
Total Asbestos	**None Detected**			
236339-010 10	Bursars Office - Copy Room	Wallboard - Joint Compound	White	84% Sulfate 6% Carbonate 7% Cellulose 3% Paint
Total Asbestos	**None Detected**			

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Costa Mesa, CA 92626

Report Number: 236339
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Rd
Costa Mesa CA92626

Claim Number:
Number of Samples: 11
PO Number:

Date Received: 12/9/2004
Date Analyzed: 12/17/2004
Date Reported: 12/17/2004

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
236339-011 11	Bursars Office - Closet Near Rear Bathroom	Wallboard - Joint Compound	White	84% Sulfate 6% Carbonate 7% Cellulose 3% Paint

Total Asbestos **None Detected**

Ian Reyes
Analyst

Grace Herrera
Approved Signatory

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

236339

[PROJ]ECT NAME: Orange Coast College

[P]ROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
01 ASSUMED	Bursars Office - Attic	TAP	X		G	Plenum above Copy Room
02	- Copy Room		X			HVAC Closet
03	- Copy Room	Yellow		X	G	Copy Room
04						
05						
6		Stucco		X	G	At HVAC Pad (North Side)
07						Column At Front
08						Near Parking lot (South Side)
09		WB/JC		X	G	Near Bathroom - Rear
10						Copy Room
11						Closet near Rear Bathroom

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 12/9/04 @ 9:30am

Samples received by: Candy Campos Date/Time: 12/9/04 @ 9:30am

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES, INC.

Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue
Costa Mesa, CA 92626

Report Number: 236316
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Road
Costa Mesa CA 92626

Claim Number:
Number of Samples: 5
PO Number:

Date Received: 12/9/2004
Date Analyzed: 12/17/2004
Date Reported: 12/17/2004

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
236316-001 01	Handball - 1st Floor Hallway	Wall Plaster	Beige	65% Minerals 32% Carbonate 3% Paint
Total Asbestos	**None Detected**			
236316-002 02	Handball - 2nd Floor	Wall Plaster	Beige	65% Minerals 32% Carbonate 3% Paint
Total Asbestos	**None Detected**			
236316-003 03	Handball - At Custodial Closet	Wall Plaster	Beige	65% Minerals 32% Carbonate 3% Paint
Total Asbestos	**None Detected**			
236316-004 04	Handball - At Offices	Stucco	Beige	75% Minerals 22% Carbonate 3% Paint
Total Asbestos	**None Detected**			
236316-005 05	Handball - Exterior At Tennis Courts	Cement	Grey	85% Minerals 15% Carbonate
Total Asbestos	**None Detected**			

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

238011

JCT NAME: Orange Coast College

JECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
23	Womens Locker (92)	WP		X	G	Faculty Office Hallway - near Pool Door
24						Faculty office #4
25						Womens Swim Restroom
26						Faculty Locker Room At Sink Area
27						Co-Ed Team Room
28		WB/JC				Faculty Locker Room Above T-Bar
29						Equipment Room At Office Area
30						Locker Room At Co-Ed Team Room
31						Co-Ed Team Room

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: Date/Time: 1/6/05

Samples received by: Candy Campos Date/Time: 1/6/05 @ 11:45am

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES, INC.

NESHAP Point Counting by Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 242081
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa Drive CA 92626
Claim Number: NA
Number of Samples: 1
PO Number: NA

Date Received: 1/6/2005
Date Analyzed: 3/4/2005
Date Reported: 3/4/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition
242081-001 10	Womens Locker 92 - Front Entry Overhang	Stucco	Grey Beige	75% Minerals 22% Carbonate 3% Paint

Total Asbestos <0.1%

EPA 400 Pt Point Count Method Has Been Extended to 1000 pts To Meet The Cal OSHA Limit Of 0.1%

Ian Reyes
Analyst

Grace Herrera
Approved Signatory

Bulk samples analyzed per 40 CFR 763, Subpart F, Appendix A; EPA-600/R-93/116 and for friable materials, EPA-600/M4-82-020. Samples are analyzed by calibrated visual estimation; therefore, results may not be reliable for samples of low concentration levels. This report applies only to the items tested. The results are representative of the samples submitted and may not represent the entire material from which samples were collected. This report was issued by a NIST/NVLAP accredited laboratory and may not be reproduced without the expressed written consent of Patriot Environmental.

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 239830
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626

Claim Number:
Number of Samples: 5
PO Number:

Date Received: 1/31/2005
Date Analyzed: 2/1/2005
Date Reported: 2/1/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239830-001 01	Bookstore Warehouse (144) - At Roll-Up Door	Wallboard - Joint Compound	White	80% Sulfate 10% Carbonate 7% Cellulose 3% Paint
Total Asbestos	**None Detected**			
239830-002 02	Bookstore Warehouse (144) - North Wall	Wallboard - Joint Compound	White	80% Sulfate 10% Carbonate 7% Cellulose 3% Paint
Total Asbestos	**None Detected**			
239830-003 03	Bookstore Warehouse (144) - Northeast Wall	Wallboard - Joint Compound	White	80% Sulfate 10% Carbonate 7% Cellulose 3% Paint
Total Asbestos	**None Detected**			
239830-004 04	Bookstore Warehouse (144) - At Roll-Up	Base Cove	Brown	65% Carbonate 35% Vinyl Binder
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 239830
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626
Claim Number:
Number of Samples: 5
PO Number:

Date Received: 1/31/2005
Date Analyzed: 2/1/2005
Date Reported: 2/1/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239830-004M 04	Bookstore Warehouse (144) - At Roll-Up	Base Cove Mastic	Brown	92% Organic Binder 8% Wollastonite

Total Asbestos **None Detected**

Ian Reyes
Analyst

Cristina E. Tabatt
Approved Signatory

Bulk samples analyzed per 40 CFR 763, Subpart F, Appendix A; EPA-600/R-93/116 and for friable materials, EPA-600/M4-82-020. Samples are analyzed by calibrated visual estimation; therefore, results may not be reliable for samples of low concentration levels. This report applies only to the items tested. The results are representative of the samples submitted and may not represent the entire material from which samples were collected. This report was issued by a NIST/NVLAP (Lab Code 200358-0) accredited laboratory and may not be reproduced without the expressed written consent of Patriot Environmental. This report must not be used to claim product certification, approval or endorsement by NIST, NVLAP or any agency of the federal government.

Samples of wall systems containing discrete and separable layers are analyzed separately and reported as composite. Samples such as floor tiles and ceiling tiles with mastic layers are analyzed and reported separately.

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

239830

~ ECT NAME: Orange Coast College

JECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	N F	Cond	Material Location
01	Bookstore Warehouse (144)	WB/JC		X		At Roll-Up Door
02						North Wall
03						North East Wall
04		Brown Base & Mastic		X		At Roll-Up

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/28/05

Samples received by: Candy Campos Date/Time: 1/28/05 @ 4:00pm

PATRIOT ENVIRONMENTAL LABORATORY SERVICES, INC.

Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number:	236771
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Road Costa Mesa CA 92626
Claim Number:	
Number of Samples:	27
PO Number:	

Date Received:	12/9/2004
Date Analyzed:	12/21/2004
Date Reported:	12/22/2004

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
236771-001 01	Bookstore - Backroom HVAC near Roll-up Door	TAP		
Total Asbestos	Assumed Positive			
236771-002 02	Bookstore - Upper Office Area- Ceiling	Acoustic Ceiling	White	75% Carbonate 25% Foam
Total Asbestos	None Detected			
236771-003 03	Bookstore - Mid Store Area	Acoustic Ceiling	White	75% Carbonate 25% Foam
Total Asbestos	None Detected			
236771-004 04	Bookstore - Front Store Area	Acoustic Ceiling	Beige	65% Carbonate 35% Minerals
Total Asbestos	None Detected			
236771-005A 05	Bookstore - Backroom at Stairs	Joint Compound	Beige	93% Carbonate 5% Paint
Chrysotile	2 %			
Total Asbestos	2 %			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 236771
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Road
Costa Mesa CA 92626

Claim Number:
Number of Samples: 27
PO Number:

Date Received: 12/9/2004
Date Analyzed: 12/21/2004
Date Reported: 12/22/2004

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
236771-005B 05	Bookstore - Backroom at Stairs	Wallboard and Joint Compound	Beige White	80% Sulfate 10% Carbonate 7% Cellulose 3% Paint
Chrysotile	<1 %			
Total Asbestos	< 1%			
236771-006A 06	Bookstore - Women's Restroom	Joint Compound	Beige	93% Carbonate 5% Paint
Chrysotile	2 %			
Total Asbestos	2 %			
236771-006B 06	Bookstore - Women's Restroom	Wallboard and Joint Compound	Beige White	80% Sulfate 10% Carbonate 7% Cellulose 3% Paint
Chrysotile	<1 %			
Total Asbestos	< 1%			
236771-007 07	Bookstore - At Store Front-East Side	Wallboard and Joint Compound	Beige White	80% Sulfate 10% Carbonate 7% Cellulose 3% Paint
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
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Costa Mesa, CA 92626

Report Number: 236771
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Road
Costa Mesa CA 92626
Claim Number:
Number of Samples: 27
PO Number:

Date Received: 12/9/2004
Date Analyzed: 12/21/2004
Date Reported: 12/22/2004

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
236771-008 08	Bookstore - Backroom	12 in.Vinyl Floor Tile	Off-White	80% Carbonate 20% Vinyl Binder
Total Asbestos	**None Detected**			
236771-008M 08	Bookstore - Backroom	Floor Tile Mastic	Black	100% Tar
Total Asbestos	**None Detected**			
236771-009 09	Bookstore - Backroom	12 in.Vinyl Floor Tile	Off-White	80% Carbonate 20% Vinyl Binder
Total Asbestos	**None Detected**			
236771-009M 09	Bookstore - Backroom	Floor Tile Mastic	Black	100% Tar
Total Asbestos	**None Detected**			
236771-010 10	Bookstore - Backroom	12 in.Vinyl Floor Tile	Off-White	80% Carbonate 20% Vinyl Binder
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 236771
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Road
Costa Mesa CA 92626
Claim Number:
Number of Samples: 27
PO Number:

Date Received: 12/9/2004
Date Analyzed: 12/21/2004
Date Reported: 12/22/2004

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
236771-010M 10	Bookstore - Backroom	Floor Tile Mastic	Black	100% Tar
Total Asbestos	**None Detected**			
236771-011 11	Bookstore - Backroom	2x3 ft.Ceiling Tile	Grey White	75% Mineral Wool 15% Cellulose 7% Perlite 3% Paint
Total Asbestos	**None Detected**			
236771-012 12	Bookstore - Womens Restroom	Linoleum	White	15% Linoleum 55% Vinyl Binder 20% Cellulose 10% Glass Fibers
Total Asbestos	**None Detected**			
236771-013 13	Bookstore - Mens Restroom	Linoleum	White	15% Linoleum 55% Vinyl Binder 20% Cellulose 10% Glass Fibers
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number:	236771
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Road Costa Mesa CA 92626
Claim Number:	
Number of Samples:	27
PO Number:	

Date Received:	12/9/2004
Date Analyzed:	12/21/2004
Date Reported:	12/22/2004

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
236771-014 14	Bookstore - Mens Restroom	Floor Tile	Beige	76% Carbonate 20% Vinyl Binder
Chrysotile	4 %			
Total Asbestos	4 %			
236771-014M 14	Bookstore - Mens Restroom	Floor Tile Mastic	Black	93% Tar
Chrysotile	7 %			
Total Asbestos	7 %			
236771-015 15	Bookstore - Front Store Area- Upper Hall	Acoustic Ceiling	White	60% Minerals 35% Carbonate 5% Paint
Chrysotile	<1 %			
Total Asbestos	< 1%			
236771-016 16	Bookstore - Mid Store-Wall Cover	Acoustic Ceiling	White Beige	60% Minerals 35% Carbonate 5% Paint
Total Asbestos	None Detected			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
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Costa Mesa, CA 92626

Report Number: 236771
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Road
Costa Mesa CA 92626
Claim Number:
Number of Samples: 27
PO Number:

Date Received: 12/9/2004
Date Analyzed: 12/21/2004
Date Reported: 12/22/2004

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
236771-017 17	Bookstore - Upper Office Area Wall	Acoustic Ceiling	White Beige	60% Minerals 35% Carbonate 5% Paint
Total Asbestos	None Detected			
236771-018 18	Bookstore - Exterior Wall	Stucco	Grey Beige	75% Minerals 22% Carbonate 3% Paint
Total Asbestos	None Detected			
236771-019 19	Bookstore - Exterior Wall	Stucco	Beige	70% Minerals 27% Carbonate 3% Paint
Chrysotile	<1 %			
Total Asbestos	< 1%			
236771-020 20	Bookstore - Exterior Wall	Stucco	Grey Beige	75% Minerals 22% Carbonate 3% Paint
Total Asbestos	None Detected			
236771-021 21	Bookstore - Exterior-Smooth Wall Cover	Cement	Grey Beige	75% Minerals 22% Carbonate 3% Paint
Total Asbestos	None Detected			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
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Costa Mesa, CA 92626

Report Number:	236771
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Road Costa Mesa CA 92626
Claim Number:	
Number of Samples:	27
PO Number:	

Date Received:	12/9/2004
Date Analyzed:	12/21/2004
Date Reported:	12/22/2004

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)

Ian Reyes
Analyst

Cristina E. Tabatt
Approved Signatory

Bulk samples analyzed per 40 CFR 763, Subpart F, Appendix A; EPA-600/R-93/116 and for friable materials, EPA-600/M4-82-020. Samples are analyzed by calibrated visual estimation; therefore, results may not be reliable for samples of low concentration levels. This report applies only to the items tested. The results are representative of the samples submitted and may not represent the entire material from which samples were collected. This report was issued by a NIST/NVLAP (Lab Code 200358-0) accredited laboratory and may not be reproduced without the expressed written consent of Patriot Environmental. This report must not be used to claim product certification, approval or endorsement by NIST, NVLAP or any agency of the federal government.

Samples of wall systems containing discrete and separable layers are analyzed separately and reported as composite. Samples such as floor tiles and ceiling tiles with mastic layers are analyzed and reported separately.

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES, INC.

NESHAP Point Counting by Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 238336
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Road
Costa Mesa CA 92626

Date Received: 1/10/2005
Date Analyzed: 1/14/2005
Date Reported: 1/14/2005

Claim Number:
Number of Samples: 2
PO Number:

Lab/Client ID/Layer	Location	Material Description	Color	Composition
238336-001 15	Point Count - Bookstore - Front Store Area - Upper Hall	Acoustic Ceiling	White	60% Minerals 35% Carbonate 5% Paint
Total Asbestos	<0.1%			
238336-002 19	Point Count - Bookstore - Exterior Wall	Stucco	Beige	75% Minerals 22% Carbonate 3% Paint
Total Asbestos	<0.1%			

EPA 400 Pt. Point Count Method Has Been Extended to 1000 pts To Meet The Cal OSHA Limit Of 0.1%

Ian Reyes
Analyst

Cristina E. Tabatt
Approved Signatory

Bulk samples analyzed per 40 CFR 763, Subpart F, Appendix A; EPA-600/R-93/116 and for friable materials, EPA-600/M4-82-020. Samples are analyzed by calibrated visual estimation; therefore, results may not be reliable for samples of low concentration levels. This report applies only to the items tested. The results are representative of the samples submitted and may not represent the entire material from which samples were collected. This report was issued by a NIST/NVLAP accredited laboratory and may not be reproduced without the expressed written consent of Patriot Environmental.

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

236771

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
01 ASSUMED	Bookstore	TAP	X			Backroom HVAC - near Roll-Up Door
02		A/C	X		G	Upper Office Area - Ceiling
03						Mid. Store Area -
04						Front Store Area
05		WB/JC		X	G	Backroom At Stairs
06						Women's Restroom
07						At Store Front - East Side
08		12" VFT Off white		X	G	Backroom
09						
10						
11		2'X3' Ceiling Tile	X		G	Backroom

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 12/9/04 @ 9:00am

Samples received by: [signature] Date/Time: 12/9/04 9am

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

236304

ECT NAME: Orange Coast College

ROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
12	Student Center	Ceiling Tile Mastic Dots		X	G	Cafeteria Room 10
13		12" Ceiling Tile	X		G	Captains Kitchen
14						
15						
16		Stucco		X	G	Room 10
1						Rear Water Cooler Room
18						Rear Captains Restaurant
19						At Classroom - West side

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 12/9/04 @ 9:00am

Samples received by: Candy Campos Date/Time: 12/9/04 @ 9:00am

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES, INC.

Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number:	240801
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Drive Costa Mesa CA 92626
Claim Number:	
Number of Samples:	42
PO Number:	

Date Received:	1/26/2005
Date Analyzed:	2/14/2005
Date Reported:	2/22/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
240801-001 01	Skill Center (47) - Welding Booths (x20) Welding 101	Transite Panels	Grey	82% Carbonate

Chrysotile 18 %
Total Asbestos 18 %

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
240801-002 02	Skill Center (47) - Welding Booths (x20) Welding 101	Transite Panels	Grey	82% Carbonate

Chrysotile 18 %
Total Asbestos 18 %

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
240801-003 03	Skill Center (47) - Welding Booths (x20) Welding 101	Transite Panels	Grey	82% Carbonate

Chrysotile 18 %
Total Asbestos 18 %

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
240801-004 04	Skill Center (47) - Welding 101	HVAC Duct Tape		

Total Asbestos **Assumed Positive**

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
240801-005 05	Skill Center (47) - Welding 101	HVAC Duct Vibration Gasket		

Total Asbestos **Assumed Positive**

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number:	240801
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Drive Costa Mesa CA 92626
Claim Number:	
Number of Samples:	42
PO Number:	

Date Received:	1/26/2005
Date Analyzed:	2/14/2005
Date Reported:	2/22/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
240801-006 06	Skill Center (47) - Office Area Of Welding 101	Fireproofing	Beige	70% Minerals 30% Carbonate
Total Asbestos	**None Detected**			
240801-007 07	Skill Center (47) - Office Area Of Welding 101	Fireproofing	Beige	70% Minerals 30% Carbonate
Total Asbestos	**None Detected**			
240801-008 08	Skill Center (47) - Office Area Of Welding 101	Fireproofing	Beige	70% Minerals 30% Carbonate
Total Asbestos	**None Detected**			
240801-009 09	Skill Center (47) - Office 101 B	12 Inch Multi Vinyl Floor Tile	Beige	72% Carbonate 20% Vinyl Binder
Chrysotile	8 %			
Total Asbestos	**8 %**			
240801-009M 09	Skill Center (47) - Office 101 B	Floor Tile Mastic	Black	90% Tar
Chrysotile	10 %			
Total Asbestos	**10 %**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 240801
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626
Claim Number:
Number of Samples: 42
PO Number:

Date Received: 1/26/2005
Date Analyzed: 2/14/2005
Date Reported: 2/22/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
240801-010 10	Skill Center (47) - Office 102A	12 Inch Multi Vinyl Floor Tile	Beige	72% Carbonate 20% Vinyl Binder
Chrysotile	8 %			
Total Asbestos	**8 %**			
240801-010M 10	Skill Center (47) - Office 102A	Floor Tile Mastic	Black	90% Tar
Chrysotile	10 %			
Total Asbestos	**10 %**			
240801-011 11	Skill Center (47) - Office (101B)	12 Inch Multi Vinyl Floor Tile	Beige	72% Carbonate 20% Vinyl Binder
Chrysotile	8 %			
Total Asbestos	**8 %**			
240801-011M 11	Skill Center (47) - Office (101B)	Floor Tile Mastic	Black	90% Tar
Chrysotile	10 %			
Total Asbestos	**10 %**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 240801
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626

Claim Number:
Number of Samples: 42
PO Number:

Date Received: 1/26/2005
Date Analyzed: 2/14/2005
Date Reported: 2/22/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
240801-012 12	Skill Center (47) - Welding 101	Base Cove	Black	65% Carbonate 35% Vinyl Binder
Total Asbestos	**None Detected**			
240801-013 13	Skill Center (47) - Welding 101	Base Cove Mastic	Brown	100% Organic Binder
Total Asbestos	**None Detected**			
240801-014 14	Skill Center (47) - Welding 101	Base Cove	Black	65% Carbonate 35% Vinyl Binder
Total Asbestos	**None Detected**			
240801-015 15	Skill Center (47) - Welding 101	Base Cove Mastic	Brown	100% Organic Binder
Total Asbestos	**None Detected**			
240801-016 16	Skill Center (47) - Welding 101 - Press Room	Acoustic Ceiling Tile Mastic	Brown	100% Organic Binder
Total Asbestos	**None Detected**			

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Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 240801
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626
Claim Number:
Number of Samples: 42
PO Number:

Date Received: 1/26/2005
Date Analyzed: 2/14/2005
Date Reported: 2/22/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
240801-017 17	Skill Center (47) - Welding 101 - Press Room	Acoustic Ceiling Tile Mastic	Brown	100% Organic Binder
Total Asbestos	**None Detected**			
240801-018 18	Skill Center (47) - Welding 101 - Press Room	12 Inch Acoustic Ceiling Tile	Beige	70% Mineral Wool 30% Cellulose
Total Asbestos	**None Detected**			
240801-019 19	Skill Center (47) - Welding 101 - Press Room	12 Inch Acoustic Ceiling Tile	Beige	70% Mineral Wool 30% Cellulose
Total Asbestos	**None Detected**			
240801-020A 20	Skill Center (47) - Welding 101 - Press Room	Joint Compound	Beige	97% Carbonate
Chrysotile	3 %			
Total Asbestos	**3 %**			
240801-020B 20	Skill Center (47) - Welding 101 - Press Room	Wallboard - Joint Compound	Beige White	89% Sulfate 2% Carbonate 7% Cellulose 2% Glass Fibers
Chrysotile	<1 %			
Total Asbestos	**<1%**			

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Report Number: 240801
Project Number: 19378
Project Name: Orange Coast College
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Costa Mesa CA 92626

Claim Number:
Number of Samples: 42
PO Number:

Date Received: 1/26/2005
Date Analyzed: 2/14/2005
Date Reported: 2/22/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
240801-021 21	Skill Center (47) - Welding 101 - Rear North End	Welding Curtains	Green	100% Cellulose
Total Asbestos	None Detected			
240801-022 22	Skill Center (47) - Welding 101 - Rear North End	Welding Curtains	White	
Chrysotile	100 %			
Total Asbestos	100 %			
240801-023A 23	Skill Center (47) - Welding 101 - Office Area	Joint Compound	Beige	92% Carbonate 5% Paint
Chrysotile	3 %			
Total Asbestos	3 %			
240801-023B 23	Skill Center (47) - Welding 101 - Office Area	Wallboard - Joint Compound	Beige White	92% Carbonate 5% Paint
Chrysotile	<1 %			
Total Asbestos	< 1%			
240801-024A 24	Skill Center (47) - Welding 101 - Office Area	Joint Compound	Beige	92% Carbonate 5% Paint
Chrysotile	3 %			
Total Asbestos	3 %			

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Report Number: 240801
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626
Claim Number:
Number of Samples: 42
PO Number:

Date Received: 1/26/2005
Date Analyzed: 2/14/2005
Date Reported: 2/22/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
240801-024B 24	Skill Center (47) - Welding 101 - Office Area	Wallboard - Joint Compound	Beige White	87% Sulfate 3% Carbonate 7% Cellulose 3% Paint
Chrysotile	<1 %			
Total Asbestos	< 1%			
240801-025 25	Skill Center (47) - Classroom 103	Base Cove Mastic	Brown	100% Organic Binder
Total Asbestos	**None Detected**			
240801-026 26	Skill Center (47) - Classroom 103	Base Cove	Black	65% Carbonate 35% Vinyl Binder
Total Asbestos	**None Detected**			
240801-027 27	Skill Center (47) - Classroom 103	12 Inch Multi Vinyl Floor Tile	Beige	76% Carbonate 20% Vinyl Binder
Chrysotile	4 %			
Total Asbestos	4 %			

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Report Number: 240801
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626

Claim Number:
Number of Samples: 42
PO Number:

Date Received: 1/26/2005
Date Analyzed: 2/14/2005
Date Reported: 2/22/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
240801-027M 27	Skill Center (47) - Classroom 103	Floor Tile Mastic	Black	90% Tar
Chrysotile	10 %			
Total Asbestos	10 %			
240801-028 28	Skill Center (47) - Skill Center 102	Base Cove	Black	65% Carbonate 35% Vinyl Binder
Total Asbestos	**None Detected**			
240801-029 29	Skill Center (47) - Skill Center 102 Office	Base Cove Mastic	Beige	100% Organic Binder
Total Asbestos	**None Detected**			
240801-030A 30	Skill Center (47) - Skill Center 102 Storage Room	Wallboard - Joint Compound	Beige	92% Carbonate 5% Paint
Chrysotile	3 %			
Total Asbestos	3 %			

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Costa Mesa, CA 92626

Report Number: 240801
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626
Claim Number:
Number of Samples: 42
PO Number:

Date Received: 1/26/2005
Date Analyzed: 2/14/2005
Date Reported: 2/22/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
240801-030B 30	Skill Center (47) - Skill Center 102 Storage Room	Wallboard - Joint Compound	Beige White	84% Sulfate 4% Carbonate 7% Cellulose 2% Glass Fibers 3% Paint
Chrysotile	<1 %			
Total Asbestos	< 1%			
240801-031A 31	Skill Center (47) - Skill Center 102 Storage Room	Wallboard - Joint Compound	Beige	92% Carbonate 5% Paint
Chrysotile	3 %			
Total Asbestos	3 %			
240801-031B 31	Skill Center (47) - Skill Center 102 Storage Room	Wallboard - Joint Compound	Beige White	84% Sulfate 4% Carbonate 7% Cellulose 2% Glass Fibers 3% Paint
Chrysotile	<1 %			
Total Asbestos	< 1%			
240801-032A 32	Skill Center (47) - Skill Center 102	Wallboard - Joint Compound	Beige	92% Carbonate 5% Paint
Chrysotile	3 %			
Total Asbestos	3 %			

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Report Number: 240801
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626
Claim Number:
Number of Samples: 42
PO Number:

Date Received: 1/26/2005
Date Analyzed: 2/14/2005
Date Reported: 2/22/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
240801-032B 32	Skill Center (47) - Skill Center 102	Wallboard - Joint Compound	Beige	84% Sulfate 4% Carbonate 7% Cellulose 2% Glass Fibers 3% Paint

Chrysotile <1 %
Total Asbestos < 1%

Ian Reyes
Analyst

Grace Herrera
Approved Signatory

Bulk samples analyzed per 40 CFR 763, Subpart F, Appendix A; EPA-600/R-93/116 and for friable materials, EPA-600/M4-82-020. Samples are analyzed by calibrated visual estimation; therefore, results may not be reliable for samples of low concentration levels. This report applies only to the items tested. The results are representative of the samples submitted and may not represent the entire material from which samples were collected. This report was issued by a NIST/NVLAP (Lab Code 200358-0) accredited laboratory and may not be reproduced without the expressed written consent of Patriot Environmental. This report must not be used to claim product certification, approval or endorsement by NIST, NVLAP or any agency of the federal government.

Samples of wall systems containing discrete and separable layers are analyzed separately and reported as composite. Samples such as floor tiles and ceiling tiles with mastic layers are analyzed and reported separately.

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

240801

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
01	Skill Center (47)	Transite Panels		X	G	Welding Booths (x20) Welding 101
02						
03						
04 ASS		HVAC DUCT TAPE	X		G	Welding 101
05 ASS		HVAC DUCT VIBRATION GASKET				
06		Fireproofing		X		Office Area of Welding
07						
08						
09		12" Beige - Multi VFT		X		Office 101 B
10						Office 102A
11						(101 B)

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty
RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/26/05

Samples received by: Candy Campos Date/Time: 1/26/05 @ 4:00pm

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue
Costa Mesa, CA 92626

Report Number:	236316
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Road Costa Mesa CA 92626
Claim Number:	
Number of Samples:	5
PO Number:	

Date Received:	12/9/2004
Date Analyzed:	12/17/2004
Date Reported:	12/17/2004

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)

Ian Reyes
Analyst

Grace Herrera
Approved Signatory

Bulk samples analyzed per 40 CFR 763, Subpart F, Appendix A; EPA-600/R-93/116 and for friable materials, EPA-600/M4-82-020. Samples are analyzed by calibrated visual estimation; therefore, results may not be reliable for samples of low concentration levels. This report applies only to the items tested. The results are representative of the samples submitted and may not represent the entire material from which samples were collected. This report was issued by a NIST/NVLAP (Lab Code 200358-0) accredited laboratory and may not be reproduced without the expressed written consent of Patriot Environmental. This report must not be used to claim product certification, approval or endorsement by NIST, NVLAP or any agency of the federal government.

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

236311

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
01	Handball	WP		X	G	1st Floor Hallway
02						2nd Floor
03						At Custodial Closet
04		Stucco		X		At Offices
05		Cement				Ext At Tennis Courts

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 12/9/04 @ 9:30am

Samples received by: Candy Campos Date/Time: 12/9/04 @ 9:30am CC.

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES, INC.

Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number:	236304
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Rd Costa Mesa CA 92626
Claim Number:	
Number of Samples:	20
PO Number:	

Date Received:	12/9/2004
Date Analyzed:	12/20/2004
Date Reported:	12/21/2004

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
236304-001 01	Student Center - Cafeteria Room 10	12 Inch Ceiling Tile	White	10% Carbonate 90% Mineral Wool
Total Asbestos	**None Detected**			
236304-002 02	Student Center - Captains Restaurant - Seating Area	12 Inch Ceiling Tile	Brown, White	10% Paint 90% Cellulose
Total Asbestos	**None Detected**			
236304-003 03	Student Center - Captains Restaurant - Seating Area	12 Inch Ceiling Tile	Brown, White	10% Carbonate 90% Mineral Wool
Total Asbestos	**None Detected**			
236304-004 04	Student Center - Assoc Students Closet	Wallboard - Joint Compound	White, Grey	20% Cellulose 60% Carbonate 20% Sulfate
Total Asbestos	**None Detected**			
236304-005 05	Student Center - Captains Restaurant - Hallway	Wallboard - Joint Compound	White, Peach, Brown	10% Cellulose 15% Carbonate 75% Sulfate
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number:	236304
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Rd Costa Mesa CA 92626
Claim Number:	
Number of Samples:	20
PO Number:	

Date Received:	12/9/2004
Date Analyzed:	12/20/2004
Date Reported:	12/21/2004

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
236304-006 06	Student Center - Rear Boiler Closet	Wallboard - Joint Compound	White, Brown	20% Cellulose 20% Carbonate 60% Sulfate
Total Asbestos	**None Detected**			
236304-007A 07	Student Center - Room 10	Joint Compound	White	96% Carbonate
Chrysotile	4 %			
Total Asbestos	**4 %**			
236304-007B 07	Student Center - Room 10	Wallboard - Joint Compound	White, Brown	20% Cellulose 35% Carbonate 45% Sulfate
Chrysotile	< 1 %			
Total Asbestos	**< 1%**			
236304-008 08	Student Center - Captains Restaurant - Seating Area	Wallboard - Joint Compound	White	10% Cellulose 55% Carbonate 35% Sulfate
Total Asbestos	**None Detected**			
236304-009 09	Student Center - Rear Boiler Closet	Wall Plaster	Tan, White	55% Vermiculite 45% Non-Fibrous
Total Asbestos	**None Detected**			

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1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 236304
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Rd
Costa Mesa CA 92626

Claim Number:
Number of Samples: 20
PO Number:

Date Received: 12/9/2004
Date Analyzed: 12/20/2004
Date Reported: 12/21/2004

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
236304-010 10	Student Center - Captains Restaurant - Upper Wall	Wall Plaster	Tan, White	5% Cellulose 40% Vermiculite 55% Non-Fibrous
Total Asbestos	**None Detected**			
236304-011 11	Student Center - Captains Kitchen	Ceiling Tile Mastic Dot	Brown	5% Cellulose 95% Non-Fibrous
Total Asbestos	**None Detected**			
236304-012 12	Student Center - Cafeteria Room 10	Ceiling Tile Mastic Dot	Brown	3% Cellulose 97% Non-Fibrous
Total Asbestos	**None Detected**			
236304-013 13	Student Center - Captains Kitchen	12 Inch Ceiling Tile	Grey, White	20% Paint 15% Cellulose 65% Mineral Wool
Total Asbestos	**None Detected**			

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Report Number: 236304
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Rd
Costa Mesa CA 92626

Claim Number:
Number of Samples: 20
PO Number:

Date Received: 12/9/2004
Date Analyzed: 12/20/2004
Date Reported: 12/21/2004

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
236304-014 14	Student Center - Captains Kitchen	12 Inch Ceiling Tile	White, Grey	35% Paint 15% Cellulose 50% Mineral Wool
Total Asbestos	**None Detected**			
236304-015 15	Student Center - Captains Kitchen	12 Inch Ceiling Tile	Grey, White	15% Paint 20% Cellulose 65% Mineral Wool
Total Asbestos	**None Detected**			
236304-016 16	Student Center - Room 10	Stucco	White, Tan	3% Cellulose 97% Minerals
Total Asbestos	**None Detected**			
236304-017 17	Student Center - Rear Water Cooler Room	Stucco	Grey	6% Cellulose 94% Minerals
Total Asbestos	**None Detected**			
236304-018 18	Student Center - Rear Captains Restaurant	Stucco	Tan	100% Minerals
Total Asbestos	**None Detected**			

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Costa Mesa CA 92626

Claim Number:
Number of Samples: 20
PO Number:

Date Received: 12/9/2004
Date Analyzed: 12/20/2004
Date Reported: 12/21/2004

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
236304-019 19	Student Center - At Classroom - West Side	Stucco	Grey, White	2% Cellulose 98% Non-Fibrous

Total Asbestos **None Detected**

John Lopez
Analyst

Cristina E. Tabatt
Approved Signatory

Bulk samples analyzed per 40 CFR 763, Subpart F, Appendix A; EPA-600/R-93/116 and for friable materials, EPA-600/M4-82-020. Samples are analyzed by calibrated visual estimation; therefore, results may not be reliable for samples of low concentration levels. This report applies only to the items tested. The results are representative of the samples submitted and may not represent the entire material from which samples were collected. This report was issued by a NIST/NVLAP (Lab Code 200358-0) accredited laboratory and may not be reproduced without the expressed written consent of Patriot Environmental. This report must not be used to claim product certification, approval or endorsement by NIST, NVLAP or any agency of the federal government.

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

236304

ROJECT NAME: Orange Coast College

ROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

ROJECT #: 19378

ample ID	Sample Location	Material Type	F	NF	Cond	Material Location
01	Student Center	12" Ceiling Tile	X		G	Cafeteria - Rm 10
02						Captains Restaurant - Seating Area
03						
04		WB/JC		X		Associated Students Closet
05						Captains Restaurant - Hallway
06						Rear Boiler Closet
07						Room 10
08						Captains Restaurant - Seating Area
09		WP		X		Rear Boiler Closet
10						Captains Restaurant - Upper Wall
11		Ceiling Tile Mastic Dot		X	G	Captains Kitchen

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: E[illegible] Date/Time: 12/9/04 @ 9:00am

Samples received by: Candy Campos Date/Time: 12/9/04 @ 9:00am

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 239759
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Coast Mesa, CA 92626

Claim Number:
Number of Samples: 33
PO Number:

Date Received: 1/26/2005
Date Analyzed: 2/18/2005
Date Reported: 2/18/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239759-012 12	Classroom (47/48)-Computer Lab Between Rooms 104 and 105	2x4 Acoustic Ceiling Tile	Grey White	65% Mineral Wool 32% Cellulose 3% Paint
Total Asbestos	**None Detected**			
239759-013 13	Classroom (47/48)-Computer Lab Between Rooms 104 and 105	2x4 Acoustic Ceiling Tile Mastic	Brown	100% Organic Binder
Total Asbestos	**None Detected**			
239759-014 14	Skill Center (48) Acoustic Panels in Airframe 110	Acoustic Ceiling and Wall Panels	White	90% Cellulose 10% Carbonate
Total Asbestos	**None Detected**			
239759-015 15	Skill Center (48) Acoustic Panels in Airframe 110	Acoustic Ceiling and Wall Panels	White	90% Cellulose 10% Carbonate
Total Asbestos	**None Detected**			
239759-016 16	Skill Center (48) Acoustic Panels in Airframe 110	Acoustic Ceiling and Wall Panels	White	90% Cellulose 10% Carbonate
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
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Costa Mesa, CA 92626

Report Number: 239759
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Coast Mesa, CA 92626

Claim Number:
Number of Samples: 33
PO Number:

Date Received: 1/26/2005
Date Analyzed: 2/18/2005
Date Reported: 2/18/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239759-017 17	Skill Center (48) Airframe 110B Office	12 inch Vinyl Floor Tile	Beige	76% Carbonate 20% Vinyl Binder
Chrysotile 4 %				
Total Asbestos 4 %				
239759-017M 17	Skill Center (48) Airframe 110B Office	Floor Tile Mastic	Black	90% Tar
Chrysotile 10 %				
Total Asbestos 10 %				
239759-018 18	Skill Center (48) Airframe 110B Office	12 inch Vinyl Floor Tile	Beige	76% Carbonate 20% Vinyl Binder
Chrysotile 4 %				
Total Asbestos 4 %				
239759-018M 18	Skill Center (48) Airframe 110B Office	Floor Tile Mastic	Black	90% Tar
Chrysotile 10 %				
Total Asbestos 10 %				

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 239759
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Coast Mesa, CA 92626

Claim Number:
Number of Samples: 33
PO Number:

Date Received: 1/26/2005
Date Analyzed: 2/18/2005
Date Reported: 2/18/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239759-019 19	Skill Center (48) Airframe 110A Office	12 inch Vinyl Floor Tile	Beige	76% Carbonate 20% Vinyl Binder
Chrysotile	4 %			
Total Asbestos	4 %			
239759-019M 19	Skill Center (48) Airframe 110A Office	Floor Tile Mastic	Yellow	100% Organic Binder
Total Asbestos	**None Detected**			
239759-020 20	Skill Center (48) Wind Tunnel- Sound Room at Airframe Room 110	Woven Cloth and Ceiling Covering	Yellow White	90% Glass Fibers 10% Binder
Total Asbestos	**None Detected**			
239759-021 21	Skill Center (48) Wind Tunnel- Sound Room at Airframe Room 110	Woven Cloth and Ceiling Covering	Yellow White	90% Glass Fibers 10% Binder
Total Asbestos	**None Detected**			
239759-022 22	Skill Center (48) Wind Tunnel- Sound Room at Airframe Room 110	Woven Cloth and Ceiling Covering	Yellow White	90% Glass Fibers 10% Binder
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number:	239759
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Drive Coast Mesa, CA 92626
Claim Number:	-
Number of Samples:	33
PO Number:	

Date Received:	1/26/2005
Date Analyzed:	2/18/2005
Date Reported:	2/18/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239759-023A 23	Skill Center (48) Airframe 110-110A Office	Wallboard - Joint Compound	White	92% Carbonate 5% Paint
Chrysotile	3 %			
Total Asbestos	**3 %**			
239759-023B 23	Skill Center (48) Airframe 110-110A Office	Wallboard - Joint Compound	White	81% Sulfate 7% Carbonate 7% Cellulose 2% Glass Fibers 3% Paint
Chrysotile	<1 %			
Total Asbestos	**< 1%**			
239759-024A 24	Skill Center (48) Airframe 110-110A Office	Wallboard - Joint Compound	White	92% Carbonate 5% Paint
Chrysotile	3 %			
Total Asbestos	**3 %**			
239759-024B 24	Skill Center (48) Airframe 110-110A Office	Wallboard - Joint Compound	White	81% Sulfate 7% Carbonate 7% Cellulose 2% Glass Fibers 3% Paint
Chrysotile	<1 %			
Total Asbestos	**< 1%**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number:	239759
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Drive Coast Mesa, CA 92626
Claim Number:	
Number of Samples:	33
PO Number:	

Date Received:	1/26/2005
Date Analyzed:	2/18/2005
Date Reported:	2/18/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239759-025A 25	Skill Center (48) Airframe 110-110B Office	Wallboard - Joint Compound	White	92% Carbonate 5% Paint
Chrysotile	3 %			
Total Asbestos	3 %			
239759-025B 25	Classroom (47/48)-Airframe 110-110B Office	Wallboard - Joint Compound	White	81% Sulfate 7% Carbonate 7% Cellulose 2% Glass Fibers 3% Paint
Chrysotile	<1 %			
Total Asbestos	< 1%			

Ian Reyes
Analyst

Grace Herrera
Approved Signatory

Bulk samples analyzed per 40 CFR 763, Subpart F, Appendix A; EPA-600/R-93/116 and for friable materials, EPA-600/M4-82-020. Samples are analyzed by calibrated visual estimation; therefore, results may not be reliable for samples of low concentration levels. This report applies only to the items tested. The results are representative of the samples submitted and may not represent the entire material from which samples were collected. This report was issued by a NIST/NVLAP (Lab Code 200358-0) accredited laboratory and may not be reproduced without the expressed written consent of Patriot Environmental. This report must not be used to claim product certification, approval or endorsement by NIST, NVLAP or any agency of the federal government.

Samples of wall systems containing discrete and separable layers are analyzed separately and reported as composite. Samples such as floor tiles and ceiling tiles with mastic layers are analyzed and reported separately.

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

239759

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
01	Classrooms (47/48)	2'x4' ACT	X		G	Room 104
NOTE		~~Transite Panels~~ * NOTE *				"Skill Center" Under Windows of Classrooms
02		2'x4' ACT	X		G	
03		HVAC DUCT SEAM TAPE (TAP)	X		G	
04						
05		WB/JC		X	G	
06						
07		Brown Base Cove		X	G	
08		Mastic				
09		2'x4' ACT	X		G	Room 105
10		Brown Base Cove		X		

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/26/05

Samples received by: [signature] Date/Time: 1/26/05

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
11	Classrooms (47/48)	Brown Base Cove Mastic		X	G	Room 105
12		12" ACT	X			Computer Lab Between Room 104 & 105
13		Mastic		X		
14	Skill Center (48)	Acoustic Ceiling & Wall Panels		X	G	Acoustic Panels in Airframe 110
15						
16						
NOTE		Transite Panels * NOTE *				Airframe Rm. 110
17		12" Beige Multi VFT		X	G	Airframe 110; 110 B Office
18						
19						; 110 A
20		Woven Cloth Wall & Ceiling Covering	X		G	Wind Tunnel/Sound Room At Airframe Rm. 110

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/26/05

Samples received by: [signature] Date/Time: 1/26/05

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
21	Skill Center (48)	Woven Cloth Wall & Ceiling Covering	X		G	Wind Tunnel/Sound Room At Airframe 110
22						
23		WB/JC		X	G	Airframe 110 ; 110 A office
24						
25						; 110B office
~~[illegible]~~	~~Skill Ctr (47)~~	~~Transite Panels & Nuts~~				~~[illegible]~~
~~[illegible]~~		~~[illegible] System Gaskets~~				

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty
RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/26/05

Samples received by: [signature] Date/Time: 1/26/05

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES, INC.

Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 239826
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Dr
Costa Mesa CA 92626
Claim Number:
Number of Samples: 26
PO Number:

Date Received: 1/31/2005
Date Analyzed: 2/18/2005
Date Reported: 2/18/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239826-001 01	Allied Health (49) - Room 103	12 Inch ACT - Straight Hole Pattern	Brown, White	10% Paint 90% Cellulose
Total Asbestos	**None Detected**			
239826-002 02	Allied Health (49) - Room 101	12 Inch ACT - Straight Hole Pattern	Brown, White	5% Paint 95% Cellulose
Total Asbestos	**None Detected**			
239826-003 03	Allied Health (49) - Room 101	12 Inch ACT - Straight Hole Pattern	Brown, White	20% Paint 80% Cellulose
Total Asbestos	**None Detected**			
239826-004 04	Allied Health (49) - Room 101 At Door	Wall Plaster	Yellow, Beige	15% Paint 85% Minerals
Total Asbestos	**None Detected**			
239826-005 05	Allied Health (49) - Room 101 - Front	Wall Plaster	Beige, Yellow	20% Paint 5% Cellulose 75% Minerals
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number:	239826
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Dr Costa Mesa CA 92626
Claim Number:	
Number of Samples:	26
PO Number:	

Date Received:	1/31/2005
Date Analyzed:	2/18/2005
Date Reported:	2/18/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239826-006 06	Allied Health (49) - Room 105	Wall Plaster	Beige, Yellow	40% Paint 60% Non-Fibrous
Total Asbestos	**None Detected**			
239826-007 07	Allied Health (49) - Room 103 At Utility Closet	Stucco	Grey, Red	3% Cellulose 97% Minerals
Total Asbestos	**None Detected**			
239826-008 08	Allied Health (49) - Room 103 At Utility Closet	Stucco	Grey, Tan	7% Cellulose 93% Minerals
Total Asbestos	**None Detected**			
239826-009 09	Allied Health (49) - Overhead At 103	Stucco	Grey, Tan	100% Minerals
Total Asbestos	**None Detected**			
239826-010 10	Allied Health (49) - 105 Near Door	Stucco	Grey	4% Cellulose 96% Minerals
Total Asbestos	**None Detected**			

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Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number:	239826
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Dr Costa Mesa CA 92626
Claim Number:	
Number of Samples:	26
PO Number:	

Date Received:	1/31/2005
Date Analyzed:	2/18/2005
Date Reported:	2/18/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239826-011 11	Allied Health (49) - Room 105 - Under Carpet	Vinyl Floor Tile	Beige	92% Carbonate
Chrysotile	8 %			
Total Asbestos	8 %			
239826-011M 11	Allied Health (49) - Room 105 - Under Carpet	Mastic	Black	90% Tar
Chrysotile	10 %			
Total Asbestos	10 %			
239826-012 12	Allied Health (49) - Room 105 - Under Carpet	Vinyl Floor Tile	Beige	90% Carbonate
Chrysotile	10 %			
Total Asbestos	10 %			
239826-012M 12	Allied Health (49) - Room 105 - Under Carpet	Mastic	Black	92% Tar
Chrysotile	8 %			
Total Asbestos				
Total Asbestos	8 %			

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Polarized Light Microscopy Analysis

Coast Community College
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1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 239826
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Dr
Costa Mesa CA 92626
Claim Number:
Number of Samples: 26
PO Number:

Date Received: 1/31/2005
Date Analyzed: 2/18/2005
Date Reported: 2/18/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239826-013 13	Allied Health (49) - Room 105 - Under Carpet	Vinyl Floor Tile	Beige	85% Carbonate
Chrysotile	15 %			
Total Asbestos	15 %			
239826-013M 13	Allied Health (49) - Room 105 - Under Carpet	Mastic	Black	90% Tar
Chrysotile	10 %			
Total Asbestos	10 %			
239826-014 14	Allied Health (49) - Room 103	Base Cove	Brown	100% Carbonate
Total Asbestos	**None Detected**			
239826-014M 14	Allied Health (49) - Room 103	Mastic	Brown	2% Cellulose 98% Non-Fibrous
Total Asbestos	**None Detected**			
239826-015 15	Allied Health (49) - Room 101	Base Cove	Brown	100% Carbonate
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number:	239410
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Dr Costa Mesa CA 92626
Claim Number:	
Number of Samples:	55
PO Number:	

Date Received: 1/17/2005
Date Analyzed: 2/8/2005
Date Reported: 2/14/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239410-022 31	Chemistry (69) - 2nd Fl Faculty Office Hall	12 Inch Acoustic Ceiling Tile	White Grey	30%Cellulose 65%Mineral Wool 5%Paint
Total Asbestos	**None Detected**			
239410-023 32	Chemistry (69) - Room 124 - Middle	Sheet Flooring	Yellow Grey	5%Cellulose 35%Carbonate 35%Vinyl Binder
Chrysotile	25 %			
Total Asbestos	25 %			
239410-024 33	Chemistry (69) - Room 124 - Middle Lab Room	Sheet Flooring	Yellow Grey	5%Cellulose 35%Carbonate 35%Vinyl Binder
Chrysotile	25 %			
Total Asbestos	25 %			
239410-025 34	Chemistry (69) - Room 115	2ft Acoustic Ceiling Tile	White Beige	35%Cellulose 60%Mineral Wool 5%Paint
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
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Costa Mesa, CA 92626

Report Number: 239410
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Dr
Costa Mesa CA 92626

Claim Number:
Number of Samples: 55
PO Number:

Date Received: 1/17/2005
Date Analyzed: 2/8/2005
Date Reported: 2/14/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239410-026 35	Chemistry (69) - Room 118	2ft Acoustic Ceiling Tile	Beige	40%Cellulose 60%Mineral Wool
Total Asbestos	**None Detected**			
239410-027 36	Chemistry (69) - Room 232	2ft Acoustic Ceiling Tile	White Beige	35%Cellulose 60%Mineral Wool 5%Paint
Total Asbestos	**None Detected**			
239410-028 37	Chemistry (69) - 1st Fl Custodial Room - Under Stairs	Fireproofing	Brown	35%Cellulose 10%Vermiculite 55%Sulfate
Total Asbestos	**None Detected**			
239410-029 38	Chemistry (69) - 2nd Fl At Exterior HVAC-Chiller Room	Fireproofing	Brown	35%Cellulose 10%Vermiculite 55%Sulfate
Total Asbestos	**None Detected**			
239410-030 39	Chemistry (69) - Room 214 - Lecture Hall	Acoustic Ceiling	White	5%Cellulose 75%Carbonate 20%Foam
Total Asbestos	**None Detected**			

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

240801

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
12	Skill Center (47)	Black Base Cove		X	G	Welding 101
13	↓	↓ Mastic		↓	↓	↓
14	↓	Black Base Cove		↓	↓	↓
15	↓	↓ Mastic		↓	↓	↓
16	↓	Brown ACT Mastic		X	G	Welding 101 ; Press Room
17	↓	↓		↓	↓	↓
18	↓	12" ACT	X		↓	↓
19	↓	↓	↓		↓	↓
20	↓	WB/JC		X	G	↓
21	↓	WELDING CURTAINS	X		G	Welding 101 - Rear North End
22	↓	↓	↓		↓	↓

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/26/05

Samples received by: Candy Campos Date/Time: 1/26/05 @ 4:00pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

240801

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
23	Skill Center (47)	WB/JC		X	G	Welding 101 · Office Area
24		↓		↓	↓	↓
25		Brown Base Cove Mastic		X	G	Classroom 103
26		Black Base Cove		↓	↓	↓
27		12" Beige Multi VFT		↓	↓	↓
NOTE		* NOTE * →				Gaskets Around Welding 101 Shop Ventilation System
NOTE		* NOTE * →				Pressboard Ceiling Material - Welding 101, Skill Ctr. 102
28		Black Base Cove		X		Skill Center 102
29		↓ Mastic		↓		; Office
30		WB/JC		X		; Storage Rm.
31		↓		↓		; ↓

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/24/05

Samples received by: Candy Campos Date/Time: 1/24/05 @ 4:00pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

240801

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
32	Skill Center (47)	WB/JC		X	G	Skill Center 102

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/24/05

Samples received by: Candy Campos Date/Time: 1/26/05 @ 4:00pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES, INC.

Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 239759
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Coast Mesa, CA 92626
Claim Number:
Number of Samples: 33
PO Number:

Date Received: 1/26/2005
Date Analyzed: 2/18/2005
Date Reported: 2/18/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239759-001 1	Classroom (47/48)- Room 104	2x4 Acoustic Ceiling Tile	Grey White	15% Mineral Wool 70% Cellulose 13% Perlite 2% Paint
Total Asbestos	**None Detected**			
239759-002 2	Classroom (47/48)- Room 104	2x4 Acoustic Ceiling Tile	Grey White	15% Mineral Wool 70% Cellulose 13% Perlite 2% Paint
Total Asbestos	**None Detected**			
239759-003 3	Classroom (47/48)- Room 104	HVAC Duct Seam Tape	White	80% Cellulose 20% Binder
Total Asbestos	**None Detected**			
239759-004 4	Classroom (47/48)- Room 104	HVAC Duct Seam Tape	White	80% Cellulose 20% Binder
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
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Costa Mesa, CA 92626

Report Number: 239759
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Coast Mesa, CA 92626
Claim Number:
Number of Samples: 33
PO Number:

Date Received: 1/26/2005
Date Analyzed: 2/18/2005
Date Reported: 2/18/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239759-005A 5	Classroom (47/48)- Room 104	Joint Compound	White	92% Carbonate 5% Paint
Chrysotile 3 %				
Total Asbestos 3 %				
239759-005B 5	Classroom (47/48)- Room 104	Wallboard - Joint Compound	White	81% Sulfate 7% Carbonate 7% Cellulose 2% Glass Fibers 3% Paint
Chrysotile <1 %				
Total Asbestos < 1%				
239759-006A 6	Classroom (47/48)- Room 104	Joint Compound	White	92% Carbonate 5% Paint
Chrysotile 3 %				
Total Asbestos 3 %				
239759-006B 6	Classroom (47/48)- Room 104	Wallboard - Joint Compound	White	81% Sulfate 7% Carbonate 7% Cellulose 2% Glass Fibers 3% Paint
Chrysotile <1 %				
Total Asbestos < 1%				

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
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Report Number: 239759
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Coast Mesa, CA 92626
Claim Number:
Number of Samples: 33
PO Number:

Date Received: 1/26/2005
Date Analyzed: 2/18/2005
Date Reported: 2/18/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239759-007 7	Classroom (47/48)- Room 104	Base Cove	Black	60% Carbonate 40% Vinyl Binder
Total Asbestos	None Detected			
239759-008 8	Classroom (47/48)- Room 104	Base Cove Matic	Brown	100% Organic Binder
Total Asbestos	None Detected			
239759-009 9	Classroom (47/48)- Room 105	2x4 Acoustic Ceiling Tile	Grey White	20% Mineral Wool 65% Cellulose 12% Perlite 3% Paint
Total Asbestos	None Detected			
239759-010 10	Classroom (47/48)- Room 105	Base Cove	Brown	65% Carbonate 35% Vinyl Binder
Total Asbestos	None Detected			
239759-011 11	Classroom (47/48)- Room 105	Base Cove Mastic	Brown	100% Organic Binder
Total Asbestos	None Detected			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number:	240199
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Dr Costa Mesa CA 92626
Claim Number:	
Number of Samples:	43
PO Number:	

Date Received:	1/28/2005
Date Analyzed:	2/11/2005
Date Reported:	2/16/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
240199-021 27	Lewis Applied Science (42) - Southwest Utility At Boiler Room	Pipe Elbow - 10 Inch Diameter	Grey	7%Cellulose 30%Mineral Wool 60%Carbonate
Chrysotile	3 %			
Total Asbestos	3 %			
240199-022 29	Lewis Applied Science (42) - 1st Fl Compressor Room	Insulation At Floor Penetration	Tan	100%Cellulose
Total Asbestos	**None Detected**			
240199-023 30	Lewis Applied Science (42) - At 109	Fireproofing	White	5%Vermiculite 10%Minerals 85%Sulfate
Total Asbestos	**None Detected**			
240199-024 31	Lewis Applied Science (42) - Southwest Utility At Boiler Room	TSI - Pipe Insulation	White	85%Carbonate
Chrysotile	5 %			
Amosite	10 %			
Total Asbestos	15 %			

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Costa Mesa, CA 92626

Report Number: 240199
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Dr
Costa Mesa CA 92626

Claim Number:
Number of Samples: 43
PO Number:

Date Received: 1/28/2005
Date Analyzed: 2/11/2005
Date Reported: 2/16/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
240199-025 32	Lewis Applied Science (42) - Compressor Room	TSI - Pipe Elbow	Beige	3%Cellulose 22%Mineral Wool 70%Carbonate
Chrysotile	5 %			
Total Asbestos	**5 %**			
240199-026 33	Lewis Applied Science (42) - Southwest Utility Boiler Room	Wall Plaster - Rough	Grey	40%Minerals 60%Sulfate
Total Asbestos	**None Detected**			
240199-027 34	Lewis Applied Science (42) - Southwest Utility Boiler Room	Wall Plaster - Rough	Grey	40%Minerals 60%Sulfate
Total Asbestos	**None Detected**			
240199-028 35	Lewis Applied Science (42) - Southwest Utility Boiler Room	Wall Plaster - Rough	Grey	40%Minerals 60%Sulfate
Total Asbestos	**None Detected**			

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Report Number: 240199
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Dr
Costa Mesa CA 92626

Claim Number:
Number of Samples: 43
PO Number:

Date Received: 1/28/2005
Date Analyzed: 2/11/2005
Date Reported: 2/16/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
240199-029 36	Lewis Applied Science (42) - At 109	2x4 Acoustic Ceiling Tile	Beige	35%Cellulose 35%Mineral Wool 30%Perlite
Total Asbestos	**None Detected**			
240199-030 37	Lewis Applied Science (42) - At 110	2x4 Acoustic Ceiling Tile	Beige	35%Cellulose 35%Mineral Wool 30%Perlite
Total Asbestos	**None Detected**			
240199-031 38	Lewis Applied Science (42) - At 104	Base Cove	Black	60%Carbonate 40%Vinyl Binder
Total Asbestos	**None Detected**			
240199-032 39	Lewis Applied Science (42) - At 104	Base Cove Mastic	Brown	50%Carbonate 50%Organic Binder
Total Asbestos	**None Detected**			
240199-033 01	Lewis Applied Science (42) - At Entry Hall	Fireproofing		
Total Asbestos	**Assumed Positve**			

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Report Number: 240199
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Dr
Costa Mesa CA 92626
Claim Number:
Number of Samples: 43
PO Number:

Date Received: 1/28/2005
Date Analyzed: 2/11/2005
Date Reported: 2/16/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
240199-034 13	Lewis Applied Science (42) - Room 104 - Attic	TSI Elbows		
Total Asbestos	**Assumed Positive**			
240199-035 22	Lewis Applied Science (42) - External Soffit -2nd fl/1st fl near Taco Bell/Pizza	Stucco		
Total Asbestos	**Assumed Positve**			
240199-036 23	Lewis Applied Science (42) - 2nd Fl External HVAC Room	TSI Pipe & Multiple Sizes Elbows		
Total Asbestos	**Assumed Positve**			
240199-037 24	Lewis Applied Science (42) - 2nd Fl External HVAC Room	HVAC Gasket		
Total Asbestos	**Assumed Positve**			
240199-038 26	Lewis Applied Science (42) - 1st fl Ext Compressor Rm	TSI Pipe & Elbows Multiple Sizes		
Total Asbestos	**Assumed Positve**			

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Report Number: 240199
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Dr
Costa Mesa CA 92626

Claim Number:
Number of Samples: 43
PO Number:

Date Received: 1/28/2005
Date Analyzed: 2/11/2005
Date Reported: 2/16/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
240199-039 28	Lewis Applied Science (42) - External Soffit -1st 2nd S End Utility to Main	Stucco		

Total Asbestos **Assumed Positve**

Fred D. Chappelear
Analyst

Cristina E. Tabatt
Approved Signatory

Bulk samples analyzed per 40 CFR 763, Subpart F, Appendix A; EPA-600/R-93/116 and for friable materials, EPA-600/M4-82-020. Samples are analyzed by calibrated visual estimation; therefore, results may not be reliable for samples of low concentration levels. This report applies only to the items tested. The results are representative of the samples submitted and may not represent the entire material from which samples were collected. This report was issued by a NIST/NVLAP (Lab Code 200358-0) accredited laboratory and may not be reproduced without the expressed written consent of Patriot Environmental. This report must not be used to claim product certification, approval or endorsement by NIST, NVLAP or any agency of the federal government.

Samples of wall systems containing discrete and separable layers are analyzed separately and reported as composite. Samples such as floor tiles and ceiling tiles with mastic layers are analyzed and reported separately.

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

240199

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
01 ASS	Lewis Applied Science (42)	Fireproofing	X		G	At Entry Hall
02		2'x4' ACT	X		G	; near 103
03		WP		X	G	Storage Closet near Elev.
04		Black Base Cove				
05		Brown Base Cove Mastic				
06						At Room 108 - Hall
07		Black Base Cove				
08		12" ACT	X		G	Entry Area
09		2'x4' ACT				At Rm 101
10		Fireproofing				Rm 101 (At)
11		12" Beige VFT & Mastic		X		Rm 104

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/28/05

Samples received by: Candy Campos Date/Time: 1/28/05 @ 4:00pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

240199

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
12	Lewis Applied Science (42)	12" Beige VFT		X	G	Room 104
13 ASS.		T.S.I. - Elbows	X		G	Room 104 - Attic
14		WP		X	G	Room 104
15		12" Beige Multi VFT				Room 103
16						Room 103 A
7		12" Beige VFT		X	G	Room 101
NOTE						Room 119
18		2'x4' ACT	X		G	Rm 203
19		Fireproofing	X		G	Room 203
20		WP		X	G	Room 204
21		WP				Column A+ Rm 208

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/28/05

Samples received by: Candy Campos Date/Time: 1/28/05 @ 4:00pm

:71 Garden Grove Blvd. Suite A, Garden Grove, CA 92841 Tel: 888/743-0998 Tel: 714/899/8900 Fax: 714/899-7098

PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

240199

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
NOTE	Lewis Applied Science (42)	* NOTE *				Walls Covered with Alum Siding Panels
NOTE		12" Beige VFT – NOTE –				Room 211, 210, 209
NOTE		No Access *				Room 212, 213 No Access – Carpeted
22 ASS.		Stucco		X	G	External Soffit . 2nd Floor/1st Fl near Taco Bell/Pizza
23 ASS.		T.S.I. – Pipe + Multiple Sizes Elbows	X		G	2nd Floor . External HVAC Room
24 ASS.		HVAC Gasket	X		G	
25		HVAC Duct Tape (TAP)	X		G	
26 ASS.		T.S.I. – Pipe & Elbows Multiple Sizes	X		G	1st Floor Exterior Compressor Room: Assumed (Hard)
27		ELB – 10" Diameter	X		G	Southwest Utility At Boiler Room
28 ASS.		Stucco		X	G	External Soffit – 1st + 2nd South End Utility & Main
29		Insulation At Floor Penetration	X		D	1st Floor Compressor Room

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/28/05

Samples received by: Candy Campos Date/Time: 1/28/05 @ 4:10pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

240199

JECT NAME: Orange Coast College

JECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
30	Lewis Applied Science (42)	Fireproofing	X		G	At 109
31		T.S.I. - Pipe Insulation	X		G	Southwest Utility At Boiler Room
32		T.S.I. - Pipe Elbow				Compressor Room
33		WP - Rough		X	G	Southwest Utility - Boiler Room
34						
35						
36		2'x4' ACT	X		G	At 109
37						110
38		Black Base Cove		X	G	At 104
39		Brown Base Cove Mastic				

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty
RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/28/05

Samples received by: Candy Campos Date/Time: 1/28/05 @ 4:00pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES, INC

Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number:	239410
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Dr Costa Mesa CA 92626
Claim Number:	
Number of Samples:	55
PO Number:	

Date Received:	1/17/2005
Date Analyzed:	2/8/2005
Date Reported:	2/14/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239410-001 02	Chemistry (69) - 2nd Floor Room 3 - Utility Rm	TSI - Elbow	White Tan	35%Mineral Wool 65%Carbonate
Total Asbestos	**None Detected**			
239410-002 05	Chemistry (69) - 2nd Fl - Utility-HVAC-Chiller Room2	Water-Chiller Line End Cap At Gauge	White	20%Mineral Wool 80%Carbonate
Total Asbestos	**None Detected**			
239410-003 07	Chemistry (69) - Room 121	Sheet Flooring	White Yellow	40%Carbonate 35%Vinyl Binder
Chrysotile	25 %			
Total Asbestos	**25 %**			
239410-004 08	Chemistry (69) - Chem. Middle Office Area	Sheet Flooring	Brown Tan Grey	5%Cellulose 40%Carbonate 30%Vinyl Binder
Chrysotile	25 %			
Total Asbestos	**25 %**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 239410
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Dr
Costa Mesa CA 92626

Claim Number:
Number of Samples: 55
PO Number:

Date Received: 1/17/2005
Date Analyzed: 2/8/2005
Date Reported: 2/14/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239410-005 10	Chemistry (69) - Room 126	Sheet Flooring	Orange Grey	40%Carbonate 35%Vinyl Binder
Chrysotile	25 %			
Total Asbestos	**25 %**			
239410-006 15	Chemistry (69) - 1st Fl Lab Office Area - Storage Room	Sheet Flooring	Brown Tan Grey	5%Cellulose 40%Carbonate 30%Vinyl Binder
Chrysotile	25 %			
Total Asbestos	**25 %**			
239410-007 16	Chemistry (69) - Room 124	Sheet Flooring	Brown	5%Cellulose 60%Carbonate 35%Vinyl Binder
Total Asbestos	**None Detected**			
239410-008 17	Chemistry (69) - Room 124 - Under Carpet	Leveling Compound	White	5%Cellulose 5%Mineral Wool 90%Carbonate
Total Asbestos	**None Detected**			

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Costa Mesa, CA 92626

Report Number: 239410
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Dr
Costa Mesa CA 92626
Claim Number:
Number of Samples: 55
PO Number:

Date Received: 1/17/2005
Date Analyzed: 2/8/2005
Date Reported: 2/14/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239410-009 18	Chemistry (69) - Room 115 - Middle Room Computer Lab	Sheet Flooring	Brown Yellow	40%Carbonate 35%Vinyl Binder
Chrysotile	25 %			
Total Asbestos	**25 %**			
239410-010 19	Chemistry (69) - Room 115	Sheet Flooring	Brown Yellow Grey	40%Carbonate 35%Vinyl Binder
Chrysotile	25 %			
Total Asbestos	**25 %**			
239410-011 20	Chemistry (69) - Room 118	Sheet Flooring	Brown Yellow Grey	40%Carbonate 35%Vinyl Binder
Chrysotile	25 %			
Total Asbestos	**25 %**			
239410-012 21	Chemistry (69) - Room 211	Wallboard - Joint Compound	White Brown	35%Cellulose 35%Sulfate 30%Carbonate
Total Asbestos	**None Detected**			

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Project Name: Orange Coast College
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Claim Number:
Number of Samples: 55
PO Number:

Date Received: 1/17/2005
Date Analyzed: 2/8/2005
Date Reported: 2/14/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239410-013 22	Chemistry (69) - 1st Fl Custodial - Under Stairs	Wallboard - Joint Compound	White Brown	20%Cellulose 35%Sulfate 35%Carbonate 10%Paint
Total Asbestos	**None Detected**			
239410-014 23	Chemistry (69) - Exterior Telephone Equip. Room 1A	Wallboard - Joint Compound	White	8%Cellulose 2%Glass Fibers 45%Sulfate 45%Carbonate
Total Asbestos	**None Detected**			
239410-015 24	Chemistry (69) - 1st Floor At Elevator	Wallboard - Joint Compound	White Brown	40%Cellulose 30%Sulfate 30%Carbonate
Total Asbestos	**None Detected**			
239410-016 25	Chemistry (69) - Room 121	Wallboard - Joint Compound	White	80%Carbonate 20%Paint
Total Asbestos	**None Detected**			
239410-017 26	Chemistry (69) - Middle Lab Office Area At Water Supply Rm	Wallboard - Joint Compound	White Brown	30%Cellulose 30%Sulfate 30%Carbonate 10%Paint
Total Asbestos	**None Detected**			

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Claim Number:
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PO Number:

Date Received: 1/17/2005
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Date Reported: 2/14/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239410-018 27	Chemistry (69) - Room 124 - Middle Room	Sheet Flooring	Orange Grey	45%Carbonate 30%Vinyl Binder
Chrysotile	25 %			
Total Asbestos	**25 %**			
239410-019 28	Chemistry (69) - Room 129	Sheet Flooring	Orange Grey	45%Carbonate 30%Vinyl Binder
Chrysotile	25 %			
Total Asbestos	**25 %**			
239410-020 29	Chemistry (69) - 2nd Fl Faculty Office Hall	12 Inch Acoustic Ceiling Tile	White Grey	30%Cellulose 65%Mineral Wool 5%Paint
Total Asbestos	**None Detected**			
239410-021 30	Chemistry (69) - 2nd Fl Faculty Office Hall	12 Inch Acoustic Ceiling Tile	White Grey	30%Cellulose 65%Mineral Wool 5%Paint
Total Asbestos	**None Detected**			

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Report Number:	239822
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Drive Costa Mesa CA 92626
Claim Number:	
Number of Samples:	39
PO Number:	

Date Received:	1/28/2005
Date Analyzed:	2/18/2005
Date Reported:	2/18/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239822-015 15	Horticulture (64) - Room 101	Base Cove	Brown	65% Carbonate 35% Vinyl Binder
Total Asbestos	**None Detected**			
239822-015M 15	Horticulture (64) - Room 101	Base Cove Mastic	Brown	98% Organic Binder
Anthophyllite	2 %			
Total Asbestos	2 %			
239822-016 16	Horticulture (64) - Room 101	Base Cove	Brown	65% Carbonate 35% Vinyl Binder
Total Asbestos	**None Detected**			
239822-016M 16	Horticulture (64) - Room 101	Base Cove Mastic	Brown	98% Organic Binder
Anthophyllite	2 %			
Total Asbestos	2 %			
239822-017 17	Horticulture (64) - Room 102 - At Entry	12 Inch Vinyl Floor Tile	Tan	70% Carbonate 20% Vinyl Binder
Chrysotile	10 %			
Total Asbestos	10 %			

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Report Number: 239822
Project Number: 19378
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Costa Mesa CA 92626
Claim Number:
Number of Samples: 39
PO Number:

Date Received: 1/28/2005
Date Analyzed: 2/18/2005
Date Reported: 2/18/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239822-018 18	Horticulture (64) - Room 102 - At Entry	12 Inch Vinyl Floor Tile	Tan	70% Carbonate 20% Vinyl Binder
Chrysotile	10 %			
Total Asbestos	10 %			
239822-019 19	Horticulture (64) - Room 102 - At Entry	12 Inch Vinyl Floor Tile	Tan	70% Carbonate 20% Vinyl Binder
Chrysotile	10 %			
Total Asbestos	10 %			
239822-020 20	Horticulture (64) - Room 103A	2x3 Acoustic Ceiling Tile	Grey White	20% Mineral Wool 65% Cellulose 12% Perlite 3% Paint
Total Asbestos	**None Detected**			
239822-021 21	Horticulture (64) - Room 103A	2x3 Acoustic Ceiling Tile	Grey White	20% Mineral Wool 65% Cellulose 12% Perlite 3% Paint
Total Asbestos	**None Detected**			

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Claim Number:
Number of Samples: 39
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Date Received: 1/28/2005
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Date Reported: 2/18/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239822-022 22	Horticulture (64) - Room 103A	2x3 Acoustic Ceiling Tile	Grey White	20% Mineral Wool 65% Cellulose 12% Perlite 3% Paint
Total Asbestos	**None Detected**			
239822-023 23	Horticulture (64) - Small Bldg - Northeast	Stucco	Grey Beige	75% Minerals 22% Carbonate 3% Paint
Chrysotile	<1 %			
Total Asbestos	**< 1%**			
239822-024 24	Horticulture (64) - Small Bldg - Northeast	Stucco	Grey Beige	75% Minerals 22% Carbonate 3% Paint
Chrysotile	<1 %			
Total Asbestos	**< 1%**			
239822-025 25	Horticulture (64) - Small Bldg - Northwest	Stucco	Grey Beige	75% Minerals 22% Carbonate 3% Paint
Total Asbestos	**None Detected**			

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Date Received: 1/28/2005
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Date Reported: 2/18/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239822-026 26	Horticulture (64) - Small Bldg - Northwest	Stucco	Grey Beige	75% Minerals 22% Carbonate 3% Paint
Total Asbestos	**None Detected**			
239822-027 27	Horticulture (64) - Room 101	Cement Like Brick	Grey Brown	85% Minerals 15% Carbonate
Total Asbestos	**None Detected**			
239822-028 28	Horticulture (64) - Room 102	Cement Like Brick	Grey Brown	85% Minerals 15% Carbonate
Total Asbestos	**None Detected**			
239822-029 29	Horticulture (64) - Room 101	Cement Like Brick	Grey Brown	85% Minerals 15% Carbonate
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 239822
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626
Claim Number:
Number of Samples: 39
PO Number:

Date Received: 1/28/2005
Date Analyzed: 2/18/2005
Date Reported: 2/18/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)

Ian Reyes
Analyst

Grace Herrera
Approved Signatory

Bulk samples analyzed per 40 CFR 763, Subpart F, Appendix A; EPA-600/R-93/116 and for friable materials, EPA-600/M4-82-020. Samples are analyzed by calibrated visual estimation; therefore, results may not be reliable for samples of low concentration levels. This report applies only to the items tested. The results are representative of the samples submitted and may not represent the entire material from which samples were collected. This report was issued by a NIST/NVLAP (Lab Code 200358-0) accredited laboratory and may not be reproduced without the expressed written consent of Patriot Environmental. This report must not be used to claim product certification, approval or endorsement by NIST, NVLAP or any agency of the federal government.

Samples of wall systems containing discrete and separable layers are analyzed separately and reported as composite. Samples such as floor tiles and ceiling tiles with mastic layers are analyzed and reported separately.

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

2398022

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
01	Horticulture (64)	Blue Base Cove & Mastic		X	G	Room 102
NOTE		* NOTE *		X	G	Lab Room 102 has a small fume hood w/possible transite top
NOTE		NOTE				Two Small Stucco Bldgs. Part of Horticulture. NOT ON MAP
02		Blue Base Cove & Mastic		X	G	Room 103A
03						102
04		WB/JC		X	G	Room 101
05						Womens RR
06						Room 101 - Upper
07						Small Building - Maint. Office
08						Room 102 - Upper
09		WP		X	G	Chemical Room

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/28/05

Samples received by: Candy Campos Date/Time: 1/28/05 @ 4:00pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

2398222

JECT NAME: Orange Coast College

JECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
10	Horticulture (64)	WP		X	G	Small Building Northeast – Chemical Room
11		WPTY		X	G	Small Bldg. Northeast
12						
13						
14		Brown Base Cove & mastic		X	G	Room 101
15						
16						
17		12" Tan w/Pattern VFT		X	G	Room 102; At Entry
18						
19						
20		2'X3' ACT	X		G	Room 103 A

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: EOtte Date/Time: 1/28/05

Samples received by: Candy Campos Date/Time: 1/28/05 @ 4:00pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

239822

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
21	Horticulture (64)	2'X3' ACT	X		G	Room 103A
22						
23		Stucco		X	G	Small Bldg. Northeast
24						
25						. Northwest
26						
27		Cement like Brick		X	G	Room 101
28						102
29						101

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/28/05

Samples received by: Candy Campos Date/Time: 1/28/05 @ 4:00pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES, INC.

NESHAP Point Counting by Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Date Received: 1/28/2005
Date Analyzed: 3/4/2005
Date Reported: 3/4/2005

Report Number: 242089
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626
Claim Number: NA
Number of Samples: 1
PO Number: NA

Lab/Client ID/Layer	Location	Material Description	Color	Composition
242089-001 23	Horticulture 64- Small Building Northeast	Stucco	Grey Beige	75% Minerals 22% Carbonate 3% Paint

Total Asbestos <0.1%

EPA 400 Pt Point Count Method Has Been Extended to 1000 pts To Meet The Cal OSHA Limit Of 0.1%

Ian Reyes
Analyst

Grace Herrera
Approved Signatory

Bulk samples analyzed per 40 CFR 763, Subpart F, Appendix A; EPA-600/R-93/116 and for friable materials, EPA-600/M4-82-020. Samples are analyzed by calibrated visual estimation; therefore, results may not be reliable for samples of low concentration levels. This report applies only to the items tested. The results are representative of the samples submitted and may not represent the entire material from which samples were collected. This report was issued by a NIST/NVLAP accredited laboratory and may not be reproduced without the expressed written consent of Patriot Environmental.

PATRIOT ENVIRONMENTAL LABORATORY SERVICES, INC.

Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 240199
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Dr
Costa Mesa CA 92626
Claim Number:
Number of Samples: 43
PO Number:

Date Received: 1/28/2005
Date Analyzed: 2/11/2005
Date Reported: 2/16/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
240199-001 02	Lewis Applied Science (42) - At Entry - Near 103	2x4 Acoustic Ceiling Tile	Beige	35%Cellulose 35%Mineral Wool 30%Perlite
Total Asbestos	**None Detected**			
240199-002 03	Lewis Applied Science (42) - Storage Closet Near Elev.	Wall Plaster	White Yellow	15%Minerals 65%Carbonate 20%Paint
Total Asbestos	**None Detected**			
240199-003 04	Lewis Applied Science (42) - Storage Closet Near Elev.	Base Cove	Black	20%Carbonate 80%Vinyl Binder
Total Asbestos	**None Detected**			
240199-004 05	Lewis Applied Science (42) - Storage Closet Near Elev.	Base Cove Mastic	Brown	28%Fibrous Talc 70% Organic Binder
Anthophyllite	2 %			
Total Asbestos	2 %			
240199-005 06	Lewis Applied Science (42) - At Room 108 - Hall	Base Cove Mastic	Brown	2%Wollastonite 98%Organic Binder
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 240199
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Dr
Costa Mesa CA 92626

Claim Number:
Number of Samples: 43
PO Number:

Date Received: 1/28/2005
Date Analyzed: 2/11/2005
Date Reported: 2/16/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
240199-006 07	Lewis Applied Science (42) - At Room 108 - Hall	Base Cove	Brown	40%Carbonate 60%Vinyl Binder
Total Asbestos	**None Detected**			
240199-007 08	Lewis Applied Science (42) - Entry Area	12 Inch Acoustic Ceiling Tile	Grey Beige	20%Cellulose 75%Mineral Wool 5%Perlite
Total Asbestos	**None Detected**			
240199-008 09	Lewis Applied Science (42) - At Room 101	2x4 Acoustic Ceiling Tile	Beige	40%Cellulose 50%Mineral Wool 10%Perlite
Total Asbestos	**None Detected**			
240199-009 10	Lewis Applied Science (42) - Room 101 (At)	Fireproofing	White	5%Vermiculite 45%Minerals 50%Carbonate
Total Asbestos	**None Detected**			
240199-010 11	Lewis Applied Science (42) - Room 104	12 Inch Vinyl Floor Tile	Beige	45%Carbonate 55%Vinyl Binder
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

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Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 240199
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Dr
Costa Mesa CA 92626
Claim Number:
Number of Samples: 43
PO Number:

Date Received: 1/28/2005
Date Analyzed: 2/11/2005
Date Reported: 2/16/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
240199-010M 11	Lewis Applied Science (42) - Room 104	Mastic	Black	95%Tar
Chrysotile	5 %			
Total Asbestos	**5 %**			
240199-011 12	Lewis Applied Science (42) - Room 104	12 Inch Vinyl Floor Tile	Beige	45%Carbonate 55%Vinyl Binder
Total Asbestos	**None Detected**			
240199-011M 12	Lewis Applied Science (42) - Room 104	Mastic	Black	95%Tar
Chrysotile	5 %			
Total Asbestos	**5 %**			
240199-012 14	Lewis Applied Science (42) - Room 104	Wall Plaster	White	40%Minerals 60%Carbonate
Total Asbestos	**None Detected**			
240199-013 15	Lewis Applied Science (42) - Room 103	12 Inch Multi Vinyl Floor Tile	Beige	50%Carbonate 50%Vinyl Binder
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

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Attn: Michael Collins
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Costa Mesa, CA 92626

Report Number: 240199
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Dr
Costa Mesa CA 92626

Claim Number:
Number of Samples: 43
PO Number:

Date Received: 1/28/2005
Date Analyzed: 2/11/2005
Date Reported: 2/16/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
240199-014 16	Lewis Applied Science (42) - Room 103A	12 Inch Multi Vinyl Floor Tile	Beige	43%Carbonate 55%Vinyl Binder
Chrysotile	2 %			
Total Asbestos	**2 %**			
240199-014M 16	Lewis Applied Science (42) - Room 103A	Mastic	Black	96%Tar
Chrysotile	4 %			
Total Asbestos	**4 %**			
240199-015 17	Lewis Applied Science (42) - Room 101	12 Inch Vinyl Floor Tile	Beige	43%Carbonate 55%Vinyl Binder
Chrysotile	2 %			
Total Asbestos	**2 %**			
240199-015M 17	Lewis Applied Science (42) - Room 101	Mastic	Black	94%Tar
Chrysotile	6 %			
Total Asbestos	**6 %**			

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Polarized Light Microscopy Analysis

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Costa Mesa, CA 92626

Report Number: 240199
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Dr
Costa Mesa CA 92626
Claim Number:
Number of Samples: 43
PO Number:

Date Received: 1/28/2005
Date Analyzed: 2/11/2005
Date Reported: 2/16/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
240199-016 18	Lewis Applied Science (42) - Room 203	2x4 Acoustic Ceiling Tile	Beige	35%Cellulose 35%Mineral Wool 30%Perlite
Total Asbestos	**None Detected**			
240199-017 19	Lewis Applied Science (42) - Room 203	Fireproofing	Beige	3%Vermiculite 60%Sulfate 37%Carbonate
Total Asbestos	**None Detected**			
240199-018 20	Lewis Applied Science (42) - Room 204	Wall Plaster	Beige	35%Minerals 55%Carbonate 10%Paint
Total Asbestos	**None Detected**			
240199-019 21	Lewis Applied Science (42) - Column At Room 208	Wall Plaster	Beige	35%Minerals 55%Carbonate 10%Paint
Total Asbestos	**None Detected**			
240199-020 25	Lewis Applied Science (42) - 2nd Fl - External HVAC Room	HVAC Duct Tape	Beige	80%Cellulose 20%Organic Binder
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number:	239826
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Dr Costa Mesa CA 92626
Claim Number:	
Number of Samples:	26
PO Number:	

Date Received:	1/31/2005
Date Analyzed:	2/18/2005
Date Reported:	2/18/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239826-015M 15	Allied Health (49) - Room 101	Mastic	Brown	5% Wollastonite 95% Non-Fibrous
Total Asbestos	**None Detected**			
239826-016 16	Allied Health (49) - Room 101	Base Cove	Brown	3% Cellulose 97% Non-Fibrous
Total Asbestos	**None Detected**			
239826-016M 16	Allied Health (49) - Room 101	Mastic	Brown	8% Wollastonite 92% Non-Fibrous
Total Asbestos	**None Detected**			
239826-017 17	Allied Health (49) - Room 103 - Under Carpet	Flooring Mastic	Black	95% Tar
Chrysotile	5 %			
Total Asbestos	**5 %**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
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Costa Mesa, CA 92626

Report Number:	239826
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Dr Costa Mesa CA 92626
Claim Number:	
Number of Samples:	26
PO Number:	

Date Received:	1/31/2005
Date Analyzed:	2/18/2005
Date Reported:	2/18/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239826-018 18	Allied Health (49) - Room 101	Carpet Glue	Black, Brown	10% Synthetic Fibers 85% Non-Fibrous
Chrysotile	5 %			
Total Asbestos	**5 %**			
239826-019 19	Allied Health (49) - Room 105	Window Putty	Grey	3% Cellulose 97% Carbonate
Chrysotile	< 1 %			
Total Asbestos	**< 1%**			
239826-020 20	Allied Health (49) - Room 103	Window Putty	Grey	100% Carbonate
Chrysotile	< 1 %			
Total Asbestos	**< 1%**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
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Costa Mesa, CA 92626

Report Number:	239826
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Dr Costa Mesa CA 92626
Claim Number:	
Number of Samples:	26
PO Number:	

Date Received:	1/31/2005
Date Analyzed:	2/18/2005
Date Reported:	2/18/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)

John Lopez
Analyst

Grace Herrera
Approved Signatory

Bulk samples analyzed per 40 CFR 763, Subpart F, Appendix A; EPA-600/R-93/116 and for friable materials, EPA-600/M4-82-020. Samples are analyzed by calibrated visual estimation; therefore, results may not be reliable for samples of low concentration levels. This report applies only to the items tested. The results are representative of the samples submitted and may not represent the entire material from which samples were collected. This report was issued by a NIST/NVLAP (Lab Code 200358-0) accredited laboratory and may not be reproduced without the expressed written consent of Patriot Environmental. This report must not be used to claim product certification, approval or endorsement by NIST, NVLAP or any agency of the federal government.

Samples of wall systems containing discrete and separable layers are analyzed separately and reported as composite. Samples such as floor tiles and ceiling tiles with mastic layers are analyzed and reported separately.

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

239826

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
01	Allied Health (49)	12" ACT - Straight Hole Pattern	X		G	Room 103
NOTE		12" ACT - Straight Hole Pattern	X		G	Present in Rooms 101, 103 & 105
02					G	Room 101
03					G	
04		WP		X	G	Room 101 At Door
05						; Front
06						105
07		Stucco		X	G	Room 103 At Utility Closet
08						
09						Overhead At 103
10						105 near door

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/28/05

Samples received by: Candy Campos Date/Time: 1/28/05 @ 4:00pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

239826

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
11	Allied Health (49)	Beige VFT		X	G	Room 105; Under Carpet
12						
13						
14		Brn Base Cove & Mastic		X	G	Room 103
15						101
17		Flooring Mastic		X	G	Rm 103; under carpet
18		Carpet Glue		X		101
19		WPTY				105
20						103

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty
RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/28/05

Samples received by: Candy Campos Date/Time: 1/28/05 @ 4:00pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES, INC.

Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 239822
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626

Claim Number:
Number of Samples: 39
PO Number:

Date Received: 1/28/2005
Date Analyzed: 2/18/2005
Date Reported: 2/18/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239822-001 01	Horticulture (64) - Room 102	Base Cove	Blue	65% Carbonate 35% Vinyl Binder
Total Asbestos	**None Detected**			
239822-001M 01	Horticulture (64) - Room 102	Base Cove Mastic	Beige	100% Organic Binder
Total Asbestos	**None Detected**			
239822-002 02	Horticulture (64) - Room 103A	Base Cove	Blue	65% Carbonate 35% Vinyl Binder
Total Asbestos	**None Detected**			
239822-002M 02	Horticulture (64) - Room 103A	Base Cove Mastic	Beige	100% Organic Binder
Total Asbestos	**None Detected**			
239822-003 03	Horticulture (64) - Room 102	Base Cove	Blue	65% Carbonate 35% Vinyl Binder
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 239822
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626

Claim Number:
Number of Samples: 39
PO Number:

Date Received: 1/28/2005
Date Analyzed: 2/18/2005
Date Reported: 2/18/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239822-003M 03	Horticulture (64) - Room 102	Base Cove Mastic	Beige	100% Organic Binder
Total Asbestos	None Detected			
239822-004 04	Horticulture (64) - Room 101	Wallboard - Joint Compound	Beige White	88% Sulfate 2% Carbonate 7% Cellulose 3% Paint
Total Asbestos	None Detected			
239822-005A 05	Horticulture (64) - Womens Restroom	Joint Compound	Beige	92% Carbonate 5% Paint
Chrysotile	3 %			
Total Asbestos	3 %			
239822-005B 05	Horticulture (64) - Womens Restroom	Wallboard - Joint Compound	Beige White	85% Sulfate 3% Carbonate 7% Cellulose 2% Glass Fibers 3% Paint
Chrysotile	<1 %			
Total Asbestos	< 1%			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number:	239822
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Drive Costa Mesa CA 92626
Claim Number:	
Number of Samples:	39
PO Number:	

Date Received: 1/28/2005
Date Analyzed: 2/18/2005
Date Reported: 2/18/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239822-006A 06	Horticulture (64) - Room 101 - Upper	Joint Compound	Beige	92% Carbonate 5% Paint
Chrysotile	3 %			
Total Asbestos	3 %			
239822-006B 06	Horticulture (64) - Room 101 - Upper	Wallboard - Joint Compound	Beige	85% Sulfate 3% Carbonate 7% Cellulose 2% Glass Fibers 3% Paint
Chrysotile	<1 %			
Total Asbestos	< 1%			
239822-007A 07	Horticulture (64) - Small Bldg - Maintenance Office	Joint Compound	Beige	92% Carbonate 5% Paint
Chrysotile	3 %			
Total Asbestos	3 %			
239822-007B 07	Horticulture (64) - Small Bldg - Maintenance Office	Wallboard - Joint Compound	Beige	85% Sulfate 5% Carbonate 7% Cellulose 3% Paint
Chrysotile	<1 %			
Total Asbestos	< 1%			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
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Costa Mesa, CA 92626

Report Number: 239822
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626
Claim Number:
Number of Samples: 39
PO Number:

Date Received: 1/28/2005
Date Analyzed: 2/18/2005
Date Reported: 2/18/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239822-008A 08	Horticulture (64) - Room 102 - Upper	Joint Compound	Beige	92% Carbonate 5% Paint
Chrysotile	3 %			
Total Asbestos	**3 %**			
239822-008B 08	Horticulture (64) - Room 102 - Upper	Wallboard - Joint Compound	Beige White	84% Sulfate 4% Carbonate 7% Cellulose 2% Glass Fibers 3% Paint
Chrysotile	<1 %			
Total Asbestos	**< 1%**			
239822-009 09	Horticulture (64) - Chemical Room	Wall Plaster	Grey White	65% Minerals 32% Carbonate 3% Paint
Total Asbestos	**None Detected**			
239822-010 10	Horticulture (64) - Small Bldg Northeast - Chemical Room	Wall Plaster	Grey White	65% Minerals 32% Carbonate 3% Paint
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 239822
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626
Claim Number:
Number of Samples: 39
PO Number:

Date Received: 1/28/2005
Date Analyzed: 2/18/2005
Date Reported: 2/18/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239822-011 11	Horticulture (64) - Small Bldg - Northeast	Window Putty	Beige	92% Carbonate 5% Paint
Chrysotile	3 %			
Total Asbestos	**3 %**			
239822-012 12	Horticulture (64) - Small Bldg - Northeast	Window Putty	Beige	92% Carbonate 5% Paint
Chrysotile	3 %			
Total Asbestos	**3 %**			
239822-013 13	Horticulture (64) - Small Bldg - Northeast	Window Putty	Beige	92% Carbonate 5% Paint
Chrysotile	3 %			
Total Asbestos	**3 %**			
239822-014 14	Horticulture (64) - Room 101	Base Cove	Brown	65% Carbonate 35% Vinyl Binder
Total Asbestos	**None Detected**			
239822-014M 14	Horticulture (64) - Room 101	Base Cove Mastic	Brown	98% Organic Binder
Anthophyllite	2 %			
Total Asbestos	**2 %**			

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Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 239410
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Dr
Costa Mesa CA 92626

Claim Number:
Number of Samples: 55
PO Number:

Date Received: 1/17/2005
Date Analyzed: 2/8/2005
Date Reported: 2/14/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239410-031 40	Chemistry (69) - Room 214 - Lecture Hall	Acoustic Ceiling	White	5%Cellulose 75%Carbonate 20%Foam
Total Asbestos	**None Detected**			
239410-032 41	Chemistry (69) - Room 207 - Lecture Hall	Acoustic Ceiling	White	5%Cellulose 75%Carbonate 20%Foam
Total Asbestos	**None Detected**			
239410-033 42	Chemistry (69) - Room 207 - Rear Lecture Hall	Acoustic Ceiling	White	5%Cellulose 75%Carbonate 20%Foam
Total Asbestos	**None Detected**			
239410-034 43	Chemistry (69) - 1st Floor Custodial	Base Cove	Brown	35%Carbonate 65%Vinyl Binder
Total Asbestos	**None Detected**			
239410-035 44	Chemistry (69) - Room 115	Base Cove	Brown	35%Carbonate 65%Vinyl Binder
Total Asbestos	**None Detected**			

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Attn: Michael Collins
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Costa Mesa, CA 92626

Report Number: 239410
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Dr
Costa Mesa CA 92626
Claim Number:
Number of Samples: 55
PO Number:

Date Received: 1/17/2005
Date Analyzed: 2/8/2005
Date Reported: 2/14/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239410-035M 44	Chemistry (69) - Room 115	Mastic	Brown	100%Organic Binder
Total Asbestos	**None Detected**			
239410-036 45	Chemistry (69) - Room 118	Base Cove	Brown	5%Carbonate 65%Vinyl Binder
Total Asbestos	**None Detected**			
239410-036M 45	Chemistry (69) - Room 118	Mastic	Brown	100%Organic Binder
Total Asbestos	**None Detected**			
239410-037 46	Chemistry (69) - Room 124 - Middle Room	Base Cove	Brown	35%Carbonate 65%Vinyl Binder
Total Asbestos	**None Detected**			
239410-038 47	Chemistry (69) - 2nd Fl - Side Entry Near Horticulture Bldg	Stucco	Grey	60%Minerals 40%Carbonate
Total Asbestos	**None Detected**			

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Costa Mesa, CA 92626

Report Number: 239410
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Dr
Costa Mesa CA 92626

Claim Number:
Number of Samples: 55
PO Number:

Date Received: 1/17/2005
Date Analyzed: 2/8/2005
Date Reported: 2/14/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239410-039 48	Chemistry (69) - 2nd Fl - Side Entry Near Horticulture Bldg	Stucco	Grey	60%Minerals 40%Carbonate
Total Asbestos	**None Detected**			
239410-040 49	Chemistry (69) - Foyer At Stairs	Cement Siding - Exterior	Grey	60%Minerals 40%Carbonate
Total Asbestos	**None Detected**			
239410-041 50	Chemistry (69) - 1st Fl Telephone Equip. Room	Cement Siding - Exterior	Grey	60%Minerals 40%Carbonate
Total Asbestos	**None Detected**			
239410-042 51	Chemistry (69) - South Side Of Bldg	Cement Siding - Exterior	Grey	60%Minerals 40%Carbonate
Total Asbestos	**None Detected**			
239410-043 52	Chemistry (69) - Room 121 - Exterior	Cement Siding - Exterior	Grey	60%Minerals 40%Carbonate
Total Asbestos	**None Detected**			

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Costa Mesa, CA 92626

Report Number: 239410
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Dr
Costa Mesa CA 92626
Claim Number:
Number of Samples: 55
PO Number:

Date Received: 1/17/2005
Date Analyzed: 2/8/2005
Date Reported: 2/14/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239410-044 53	Chemistry (69) - Overhang At Side Entry To Rooms 121-118	Smooth Cement Material	Grey	60%Minerals 40%Carbonate
Total Asbestos	**None Detected**			
239410-045 01	Chemistry (69) - Exterior Utility Room 1A 1B Entry	Fireproofing		
Total Asbestos	**Assumed Positve**			
239410-046 03	Chemistry (69) - 2nd Floor Utility HVAC Chiller Room 2	HVAC Expansion Joint Gasket (WOV)		
Total Asbestos	**Assumed Positve**			
239410-047 04	Chemistry (69) - 2nd Floor Utility HVAC Chiller Room 2	HVAC Joint Tape (TAP)		
Total Asbestos	**Assumed Positve**			
239410-048 06	Chemistry (69) - 1/2+1/2 Door At Room 118 into Office Area	Fire Rated Door (FRD)		
Total Asbestos	**Assumed Positive**			

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Costa Mesa, CA 92626

Report Number: 239410
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Dr
Costa Mesa CA 92626
Claim Number:
Number of Samples: 55
PO Number:

Date Received: 1/17/2005
Date Analyzed: 2/8/2005
Date Reported: 2/14/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239410-049 09	Chemistry (69) - 1/2+1/2 Door At Middle Office Lab Area into 124	Fire Rated Door (FRD)		
Total Asbestos	**Assumed Positive**			
239410-050 11	Chemistry (69) - 1/2+1/2 Door At Middle Office Lab Area into 129	Fire Rated Door (FRD)		
Total Asbestos	**Assumed Positive**			
239410-051 12	Chemistry (69) - 1/2+1/2 Door At Middle Office Lab Area into 115	Fire Rated Door (FRD)		
Total Asbestos	**Assumed Positive**			
239410-052 13	Chemistry (69) - 2nd Floor Room 3 HVAC Room	HVAC Expansion Gasket (WOV)		
Total Asbestos	**Assumed Positve**			
239410-053 14	Chemistry (69) - 2nd Floor Room 3 HVAC Room	HVAC Duct Tape (TAP)		
Total Asbestos	**Assumed Positive**			

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Attn: Michael Collins
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Costa Mesa, CA 92626

Report Number:	239410
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Dr Costa Mesa CA 92626
Claim Number:	
Number of Samples:	55
PO Number:	

Date Received:	1/17/2005
Date Analyzed:	2/8/2005
Date Reported:	2/14/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)

Fred D. Chappelear
Analyst

Cristina E. Tabatt
Approved Signatory

Bulk samples analyzed per 40 CFR 763, Subpart F, Appendix A; EPA-600/R-93/116 and for friable materials, EPA-600/M4-82-020. Samples are analyzed by calibrated visual estimation; therefore, results may not be reliable for samples of low concentration levels. This report applies only to the items tested. The results are representative of the samples submitted and may not represent the entire material from which samples were collected. This report was issued by a NIST/NVLAP (Lab Code 200358-0) accredited laboratory and may not be reproduced without the expressed written consent of Patriot Environmental. This report must not be used to claim product certification, approval or endorsement by NIST, NVLAP or any agency of the federal government.

Samples of wall systems containing discrete and separable layers are analyzed separately and reported as composite. Samples such as floor tiles and ceiling tiles with mastic layers are analyzed and reported separately.

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

239410

…JECT NAME: Orange Coast College

…ROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
01 ASS	Chemistry (69)	Fireproofing - Spray Applied	X		G	Exterior Utility Room 1A, 1B & Entry
~~*~~	~~*NA*~~	~~*NA*~~				~~NA~~
02		T.S.I. - Elbow	X		G	2nd Floor Room 3; Utility Rm.
03 ASS.		HVAC EXPANSION JOINT GASKET (WOV)	X		G	2nd Floor Utility/HVAC/CHILLER Room #2
04 ASS.		HVAC JOINT TAPE (TAP)				
5		WATER/CHILLER LINE ENDCAP AT GUAGE			D	
NOTE		Transite Tabletops - FumeHoods - Lab Stations		X	G	Room 115 - Lab Classroom - Throughout Labs
NOTE		GRN/YEL SFL				Room 115, 118 & Middle Lab Rooms (Both)
06 ASS.		Fire Rated Door (FRD)		X	G	1/2 + 1/2 Door At Room 118 - into Office Area
07		YEL/BRN SFL				Room 121
08		BRN MULTI SFL				Chem. Middle Office Area

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty
RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/17/05

Samples received by: Candy Campos Date/Time: 1/17/05 @ 4:00pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

239410

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
09 ASS.	Chemistry (69)	Fire Rated Door (FRD)		X	G	½ & ½ Door At Middle Office Lab Area into #124
10		Orange Multi SFL		X	G	Room 126 ~~[illegible]~~
11 ASS.		(FRD)		X		½ & ½ Door At Mid. Office Lab Area into #129
NOTE		Brown Multi SFL *NOTE*				Room 107 & Room 106 & Room 109
NOTE		No Access to Room 108				Room 108 - No Access 1/12/05 @ 1:30pm
12 ASS		(FRD)		X	G	½ & ½ Door From Mid. Off Lab Area into #115
NOTE		Brown Multi SFL		X	G	2nd Floor Custodial & 2nd Floor Store Room
13 ASS.		HVAC EXPANSION GASKET (WOV)	X		G	2nd Floor - Rm 3 - HVAC Room
14 ASS.		HVAC DUCT TAPE (TAP)				
15		Brown multi SFL		X		1st Floor Lab Office Area; Storage Room
16						Room 124

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Samples relinquished by: [signature] Date/Time: 1/17/05

Samples received by: Candy Campos Date/Time: 1/17/05 @ 4:00pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

239410

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
17	Chemistry (69)	Leveling Compound		X	G	Room 124; Under Carpet
18		GRN/YEL SFL		X	G	Room 115; Middle Room - Computer Lab
19						Room 115
20						Room 118
21		WB/JC		X	G	Room 211
22						1st Floor Custodial; Under Stairs
23						Exterior Telephone Equip. Room 1A
24						1st Floor at Elevator
25						Room 121
26						Middle Lab Office Area At Water Supply Room
27		Orange SFL		X	G	Room 124; Middle Room

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RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/17/05

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

239410

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
28	Chemistry (69)	Orange SFL		X	G	Room 129
29		12" ACT	X		G	2nd Floor Faculty Office Hall
30						
31						
32		YEL/BRN SFL		X	G	Room 124; Middle [redacted]
33						; Middle Lab Rm
34		2' ACT	X		G	Room 115
35						118
36						232
37		Fireproofing	X		G	1st Floor Custodial Room; Under Stairs
38						2nd Floor At Exterior HVAC/Chiller Room

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Samples relinquished by: [signature] Date/Time: 1/17/05

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 237977
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626
Claim Number:
Number of Samples: 50
PO Number:

Date Received: 1/4/2005
Date Analyzed: 1/25/2005
Date Reported: 1/25/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237977-033 39	Exercise Science 83 - Faculty Office G	12 Inch Acoustic C T - R H	Brown White	96% Cellulose 4% Paint
Total Asbestos	**None Detected**			
237977-034 40	Exercise Science 83 - 1st Fl Ex. Science - Bike Room	Wallboard - Joint Compound	Beige White	80% Sulfate 10% Carbonate 7% Cellulose 3% Paint
Chrysotile	<1 %			
Total Asbestos	**< 1%**			
237977-035 41	Exercise Science 83 - 1st Fl - Ex. Lab	Wallboard - Joint Compound	Beige White	80% Sulfate 10% Carbonate 7% Cellulose 3% Paint
Chrysotile	<1 %			
Total Asbestos	**< 1%**			
237977-036 42	Exercise Science 83 - 1st Fl - Classroom	Wallboard - Joint Compound	White	78% Sulfate 12% Carbonate 7% Cellulose 3% Paint
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 237977
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626
Claim Number:
Number of Samples: 50
PO Number:

Date Received: 1/4/2005
Date Analyzed: 1/25/2005
Date Reported: 1/25/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237977-037 43	Exercise Science 83 - 1st Fl - Ex. Room Above T-Bar Ceiling	Tape - Joint Compound	Beige	82% Carbonate 15% Cellulose
Chrysotile 3 %				
Total Asbestos 3 %				
237977-038 44	Exercise Science 83 - Faculty Office G	Wallboard - Joint Compound	Beige White	80% Sulfate 10% Carbonate 7% Cellulose 3% Paint
Chrysotile <1 %				
Total Asbestos < 1%				
237977-039 45	Exercise Science 83 - Faculty Office A - Closet	Wallboard - Joint Compound	Beige White	80% Sulfate 10% Carbonate 7% Cellulose 3% Paint
Chrysotile <1 %				
Total Asbestos < 1%				
237977-040 46	Exercise Science 83 - Faculty Office - Main Area Utility Closet At Roof Acc	Wallboard - Joint Compound	Grey	80% Sulfate 10% Carbonate 7% Cellulose 3% Paint
Chrysotile <1 %				
Total Asbestos < 1%				

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Polarized Light Microscopy Analysis

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Attn: Michael Collins
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Costa Mesa, CA 92626

Report Number:	237977
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Drive Costa Mesa CA 92626
Claim Number:	
Number of Samples:	50
PO Number:	

Date Received:	1/4/2005
Date Analyzed:	1/25/2005
Date Reported:	1/25/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237977-041 01	Exercise Science 83 - Excercise Lab at Attic Access Panel	TSI (Elbow) 3"		
Total Asbestos	**Assumed Positive**			
237977-042 02	Exercise Science 83 - Excercise Lab at Attic Access Panel	TSI Pipe Insulation 3"		
Total Asbestos	**Assumed Positve**			
237977-043 03	Exercise Science 83 - Execercise Science Classroom Above t-Bar	TSI (Elbow)		
Total Asbestos	**Assumed Positve**			
237977-044 12	Exercise Science 83 - Faculty Office S Utility Closet At Roof Access	TSI Pipe Elbows		
Total Asbestos	**Assumed Positve**			
237977-045 13	Exercise Science 83 - Faculty Office S Utility Closet At Roof Access	HVAC Duct Taping		
Total Asbestos	**Assumed Positve**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
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Costa Mesa, CA 92626

Report Number: 237977
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626
Claim Number:
Number of Samples: 50
PO Number:

Date Received: 1/4/2005
Date Analyzed: 1/25/2005
Date Reported: 1/25/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237977-046 14	Exercise Science 83 - Faculty Office S Utility Closet At Roof Access	HVAC Duct Taping		

Total Asbestos **Assumed Positive**

Ian Reyes
Analyst

Grace Herrera
Approved Signatory

Bulk samples analyzed per 40 CFR 763, Subpart F, Appendix A; EPA-600/R-93/116 and for friable materials, EPA-600/M4-82-020. Samples are analyzed by calibrated visual estimation; therefore, results may not be reliable for samples of low concentration levels. This report applies only to the items tested. The results are representative of the samples submitted and may not represent the entire material from which samples were collected. This report was issued by a NIST/NVLAP (Lab Code 200358-0) accredited laboratory and may not be reproduced without the expressed written consent of Patriot Environmental. This report must not be used to claim product certification, approval or endorsement by NIST, NVLAP or any agency of the federal government.

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

2379777

...ECT NAME: Orange Coast College

...OJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
01 ASS	Exercise Science (83)	T.S.I. (Elbow) 3"	X		D	Exercise Lab At Attic Access Panel
02 ASS	↓	T.S.I. Pipe Insulation 3"	↓		↓	↓
03 ASS	↓	T.S.I. (Elbow)	↓		G	Exercise Science Classroom Above T-Bar
04	↓	Black Base Cove		X	G	First Floor Exercise lab
05	↓	Grey ↓		↓	↓	Faculty Office G (2nd Floor)
6	↓	2'x3' ACT	X		G	Exam Room (1st Floor)
07	↓	↓	↓		↓	Classroom on North Side
08	↓	↓	↓		↓	Exam Room
09	↓	9" Beige VFT		X	G	Faculty Offices (2nd Floor) At Stair Landing At Entry
10	↓	↓		↓	↓	Faculty Office G - under carpet
11	↓	↓		↓	↓	Faculty Office A - Closet

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RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/4/05

Samples received by: Candyo Campos Date/Time: 1/4/05 @ 3:00pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

237977

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
12 ASS	Exercise Science (#83)	T.S.I.: Pipe Elbows	X		G	Faculty Offices. South Utility Closet ; At Roof Access
13 ASS		HVAC Duct Taping				
14 ASS						
15		Sheet Flooring Beige		X	G	Faculty Offices Stair Tread
16						
17						
18						; Stair Bullnose
19		Ceiling Tile Mastic	X		D	1st Floor Exercise Exam Room Above T-Bar Ceiling
20		Carpet Glue		X	G	1st Floor Exercise Room - Cardio Room
21		Stucco		X	G	Exercise Science ; West Side
22						; East Side

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/4/05

Samples received by: Candy Campos Date/Time: 1/4/05 @ 3:00pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

237977

ECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
23	Exercise Science (#83)	WP		X	G	At Stairs To 2nd Floor Faculty Offices
24		↓		↓	↓	Exercise Lab at West End of 1st Floor
25		Tan VFT		X	G	1st Floor Exercise Lab Under Carpet
26						; Bike Lab Under Carpet
27						; Fitness Room Under Carpet
8		↓		↓	↓	; ↓
29		12" Blue VFT		X	G	Faculty Office - Mens Restroom
30						-
31						-
32		↓		↓	↓	- Womens Restroom
33		12" ACT - Random Hole	X		G	1st Floor Ex. Lab - Bike Room

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty
RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/4/05

Samples received by: Candy Campos Date/Time: 1/4/05 @ 3:00pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

237977

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
34	Exercise Science (#B3)	12" ACT - Random Hole	X		G	1st Floor Ex. Lab. - Cardio Room
35		12" ACT - Semi Rough, Random Hole				- Fitness Room
36						-
37		12" ACT Random Hole				Faculty Office A (2nd Floor)
38						Main Hall Area
39						Faculty Office G
40		WB/JC		X		1st Floor Exercise Science - Bike Room
41						- Ex. Lab
42						- Classroom
43		Tape & J/C				- Exam Room above T-Bar Ceiling
44		WB/JC				Faculty Office G

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

237977

[PROJ]ECT NAME: Orange Coast College

[P]ROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
45	Exercise Science (#83)	WB/JC		X	G	Faculty Office A · Closet
46	↓	↓		↓	↓	↓ - Main Area Utility Closet At Roof Acc.

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Samples relinquished by: [signature] Date/Time: 1/4/05

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES, INC.

Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 237980
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626
Claim Number:
Number of Samples: 56
PO Number:

Date Received: 1/4/2005
Date Analyzed: 1/27/2005
Date Reported: 1/27/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237980-001 02	Social Science 80 - Room 110	2ft Acoustic Wall Tiles	Brown White	96% Cellulose 4% Paint
Total Asbestos	None Detected			
237980-002 03	Social Science 80 - Room 101	2ft Acoustic Wall Tiles	Brown White	96% Cellulose 4% Paint
Total Asbestos	None Detected			
237980-003 04	Social Science 80 - Room 108	2ft Acoustic Wall Tiles	Brown White	96% Cellulose 4% Paint
Total Asbestos	None Detected			
237980-004 05	Social Science 80 - Mens Restroom	Wall Plaster	Beige	65% Minerals 32% Carbonate 3% Paint
Total Asbestos	None Detected			
237980-005 06	Social Science 80 - Womens Restroom	Wall Plaster	Beige	65% Minerals 32% Carbonate 3% Paint
Total Asbestos	None Detected			

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Costa Mesa CA 92626
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Date Received: 1/4/2005
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Date Reported: 1/27/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237980-006 07	Social Science 80 - Utility Rm - Near Restrooms	Wall Plaster	Beige White	40% Minerals 40% Sulfate 15% Carbonate 3% Cellulose 2% Paint
Total Asbestos	**None Detected**			
237980-007 08	Social Science 80 - Room 101 - Front Entry	Window Putty	Grey	100% Carbonate
Total Asbestos	**None Detected**			
237980-008 09	Social Science 80 - Above T-Bar Ceiling Room 110	12 Inch Acoustic Ceiling Tile -	Brown White	96% Cellulose 4% Paint
Total Asbestos	**None Detected**			
237980-009 10	Social Science 80 - Room 101	12 Inch Acoustic Ceiling Tile -	Brown White	96% Cellulose 4% Paint
Total Asbestos	**None Detected**			
237980-010 11	Social Science 80 - Above T-Bar Ceiling Room 106	12 Inch Acoustic Ceiling Tile -	Brown White	96% Cellulose 4% Paint
Total Asbestos	**None Detected**			

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Date Reported: 1/27/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237980-011 12	Social Science 80 - At Room 112-110 Doorway	Stucco	Grey Beige	75% Minerals 22% Carbonate 3% Paint
Chrysotile	<1 %			
Total Asbestos	< 1%			
237980-012 13	Social Science 80 - At Room 104 Front Entry	Stucco	Grey Beige	75% Minerals 22% Carbonate 3% Paint
Chrysotile	<1 %			
Total Asbestos	< 1%			
237980-013 14	Social Science 80 - At Room 111	Stucco	Grey Beige	75% Minerals 22% Carbonate 3% Paint
Chrysotile	<1 %			
Total Asbestos	< 1%			
237980-014 15	Social Science 80 - At Room 108	Cement - Exterior	Grey	80% Minerals 20% Carbonate
Total Asbestos	**None Detected**			

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

239410

ECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
39	Chemistry (69)	A/C	X		G	Room 214 ; Lecture Hall
40						
41						207 ;
42						; Rear
43		Brown Base Cove		X	G	1st Floor Custodial
44						Room 115
45						118
46						124 ; Middle Room
47		Stucco		X	G	2nd Floor Side Entry near Horticulture Bldg
48						
49		Cement Siding - Exterior		X	G	Foyer at Stairs

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Samples relinquished by: [signature] Date/Time: 1/17/05

Samples received by: Candy Campos Date/Time: 1/17/05 @ 4:00pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

239410.

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
50	Chemistry (69)	Cement Siding - Exterior		X	G	1st Floor Telephone Equip. Room
51						South Side of Bldg.
52						Room 121 - Exterior
53		Smooth Cement Material				Overhang At Side Entry To Rooms 121/118

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Samples relinquished by: [signature] Date/Time: 1/17/05

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number:	237977
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Drive Costa Mesa CA 92626
Claim Number:	
Number of Samples:	50
PO Number:	

Date Received:	1/4/2005
Date Analyzed:	1/25/2005
Date Reported:	1/25/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237977-001 04	Exercise Science 83 - First Floor	Base Cove	Black	65% Carbonate 35% Vinyl Binder
Total Asbestos	**None Detected**			
237977-002 05	Exercise Science 83 - Faculty Office G-2nd Fl	Base Cove	Grey	65% Carbonate 35% Vinyl Binder
Total Asbestos	**None Detected**			
237977-003 06	Exercise Science 83 - Exam Room 1st Floor	2x3 Acoustic Ceiling Tile	Grey White	20% Mineral Wool 65% Cellulose 12% Perlite 3% Paint
Total Asbestos	**None Detected**			
237977-004 07	Exercise Science 83 - Classroom On North Side	2x3 Acoustic Ceiling Tile	Grey White	20% Mineral Wool 65% Cellulose 12% Perlite 3% Paint
Total Asbestos	**None Detected**			

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Date Reported: 1/25/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237977-005 08	Exercise Science 83 - Exam Room	2x3 Acoustic Ceiling Tile	Grey White	20% Mineral Wool 65% Cellulose 12% Perlite 3% Paint
Total Asbestos	**None Detected**			
237977-006 09	Exercise Science 83 - Faculty Offices -2nd Fl - At Stair Landing	9 Inch Vinyl Floor Tile	Beige	77% Carbonate 20% Vinyl Binder
Chrysotile	3 %			
Total Asbestos	3 %			
237977-007 10	Exercise Science 83 - Faculty Office G - Under Carpet	9 Inch Vinyl Floor Tile	Beige	77% Carbonate 20% Vinyl Binder
Chrysotile	3 %			
Total Asbestos	3 %			
237977-008 11	Exercise Science 83 - Faculty Office A - Closet	9 Inch Vinyl Floor Tile	Beige	77% Carbonate 20% Vinyl Binder
Chrysotile	3 %			
Total Asbestos	3 %			

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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237977-009 15	Exercise Science 83 - Faculty Offices Stair Tread	Sheet Flooring	Beige	75% Carbonate 25% Vinyl Binder
Total Asbestos	**None Detected**			
237977-010 16	Exercise Science 83 - Faculty Offices Stair Tread	Sheet Flooring	Beige	75% Carbonate 25% Vinyl Binder
Total Asbestos	**None Detected**			
237977-011 17	Exercise Science 83 - Faculty Offices Stair Tread	Sheet Flooring	Beige	75% Carbonate 25% Vinyl Binder
Total Asbestos	**None Detected**			
237977-012 18	Exercise Science 83 - Faculty Offices - Stair Bullnose	Sheet Flooring	Beige	75% Carbonate 25% Vinyl Binder
Total Asbestos	**None Detected**			
237977-013 19	Exercise Science 83 - 1st Fl Exercise Exam Rm Above T-Bar Ceiling	Ceiling Tile Mastic	Brown	100% Organic Binder
Total Asbestos	**None Detected**			

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Claim Number:
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Date Received: 1/4/2005
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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237977-014 20	Exercise Science 83 - 1st Fl exercise Rm - Cardio Rm	Carpet Glue	Black	90% Tar
Chrysotile	10 %			
Total Asbestos	**10 %**			
237977-015 21	Exercise Science 83 - Exercise Science - West Side	Stucco	Grey Beige	75% Minerals 22% Carbonate 3% Paint
Total Asbestos	**None Detected**			
237977-016 22	Exercise Science 83 - Exercise Science - East Side	Stucco	Grey Beige	75% Minerals 22% Carbonate 3% Paint
Total Asbestos	**None Detected**			
237977-017 23	Exercise Science 83 - At Stairs - 2nd Fl Faculty Offices	Wall Plaster	Beige White	55% Minerals 42% Carbonate 3% Paint
Total Asbestos	**None Detected**			
237977-018 24	Exercise Science 83 - Exercise Lab At West End Of 1st Fl	Wall Plaster	Beige White	55% Minerals 42% Carbonate 3% Paint
Total Asbestos	**None Detected**			

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Report Number: 237977
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626
Claim Number:
Number of Samples: 50
PO Number:

Date Received: 1/4/2005
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Date Reported: 1/25/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237977-019 25	Exercise Science 83 - 1st Fl Exercise Lab Under Carpet	Vinyl Floor Tile	Tan	74% Carbonate 20% Vinyl Binder
Chrysotile	6 %			
Total Asbestos	6 %			
237977-020 26	Exercise Science 83 - 1st Fl Bike Lab - Under Carpet	Vinyl Floor Tile	Tan	76% Carbonate 20% Vinyl Binder
Chrysotile	4 %			
Total Asbestos	4 %			
237977-021 27	Exercise Science 83 - 1st Fl Fitness Rm - Under Carpet	Vinyl Floor Tile	Tan	76% Carbonate 20% Vinyl Binder
Chrysotile	4 %			
Total Asbestos	4 %			
237977-022 28	Exercise Science 83 - 1st Fl Fitness Rm - Under Carpet	Vinyl Floor Tile	Tan	74% Carbonate 20% Vinyl Binder
Chrysotile	6 %			
Total Asbestos	6 %			

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Polarized Light Microscopy Analysis

Coast Community College
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Costa Mesa, CA 92626

Report Number: 237977
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626
Claim Number:
Number of Samples: 50
PO Number:

Date Received: 1/4/2005
Date Analyzed: 1/25/2005
Date Reported: 1/25/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237977-023A 29	Exercise Science 83 - Faculty Office - Mens Restroom	12 Inch Vinyl Floor Tile	Blue	80% Carbonate 20% Vinyl Binder
Total Asbestos	**None Detected**			
237977-023B 29	Exercise Science 83 - Faculty Office - Mens Restroom	12 Inch Vinyl Floor Tile	Beige	75% Carbonate 20% Vinyl Binder
Chrysotile	5 %			
Total Asbestos	**5 %**			
237977-024A 30	Exercise Science 83 - Faculty Office - Mens Restroom	12 Inch Vinyl Floor Tile	Blue	80% Carbonate 20% Vinyl Binder
Total Asbestos	**None Detected**			
237977-024B 30	Exercise Science 83 - Faculty Office - Mens Restroom	12 Inch Vinyl Floor Tile	Beige	75% Carbonate 20% Vinyl Binder
Chrysotile	5 %			
Total Asbestos	**5 %**			

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Report Number:	237977
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Claim Number:	
Number of Samples:	50
PO Number:	

Date Received:	1/4/2005
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Date Reported:	1/25/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237977-025A 31	Exercise Science 83 - Faculty Office - Mens Restroom	12 Inch Vinyl Floor Tile	Blue	80% Carbonate 20% Vinyl Binder
Total Asbestos	**None Detected**			
237977-025B 31	Exercise Science 83 - Faculty Office - Mens Restroom	12 Inch Vinyl Floor Tile	Beige	75% Carbonate 20% Vinyl Binder
Chrysotile	5 %			
Total Asbestos	**5 %**			
237977-026A 32	Exercise Science 83 - Faculty Office - Womens Restroom	12 Inch Vinyl Floor Tile	Blue	80% Carbonate 20% Vinyl Binder
Total Asbestos	**None Detected**			
237977-026B 32	Exercise Science 83 - Faculty Office - Womens Restroom	12 Inch Vinyl Floor Tile	Beige	75% Carbonate 20% Vinyl Binder
Chrysotile	5 %			
Total Asbestos	**5 %**			
237977-027 33	Exercise Science 83 - 1st Fl Ex. Lab - Bike Room	12 Inch Acoustic CT - R H	Brown White	96% Cellulose 4% Paint
Total Asbestos	**None Detected**			

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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237977-028 34	Exercise Science 83 - 1st Fl Ex Lab - Cardio Rm	12 Inch Acoustic C T - R H	Brown White	96% Cellulose 4% Paint
Total Asbestos	**None Detected**			
237977-029 35	Exercise Science 83 - 1st Fl Fitness Room	12 Inch Acoustic C T - SRRH	Grey White	27% Mineral Wool 70% Cellulose 3% Paint
Total Asbestos	**None Detected**			
237977-030 36	Exercise Science 83 - 1st Fl Fitness Room	12 Inch Acoustic C T - SRRC	Grey White	27% Mineral Wool 70% Cellulose 3% Paint
Total Asbestos	**None Detected**			
237977-031 37	Exercise Science 83 - Faculty Office A - 2nd Floor	12 Inch Acoustic C T - R H	Brown White	96% Cellulose 4% Paint
Total Asbestos	**None Detected**			
237977-032 38	Exercise Science 83 - Main Hall Area	12 Inch Acoustic C T - R H	Brown White	96% Cellulose 4% Paint
Total Asbestos	**None Detected**			

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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237980-015 16	Social Science 80 - At Room 108	Smooth Coat - Exterior	Grey Beige	70% Minerals 25% Carbonate 5% Paint
Total Asbestos	**None Detected**			
237980-016 17	Social Science 80 - At Room 112 Above Door	Smooth Coat - Exterior	Grey Beige	70% Minerals 25% Carbonate 5% Paint
Total Asbestos	**None Detected**			
237980-017 18	Social Science 80 - At Room 111 At Door	Smooth Coat - Exterior	Grey Beige	70% Minerals 25% Carbonate 5% Paint
Total Asbestos	**None Detected**			
237980-018 19	Social Science 80 - Room 103	2x3 Acoustic Ceiling Tile	Grey White	20% Mineral Wool 65% Cellulose 12% Perlite 3% Paint
Total Asbestos	**None Detected**			

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Claim Number:	
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PO Number:	

Date Received:	1/4/2005
Date Analyzed:	1/27/2005
Date Reported:	1/27/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237980-019 20	Social Science 80 - Room 110	2x3 Acoustic Ceiling Tile	Grey White	20% Mineral Wool 65% Cellulose 12% Perlite 3% Paint
Total Asbestos	**None Detected**			
237980-020 21	Social Science 80 - Room 106	2x3 Acoustic Ceiling Tile	Grey White	20% Mineral Wool 65% Cellulose 12% Perlite 3% Paint
Total Asbestos	**None Detected**			
237980-021 22	Social Science 80 - Room 101	Smooth Coat - Interior	Beige	20% Carbonate 80% Paint
Total Asbestos	**None Detected**			
237980-022 23	Social Science 80 - Room 101 - Rear	Rough Coat - Beams	White	40% Minerals 57% Carbonate 3% Paint
Total Asbestos	**None Detected**			

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Date Received:	1/4/2005
Date Analyzed:	1/27/2005
Date Reported:	1/27/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237980-023 24	Social Science 80 - Room 112 - Front	Rough Coat - Beams	White	40% Minerals 57% Carbonate 3% Paint
Total Asbestos	**None Detected**			
237980-024 25	Social Science 80 - Exterior Utility Rm - Near Room 112	Rough Coat - Beams	White	40% Minerals 57% Carbonate 3% Paint
Total Asbestos	**None Detected**			
237980-025 26	Social Science 80 - Room 110 Above T-Bar Ceiling	Rough Coat - Beams	White	40% Minerals 57% Carbonate 3% Paint
Total Asbestos	**None Detected**			
237980-026 27	Social Science 80 - Utility Room - Near Room 112	Walboard - Joint Compound	Beige White	91% Sulfate 5% Cellulose 2% Glass Fibers 2% Paint
Total Asbestos	**None Detected**			
237980-027A 28	Social Science 80 - Room 104	Joint Compound	Beige	92% Carbonate 5% Paint
Chrysotile	3 %			
Total Asbestos	3 %			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 237980
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626
Claim Number:
Number of Samples: 56
PO Number:

Date Received: 1/4/2005
Date Analyzed: 1/27/2005
Date Reported: 1/27/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237980-027B 28	Social Science 80 - Room 104	Walboard - Joint Compound	Beige	84% Sulfate 6% Carbonate 7% Cellulose 3% Paint
Chrysotile	<1 %			
Total Asbestos	**<1%**			
237980-028 29	Social Science 80 - Room 110 At Door	Joint Compound	Beige	92% Carbonate 5% Paint
Chrysotile	3 %			
Total Asbestos	**3 %**			
237980-029A 30	Social Science 80 - Room 112 - Rear	Joint Compound	Beige	92% Carbonate 5% Paint
Chrysotile	3 %			
Total Asbestos	**3 %**			
237980-029B 30	Social Science 80 - Room 112 - Rear	Walboard - Joint Compound	Beige	84% Sulfate 6% Carbonate 7% Cellulose 3% Paint
Chrysotile	<1 %			
Total Asbestos	**<1%**			

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Costa Mesa, CA 92626

Report Number: 237980
Project Number: 19378
Project Name: Orange Coast College
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Costa Mesa CA 92626

Claim Number:
Number of Samples: 56
PO Number:

Date Received: 1/4/2005
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Date Reported: 1/27/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237980-030A 31	Social Science 80 - Room 103 - West	Joint Compound	Beige	92% Carbonate 5% Paint
Chrysotile	3 %			
Total Asbestos	3 %			
237980-030B 31	Social Science 80 - Room 103 - West	Walboard - Joint Compound	Beige	84% Sulfate 6% Carbonate 7% Cellulose 3% Paint
Chrysotile	<1 %			
Total Asbestos	< 1%			
237980-031A 32	Social Science 80 - Room 105 - East	Joint Compound	Beige	92% Carbonate 5% Paint
Chrysotile	3 %			
Total Asbestos	3 %			
237980-031B 32	Social Science 80 - Room 105 - East	Walboard - Joint Compound	Beige	84% Sulfate 6% Carbonate 7% Cellulose 3% Paint
Chrysotile	<1 %			
Total Asbestos	< 1%			

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Claim Number:
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Date Received: 1/4/2005
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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237980-032 33	Social Science 80 - Room 101 - Under Carpet	Vinyl Floor Tile	Beige	77% Carbonate 20% Vinyl Binder
Chrysotile	3 %			
Total Asbestos	**3 %**			
237980-032M 33	Social Science 80 - Room 101 - Under Carpet	Floor Tile Mastic	Black	90% Tar
Chrysotile	10 %			
Total Asbestos	**10 %**			
237980-033 34	Social Science 80 - Room 106 - Under Carpet	Vinyl Floor Tile	Beige	76% Carbonate 20% Vinyl Binder
Chrysotile	4 %			
Total Asbestos	**4 %**			
237980-033M 34	Social Science 80 - Room 106 - Under Carpet	Floor Tile Mastic	Black	90% Tar
Chrysotile	10 %			
Total Asbestos	**10 %**			

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Costa Mesa CA 92626

Claim Number:
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PO Number:

Date Received: 1/4/2005
Date Analyzed: 1/27/2005
Date Reported: 1/27/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237980-034 35	Social Science 80 - Room 108 - Under Carpet	Vinyl Floor Tile	Beige	77% Carbonate 20% Vinyl Binder
Chrysotile	3 %			
Total Asbestos	3 %			
237980-034M 35	Social Science 80 - Room 108 - Under Carpet	Floor Tile Mastic	Black	90% Tar
Chrysotile	10 %			
Total Asbestos	10 %			
237980-035 36	Social Science 80 - Room 110 - Under Carpet	Vinyl Floor Tile	Beige	80% Carbonate 20% Vinyl Binder
Total Asbestos	**None Detected**			
237980-035M 36	Social Science 80 - Room 110 - Under Carpet	Floor Tile Mastic	Black	90% Tar
Chrysotile	10 %			
Total Asbestos	10 %			

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Costa Mesa CA 92626
Claim Number:
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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237980-036 37	Social Science 80 - Room 104 - Under Carpet	Vinyl Floor Tile	Beige	76% Carbonate 20% Vinyl Binder
Chrysotile	4 %			
Total Asbestos	4 %			
237980-036M 37	Social Science 80 - Room 104 - Under Carpet	Floor Tile Mastic	Black	90% Tar
Chrysotile	10 %			
Total Asbestos	10 %			
237980-037 38	Social Science 80 - Room 103 - Under Carpet	Vinyl Floor Tile	Beige	76% Carbonate 20% Vinyl Binder
Chrysotile	4 %			
Total Asbestos	4 %			
237980-037M 38	Social Science 80 - Room 103 - Under Carpet	Floor Tile Mastic	Black	90% Tar
Chrysotile	10 %			
Total Asbestos	10 %			

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Claim Number:
Number of Samples: 56
PO Number:

Date Received: 1/4/2005
Date Analyzed: 1/27/2005
Date Reported: 1/27/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237980-038 39	Social Science 80 - Room 105 - Under Carpet	Vinyl Floor Tile	Beige	76% Carbonate 20% Vinyl Binder
Chrysotile	4 %			
Total Asbestos	4 %			
237980-038M 39	Social Science 80 - Room 105 - Under Carpet	Floor Tile Mastic	Black	90% Tar
Chrysotile	10 %			
Total Asbestos	10 %			
237980-039 40	Social Science 80 - Room 112 - Under Carpet	Leveling Compound	White	100% Carbonate
Total Asbestos	**None Detected**			
237980-040 41	Social Science 80 - Room 110 - Under Carpet	Leveling Compound	White	100% Carbonate
Total Asbestos	**None Detected**			
237980-041 42	Social Science 80 - Room 112 - Under Carpet	Base Cove	Black	65% Carbonate 35% Vinyl Binder
Total Asbestos	**None Detected**			

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Costa Mesa CA 92626

Claim Number:
Number of Samples: 56
PO Number:

Date Received: 1/4/2005
Date Analyzed: 1/27/2005
Date Reported: 1/27/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237980-041M 42	Social Science 80 - Room 112 - Under Carpet	Base Cove Mastic	Yellow	100% Organic Binder
Total Asbestos	**None Detected**			
237980-042 43	Social Science 80 - Room 103 - Under Carpet	Base Cove	Black	65% Carbonate 35% Vinyl Binder
Total Asbestos	**None Detected**			
237980-042M 43	Social Science 80 - Room 103 - Under Carpet	Base Cove Mastic	Yellow	100% Organic Binder
Total Asbestos	**None Detected**			
237980-043 1	Social Science 80 - Utility Room	FDR		
Total Asbestos	**Assumed Positive**			

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Project Location: 2701 Fairview Drive
Costa Mesa CA 92626
Claim Number:
Number of Samples: 56
PO Number:

Date Received: 1/4/2005
Date Analyzed: 1/27/2005
Date Reported: 1/27/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)

Ian Reyes
Analyst

Grace Herrera
Approved Signatory

Bulk samples analyzed per 40 CFR 763, Subpart F, Appendix A; EPA-600/R-93/116 and for friable materials, EPA-600/M4-82-020. Samples are analyzed by calibrated visual estimation; therefore, results may not be reliable for samples of low concentration levels. This report applies only to the items tested. The results are representative of the samples submitted and may not represent the entire material from which samples were collected. This report was issued by a NIST/NVLAP (Lab Code 200358-0) accredited laboratory and may not be reproduced without the expressed written consent of Patriot Environmental. This report must not be used to claim product certification, approval or endorsement by NIST, NVLAP or any agency of the federal government.

Samples of wall systems containing discrete and separable layers are analyzed separately and reported as composite. Samples such as floor tiles and ceiling tiles with mastic layers are analyzed and reported separately.

237980-028 No Drywall Present

PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

237980

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
01 AS4	Social Science (80)	FDR		X	D	Utility Room at Telephone Room near Classroom 112
02		2' Acoustic Wall Tiles	X		G	Room 110
03						101
04						108
05		WP		X	G	Mens Restroom
06						Womens Restroom
07						Utility Room (near Restrooms)
08		WPTY		X	G	Room 101 - Front Entry
09		12" ACT - Random Hole	X		G	Above T-Bar Ceiling in Room 110
10		-				Room 101
11		-				Above T-Bar Ceiling in Room 106

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty
RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/4/05

Samples received by: Candy Campos Date/Time: 1/4/05 @ 3:00pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

237980

…CT NAME: Orange Coast College

…ECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
12	Social Science (80)	Stucco		X	G	At Room 112/110 Doorway
13						At Room 104 Front Entry
14						At Room 111
15		Cement - Ext		X	G	At Room 108
16		Smooth Coat - Ext		X	G	At Room 108
17						At Room 112 Above Door
18						At Room 111 At Door
19		2'X3' ACT	X		G	Room 103
20						110
21						106
22		Smooth Coat - Interior		X	G	Room 101

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty
RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

237980

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
23	Social Science (80)	Rough Coat - Beams		X	D	Room 101 - Rear
24					G	Room 112 - Front
25						Ext. Utility Room (near Rm 112)
26						Room 110 Above - T-Bar Ceiling
27		WB/JC				Utility Room (near Room 112)
28				X		Room 104
29						Room 110 at Door
30						112 - Rear
31						103 - West
32						105 - East
33		VFT		X	G	Room 101 - Under Carpet

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/4/05

Samples received by: Candy Campos Date/Time: 1/4/05 @ 3:00pm

PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

237980

ECT NAME: Orange Coast College

OJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
34	Social Science (80)	VFT		X	G	Room 106 ; under carpet
35						108 ;
36						110 ;
37						104 ;
38						103 ;
39						105 ;
40		Leveling Compound		X	G	112 ;
41						110 ;
42		Black Base Cove		X	G	112
43						103

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: Date/Time: 1/4/05

Samples received by: Candy Campos Date/Time: 1/4/05 @ 3:00 pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES, INC

NESHAP Point Counting by Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 242111
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626

Date Received: 1/4/2005
Date Analyzed: 3/4/2005
Date Reported: 3/4/2005

Claim Number: NA
Number of Samples: 1
PO Number: NA

Lab/Client ID/Layer	Location	Material Description	Color	Composition
242111-001 12	Social Science 80 - At Room 112-110 Doorway	Stucco	Grey Beige	75% Minerals 22% Carbonate 3% Paint

Total Asbestos <0.1%

EPA 400 Pt. Point Count Method Has Been Extended to 1000 pts To Meet The Cal OSHA Limit Of 0.1%

Ian Reyes
Analyst

Grace Herrera
Approved Signatory

Bulk samples analyzed per 40 CFR 763, Subpart F, Appendix A; EPA-600/R-93/116 and for friable materials, EPA-600/M4-82-020. Samples are analyzed by calibrated visual estimation; therefore, results may not be reliable for samples of low concentration levels. This report applies only to the items tested. The results are representative of the samples submitted and may not represent the entire material from which samples were collected. This report was issued by a NIST/NVLAP accredited laboratory and may not be reproduced without the expressed written consent of Patriot Environmental.

PATRIOT ENVIRONMENTAL LABORATORY SERVICES, INC.

Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 237984
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626

Claim Number:
Number of Samples: 28
PO Number:

Date Received: 1/4/2005
Date Analyzed: 1/28/2005
Date Reported: 1/31/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237984-001 03	Computing Center 73 - Loft Near Elevator - Equip Room	TSI Pipe Elbows	Grey	84% Carbonate 10% Glass Fibers
Chrysotile	3 %			
Amosite	3 %			
Total Asbestos	6 %			
237984-002 06	Computing Center 73 - Classroom 105 - Storage Room	9 Inch Vinyl Floor Tile	Beige	77% Carbonate 20% Vinyl Binder
Chrysotile	3 %			
Total Asbestos	3 %			
237984-002M 06	Computing Center 73 - Classroom 105 - Storage Room	Floor Tile Mastic	Black	90% Tar
Chrysotile	10 %			
Total Asbestos	10 %			
237984-003 07	Computing Center 73 - Classroom 6 - Above T-Bar Ceiling	Fire Proofing	Beige	65% Sulfate 25% Vermiculite
Chrysotile	10 %			
Total Asbestos	10 %			

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Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Drive Costa Mesa CA 92626
Claim Number:	
Number of Samples:	28
PO Number:	

Date Received:	1/4/2005
Date Analyzed:	1/28/2005
Date Reported:	1/31/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237984-004 08	Computing Center 73 - Classroom - Above T-Bar Ceiling	2x3 Acoustic Ceiling Tile	Grey White	20% Mineral Wool 65% Cellulose 12% Perlite 3% Paint
Total Asbestos	None Detected			
237984-005 09	Computing Center 73 - Main Entry Area At Classroom 6	Base Cove	Blue	65% Carbonate 35% Vinyl Binder
Total Asbestos	None Detected			
237984-006 10	Computing Center 73 - Classroom 102 - Hall	Base Cove	Blue	65% Carbonate 35% Vinyl Binder
Total Asbestos	None Detected			
237984-007 11	Computing Center 73 - Mens Exterior Restroom	Wall Plaster - Smooth Coat	Beige	65% Minerals 32% Carbonate 3% Paint
Total Asbestos	None Detected			
237984-008 12	Computing Center 73 - Womens Exterior Restroom	Wall Plaster - Smooth Coat	Beige	65% Minerals 32% Carbonate 3% Paint
Total Asbestos	None Detected			

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Claim Number:
Number of Samples: 28
PO Number:

Date Received: 1/4/2005
Date Analyzed: 1/28/2005
Date Reported: 1/31/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237984-009 13	Computing Center 73 - At Service Elevator	Wall Plaster - Smooth Coat	Beige	65% Minerals 32% Carbonate 3% Paint
Total Asbestos	**None Detected**			
237984-010 14	Computing Center 73 - At Room D-11 2nd Fl - At Doorway	Wall Plaster - Smooth Coat	Beige	65% Minerals 32% Carbonate 3% Paint
Total Asbestos	**None Detected**			
237984-011 15	Computing Center 73 - Ceiling Of D-12 2nd Fl	Wall Plaster - Rough Coat	Beige	65% Minerals 32% Carbonate 3% Paint
Total Asbestos	**None Detected**			
237984-012 16	Computing Center 73 - Under Carpet Of Main Entry Area At Service Elevator	Vinyl Floor Tile	Beige	72% Carbonate 20% Vinyl Binder
Chrysotile	8 %			
Total Asbestos	8 %			

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Project Name: Orange Coast College
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Costa Mesa CA 92626

Claim Number:
Number of Samples: 28
PO Number:

Date Received: 1/4/2005
Date Analyzed: 1/28/2005
Date Reported: 1/31/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237984-013 17	Computing Center 73 - Under Carpet At Classroom 105	Vinyl Floor Tile	Beige	76% Carbonate 20% Vinyl Binder
Chrysotile	4 %			
Total Asbestos	4 %			
237984-014 18	Computing Center 73 - Classroom 105	Wallboard - Joint Compound	Beige	87% Sulfate 3% Carbonate 7% Cellulose 3% Paint
Total Asbestos	None Detected			
237984-015A 19	Computing Center 73 - Exterior Utility Rm Nearest Telephone Equip Room	Joint Compound	Beige	92% Carbonate 5% Paint
Chrysotile	3 %			
Total Asbestos	3 %			
237984-015B 19	Computing Center 73 - Exterior Utility Rm Nearest Telephone Equip Room	Wallboard - Joint Compound	Beige	83% Sulfate 7% Carbonate 7% Cellulose 3% Paint
Chrysotile	<1 %			
Total Asbestos	<1%			

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Claim Number:
Number of Samples: 28
PO Number:

Date Received: 1/4/2005
Date Analyzed: 1/28/2005
Date Reported: 1/31/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237984-016 20	Computing Center 73 - Exterior Telephone Equip Rm	Wallboard - Joint Compound	White	93% Sulfate 5% Cellulose 2% Glass Fibers
Total Asbestos	**None Detected**			
237984-017 21	Computing Center 73 - Main Entry Area - Rear Wall	Wallboard	White	94% Sulfate 6% Cellulose
Total Asbestos	**None Detected**			
237984-018 22	Computing Center 73 - Overhang At Front Walkway	Stucco	Grey Beige	75% Minerals 22% Carbonate 3% Paint
Total Asbestos	**None Detected**			
237984-019 23	Computing Center 73 - Doorway Overhang At South End Of Bldg	Stucco	Grey Beige	75% Minerals 22% Carbonate 3% Paint
Total Asbestos	**None Detected**			
237984-020 24	Computing Center 73 - Rear Loading Dock Overhang	Stucco	Grey Beige	75% Minerals 22% Carbonate 3% Paint
Total Asbestos	**None Detected**			

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Claim Number:
Number of Samples: 28
PO Number:

Date Received: 1/4/2005
Date Analyzed: 1/28/2005
Date Reported: 1/31/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237984-021 25	Computing Center 73 - Rear At Telephone Equip Room	Exterior Smooth Coat	Beige	70% Minerals 24% Carbonate 6% Paint
Total Asbestos	**None Detected**			
237984-022 26	Computing Center 73 - South Side Nearest Social Science Bldg	Exterior Smooth Coat	Beige	70% Minerals 24% Carbonate 6% Paint
Total Asbestos	**None Detected**			
237984-023 01	Computing Center 73 - Utility Room - Exterior	Fireproofing		
Total Asbestos	**Assumed Positve**			
237984-024 02	Computing Center 73 - Interior Loft near Elevator	TSI Pipe Ins		
Total Asbestos	**Assumed Positve**			
237984-025 04	Computing Center 73 - D-12 Equipment Room 2	Firedoor		
Total Asbestos	**Assumed Positve**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number:	237984
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Drive Costa Mesa CA 92626
Claim Number:	
Number of Samples:	28
PO Number:	

Date Received:	1/4/2005
Date Analyzed:	1/28/2005
Date Reported:	1/31/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237984-026 05	Computing Center 73 - Classroom 105 - Storage Room	Firedoor		

Total Asbestos **Assumed Positive**

Ian Reyes
Analyst

Cristina E. Tabatt
Approved Signatory

Bulk samples analyzed per 40 CFR 763, Subpart F, Appendix A; EPA-600/R-93/116 and for friable materials, EPA-600/M4-82-020. Samples are analyzed by calibrated visual estimation; therefore, results may not be reliable for samples of low concentration levels. This report applies only to the items tested. The results are representative of the samples submitted and may not represent the entire material from which samples were collected. This report was issued by a NIST/NVLAP (Lab Code 200358-0) accredited laboratory and may not be reproduced without the expressed written consent of Patriot Environmental. This report must not be used to claim product certification, approval or endorsement by NIST, NVLAP or any agency of the federal government.

Samples of wall systems containing discrete and separable layers are analyzed separately and reported as composite. Samples such as floor tiles and ceiling tiles with mastic layers are analyzed and reported separately.

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

237984

ROJECT NAME: Orange Coast College

ROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
01 ASS.	Computing Center (73)	Fireproofing	X		G	Utility Room (nearest Social Science) - Exterior
02 ASS.		T.S.I. Pipe Ins.			SD	Interior Loft near Elevator (Equip Room)
03		T.S.I. Pipe Elbows			SD	Loft near Elevator (Equip. Room)
04 ASS.		Firedoor		X	G	D-12 Equipment Room 2
NOTE	NO ACCESS	* NOTE *				Doors At Service Elevator
05 ASS.	Computing Center	Firedoor		X	G	Classroom #105 - Storage Room
06		9" Beige VFT		X	G	
07		Fireproofing	X		G	Classroom 6; Above T-Bar Ceiling
08		2'x3' ACT	X		G	; T-Bar Ceiling
09		Blue Base Cove		X	G	Main Entry Area At Classroom #6
10						Classroom 102; Hall

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/4/05

Samples received by: Candy Campos Date/Time: 1/4/05 @ 3:00pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

237984

…ECT NAME: Orange Coast College

…JECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
11	Computing Center (73)	WP ; Smooth Coat		X	G	Men's Exterior Restroom
12	↓	↓		↓	↓	Women's ↓ ↓
13	↓	↓		↓	↓	At Service Elevator
14	↓	↓		↓	↓	At Room D-11 (2nd Floor) At Doorway
15	↓	; Rough Coat		X	G	Ceiling of D-12 (2nd Floor)
16	↓	VFT		X	G	Under Carpet of Main Entry Area At Service Elevator
17	↓	↓		↓	↓	Under Carpet at Classroom #105
18	↓	WB/JC		X	G	Classroom #105
19	↓	↓		↓	↓	Exterior Utility Room nearest Telephone Equip. Room
20	↓	↓		↓	↓	Exterior Telephone Equip. Rm
21	↓	WB		X	G	Main Entry Area ; Rear Wall

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty
RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/4/05

…mples received by: Candy Campos Date/Time: 1/4/05 @ 3:00pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

2357984

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
22	Computing Center (13)	Stucco		X	G	Overhang at Front Walkway
23						Doorway Overhang at South End of Bldg.
24						Rear Loading Dock Overhang
25		Ext. Smooth Coat				Rear At Telephone Equip. Room
26						South Side nearest Social Science Bldg.

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/4/05

Samples received by: Candy Campos Date/Time: 1/4/05 @ 3:00pm

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES, INC.

Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 237698
Project Number: 19378
Project Name: 2701 Fairview Drive
Project Location: Costa mesa, CA 92626

Claim Number:
Number of Samples: 42
PO Number:

Date Received: 12/30/2004
Date Analyzed: 1/21/2005
Date Reported: 1/24/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237698-001 01	Business Ed (12)- Room 104 Utility Closet (in Box)	12" Acoustic Ceiling Tile	Brown, White	95% Cellulose 5% Paint
Total Asbestos	None Detected			
237698-001M 01	Business Ed (12)- Room 104 Utility Closet (in Box)	Mastic	Brown	3% Cellulose 97% Minerals
Total Asbestos	None Detected			
237698-002 02	Business Ed (12)- Room 104 Utility Closet	Cement Pipe		
Total Asbestos	Assumed Positive			
237698-003 03	Business Ed (12)- Room 104 Utility Closet	Stucco	Beige	3% Cellulose 97% Minerals
Total Asbestos	None Detected			
237698-004 04	Business Ed (12)- Room 104 Utility Closet	2'x4' Acoustic Ceiling	Brown, White	4% Paint 96% Cellulose
Total Asbestos	None Detected			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 237698
Project Number: 19378
Project Name: 2701 Fairview Drive
Project Location: Costa mesa, CA 92626

Claim Number:
Number of Samples: 42
PO Number:

Date Received: 12/30/2004
Date Analyzed: 1/21/2005
Date Reported: 1/24/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237698-005 05	Business Ed (12)- Room 104 At Front	Wallboard and Joint Compound	White, Grey, Yellow	15% Glass Fibers 15% Cellulose 15% Carbonate 55% Sulfate
Total Asbestos	**None Detected**			
237698-006 06	Business Ed (12)- Room 104 At Front	Base Cove	Black	100% Non-Fibrous
Total Asbestos	**None Detected**			
237698-006M 06	Business Ed (12)- Room 104 At Front	Mastic	Brown, White	3% Cellulose 97% Non-Fibrous
Total Asbestos	**None Detected**			
237698-007 07	Business Ed (12)- Room 104 Center	Flooring Mastic	Black, Tan	2% Cellulose 98% Non-Fibrous
Total Asbestos	**None Detected**			
237698-008 08	Business Ed (12)- Exterior Custodial Closet at Room 104	Stucco	Grey	4% Cellulose 96% Minerals
Total Asbestos	**None Detected**			

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Report Number: 237698
Project Number: 19378
Project Name: 2701 Fairview Drive
Project Location: Costa mesa, CA 92626

Claim Number:
Number of Samples: 42
PO Number:

Date Received: 12/30/2004
Date Analyzed: 1/21/2005
Date Reported: 1/24/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237698-009 09	Business Ed (12)- Exterior Custodial Closet at Room 104	9" Vinyl Floor Tile	Grey	92% Carbonate
Chrysotile	8 %			
Total Asbestos	**8 %**			
237698-009M 09	Business Ed (12)- Exterior Custodial Closet at Room 104	Mastic	Black	5% Cellulose 95% Tar
Total Asbestos	**None Detected**			
237698-010 10	Business Ed (12)- Exterior Custodial Closet at Room 104	9" Vinyl Floor Tile	Grey	95% Carbonate
Chrysotile	5 %			
Total Asbestos	**5 %**			
237698-010M 10	Business Ed (12)- Exterior Custodial Closet at Room 104	Mastic	Black	3% Cellulose 97% Tar
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

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Costa Mesa, CA 92626

Report Number: 237698
Project Number: 19378
Project Name: 2701 Fairview Drive
Project Location: Costa mesa, CA 92626

Claim Number:
Number of Samples: 42
PO Number:

Date Received: 12/30/2004
Date Analyzed: 1/21/2005
Date Reported: 1/24/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237698-011 11	Business Ed (12)- Exterior Custodial Closet at Room 104	9" Vinyl Floor Tile	Grey	92% Carbonate
Chrysotile	8 %			
Total Asbestos	8 %			
237698-011M 11	Business Ed (12)- Exterior Custodial Closet at Room 104	Mastic	Black	3% Cellulose 97% Tar
Total Asbestos	**None Detected**			
237698-012 12	Business Ed (12)- Exterior Custodial Closet At Room 104	Flooring Bullnose	Black	4% Cellulose 90% Minerals
Chrysotile	6 %			
Total Asbestos	6 %			
237698-013 13	Business Ed (12)- Room 103 Ceiling	2'x4' Acoustic Ceiling	Brown, White	5% Paint 95% Cellulose
Total Asbestos	**None Detected**			
237698-014 14	Business Ed (12)- Room 103 Wall	2'x4' Acoustic Ceiling	Brown	100% Cellulose
Total Asbestos	**None Detected**			

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Report Number: 237698
Project Number: 19378
Project Name: 2701 Fairview Drive
Project Location: Costa mesa, CA 92626

Claim Number:
Number of Samples: 42
PO Number:

Date Received: 12/30/2004
Date Analyzed: 1/21/2005
Date Reported: 1/24/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237698-015 15	Business Ed (12)- Room 103 Under Carpet	Flooring Mastic	Black	3% Cellulose 94% Tar
Chrysotile	3 %			
Total Asbestos	3 %			
237698-016 16	Business Ed (12)- Room 103 Rear Classroom	Base Cove	Black	100% Carbonate
Total Asbestos	**None Detected**			
237698-016M 16	Business Ed (12)- Room 103 Rear Classroom	Mastic	White, Brown	2% Cellulose 98% Non-Fibrous
Total Asbestos	**None Detected**			
237698-017 17	Business Ed (12)- Exterior Storage Closet Between Room 103/102	Wallboard and Wall Plaster	White, Brown	8% Cellulose 15% Carbonate 77% Sulfate
Total Asbestos	**None Detected**			
237698-018 18	Business Ed (12)- Room 102 At Front	Wallboard and Joint Compound	White	15% Cellulose 85% Carbonate
Total Asbestos	**None Detected**			

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Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number:	237698
Project Number:	19378
Project Name:	2701 Fairview Drive
Project Location:	Costa mesa, CA 92626
Claim Number:	
Number of Samples:	42
PO Number:	

Date Received:	12/30/2004
Date Analyzed:	1/21/2005
Date Reported:	1/24/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237698-019 19	Business Ed (12)- Roo 101B	Wallboard and Joint Compound	White	15% Cellulose 20% Carbonate 65% Sulfate
Total Asbestos	**None Detected**			
237698-020 20	Business Ed (12)- Exterior Storage Closet Between 101A/B	Wallboard and Wall Plaster	Beige, Brown	15% Cellulose 85% Minerals
Total Asbestos	**None Detected**			
237698-021 21	Business Ed (12)- Room 101B Ceiling	2'x4' Acoustic Ceiling Tile	Brown, White	10% Paint 90% Cellulose
Total Asbestos	**None Detected**			
237698-022 22	Business Ed (12)- Room 101B Wall	2'x4' Acoustic Ceiling Tile	Brown, White	15% Paint 85% Cellulose
Total Asbestos	**None Detected**			
237698-023 23	Business Ed (12)- Room 101B Under Carpet	Vinyl Floor Tile	Tan	95% Carbonate
Chrysotile	5 %			
Total Asbestos	5 %			

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Polarized Light Microscopy Analysis

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Attn: Michael Collins
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Costa Mesa, CA 92626

Report Number: 237698
Project Number: 19378
Project Name: 2701 Fairview Drive
Project Location: Costa mesa, CA 92626

Claim Number:
Number of Samples: 42
PO Number:

Date Received: 12/30/2004
Date Analyzed: 1/21/2005
Date Reported: 1/24/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237698-023M 23	Business Ed (12)- Room 101B Under Carpet	Mastic	Black	100% Tar
Total Asbestos	**None Detected**			
237698-024 24	Business Ed (12)- Room 101B Under Carpet	Vinyl Floor Tile	Tan	93% Carbonate
Chrysotile	7 %			
Total Asbestos	7 %			
237698-024M 24	Business Ed (12)- Room 101B Under Carpet	Mastic	Black	2% Cellulose 98% Tar
Total Asbestos	**None Detected**			
237698-025 25	Business Ed (12)- Room 101B Under Carpet	Vinyl Floor Tile	Tan	94% Carbonate
Chrysotile	6 %			
Total Asbestos	6 %			
237698-025M 25	Business Ed (12)- Room 101B Under Carpet	Mastic	Black	3% Cellulose 97% Tar
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
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Costa Mesa, CA 92626

Report Number: 237698
Project Number: 19378
Project Name: 2701 Fairview Drive
Project Location: Costa mesa, CA 92626

Claim Number:
Number of Samples: 42
PO Number:

Date Received: 12/30/2004
Date Analyzed: 1/21/2005
Date Reported: 1/24/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237698-026 26	Business Ed (12)- Room 101A	Vinyl Floor Tile	Tan	92% Carbonate
Chrysotile	8 %			
Total Asbestos	**8 %**			
237698-026M 26	Business Ed (12)- Room 101A	Mastic	Black	100% Tar
Total Asbestos	**None Detected**			
237698-027 27	Business Ed (12)- Room 101A Near windows	Wallboard and Joint Compound	White, Brown	20% Cellulose 45% Carbonate 35% Sulfate
Total Asbestos	**None Detected**			
237698-028 28	Business Ed (12)- Window Frame	Window Putty	Dark Grey	96% Carbonate
Chrysotile	4 %			
Total Asbestos	**4 %**			
237698-029 29	Business Ed (12)- Exterior	Window Putty	Light Grey	95% Carbonate
Chrysotile	5 %			
Total Asbestos	**5 %**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
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Costa Mesa, CA 92626

Report Number: 237698
Project Number: 19378
Project Name: 2701 Fairview Drive
Project Location: Costa mesa, CA 92626

Claim Number:
Number of Samples: 42
PO Number:

Date Received: 12/30/2004
Date Analyzed: 1/21/2005
Date Reported: 1/24/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237698-030 30	Business Ed (12)- Exterior	Window Putty	Light Grey	97% Carbonate

Chrysotile 3 %
Total Asbestos 3 %

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237698-031 31	Business Ed (12)- Exterior	Window Putty	Light Grey	3% Cellulose 97% Carbonate

Total Asbestos **None Detected**

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237698-032 32	Business Ed (12)- Exterior	Window Putty	Light Grey	100% Carbonate

Total Asbestos **None Detected**

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 237698
Project Number: 19378
Project Name: 2701 Fairview Drive
Project Location: Costa mesa, CA 92626

Claim Number:
Number of Samples: 42
PO Number:

Date Received: 12/30/2004
Date Analyzed: 1/21/2005
Date Reported: 1/24/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)

John Lopez
Analyst

Grace Herrera
Approved Signatory

Bulk samples analyzed per 40 CFR 763, Subpart F, Appendix A; EPA-600/R-93/116 and for friable materials, EPA-600/M4-82-020. Samples are analyzed by calibrated visual estimation; therefore, results may not be reliable for samples of low concentration levels. This report applies only to the items tested. The results are representative of the samples submitted and may not represent the entire material from which samples were collected. This report was issued by a NIST/NVLAP (Lab Code 200358-0) accredited laboratory and may not be reproduced without the expressed written consent of Patriot Environmental. This report must not be used to claim product certification, approval or endorsement by NIST, NVLAP or any agency of the federal government.

Samples of wall systems containing discrete and separable layers are analyzed separately and reported as composite. Samples such as floor tiles and ceiling tiles with mastic layers are analyzed and reported separately.

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

237698

ECT NAME: Orange Coast College

ROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
01	Business Ed (12)	12" ACT & Mastic	X		D	Room 104 · Utility Closet (IN BOX)
02 ASS		Cement Pipe	X		D	· Utility Closet
03		Stucco		X	G	
04		2'x4' ACT	X		G	
05		WB/JC		X	G	· At Front
[illegible]4		Black Base Cove & Mastic		X	G	· At Front
07		Flooring Mastic		X	G	· Center
08		Stucco		X	G	Ext. Custodial Closet · At Room 104
09		9" Grey VFT		X	G	·
10						·
11						·

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty
RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: ______ Date/Time: 12/27/04

mples received by: [signature] Date/Time: 12/27/04

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

237698

ROJECT NAME: Orange Coast College

ROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
12	Business Ed. (12)	Flooring Bullnose		X	G	Ext. Custodial Closet • At Room 104
13		2'X4' ACT	X		G	Room 103 • Ceiling
14						• Wall
15		Flooring Mastic		X		• Under Carpet
16		Black Base Cove & Mastic		X		• Rear Classroom
17		WB/WP		X	D	Ext Storage Closet • Between Rm 103/102
18		WB/JC		X	G	Room 102 • At Front
19						Room 101 B
20		WB/WP		X	G	Ext. Storage Closet • Between 101A/B
21		2'X4' ACT	X		G	Room 101 B • Ceiling
22						• Wall

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 12/27/04

Samples received by: [signature] Date/Time: 12/27/04

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

237698

--JECT NAME: Orange Coast College

-JECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
23	Business Ed (12)	Tan VFT		X	G	Room 101 B • Under Carpet
24						
25						
26						Room 101 A •
27		WB/JC		X	G	• Near Windows
28		WPTY		X	G	Window Frame
29						Exterior
30						
31						
32						

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty
RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 12/27/04

Samples received by: [signature] Date/Time: 12/29/04

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES, INC.

Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 237700
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa mesa. CA 92626

Claim Number:
Number of Samples: 31
PO Number:

Date Received: 12/30/2004
Date Analyzed: 1/25/2005
Date Reported: 2/14/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237700-001 01	Faculty House (11)- Main Entry Front	Stucco	Grey	8% Cellulose 92% Minerals
Total Asbestos	**None Detected**			
237700-002 02	Faculty House (11)- At Front Main Entry	12" Vinyl Floor Tile	Pink	2% Cellulose 98% Carbonate
Total Asbestos	**None Detected**			
237700-002M 02	Faculty House (11)- At Front Main Entry	Mastic	Black	96% Tar
Chrysotile	4 %			
Total Asbestos	**4 %**			
237700-003 03	Faculty House (11)- At Front Main Entry	12" Vinyl Floor Tile	Pink	100% Carbonate
Total Asbestos				
237700-003M 03	Faculty House (11)- At Front Main Entry	Mastic	Black	5% Cellulose 90% Tar
Chrysotile	5 %			
Total Asbestos	**5 %**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number:	237700
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Drive Costa mesa, CA 92626
Claim Number:	
Number of Samples:	31
PO Number:	

Date Received:	12/30/2004
Date Analyzed:	1/25/2005
Date Reported:	2/14/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237700-004 04	Faculty House (11)- At Front Main Entry	12" Vinyl Floor Tile	Pink	2% Cellulose 98% Carbonate
Total Asbestos	**None Detected**			
237700-004M 04	Faculty House (11)- At Front Main Entry	Mastic	Black	85% Tar
Chrysotile	15 %			
Total Asbestos	**15 %**			
237700-005 05	Faculty House (11)- Kitchen	9" Vinyl Floor Tile	Orange	95% Carbonate
Chrysotile	5 %			
Total Asbestos	**5 %**			
237700-005M 05	Faculty House (11)- Kitchen	Mastic	Black	90% Tar
Chrysotile	10 %			
Total Asbestos	**10 %**			
237700-006 06	Faculty House (11)- Custodial Closet	9" Vinyl Floor Tile	Orange	95% Carbonate
Chrysotile	5 %			
Total Asbestos	**5 %**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 237700
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa mesa, CA 92626
Claim Number:
Number of Samples: 31
PO Number:

Date Received: 12/30/2004
Date Analyzed: 1/25/2005
Date Reported: 2/14/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237700-006M 06	Faculty House (11)- Custodial Closet	Mastic	Black	85% Tar
Chrysotile	15 %			
Total Asbestos	**15 %**			
237700-007 07	Faculty House (11)- HVAC Closet	9" Vinyl Floor Tile	Orange	93% Carbonate
Chrysotile	7 %			
Total Asbestos	**7 %**			
237700-007M 07	Faculty House (11)- HVAC Closet	Mastic	Black	90% Tar
Chrysotile	10 %			
Total Asbestos	**10 %**			
237700-008 08	Faculty House (11)- HVAC Closet	Vent Pipe Gasket	White	96% Non-Fibrous
Chrysotile	4 %			
Total Asbestos	**4 %**			
237700-009 09	Faculty House (11)- Bathroom	Base Cove	Beige	100% Carbonate
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 237700
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa mesa, CA 92626

Claim Number:
Number of Samples: 31
PO Number:

Date Received: 12/30/2004
Date Analyzed: 1/25/2005
Date Reported: 2/14/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237700-009M 09	Faculty House (11)- Bathroom	Mastic	White	100% Carbonate
Total Asbestos	**None Detected**			
237700-010 10	Faculty House (11)- Kitchen	Base Cove	Black	100% Carbonate
Total Asbestos	**None Detected**			
237700-010M 10	Faculty House (11)- Kitchen	Mastic	Brown	4% Cellulose 96% Non-Fibrous
Total Asbestos	**None Detected**			
237700-011 11	Faculty House (11)- Utility Closet	Base Cove	Black	100% Carbonate
Total Asbestos	**None Detected**			
237700-011M 11	Faculty House (11)- Utility Closet	Mastic	Brown	100% Non-Fibrous
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 237700
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa mesa. CA 92626
Claim Number:
Number of Samples: 31
PO Number:

Date Received: 12/30/2004
Date Analyzed: 1/25/2005
Date Reported: 2/14/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237700-012 12	Faculty House (11)-Bathroom	Linoleum	White	20% Cellulose 10% Synthetic Fibers 70% Vinyl Binder
Total Asbestos	**None Detected**			
237700-013A 13	Faculty House (11)-Bathroom	Linoleum	White	20% Cellulose 10% Synthetic Fibers 70% Vinyl Binder
Total Asbestos	**None Detected**			
237700-013B 13	Faculty House (11)-Bathroom	Linoleum	Yellow	94% Carbonate
Chrysotile	6 %			
Total Asbestos	6 %			
237700-014A 14	Faculty House (11)-Bathroom	Linoleum	White	15% Cellulose 20% Synthetic Fibers 65% Vinyl Binder
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 237700
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa mesa. CA 92626
Claim Number:
Number of Samples: 31
PO Number:

Date Received: 12/30/2004
Date Analyzed: 1/25/2005
Date Reported: 2/14/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237700-014B 14	Faculty House (11)- Bathroom	Linoleum	Yellow	92% Carbonate
Chrysotile	8 %			
Total Asbestos	**8 %**			
237700-015 15	Faculty House (11)- Bathroom	Wallboard and Joint Compound	White	10% Cellulose 60% Carbonate 30% Sulfate
Total Asbestos	**None Detected**			
237700-016 16	Faculty House (11)- Hallway Near Bathroom	Wallboard and Joint Compound	White, Grey	15% Cellulose 60% Carbonate 25% Sulfate
Total Asbestos	**None Detected**			
237700-017 17	Faculty House (11)- At Main Area Near Fireplace	Wallboard and Joint Compound	Pink, White, Brown	20% Cellulose 20% Carbonate 60% Sulfate
Chrysotile	< 1 %			
Total Asbestos	**< 1%**			
237700-018 18	Faculty House (11)- Kitchen At HVAC Closet	Wallboard and Joint Compound	White, Brown, Green	25% Cellulose 20% Paint 55% Sulfate
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number:	237700
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Drive Costa mesa, CA 92626
Claim Number:	
Number of Samples:	31
PO Number:	

Date Received:	12/30/2004
Date Analyzed:	1/25/2005
Date Reported:	2/14/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
237700-019 19	Faculty House (11)- Near Patio Entrance at HVAC	Stucco	Tan	5% Cellulose 95% Minerals
Total Asbestos	**None Detected**			
237700-020 20	Faculty House (11)- At Patio Entry Sliding Door	Stucco	Tan	8% Cellulose 92% Minerals
Total Asbestos	**None Detected**			

John Lopez
Analyst

Grace Herrera
Approved Signatory

Bulk samples analyzed per 40 CFR 763, Subpart F, Appendix A; EPA-600/R-93/116 and for friable materials, EPA-600/M4-82-020. Samples are analyzed by calibrated visual estimation; therefore, results may not be reliable for samples of low concentration levels. This report applies only to the items tested. The results are representative of the samples submitted and may not represent the entire material from which samples were collected. This report was issued by a NIST/NVLAP (Lab Code 200358-0) accredited laboratory and may not be reproduced without the expressed written consent of Patriot Environmental. This report must not be used to claim product certification, approval or endorsement by NIST, NVLAP or any agency of the federal government.

Samples of wall systems containing discrete and separable layers are analyzed separately and reported as composite. Samples such as floor tiles and ceiling tiles with mastic layers are analyzed and reported separately.

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

237700

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
01	Faculty House (11)	Stucco		X	G	Main Entry - Front
NOTE		No Access				Academic Senate
NOTE						Coast Federation of Educators AFT Local 1911 OFFICE
02		12" Pink VFT		X	G	At Front - Main Entry
03						
4						
05		9" Orange VFT				Kitchen
06						Custodial Closet
07						HVAC Closet
08		Vent Pipe Gasket				
09		White Base Cove				Bathroom

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 12/27/04

Samples received by: [signature] Date/Time: 12/27/04

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

237700

ROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	N F	Cond	Material Location
10	Faculty House (11)	Black Base Cove		X	G	Kitchen
11	↓	↓		↓	↓	Utility Closet
12	↓	White Cobble Lin.		X	↓	Bathroom
13	↓	↓		↓	↓	↓
14	↓	↓		↓	↓	↓
15	↓	WB/JC		X	G	Bathroom
16	↓	↓		↓	↓	Hallway near Bathroom
17	↓	↓		↓	↓	At Main Area near Fireplace
18	↓	↓		↓	↓	Kitchen At HVAC Closet
19	↓	Stucco		X	G	Near Patio Entrance At HVAC
20	↓	↓		↓	↓	At Patio Entry Sliding Door

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty
RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 12/27/04

Samples received by: [signature] Date/Time: 12/27/04

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES, INC.

Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 239828
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626

Claim Number:
Number of Samples: 3
PO Number:

Date Received: 1/31/2005
Date Analyzed: 2/1/2005
Date Reported: 2/8/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
239828-001 01	Consumer Health Science (43) - Office Area	12 Inch Acoustic Ceiling Tile - Rough	Grey White	95% Mineral Wool 5% Paint
Total Asbestos	**None Detected**			
239828-002 02	Consumer Health Science (43) - Office Area	12 Inch Acoustic Ceiling Tile - Rough	Grey White	95% Mineral Wool 5% Paint
Total Asbestos	**None Detected**			
239828-003 03	Consumer Health Science (43) - Office Area	12 Inch Acoustic Ceiling Tile - Rough	Grey White	95% Mineral Wool 5% Paint
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number:	239828
Project Number:	19378
Project Name:	Orange Coast College
Project Location:	2701 Fairview Drive Costa Mesa CA 92626
Claim Number:	
Number of Samples:	3
PO Number:	

Date Received:	1/31/2005
Date Analyzed:	2/1/2005
Date Reported:	2/8/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)

Ian Reyes
Analyst

Cristina E. Tabatt
Approved Signatory

Bulk samples analyzed per 40 CFR 763, Subpart F, Appendix A; EPA-600/R-93/116 and for friable materials, EPA-600/M4-82-020. Samples are analyzed by calibrated visual estimation; therefore, results may not be reliable for samples of low concentration levels. This report applies only to the items tested. The results are representative of the samples submitted and may not represent the entire material from which samples were collected. This report was issued by a NIST/NVLAP (Lab Code 200358-0) accredited laboratory and may not be reproduced without the expressed written consent of Patriot Environmental. This report must not be used to claim product certification, approval or endorsement by NIST, NVLAP or any agency of the federal government.

Samples of wall systems containing discrete and separable layers are analyzed separately and reported as composite. Samples such as floor tiles and ceiling tiles with mastic layers are analyzed and reported separately.

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

239828

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
01	Consumer Health Sciences (43)	12" ACT - Rough	X		G	Office Area
02						
03						
NOTE		NOTE				Concrete Under Carpeting
NOTE		NOTE				Inaccessible above ceiling - No Hatch

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty
RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: EQA Date/Time: 1/28/04 @

Samples received by: Candy Campos Date/Time: 1/28/05 @ 4:00pm

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 238434
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626
Claim Number:
Number of Samples: 42
PO Number:

Date Received: 1/12/2005
Date Analyzed: 2/2/2005
Date Reported: 2/2/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
238434-001 24	Literature and Language (23) - 1st Fl - Custodial Room	Fireproofing - Spray Applied	Tan	3% Cellulose 97% Vermiculite
Total Asbestos	None Detected			
238434-002 25	Literature and Language (23) - 2nd Fl - Custodial Room	Fireproofing - Spray Applied	Tan	5% Cellulose 95% Vermiculite
Total Asbestos	None Detected			
238434-003 26	Literature and Language (23) - Exterior At Telephone Equip. Rm - 1st Fl	Cement Surfacing Material	Grey	4% Cellulose 96% Minerals
Total Asbestos	None Detected			
238434-004 27	Literature and Language (23) - Interior At 2nd Fl Womens Restroom	Cement Surfacing Material	Grey	100% Minerals
Total Asbestos	None Detected			
238434-005 28	Literature and Language (23) - 1st Fl Near Front Entry	2x4 Acoustic Ceiling Tile	Grey, White	20% Cellulose 45% Mineral Wool 25% Perlite 10% Paint
Total Asbestos	None Detected			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 238434
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626
Claim Number:
Number of Samples: 42
PO Number:

Date Received: 1/12/2005
Date Analyzed: 2/2/2005
Date Reported: 2/2/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
238434-006 29	Literature and Language (23) - At Rm 148 - Entry	2x4 Acoustic Ceiling Tile	Grey, White	20% Cellulose 40% Mineral Wool 25% Perlite 15% Paint
Total Asbestos	**None Detected**			
238434-007 30	Literature and Language (23) - 2nd Fl At Womens Restroom	2x4 Acoustic Ceiling Tile	Beige	20% Cellulose 45% Mineral Wool 35% Perlite
Total Asbestos	**None Detected**			
238434-008 31	Literature and Language (23) - At Entry To Room 146	Leveling Compound	White, Blue	3% Cellulose 97% Carbonate
Total Asbestos	**None Detected**			
238434-009 32	Literature and Language (23) - At Room 146	Base Cove	Black	100% Non-Fibrous
Total Asbestos	**None Detected**			
238434-009M 32	Literature and Language (23) - At Room 146	Mastic	White, Tan	2% Cellulose 98% Carbonate
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 238434
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626
Claim Number:
Number of Samples: 42
PO Number:

Date Received: 1/12/2005
Date Analyzed: 2/2/2005
Date Reported: 2/2/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
238434-010 33	Literature and Language (23) - At Room 216 - 2nd Floor	Base Cove	Black	100% Non-Fibrous
Total Asbestos	**None Detected**			
238434-011A 34	Literature and Language (23) - 1st Fl Custodial Closet	Wallboard - Joint Compound	White	97% Carbonate
Chrysotile	3 %			
Total Asbestos	3 %			
238434-011B 34	Literature and Language (23) - 1st Fl Custodial Closet	Wallboard - Joint Compound	White, Brown	35% Cellulose 25% Carbonate 40% Sulfate
Chrysotile	< 1 %			
Total Asbestos	< 1%			
238434-012 35	Literature and Language (23) - Room 146	Wallboard - Joint Compound	Beige, White	10% Glass Fibers 5% Paint 85% Sulfate
Total Asbestos	**None Detected**			

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

238434

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
12 ASS.	Literature & Languages (70)	(FRD)		X	G	Room 143 - Offices ~~(137 & 128)~~
13 ASS.						Door Into Office Area • 1st Floor ("125, 126, 121, 122")
14 ASS.						Door Into Dean office • near rear entry 1st Floor
15 ASS.						Room 137
16 ASS.						Room 129
17 ASS.						Room 124
18 ASS.						Ladies Restroom • 1st Floor
19 ASS						Room 119
20 ASS.						118
21 ASS.						117
22 ASS						116

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty
RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/12/05

Samples received by: Candy Campos Date/Time: 1/12/05 @ 11:05am

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

238434

ROJECT NAME: Orange Coast College

ROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
23 ASS.	Literature & Language (70)	(FRD)		X	G	Rooms (217, 216, 215, ETC.) * ALL DOORS ON 2nd FLOOR
24	↓	Fireproofing - Spray Applied	X		G	1st Floor Custodial Room
25	↓	↓	↓		↓	2nd ↓ ↓ ↓
26	↓	Cement Surfacing Material		X	G	Ext. At Telephone Equipment Room 1st Floor
27	↓	↓		↓	↓	Int. At 2nd Floor Womens Restroom
28	↓	2'X4' ACT	X		G	1st Floor near Front Entry
29	↓	↓	↓		↓	At Room 148 - Hallway
30	↓	↓	↓		↓	2nd Floor At Womens Restroom
31	↓	Leveling Compound		X	G	At Entry to Room 146
32	↓	Black Base Cove		X	G	At Room 146
33	↓	↓		↓	↓	At Room 216 (2nd Floor)

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/12/05

Samples received by: Candy Campos Date/Time: 1/12/05 @ 11:05am

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

2384234

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
34	Literature & Language (70)	WB/JC		X	G	1st Floor Custodial Closet
35						Room 146
36						2nd Floor Custodial Closet
37						1st Floor Exterior Telephone Equipment Room
38						Stair Well Area

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/12/05

Samples received by: Candy Campos Date/Time: 1/12/05 @ 11:05am

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES, INC.

Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 238351
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626
Claim Number:
Number of Samples: 6
PO Number:

Date Received: 1/10/2005
Date Analyzed: 2/1/2005
Date Reported: 2/8/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
238351-001 01	Strength Lab (139) - Rear - Nearest Parking Lot	Wallboard - Joint Compound	White	78% Sulfate 10% Carbonate 7% Cellulose 2% Glass Fibers 3% Paint
Total Asbestos	**None Detected**			
238351-002 02	Strength Lab (139) - West Wall - Near Field	Wallboard - Joint Compound	White	78% Sulfate 10% Carbonate 7% Cellulose 2% Glass Fibers 3% Paint
Total Asbestos	**None Detected**			
238351-003 03	Strength Lab (139) - Front - Near Desk Area	Wallboard - Joint Compound	White	78% Sulfate 10% Carbonate 7% Cellulose 2% Glass Fibers 3% Paint
Total Asbestos	**None Detected**			
238351-004 04	Strength Lab (139) - Rear	Base Cove	Black	65% Carbonate 35% Vinyl Binder
Total Asbestos	**None Detected**			

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 238351
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626
Claim Number:
Number of Samples: 6
PO Number:

Date Received: 1/10/2005
Date Analyzed: 2/1/2005
Date Reported: 2/8/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
238351-005 05	Strength Lab (139) - West Wall	Base Cove	Black	65% Carbonate 35% Vinyl Binder
Total Asbestos	**None Detected**			
238351-006 06	Strength Lab (139) - At Desk	Base Cove	Black	65% Carbonate 35% Vinyl Binder
Total Asbestos	**None Detected**			

Ian Reyes
Analyst

Cristina E. Tabatt
Approved Signatory

Bulk samples analyzed per 40 CFR 763, Subpart F, Appendix A; EPA-600/R-93/116 and for friable materials, EPA-600/M4-82-020. Samples are analyzed by calibrated visual estimation; therefore, results may not be reliable for samples of low concentration levels. This report applies only to the items tested. The results are representative of the samples submitted and may not represent the entire material from which samples were collected. This report was issued by a NIST/NVLAP (Lab Code 200358-0) accredited laboratory and may not be reproduced without the expressed written consent of Patriot Environmental. This report must not be used to claim product certification, approval or endorsement by NIST, NVLAP or any agency of the federal government.

Samples of wall systems containing discrete and separable layers are analyzed separately and reported as composite. Samples such as floor tiles and ceiling tiles with mastic layers are analyzed and reported separately.

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

238351

PROJECT NAME: Orange Coast College

PROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
01	Strength Lab (139)	WB/JC		X	G	Rear; nearest parking lot
02						West Wall; near field
03						Front; near Desk Area
04		Black Base Cove				Rear
05						West Wall
06						At Desk

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/10/05

Samples received by: Candy Campos Date/Time: 1/10/05 @ 3:00pm

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Polarized Light Microscopy Analysis

Coast Community College
Attn: Michael Collins
1370 Adams Avenue - Bldg D
Costa Mesa, CA 92626

Report Number: 238434
Project Number: 19378
Project Name: Orange Coast College
Project Location: 2701 Fairview Drive
Costa Mesa CA 92626
Claim Number:
Number of Samples: 42
PO Number:

Date Received: 1/12/2005
Date Analyzed: 2/2/2005
Date Reported: 2/2/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
238434-013A 36	Literature and Language (23) - 2nd Floor Custodial Closet	Wallboard - Joint Compound	White, Tan	97% Carbonate

Chrysotile 3 %
Total Asbestos 3 %

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
238434-013B 36	Literature and Language (23) - 2nd Floor Custodial Closet	Wallboard - Joint Compound	White, Tan, Brown	35% Cellulose 20% Carbonate 45% Sulfate

Chrysotile < 1 %
Total Asbestos < 1%

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
238434-014A 37	Literature and Language (23) - 1st Floor Exterior Telephone Equip. Room	Wallboard - Joint Compound	White	7% Cellulose 90% Carbonate

Chrysotile 3 %
Total Asbestos 3 %

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
238434-014B 37	Literature and Language (23) - 1st Floor Exterior Telephone Equip. Room	Wallboard - Joint Compound	White, Brown	20% Cellulose 40% Carbonate 40% Sulfate

Chrysotile < 1 %
Total Asbestos < 1%

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Costa Mesa CA 92626
Claim Number:
Number of Samples: 42
PO Number:

Date Received: 1/12/2005
Date Analyzed: 2/2/2005
Date Reported: 2/2/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
238434-015 38	Literature and Language (23) - Stairwell Area	Wallboard - Joint Compound	White, Brown	20% Cellulose 20% Carbonate 60% Sulfate
Total Asbestos	**None Detected**			
238434-016 1	Literature and Language (23) - 1st Fl Exterior Telephone Equipment - Utility Closet	HVAC Expansion Gasket Woven		
Total Asbestos	**Assumed Positive**			
238434-017 2	Literature and Language (23) - 1st Fl Exterior Telephone Equipment - Utility Closet	HVAC Duct Joint Tape (TAP)		
Total Asbestos	**Assumed Positive**			
238434-018 3	Literature and Language (23) - 2nd Fl Exterior Utility Room	Woven Material		
Total Asbestos	**Assumed Positive**			
238434-019 4	Literature and Language (23) - 2nd Fl Exterior Utility Room	Duct Tape		
Total Asbestos	**Assumed Positive**			

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Costa Mesa CA 92626
Claim Number:
Number of Samples: 42
PO Number:

Date Received: 1/12/2005
Date Analyzed: 2/2/2005
Date Reported: 2/2/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
238434-020 5	Literature and Language (23) - 1st Fl Mens Restroom New Hinges Have Been Replaced	Fire Rated Door		
Total Asbestos	**Assumed Positive**			
238434-021 6	Literature and Language (23) - 1st Fl Custodial Closet	Fire Rated Door		
Total Asbestos	**Assumed Positive**			
238434-022 7	Literature and Language (23) - Rm 144 - Storage Closet	Fire Rated Door (x2)		
Total Asbestos	**Assumed Positive**			
238434-023 8	Literature and Language (23) - Rm 145 - Classroom	Fire Rated Door (x2)		
Total Asbestos	**Assumed Positive**			
238434-024 9	Literature and Language (23) - Rm 146 - Classroom	Fire Rated Door (x2)		
Total Asbestos	**Assumed Positive**			

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Date Received: 1/12/2005
Date Analyzed: 2/2/2005
Date Reported: 2/2/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
238434-025 10	Literature and Language (23) - Rm 147 - Offices	Fire Rated Door (x2)		
Total Asbestos	**Assumed Positive**			
238434-026 11	Literature and Language (23) - Rm 148 - Classroom	Fire Rated Door (x2)		
Total Asbestos	**Assumed Positive**			
238434-027 12	Literature and Language (23) - Rm 143 - Offices	Fire Door		
Total Asbestos	**Assumed Positive**			
238434-028 13	Literature and Language (23) - Door Into Office Area - 1st Fl (125-126-121-122)	Fire Door		
Total Asbestos	**Assumed Positive**			
238434-029 14	Literature and Language (23) - Door Into Dean Office Near Rear Entry 1st Fl	Fire Door		
Total Asbestos	**Assumed Positive**			

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Date Analyzed: 2/2/2005
Date Reported: 2/2/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
238434-030 15	Literature and Language (23) - Rm 137	Fire Door		
Total Asbestos	**Assumed Positive**			
238434-031 16	Literature and Language (23) - Rm 129	Fire Door		
Total Asbestos	**Assumed Positive**			
238434-032 17	Literature and Language (23) - Rm 124	Fire Door		
Total Asbestos	**Assumed Positive**			
238434-033 18	Literature and Language (23) - Ladies Restroom 1st Floor	Fire Door		
Total Asbestos	**Assumed Positive**			
238434-034 19	Literature and Language (23) - Rm 119	Fire Door		
Total Asbestos	**Assumed Positive**			

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Date Received: 1/12/2005
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Date Reported: 2/2/2005

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
238434-035 20	Literature and Language (23) - Rm 118	Fire Door		
Total Asbestos	**Assumed Positive**			
238434-036 21	Literature and Language (23) - Rm 117	Fire Door		
Total Asbestos	**Assumed Positive**			
238434-037 22	Literature and Language (23) - Rm 116	Fire Door		
Total Asbestos	**Assumed Positive**			
238434-038 23	Literature and Language (23) - Rooms (217-216-215-Etc.) All Doors On 2nd Fl	Fire Door		
Total Asbestos	**Assumed Positive**			

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Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)

John Lopez
John Lopez
Analyst

CETabatt
Cristina E. Tabatt
Approved Signatory

B..k samples analyzed per 40 CFR 763, Subpart F, Appendix A; EPA-600/R-93/116 and for friable materials, EPA-600/M4-82-020. Samples are analyzed ..librated visual estimation; therefore, results may not be reliable for samples of low concentration levels. This report applies only to the items tested. ..results are representative of the samples submitted and may not represent the entire material from which samples were collected. This report was issued .a NIST/NVLAP (Lab Code 200358-0) accredited laboratory and may not be reproduced without the expressed written consent of Patriot Environmental. This report must not be used to claim product certification, approval or endorsement by NIST, NVLAP or any agency of the federal government.

Samples of wall systems containing discrete and separable layers are analyzed separately and reported as composite. Samples such as floor tiles and ceiling tiles with mastic layers are analyzed and reported separately.

238434-012 No Joint Compound in Sample.

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PATRIOT ENVIRONMENTAL LABORATORY SERVICES

DUE DATE:

238434

ROJECT NAME: Orange Coast College

ROJECT ADDRESS: 2701 Fairview Drive CITY: Costa Mesa ZIP: 92626

PROJECT #: 19378

Sample ID	Sample Location	Material Type	F	NF	Cond	Material Location
01 ASS.	Literature & Languages (70)	HVAC EXPANSION GASKET (WOV)	X		G	1st Floor Exterior Telephone Equipment - Utility Closet
02 ASS.		HVAC DUCT JOINT TAPE (TAP)				
03 ASS.		(WOV)	X		G	2nd Floor Exterior Utility Room
04 ASS.		(TAP)				
05 ASS		Fire Rated Door (FRD)		X	D	1st Floor Mens Restroom ~~Not~~ Hinges Have Been Replaced
06 ASS.						1st Floor Custodial Closet
07 ASS.		Fire Rated Door (FRD) X2		X	G	Room 144 - Storage Closet
08 ASS.						145 - Classroom
09 ASS.						146
10 ASS.						147 - offices
11 ASS.						148 - Classroom

WP = wall plaster WB = wallboard AC = sprayed-on acoustic ACT = acoustic ceiling tile S = stucco WPTY = window putty RM = roof mastic RS = roof shingle RR = rolled roofing T/G = tar & gravel F = Friable NF = non-friable

Samples relinquished by: [signature] Date/Time: 1/12/05

Samples received by: Candy Campos Date/Time: 1/12/05 @ 11:05am

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APPENDIX 7 | COST ESTIMATING
SEAROCK + STAFFORD CM

- Estimate of Probable Construction Costs

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Orange Coast College Draft Conceptual Budget

April 3, 2015

X Y Summary - Construction Costs

CSI	DESCRIPTION	Buildings 2 and 4 Theater & Music	Buildings 7-9 Admin Services	Buildings 7-9 w/ Theater	Buildings 7-9 w/ Special Services	Buildings 7-9 w/ Dance	Buildings 12-14 (Honors)	Buildings 12-14 (Student)	Buildings 12-14 (Interdisciplinary)	Buildings 35-39 (Interdisciplinary)	Buildings 35-39 (Science)	Buildings 93 Pool/Bleachers	Buildings 93 Pool/Bleachers Demo	Building 105 Stadium	Building 110 Field House	Building 110 Field House Demo	Building 10 Demo
	Alternates:	ALL	1A / 1B	1C	2A	2B	1A/1B	1C	2A / 2B	1A / 1B / 1C	2A / 2B	1A	1B/1C/2A/2B	ALL	1A	1B/1C/2A/2B	1A/1B/2A/2B
	Area:	24	79S	79T	79L	79D	1214H	1214S	1214I	3539I	3539S	93	93D	105	FH	FHD	10D
	GENERAL WORK ITEMS																
010000	General Requirements	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
015000	Temporary Facilities and Controls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	EXISTING CONDITIONS																
024000	Demolition	25,500	122,800	88,700	88,700	117,800	215,900	212,700	215,900	105,300	311,200	40,000	71,200	10,000	8,000	38,400	138,600
026000	Abatement	-	54,100	25,500	12,800	42,800	-	-	-	-	-	50,000	-	15,000	4,000	58,500	105,800
	CONCRETE																
030000	Concrete	26,500	92,100	79,000	66,800	94,200	57,000	56,900	56,700	-	-	62,500	-	96,900	5,200	-	-
032000	Concrete Reinforcing	97,200	-	-	-	-	-	-	-	56,200	29,800	-	-	-	-	-	-
033000	Cast-in-Place Concrete	-	-	-	-	-	-	-	-	75,200	19,700	-	-	-	-	-	-
034000	Precast Concrete	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	MASONRY																
042000	CMU	14,200	52,500	43,100	43,100	42,000	71,900	71,900	71,900	41,100	17,900	-	-	-	-	-	-
	METALS																
051000	Structural Steel	-	96,400	84,600	79,500	91,400	43,200	43,200	39,500	76,000	38,200	-	-	5,400	-	-	-
053000	Metal Decking	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
054000	Cold-Formed Metal Framing	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
055000	Miscellaneous Metal	-	-	-	-	-	-	-	-	-	-	-	-	16,200	-	-	-
057000	Decorative Metal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	WOOD, PLASTICS, COMPOSITES																
061000	Rough Carpentry	230,500	155,000	175,300	175,300	171,100	119,400	119,400	119,400	186,700	28,000	-	-	5,000	14,900	-	-
062000	Finish Carpentry	-	-	-	-	-	5,000	5,000	5,000	4,000	-	-	-	-	-	-	-
064000	Architectural Woodwork	-	7,600	11,400	7,600	3,800	6,100	15,300	22,900	15,300	3,800	-	-	-	-	-	-
	THERMAL AND MOISTURE PROTECTION																
071000	Waterproofing	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
072000	Thermal Protection	-	15,000	15,000	15,000	15,000	20,000	20,000	20,000	15,000	7,500	-	-	-	10,000	-	-
072500	Weather Barriers	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
075000	Membrane Roofing	265,000	233,000	304,200	304,200	255,200	146,000	146,000	146,000	315,400	109,000	-	-	-	56,000	-	-
076000	Flashing and Sheet Metal	-	27,500	55,000	55,000	27,500	20,000	20,000	20,000	27,500	10,000	-	-	-	10,000	-	-
078000	Fire and Smoke Protection	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	OPENINGS																
081000	Doors and Frames	-	105,000	115,000	115,000	105,000	79,500	77,800	74,300	64,300	19,800	-	-	-	47,500	-	-
083000	Specialty Doors and Frames	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
084000	Entrances, Storefronts, and Curtain Walls	-	25,000	30,000	30,000	30,000	-	-	-	-	-	-	-	-	-	-	-
085000	Windows	4,100	256,200	299,000	299,000	268,800	193,100	193,100	193,100	218,300	92,300	-	-	6,500	10,000	-	-
086000	Skylights	-	119,000	120,500	120,500	120,500	-	-	-	-	-	-	-	-	-	-	-
088000	Glazing	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	FINISHES																
092000	Plaster and Gypsum Board	-	102,400	120,400	102,400	120,400	25,200	25,700	24,700	107,900	20,000	42,900	-	5,000	42,000	-	-
093000	Ceramic Tile	-	29,400	29,900	32,800	30,000	34,100	48,400	47,700	43,400	-	10,900	-	-	95,900	-	-
095000	Acoustical Ceilings	-	68,900	90,300	87,200	62,300	34,400	35,500	33,900	55,200	21,700	-	-	-	42,000	-	-
096000	Flooring	-	134,500	156,500	160,600	127,200	45,400	46,400	44,500	100,800	32,500	-	-	-	26,400	-	-
098000	Acoustic Treatment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
099000	Painting and Coating	1,000	50,900	58,900	55,700	66,900	31,600	31,300	30,700	78,800	20,700	8,800	-	8,100	9,000	-	-
	SPECIALTIES																
102000	Specialties	-	15,000	15,000	15,000	30,000	25,000	25,000	25,000	64,500	24,300	7,500	-	-	5,000	-	-
	EQUIPMENT																

SEAROCK + STAFFORD CONSTRUCTION MANAGEMENT

X Y Summary - Construction Costs

CSI	DESCRIPTION	Buildings 2 and 4 Theater & Music	Buildings 7-9 Admin Services	Buildings 7-9 w/ Theater	Buildings 7-9 w/ Special Services	Buildings 7-9 w/ Dance	Buildings 12-14 (Honors)	Buildings 12-14 (Student)	Buildings 12-14 (Interdisciplinary)	Buildings 35-39 (Interdisciplinary)	Buildings 35-39 (Science)	Buildings 93 Pool/Bleachers	Buildings 93 Pool/Bleachers Demo	Building 105 Stadium	Building 110 Field House	Building 110 Field House Demo	Building 10 Demo
	Alternates:	ALL	1A / 1B	1C	2A	2B	1A/1B	1C	2A / 2B	1A / 1B / 1C	2A / 2B	1A	1B/1C/2A/2B	ALL	1A	1B/1C/2A/2B	1A/1B/2A/2B
	Area:	24	79S	79T	79L	79D	1214H	1214S	1214I	3539I	3539S	93	93D	105	FH	FHD	10D
110000	Equipment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
111000	Parking Control Equipment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
111500	Security Equipment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
113000	Residential Equipment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
114000	Foodservice Equipment	-	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	10,000	-	-	-	-	-	-
111500	Educational Equipment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
116000	Audio Visual Equipment	-	63,400	231,400	77,700	66,900	50,000	50,000	50,000	50,000	25,000	-	-	-	-	-	-
116500	Athletic and Recreational Equipment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
117000	Healthcare Equipment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
119000	Other Equipment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	FURNISHINGS																
120000	Furnishings	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
122000	Window Treatments	-	90,900	90,900	90,900	90,900	87,200	87,200	87,200	90,900	30,000	-	-	-	2,500	-	-
126000	Multiple Seating	90,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SPECIAL CONSTRUCTION																
130000	Special Construction	-	25,000	25,000	25,000	-	-	-	-	-	-	-	-	-	-	-	-
	CONVEYING EQUIPMENT																
142000	Elevators	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
143000	Escalators	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	FIRE SUPPRESSION																
210000	Fire Sprinklers	-	91,900	109,400	109,400	111,200	68,300	68,300	68,300	99,100	35,800	-	-	-	38,800	-	-
	PLUMBING																
220000	Plumbing General	-	53,200	53,200	53,200	89,500	64,000	64,000	64,000	83,100	37,200	20,000	-	-	33,600	-	-
221000	Plumbing Piping	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
223000	Plumbing Equipment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
224000	Plumbing Fixtures	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
227000	Plumbing Miscellaneous	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HVAC																
230000	HVAC General	150,000	398,200	488,400	488,400	420,200	234,700	234,700	234,700	435,200	107,800	-	-	-	123,200	-	-
232000	HVAC Piping and Pumps	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
233000	HVAC Air Distribution	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
237000	HVAC Equipment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
239000	HVAC Miscellaneous	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	ELECTRICAL																
260000	Electrical General	75,000	550,700	673,700	673,700	580,700	320,000	320,000	320,000	593,500	147,000	-	-	-	84,000	-	-
261000	Electrical Service	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
262000	Electrical Distribution	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
265000	Lighting	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
266000	Power Devices	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
269000	Miscellaneous Electrical	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	COMMUNICATIONS																
270000	Communications	-	54,300	75,800	66,600	57,300	32,000	32,000	32,000	59,300	14,700	-	-	-	16,800	-	-
271000	Cabling	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
272000	Data Communications	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
273000	Voice Communications	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
274000	Audio-Video Communications	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	ELECTRONIC SAFETY AND SECURITY																

SEAROCK + STAFFORD CONSTRUCTION MANAGEMENT

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X Y Summary - Construction Costs

CSI	DESCRIPTION		Buildings 2 and 4 Theater & Music	Buildings 7-9 Admin Services	Buildings 7-9 w/ Theater	Buildings 7-9 w/ Special Services	Buildings 7-9 w/ Dance	Buildings 12-14 (Honors)	Buildings 12-14 (Student)	Buildings 12-14 (Interdisciplinary)	Buildings 35-39 (Interdisciplinary)	Buildings 35-39 (Science)	Buildings 93 Pool/Bleachers	Buildings 93 Pool/Bleachers Demo	Building 105 Stadium	Building 110 Field House	Building 110 Field House Demo	Building 10 Demo
	Alternates:		ALL	1A / 1B	1C	2A	2B	1A/1B	1C	2A / 2B	1A / 1B / 1C	2A / 2B	1A	1B/1C/2A/2B	ALL	1A	1B/1C/2A/2B	1A/1B/2A/2B
	Area:		24	79S	79T	79L	79D	1214H	1214S	1214I	3539I	3539S	93	93D	105	FH	FHD	10D
280000	Electronic Safety and Security		10,000	72,400	88,800	88,800	76,400	42,700	42,700	42,700	79,100	19,600	-	-	-	-	-	-
	EARTHWORK																	
310000	Earthwork		-	15,000	15,000	15,000	15,000	30,000	30,000	30,000	15,000	-	-	-	-	-	-	15,000
311000	Site Cleaning		-	-	-	-	-	-	-	-	-	105,000	-	-	-	-	-	15,000
314000	Shoring and Underpinning		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
316000	Special Foundations and Load-Bearing Elements		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	EXTERIOR IMPROVEMENTS																	
321000	Paving		-	-	-	-	-	106,000	106,000	106,000	-	-	-	-	-	-	-	-
323000	Site Improvements		-	25,000	25,000	25,000	25,000	50,000	50,000	50,000	10,000	-	70,000	15,300	-	-	20,500	20,000
328000	Irrigation		-	10,000	10,000	10,000	10,000	25,000	25,000	25,000	10,000	-	10,000	-	-	-	-	16,900
329000	Planting		-	10,000	10,000	10,000	10,000	25,000	25,000	25,000	10,000	-	10,000	-	-	-	-	16,900
	UTILITIES																	
330000	Utilities		-	54,300	66,600	66,600	57,300	50,000	50,000	50,000	40,000	-	-	-	-	-	-	21,200
331000	Water Utilities		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
333000	Sanitary Sewerage Utilities		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
334000	Storm Drainage Utilities		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
337000	Electrical Utilities		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
338000	Communications Utilities		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BUILDING ADDITIONS																	
N/A	Building Additions		-	-	-	-	3,803,400		-	-	-	-	1,500,000	-	-	-	-	-
N/A	Landscape Additions / Central Plant @ 12-14		-	-	-	-	600,000	2,970,000	2,970,000	2,970,000	-	-	-	-	-	-	-	-
	Sub-Total Direct Construction		**989,000**	**3,301,600**	**3,905,500**	**3,691,500**	**7,860,700**	**5,352,700**	**5,373,500**	**5,371,100**	**3,251,100**	**1,338,500**	**1,832,600**	**86,500**	**168,100**	**684,800**	**117,400**	**349,400**
	General Conditions	15.0%	148,400	495,200	585,800	553,700	1,179,100	802,900	806,000	805,700	487,700	200,800	274,900	13,000	25,200	102,700	17,600	52,400
	Insurance	1.0%	9,900	33,000	39,100	36,900	78,600	53,500	53,700	53,700	32,500	13,400	18,300	900	1,700	6,800	1,200	3,500
	Taxes & Bonds	1.3%	12,400	41,300	48,800	46,100	98,300	66,900	67,200	67,100	40,600	16,700	22,900	1,100	2,100	8,600	1,500	4,400
	Fee	4.0%	39,600	132,100	156,200	147,700	314,400	214,100	214,900	214,800	130,000	53,500	73,300	3,500	6,700	27,400	4,700	14,000
	Sub-Total Construction		**1,199,300**	**4,003,200**	**4,735,400**	**4,475,900**	**9,531,100**	**6,490,100**	**6,515,300**	**6,512,400**	**3,941,900**	**1,622,900**	**2,222,000**	**105,000**	**203,800**	**830,300**	**142,400**	**423,700**
	Construction Contingency	15%	179,900	600,500	710,300	671,400	1,429,700	973,500	977,300	976,900	591,300	243,400	333,300	15,800	30,600	124,500	21,400	63,600
	Escalation to Mid-Point of Construction (3.5% p.a.)	7.1%	98,200	327,900	387,900	366,600	780,700	531,600	533,700	533,400	322,900	132,900	182,000	8,600	16,700	68,000	11,700	34,700
	Total Construction:		**1,477,400**	**4,931,600**	**5,833,600**	**5,513,900**	**11,741,500**	**7,995,200**	**8,026,300**	**8,022,700**	**4,856,100**	**1,999,200**	**2,737,300**	**129,400**	**251,100**	**1,022,800**	**175,500**	**522,000**
	Cost / SF		$ 55.75	$ 272.46	$ 262.77	$ 248.37	$ 371.57	$ 749.53	$ 752.44	$ 752.10	$ 245.48	$ 322.45	N/A	N/A	N/A	$ 174.84	$ 30.00	$ 61.69
	Soft Costs:	**25%**	**369,350**	**1,232,900**	**1,458,400**	**1,378,475**	**2,935,375**	**1,998,800**	**2,006,575**	**2,005,675**	**1,214,025**	**499,800**	**684,325**	**32,350**	**62,775**	**255,700**	**43,875**	**130,500**
	TOTAL PROJECT COST:		**1,846,750**	**6,164,500**	**7,292,000**	**6,892,375**	**14,676,875**	**9,994,000**	**10,032,875**	**10,028,375**	**6,070,125**	**2,499,000**	**3,421,625**	**161,750**	**313,875**	**1,278,500**	**219,375**	**652,500**

Note: This computational spreadsheet may reflect minor calculation variances due to differences in the calculations and rounding conventions. The executive summary sheet will take precedence.

SEAROCK + STAFFORD
CONSTRUCTION MANAGEMENT

Orange Coast College Draft Conceptual Budget

Buildings 2-4

April 3, 2015

Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit		Rate ($)		Total ($)
		GENERAL WORK ITEMS						
010000		**General Requirements**						
		General Requirements	INCLUDED IN GENERAL CONDITIONS				$	-
015000		**Temporary Facilities and Controls**						
		Temporary Facilities and Controls	INCLUDED IN GENERAL CONDITIONS				$	-
		Sub-Total for General Work Items:					**$**	**-**
		EXISTING CONDITIONS						
024000		**Demolition**						
		All Alternates - No Change of Use Planned						
	24	Saw cut & Demo Existing Slab	3,000	SF	$	7.00	$	21,000
	24	Debris Disposal Allowance (6" of debris per sf of Building)	10	DUMPSTERS	$	450.00	$	4,500
026000		**Abatement**						
		All Alternates - No Change of Use Planned						
	24	Abatement Allowance					$	-
		Sub-Total for Existing Conditions:					**$**	**25,500**
		CONCRETE						
030000		**Concrete**						
		All Alternates - No Change of Use Planned						
	24	Patch Existing Concrete	26,500	SF	$	1.00	$	26,500
032000		**Concrete Reinforcing**						
		All Alternates - No Change of Use Planned						
		Replace Concrete Slab @ Covered Walkway N						
	24	Grade beams	37.00	CY	$	225.00	$	8,325
	24	Reinforcing Steel - 275 lbs / cy	10,175	LBS	$	1.25	$	12,719
	24	Forming Allowance	9,000	SF	$	4.50	$	40,500
	24	Excavation by Hand	37	CY	$	65.00	$	2,405
	24	Premium for Tie-Ins to Existing (Drilling, Doweling, Grouting)	15%	PREMIUM	$	63,948.75	$	9,592
	24	Spoil Disposal	37	CY	$	27.50	$	1,018
	24	Rock Chipping Allowance	1	ALLOW	$	5,000.00	$	5,000
	24	Allowance for unforeseen strengthening of existing footings (10% of new footing cost)	1	ALLOW	$	7,955.86	$	7,956
	24	Historic Renovation/Campus Environment Premium	15%	PREMIUM	$	8,751.44	$	1,313
		Retrofit Top Reinforcing Steel in Pile Cap						
	24	Grade beams	1	CY	$	225.00	$	270
	24	Reinforcing Steel - 275 lbs / cy	330	LBS	$	1.25	$	413
	24	Forming Allowance	300	SF	$	4.50	$	1,350
	24	Excavation by Hand	1	CY	$	65.00	$	78
	24	Premium for Tie-Ins to Existing (Drilling, Doweling, Grouting)	15%	PREMIUM	$	2,110.50	$	317
	24	Spoil Disposal	1	CY	$	27.50	$	33
	24	Rock Chipping Allowance	1	ALLOW	$	5,000.00	$	5,000
	24	Allowance for unforeseen strengthening of existing footings (10% of new footing cost)	1	ALLOW	$	746.01	$	746
	24	Historic Renovation/Campus Environment Premium	15%	PREMIUM	$	820.61	$	123

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Buildings 2-4

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Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit	Rate ($)	Total ($)
034000		**Precast Concrete**				
		Precast Concrete		EXCLUDED		$ -
		Sub-Total for Concrete:				**$ 123,656**
		MASONRY				
042000		**CMU**				
		All Alternates - No Change of Use Planned				
	24	Spalled and Cracked Brick Treatment	450	SF	$ 1.05	$ 473
	24	Replacement allowance	45	EA	$ 150.00	$ 6,750
	24	Cracked and Deteriorated Joint Treatment	800	SF	$ 1.05	$ 840
	24	Allowance for Repointing of Brick Mortar	80	SF	$ 1.05	$ 84
	24	Efflorescence Treatment	400	SF	$ 1.00	$ 400
	24	Soiling and Biological Growth Treatment	500	SF	$ 1.50	$ 750
	24	Site				$ -
	24	Spalled and Cracked Brick Treatment	250	SF	$ 1.05	$ 263
	24	Replacement allowance	25	EA	$ 150.00	$ 3,750
	24	Cracked and Deteriorated Joint Treatment	250	SF	$ 1.05	$ 263
	24	Allowance for Repointing of Brick Mortar	25	SF	$ 1.05	$ 26
	24	Efflorescence Treatment	250	SF	$ 1.00	$ 250
	24	Soiling and Biological Growth Treatment	250	SF	$ 1.50	$ 375
		Sub-Total for Masonry:				**$ 14,223**
		METALS				
051000		**Structural Steel**				
		Structural Steel		EXCLUDED		$ -
053000		**Metal Decking**				
		Metal Decking		EXCLUDED		$ -
054000		**Cold-Formed Metal Framing**				
		Cold-Formed Metal Framing		EXCLUDED		$ -
055000		**Miscellaneous Metal**				
		Miscellaneous Metal		EXCLUDED		$ -
057000		**Decorative Metal**				
		Decorative Metal		EXCLUDED		$ -
		Sub-Total for Metals:				**$ -**
		WOOD, PLASTICS, COMPOSITES				
061000		**Rough Carpentry**				
		All Alternates - No Change of Use Planned				
	24	Wood Diaphragm cross ties	28	EA	$ 1,000.00	$ 28,000
	24	Wall to Roof Connections	200	EA	$ 1,000.00	$ 200,000
	24	Allowance for Misc Shaped Blocking	1	ALLOW	$ 2,500.00	$ 2,500
062000		**Finish Carpentry**				
		Finish Carpentry		EXCLUDED		$ -
064000		**Architectural Woodwork**				
		Architectural Woodwork		EXCLUDED		$ -

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Buildings 2-4

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Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit	Rate ($)	Total ($)
		Sub-Total for Wood, Plastics, Composites:				**$ 230,500**
		THERMAL AND MOISTURE PROTECTION				
071000		**Waterproofing**				
		Dampproofing	1,000	SF	$ 3.50	$ 3,500
072000		**Thermal Protection**				
		Thermal Protection		EXCLUDED		$ -
072500		**Weather Barriers**				
		Weather Barriers		EXCLUDED		$ -
075000		**Membrane Roofing**				
		All Alternates - No Change of Use Planned				$ -
	24	New Membrane Roof	26,500	SF	$ 10.00	$ 265,000
076000		**Flashing and Sheet Metal**				
		Flashing and Sheet Metal		EXCLUDED		$ -
078000		**Fire and Smoke Protection**				
		All Alternates - No Change of Use Planned				$ -
		Sub-Total for Thermal And Moisture Protection:				**$ 268,500**
		OPENINGS				
081000		**Doors and Frames**				
083000		**Specialty Doors and Frames**				
		Specialty Doors and Frames		EXCLUDED		$ -
084000		**Entrances, Storefronts, and Curtain Walls**				
		Entrances, Storefronts, and Curtain Walls		EXCLUDED		$ -
085000		**Windows**				
		All Alternates - No Change of Use Planned				$ -
		Windows (glass and finish)				
	24	Aluminum clearstory	90	SF	$ 45.00	$ 4,050
086000		**Skylights**				
		Skylights		EXCLUDED		$ -
088000		**Glazing**				
		Glazing		EXCLUDED		$ -
		Sub-Total for Openings:				**$ 4,050**
		FINISHES				
092000		**Plaster and Gypsum Board**				
		Plaster and Gypsum Board		EXCLUDED		$ -
093000		**Ceramic Tile**				
		Ceramic Tile		EXCLUDED		$ -

Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit	Rate ($)		Total ($)	
095000		**Acoustical Ceilings**						
		Acoustical Ceilings		EXCLUDED			$	-
096000		**Flooring**						
		Flooring		EXCLUDED			$	-
098000		**Acoustic Treatment**						
		Acoustic Treatment		EXCLUDED			$	-
099000		**Painting and Coating**						
		All Alternates - No Change of Use Planned						
	24	Crack Repair	20	LF	$	50.00	$	1,000
		Sub-Total for Finishes:					**$**	**1,000**
		SPECIALTIES						
102000		**Specialties**						
		All Alternates - No Change of Use Planned					$	-
		Sub-Total for Specialties:					**$**	**-**
		EQUIPMENT						
110000		**Equipment**						
		Equipment		EXCLUDED			$	-
111000		**Parking Control Equipment**						
		Parking Control Equipment		EXCLUDED			$	-
111500		**Security Equipment**						
		Security Equipment		EXCLUDED			$	-
113000		**Residential Equipment**						
		Residential Equipment		EXCLUDED			$	-
114000		**Foodservice Equipment**						
		Foodservice Equipment		EXCLUDED			$	-
111500		**Educational Equipment**						
		Educational Equipment		EXCLUDED			$	-
116000		**Audio Visual Equipment**						
		Audio Visual Equipment		EXCLUDED			$	-
116500		**Athletic and Recreational Equipment**						
		Athletic and Recreational Equipment		EXCLUDED			$	-
117000		**Healthcare Equipment**						
		Healthcare Equipment		EXCLUDED			$	-
119000		**Other Equipment**						
		Other Equipment		EXCLUDED			$	-
		Sub-Total for Equipment:					**$**	**-**

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Buildings 2-4

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Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit	Rate ($)	Total ($)
		FURNISHINGS				
120000		**Furnishings**				
		Furnishings		EXCLUDED		$ -
122000		**Window Treatments**				
		Window Treatments		EXCLUDED		$ -
126000		**Multiple Seating**				
		All Alternates - No Change of Use Planned				$ -
	24	Reupholster Cushions in Theater	450	EA	$ 200.00	$ 90,000
		Sub-Total for Furnishings:				**$ 90,000**
		SPECIAL CONSTRUCTION				
130000		**Special Construction**				
		Special Construction		EXCLUDED		$ -
		Sub-Total for Special Construction:				**$ -**
		CONVEYING EQUIPMENT				
142000		**Elevators**				
		Elevators		EXCLUDED		$ -
143000		**Escalators**				$ -
		Escalators		EXCLUDED		$ -
		Sub-Total for Conveying Equipment:				**$ -**
		FIRE SUPPRESSION				
210000		**Fire Sprinklers**				
		Fire Sprinklers		EXCLUDED		$ -
		Sub-Total for Fire Suppression:				**$ -**
		PLUMBING				
220000		**Plumbing General**				
		Plumbing General		EXCLUDED		$ -
221000		**Plumbing Piping**				
223000		**Plumbing Equipment**				
224000		**Plumbing Fixtures**				
227000		**Plumbing Miscellaneous**				
		Sub-Total for Plumbing :				**$ -**
		HEATING, VENTILATING & AIR CONDITIONING (HVAC)				
230000		**HVAC General**				
		All Alternates - No Change of Use Planned				
	24	HVAC System @ Building 2	1	ALLOW	$ 150,000.00	$ 150,000

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Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit	Rate ($)	Total ($)
232000		**HVAC Piping and Pumps**				
233000		**HVAC Air Distribution**				
237000		**HVAC Equipment**				
239000		**HVAC Miscellaneous**				
		Sub-Total for Heating, Ventilating & Air Conditioning (Hvac):				**$ 150,000**
		ELECTRICAL				
260000		**Electrical General**				$ -
		All Alternates - No Change of Use Planned				
	24	Electrical Work at Building 2	1	ALLOW	$ 75,000.00	$ 75,000
261000		**Electrical Service**				
262000		**Electrical Distribution**				
265000		**Lighting**				
266000		**Power Devices**				
269000		**Miscellaneous Electrical**				
		Sub-Total for Electrical:				**$ 75,000**
		COMMUNICATIONS				
270000		**Communications**				
		Communications		EXCLUDED		$ -
271000		**Cabling**				
272000		**Data Communications**				
273000		**Voice Communications**				
274000		**Audio-Video Communications**				
		Sub-Total for Communications:				**$ -**
		ELECTRONIC SAFETY AND SECURITY				
280000		**Electronic Safety and Security**				$ -
		All Alternates - No Change of Use Planned				
	24	FLS System	1	ALLOW	$ 10,000.00	$ 10,000
		Sub-Total for Electronic Safety And Security:				**$ 10,000**
		EARTHWORK				
310000		**Earthwork**				$ -
		Earthwork		EXCLUDED		$ -
311000		**Site Cleaning**				$ -
		Site Cleaning		EXCLUDED		$ -

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CONSTRUCTION MANAGEMENT

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Buildings 2-4

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Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit	Rate ($)	Total ($)
314000		**Shoring and Underpinning**				$ -
316000		**Special Foundations and Load-Bearing Elements**				$ -
		Sub-Total for Earthwork:				**$ -**
		EXTERIOR IMPROVEMENTS				
321000		**Paving**				$ -
323000		**Site Improvements**				$ -
				ALLOW		$ -
328000		**Irrigation**				$ -
		Irrigation		EXCLUDED		$ -
329000		**Planting**				$ -
		Planting		EXCLUDED		$ -
		Sub-Total for Exterior Improvements:				**$ -**
		UTILITIES				
330000		**Utilities**				$ -
		Utilities		EXCLUDED		$ -
331000		**Water Utilities**				$ -
		Water Utilities		EXCLUDED		$ -
333000		**Sanitary Sewerage Utilities**				
		Sanitary Sewerage Utilities		EXCLUDED		$ -
334000		**Storm Drainage Utilities**				
337000		**Electrical Utilities**				
		Electrical Utilities		EXCLUDED		$ -
338000		**Communications Utilities**				$ -
		Sub-Total for Utilities:				**$ -**

Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit	Rate ($)	Total ($)
		GENERAL WORK ITEMS				
010000		**General Requirements**				
		General Requirements	INCLUDED IN GENERAL CONDITIONS			$ -
015000		**Temporary Facilities and Controls**				
		Temporary Facilities and Controls	INCLUDED IN GENERAL CONDITIONS			$ -
		Sub-Total for General Work Items:				**$ -**
		EXISTING CONDITIONS				
024000		**Demolition**				
		Alt 1A/1B - Administrative Services (Smaller Footprint)				
	79S	General Building Demolition	5,405	SF	$ 4.50	$ 24,323
	79S	Electrical Demolition & Safe-Off	5,405	SF	$ 0.50	$ 2,703
	79S	Mechanical Demolition & Safe-off	5,405	SF	$ 0.80	$ 4,324
	79S	Saw cut & Demo Existing Slab	5,405	SF	$ 7.00	$ 37,835
	79S	Allowance for unforeseen MEP demo	5,405	SF	$ 0.75	$ 4,054
	79S	Remove Existing Metal Roof and Built-Up Fascia on South Side Bldg. 7	3,302	SF	$ 4.00	$ 13,208
	79S	Remove Underlayments	3,302	SF	$ 4.00	$ 13,208
	79S	Remove HVAC Equipment on Bldg. 8/9	9,172	SF	$ 1.00	$ 9,172
	79S	Saw cut & Demo Existing Slab for Wall-To-Foundation @ Bldg 8/9	1,140	SF	$ 7.00	$ 7,980
	79S	Debris Disposal Allowance (6" of debris per sf of Building)	10	DUMPSTERS	$ 600.00	$ 6,000
		Alt 1C - Administration & Theater Pre-Function				
	79T	General Building Demolition	1,275	SF	$ 4.50	$ 5,738
	79T	Electrical Demolition & Safe-Off	1,275	SF	$ 0.50	$ 638
	79T	Mechanical Demolition & Safe-off	1,275	SF	$ 0.80	$ 1,020
	79T	Saw cut & Demo Existing Slab	1,275	SF	$ 7.00	$ 8,925
	79T	Allowance for unforeseen MEP demo	1,275	SF	$ 0.75	$ 956
	79T	Remove Existing Metal Roof and Built-Up Fascia on South Side Bldg. 7	4,659	SF	$ 5.00	$ 23,295
	79T	Remove Underlayments	4,659	SF	$ 5.00	$ 23,295
	79T	Remove HVAC Equipment on Bldg. 8/9	9,800	SF	$ 1.00	$ 9,800
	79T	Saw cut & Demo Existing Slab for Wall-To-Foundation @ Bldg 8/9	1,460	SF	$ 7.00	$ 10,220
	79T	Debris Disposal Allowance (6" of debris per sf of Building)	8	DUMPSTERS	$ 600.00	$ 4,800
		Alt 2A - Administration & Special Services				
	79L	General Building Demolition	1,275	SF	$ 4.50	$ 5,738
	79L	Electrical Demolition & Safe-Off	1,275	SF	$ 0.50	$ 638
	79L	Mechanical Demolition & Safe-off	1,275	SF	$ 0.80	$ 1,020
	79L	Saw cut & Demo Existing Slab	1,275	SF	$ 7.00	$ 8,925
	79L	Allowance for unforeseen MEP demo	1,275	SF	$ 0.75	$ 956
	79L	Remove Existing Metal Roof and Built-Up Fascia on South Side Bldg. 7	4,659	SF	$ 5.00	$ 23,295
	79L	Remove Underlayments	4,659	SF	$ 5.00	$ 23,295
	79L	Remove HVAC Equipment on Bldg. 8/9	9,800	SF	$ 1.00	$ 9,800
	79L	Saw cut & Demo Existing Slab for Wall-To-Foundation @ Bldg 8/9	1,460	SF	$ 7.00	$ 10,220
	79L	Debris Disposal Allowance (6" of debris per sf of Building)	8	DUMPSTERS	$ 600.00	$ 4,800
		Alt 2B - Dance Department				
	79D	General Building Demolition	4,275	SF	$ 4.50	$ 19,238
	79D	Electrical Demolition & Safe-Off	4,275	SF	$ 0.50	$ 2,138
	79D	Mechanical Demolition & Safe-off	4,275	SF	$ 0.80	$ 3,420
	79D	Saw cut & Demo Existing Slab	4,275	SF	$ 7.00	$ 29,925
	79D	Allowance for unforeseen MEP demo	4,275	SF	$ 0.75	$ 3,206
	79D	Remove Existing Metal Roof and Built-Up Fascia on South Side Bldg. 7	3,501	SF	$ 5.00	$ 17,505

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Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit	Rate ($)	Total ($)
	79D	Remove Underlayments	3,501	SF	$ 5.00	$ 17,505
	79D	Remove HVAC Equipment on Bldg. 8/9	9,800	SF	$ 1.00	$ 9,800
	79D	Saw cut & Demo Existing Slab for Wall-To-Foundation @ Bldg 8/9	1,300	SF	$ 7.00	$ 9,100
	79D	Debris Disposal Allowance (6" of debris per sf of Building)	10	DUMPSTERS	$ 600.00	$ 6,000
026000		**Abatement**				
		Alt 1A/1B - Administrative Services (Smaller Footprint)				
	79S	Abatement Allowance	5,405	SF	$ 10.00	$ 54,050
		Alt 1C - Administration & Theater Pre-Function				
	79T	Abatement Allowance	1,275	SF	$ 10.00	$ 12,750
	79T	Abatement Allowance	1,275	SF	$ 10.00	$ 12,750
		Alt 2A - Administration & Special Services				
	79L	Abatement Allowance	1,275	SF	$ 10.00	$ 12,750
		Alt 2B - Dance Department				
	79D	Abatement Allowance	4,275	SF	$ 10.00	$ 42,750
		Sub-Total for Existing Conditions:				**$ 553,065**
		CONCRETE				
030000		**Concrete**				
		Alt 1A/1B - Administrative Services (Smaller Footprint)				
		Footings & Foundations for Masonry Shear Walls at 7 East / West				
	79S	Grade beams - assumed as 3'-0" x 1'-6"	16	CY	$ 150.00	$ 2,400
	79S	Reinforcing Steel - 275 lbs / cy	4,400	LBS	$ 1.25	$ 5,500
	79S	Forming Allowance	288	SF	$ 4.50	$ 1,296
	79S	Excavation by Hand	16	CY	$ 65.00	$ 1,040
	79S	Premium for Tie-Ins to Existing (Drilling, Doweling, Grouting)	10%	PREMIUM	$ 10,236.00	$ 1,024
	79S	Spoil Disposal	16	CY	$ 27.50	$ 440
	79S	Rock Chipping Allowance	1	ALLOW	$ 5,000.00	$ 5,000
	79S	Allowance for unforeseen strengthening of existing footings (10% of new footing cost)	1	ALLOW	$ 1,669.96	$ 1,670
	79S	Historic Renovation/Campus Environment Premium	15%	PREMIUM	$ 1,836.96	$ 276
		Footings & Foundations for Supplemental Framing at 8/9 North				
	79S	Grade beams - assumed as 3'-0" x 1'-6"	43	CY	$ 150.00	$ 6,450
	79S	Reinforcing Steel - 275 lbs / cy	11,825	LBS	$ 1.25	$ 14,781
	79S	Forming Allowance	774	SF	$ 4.50	$ 3,483
	79S	Excavation by Hand	43	CY	$ 65.00	$ 2,795
	79S	Premium for Tie-Ins to Existing (Drilling, Doweling, Grouting)	10%	PREMIUM	$ 27,509.25	$ 2,751
	79S	Spoil Disposal	43	CY	$ 27.50	$ 1,183
	79S	Rock Chipping Allowance	1	ALLOW	$ 5,000.00	$ 5,000
	79S	Allowance for unforeseen strengthening of existing footings (10% of new footing cost)	1	ALLOW	$ 3,644.27	$ 3,644
	79S	Historic Renovation/Campus Environment Premium	15%	PREMIUM	$ 4,008.69	$ 601
		Alt 1C - Administration & Theater Pre-Function				
		Footings & Foundations for Plywood Shear Walls at Bldg 7 Interior				
	79T	Grade beams - assumed as 3'-0" x 1'-6"	5	CY	$ 150.00	$ 800
	79T	Reinforcing Steel - 275 lbs / cy	1,467	LBS	$ 1.25	$ 1,833
	79T	Forming Allowance	96	SF	$ 4.50	$ 432
	79T	Excavation by Hand	5	CY	$ 65.00	$ 347
	79T	Premium for Tie-Ins to Existing (Drilling, Doweling, Grouting)	10%	PREMIUM	$ 3,412.00	$ 341
	79T	Spoil Disposal	5	CY	$ 27.50	$ 147

SEAROCK + STAFFORD
CONSTRUCTION MANAGEMENT

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Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit		Rate ($)		Total ($)
	79T	Rock Chipping Allowance	1	ALLOW	$	5,000.00	$	5,000
	79T	Allowance for unforeseen strengthening of existing footings (10% of new footing cost)	1	ALLOW	$	889.99	$	890
	79T	Historic Renovation/Campus Environment Premium	15%	PREMIUM	$	978.99	$	147
		Footings & Foundations for Supplemental Framing at 8/9 North						
	79T	Grade beams - assumed as 3'-0" x 1'-6"	43	CY	$	150.00	$	6,450
	79T	Reinforcing Steel - 275 lbs / cy	11,825	LBS	$	1.25	$	14,781
	79T	Forming Allowance	774	SF	$	4.50	$	3,483
	79T	Excavation by Hand	43	CY	$	65.00	$	2,795
	79T	Premium for Tie-Ins to Existing (Drilling, Doweling, Grouting)	10%	PREMIUM	$	27,509.25	$	2,751
	79T	Spoil Disposal	43	CY	$	27.50	$	1,183
	79T	Rock Chipping Allowance	1	ALLOW	$	5,000.00	$	5,000
	79T	Allowance for unforeseen strengthening of existing footings (10% of new footing cost)	1	ALLOW	$	3,644.27	$	3,644
	79T	Historic Renovation/Campus Environment Premium	15%	PREMIUM	$	4,008.69	$	601
		Alt 2A - Administration & Special Services						
		Footings & Foundations for Supplemental Framing at 8/9 North						
	79L	Grade beams - assumed as 3'-0" x 1'-6"	43	CY	$	150.00	$	6,450
	79L	Reinforcing Steel - 275 lbs / cy	11,825	LBS	$	1.25	$	14,781
	79L	Forming Allowance	774	SF	$	4.50	$	3,483
	79L	Excavation by Hand	43	CY	$	65.00	$	2,795
	79L	Premium for Tie-Ins to Existing (Drilling, Doweling, Grouting)	10%	PREMIUM	$	27,509.25	$	2,751
	79L	Spoil Disposal	43	CY	$	27.50	$	1,183
	79L	Rock Chipping Allowance	1	ALLOW	$	5,000.00	$	5,000
	79L	Allowance for unforeseen strengthening of existing footings (10% of new footing cost)	1	ALLOW	$	3,644.27	$	3,644
	79L	Historic Renovation/Campus Environment Premium	15%	PREMIUM	$	4,008.69	$	601
		Alt 2B - Dance Department						
		Footings & Foundations for Masonry Shear Walls at 7 West						
	79D	Grade beams - assumed as 3'-0" x 1'-6"	8	CY	$	150.00	$	1,175
	79D	Reinforcing Steel - 275 lbs / cy	2,154	LBS	$	1.25	$	2,693
	79D	Forming Allowance	141	SF	$	4.50	$	635
	79D	Excavation by Hand	8	CY	$	65.00	$	509
	79D	Premium for Tie-Ins to Existing (Drilling, Doweling, Grouting)	10%	PREMIUM	$	5,011.38	$	501
	79D	Spoil Disposal	8	CY	$	27.50	$	215
	79D	Rock Chipping Allowance	1	ALLOW	$	5,000.00	$	5,000
	79D	Allowance for unforeseen strengthening of existing footings (10% of new footing cost)	1	ALLOW	$	1,072.79	$	1,073
	79D	Historic Renovation/Campus Environment Premium	15%	PREMIUM	$	1,180.07	$	177
		Footings for Shear Walls @ Bldg 7 East Wing						
	79D	Grade beams - assumed as 3'-0" x 1'-6"	5	CY	$	150.00	$	800
	79D	Reinforcing Steel - 275 lbs / cy	1,467	LBS	$	1.25	$	1,833
	79D	Forming Allowance	96	SF	$	4.50	$	432
	79D	Excavation by Hand	5	CY	$	65.00	$	347
	79D	Premium for Tie-Ins to Existing (Drilling, Doweling, Grouting)	10%	PREMIUM	$	3,412.00	$	341
	79D	Spoil Disposal	5	CY	$	27.50	$	147
	79D	Rock Chipping Allowance	1	ALLOW	$	5,000.00	$	5,000
	79D	Allowance for unforeseen strengthening of existing footings (10% of new footing cost)	1	ALLOW	$	889.99	$	890
	79D	Historic Renovation/Campus Environment Premium	15%	PREMIUM	$	978.99	$	147

Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit		Rate ($)		Total ($)
		Footings & Foundations for Supplemental Framing at 8/9 North						
	79D	Grade beams - assumed as 3'-0" x 1'-6"	43	CY	$	150.00	$	6,450
	79D	Reinforcing Steel - 275 lbs / cy	11,825	LBS	$	1.25	$	14,781
	79D	Forming Allowance	774	SF	$	4.50	$	3,483
	79D	Excavation by Hand	43	CY	$	65.00	$	2,795
	79D	Premium for Tie-Ins to Existing (Drilling, Doweling, Grouting)	10%	PREMIUM	$	27,509.25	$	2,751
	79D	Spoil Disposal	43	CY	$	27.50	$	1,183
	79D	Rock Chipping Allowance	1	ALLOW	$	5,000.00	$	5,000
	79D	Allowance for unforeseen strengthening of existing footings (10% of new footing cost)	1	ALLOW	$	3,644.27	$	3,644
	79D	Historic Renovation/Campus Environment Premium	15%	PREMIUM	$	4,008.69	$	601
		Alt 1A/1B - Administrative Services (Smaller Footprint)						
		Patch back slabs Demo 'd for Foundation Work at 8/9 North Wall						
	79S	Dowels to Existing @ 12" o.c.	354	EA	$	36.25	$	12,833
	79S	Reinforcing Steel - 1.34#/sf	2,371.80	LBS	$	1.25	$	2,965
	79S	Concrete @ 6"	33	CY	$	275.00	$	9,014
	79S	Misc. Footings	4.0	EA	$	2,000.00	$	8,000
		Alt 1C - Administration & Theater Pre-Function						
		Patch back slabs Demo 'd for Foundation Work at 8/9 North Wall						
	79T	Dowels to Existing @ 12" o.c.	290	EA	$	36.25	$	10,513
	79T	Reinforcing Steel - 1.34#/sf	1,943	LBS	$	1.25	$	2,429
	79T	Concrete @ 6"	27	CY	$	275.00	$	7,384
	79T	Misc. Footings	4.0	EA	$	2,000.00	$	8,000
		Alt 2A - Administration & Special Services						
		Patch back slabs Demo 'd for Foundation Work at 8/9 North Wall						
	79L	Dowels to Existing @ 12" o.c.	258	EA	$	36.25	$	9,353
	79L	Reinforcing Steel - 1.34#/sf	1,729	LBS	$	1.25	$	2,161
	79L	Concrete @ 6"	24	CY	$	275.00	$	6,569
	79L	Misc. Footings	4.0	EA	$	2,000.00	$	8,000
		Alt 2B - Dance Department						
		Patch back slabs Demo 'd for Foundation Work at 8/9 North Wall						
	79D	Dowels to Existing @ 12" o.c.	337	EA	$	36.25	$	12,216
	79D	Reinforcing Steel - 1.34#/sf	2,258	LBS	$	1.25	$	2,822
	79D	Concrete @ 6"	31	CY	$	275.00	$	8,581
	79D	Misc. Footings	4.0	EA	$	2,000.00	$	8,000
032000		**Concrete Reinforcing**						
033000		**Cast-in-Place Concrete**						
034000		**Precast Concrete**						
		Precast Concrete		EXCLUDED			$	-
		Sub-Total for Concrete:					**$**	**332,088**

MASONRY

CSI	Complex	Description	Quantity	Unit		Rate ($)		Total ($)
042000		**CMU**						
		Alt 1A/1B - Administrative Services (Smaller Footprint)						
	79S	New Masonry Shear Walls @ Additions Removal (10' height)	960	SF	$	15.00	$	14,400
	79S	Spalled and Cracked Brick Treatment	12,121	SF	$	1.05	$	12,727

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Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit	Rate ($)	Total ($)
	79S	Replacement allowance	75	EA	$ 150.00	$ 11,250
	79S	Cracked and Deteriorated Joint Treatment	12,121	SF	$ 1.05	$ 12,727
	79S	Allowance for Repointing of Brick Mortar	606	SF	$ 1.05	$ 636
	79S	Efflorescence Treatment	429	SF	$ 1.00	$ 429
	79S	Soiling and Biological Growth Treatment	250	SF	$ 1.50	$ 375
		Alt 1C - Administration & Theater Pre-Function				
	79T	Spalled and Cracked Brick Treatment	14,424	SF	$ 1.05	$ 15,145
	79T	Replacement allowance	75	EA	$ 150.00	$ 11,250
	79T	Cracked and Deteriorated Joint Treatment	14,424	SF	$ 1.05	$ 15,145
	79T	Allowance for Repointing of Brick Mortar	721	SF	$ 1.05	$ 757
	79T	Efflorescence Treatment	429	SF	$ 1.00	$ 429
	79T	Soiling and Biological Growth Treatment	250	SF	$ 1.50	$ 375
		Alt 2A - Administration & Special Services				
	79L	Spalled and Cracked Brick Treatment	14,424	SF	$ 1.05	$ 15,145
	79L	Replacement allowance	75	EA	$ 150.00	$ 11,250
	79L	Cracked and Deteriorated Joint Treatment	14,424	SF	$ 1.05	$ 15,145
	79L	Allowance for Repointing of Brick Mortar	721	SF	$ 1.05	$ 757
	79L	Efflorescence Treatment	429	SF	$ 1.00	$ 429
	79L	Soiling and Biological Growth Treatment	250	SF	$ 1.50	$ 375
		Alt 2B - Dance Department				
	79D	New Masonry Shear Walls @ Additions Removal (10' height)	470	SF	$ 1.05	$ 494
	79D	Spalled and Cracked Brick Treatment	13,688	SF	$ 1.05	$ 14,372
	79D	Replacement allowance	75	EA	$ 150.00	$ 11,250
	79D	Cracked and Deteriorated Joint Treatment	13,688	SF	$ 1.05	$ 14,372
	79D	Allowance for Repointing of Brick Mortar	684	SF	$ 1.00	$ 684
	79D	Efflorescence Treatment	429	SF	$ 1.00	$ 429
	79D	Soiling and Biological Growth Treatment	250	SF	$ 1.50	$ 375
		Sub-Total for Masonry:				**$ 180,724**
		METALS				
051000		**Structural Steel**				
		Alt 1A/1B - Administrative Services (Smaller Footprint)				
	79S	Moment/brace frames at 8/9 north wall (assumed 10' high) - assumes using W8x21	12	TONS	$ 6,000.00	$ 71,820
	79S	Double Angle Braces and Gusset Plates @ Bldg 7	4	EA	$ 1,200.00	$ 4,800
	79S	Double Angle Braces and Gusset Plates @ Bldg 8	4	EA	$ 1,200.00	$ 4,800
	79S	Spray Applied Fireproofing at Exposed W Shape Beams	1.0	ALLOW	$ 15,000.00	$ 15,000
		Alt 1C - Administration & Theater Pre-Function				
	79T	Moment/brace frames at 8/9 north wall (assumed 10' high) - assumes using W8x21	10	TONS	$ 6,000.00	$ 57,834
	79T	Double Angle Braces and Gusset Plates @ Bldg 7	7	EA	$ 1,200.00	$ 8,400
	79T	Double Angle Braces and Gusset Plates @ Bldg 8	7	EA	$ 1,200.00	$ 8,400
	79T	Spray Applied Fireproofing at Exposed W Shape Beams	1.0	ALLOW	$ 10,000.00	$ 10,000
		Alt 2A - Administration & Special Services				
	79L	Moment/brace frames at 8/9 north wall (assumed 10' high) - assumes using W8x21	9	TONS	$ 6,000.00	$ 52,668
	79L	Double Angle Braces and Gusset Plates @ Bldg 7	7	EA	$ 1,200.00	$ 8,400
	79L	Double Angle Braces and Gusset Plates @ Bldg 8	7	EA	$ 1,200.00	$ 8,400

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Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit	Rate ($)	Total ($)
	79L	Spray Applied Fireproofing at Exposed W Shape Beams	1.0	ALLOW	$ 10,000.00	$ 10,000
		Alt 2B - Dance Department				
	79D	Moment/brace frames at 8/9 north wall (assumed 10' high) - assumes using W8x21	11	TONS	$ 6,000.00	$ 67,032
	79D	Double Angle Braces and Gusset Plates @ Bldg 7	6	EA	$ 1,200.00	$ 7,200
	79D	Double Angle Braces and Gusset Plates @ Bldg 8	6	EA	$ 1,200.00	$ 7,200
	79D	Spray Applied Fireproofing at Exposed W Shape Beams	1.0	ALLOW	$ 10,000.00	$ 10,000
053000		**Metal Decking**				
		Metal Decking		EXCLUDED		$ -
054000		**Cold-Formed Metal Framing**				
		Cold-Formed Metal Framing		EXCLUDED		$ -
055000		**Miscellaneous Metal**				
		Miscellaneous Metal		EXCLUDED		$ -
057000		**Decorative Metal**				
		Decorative Metal		EXCLUDED		$ -
		Sub-Total for Metals:				**$ 351,954**

WOOD, PLASTICS, COMPOSITES

CSI	Complex	Description	Quantity	Unit	Rate ($)	Total ($)
061000		**Rough Carpentry**				
		Alt 1A/1B - Administrative Services (Smaller Footprint)				
		2x8 Framing to Existing Wood Rafts on Bldg 7 S.				
	79S	Labor	32	HRS	$ 85.00	$ 2,720
	79S	Material	1	LS	$ 2,500.00	$ 2,500
		Replace Deteriorated Beam at Covered Walkway				
	79S	Labor	32	HRS	$ 85.00	$ 2,720
	79S	Material	1	LS	$ 2,000.00	$ 2,000
	79S	Skylight openings @ Bldgs 8/9	10	EA	$ 1,000.00	$ 10,000
	79S	Unforeseen Rough Carpentry	1	ALLOW	$ 10,000.00	$ 10,000
	79S	Temporary Shoring Allowance	1	ALLOW	$ 5,000.00	$ 5,000
	79S	Wood Diaphragm cross ties	9,800	SF	$ 2.00	$ 19,600
	79S	Wall to Roof Connections	65	EA	$ 1,000.00	$ 65,000
	79S	Allowance for Misc Shaped Blocking	1	ALLOW	$ 2,500.00	$ 2,500
		Alt 1C - Administration & Theater Pre-Function				
		2x8 Framing to Existing Wood Rafts on Bldg 7 S.				
	79T	Labor	32	HRS	$ 85.00	$ 2,720
	79T	Material	1	LS	$ 2,500.00	$ 2,500
		Replace Deteriorated Beam at Covered Walkway				
	79T	Labor	32	HRS	$ 85.00	$ 2,720
	79T	Material	1	LS	$ 2,500.00	$ 2,500
	79T	Upgrade Plywood Shear Wall @ Bldg 7 East Wing	288	SF	$ 20.00	$ 5,760
	79T	Skylight openings @ Bldgs 8/9	10	EA	$ 1,000.00	$ 10,000
	79T	Unforeseen Rough Carpentry	1	ALLOW	$ 10,000.00	$ 10,000
	79T	Temporary Shoring Allowance	1	ALLOW	$ 5,000.00	$ 5,000
	79T	Wood Diaphragm cross ties	9,800	SF	$ 2.00	$ 19,600
	79T	Wall to Roof Connections	65	EA	$ 1,000.00	$ 65,000
	79T	Allowance for Misc Shaped Blocking	1	ALLOW	$ 2,500.00	$ 2,500

Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit	Rate ($)	Total ($)
		Alt 2A - Administration & Special Services				
		2x8 Framing to Existing Wood Rafts on Bldg 7 S.				
	79L	Labor	32	HRS	$ 85.00	$ 2,720
	79L	Material	1	LS	$ 2,500.00	$ 2,500
		Replace Deteriorated Beam at Covered Walkway				
	79L	Labor	32	HRS	$ 85.00	$ 2,720
	79L	Material	1	LS	$ 2,500.00	$ 2,500
	79L	New Plywood Shear Wall @ Bldg 7 East Wing	288	SF	$ 20.00	$ 5,760
	79L	Skylight openings @ Bldgs 8/9	10	EA	$ 1,000.00	$ 10,000
	79L	Unforeseen Rough Carpentry	1	ALLOW	$ 10,000.00	$ 10,000
	79L	Temporary Shoring Allowance	1	ALLOW	$ 5,000.00	$ 5,000
	79L	Wood Diaphragm cross ties	9,800	SF	$ 2.00	$ 19,600
	79L	Wall to Roof Connections	65	EA	$ 1,000.00	$ 65,000
	79L	Allowance for Misc Shaped Blocking	1	ALLOW	$ 2,500.00	$ 2,500
		Alt 2B - Dance Department				
		2x8 Framing to Existing Wood Rafts on Bldg 7 S.				
	79D	Labor	32	HRS	$ 85.00	$ 2,720
	79D	Material	1	LS	$ 2,500.00	$ 2,500
		Replace Deteriorated Beam at Covered Walkway				
	79D	Labor	32	HRS	$ 85.00	$ 2,720
	79D	Material	1	LS	$ 2,500.00	$ 2,500
	79D	Skylight openings @ Bldgs 8/9	10	EA	$ 1,000.00	$ 10,000
	79D	Unforeseen Rough Carpentry	1	ALLOW	$ 10,000.00	$ 10,000
	79D	Temporary Shoring Allowance	1	ALLOW	$ 5,000.00	$ 5,000
	79D	Upgrade Plywood Shear Wall @ Bldg 7 East Wing	576	SF	$ 20.00	$ 11,520
	79D	Wood Diaphragm cross ties	9,800	SF	$ 2.00	$ 19,600
	79D	Wall to Roof Connections	65	EA	$ 1,000.00	$ 65,000
	79D	Allowance for Misc Shaped Blocking	1	ALLOW	$ 2,500.00	$ 2,500
	79S	Supplemental Roof Framing	3,300	SF	$ 10.00	$ 33,000
	79T	Supplemental Roof Framing	4,700	SF	$ 10.00	$ 47,000
	79L	Supplemental Roof Framing	4,700	SF	$ 10.00	$ 47,000
	79D	Supplemental Roof Framing	3,700	SF	$ 10.00	$ 37,000
062000		**Finish Carpentry**				
		Finish Carpentry		EXCLUDED		$ -
064000		**Architectural Woodwork**				
	79S	Lowers	100	LF	$ 65.00	$ 6,500
	79S	Uppers	25	LF	$ 45.00	$ 1,125
	79T	Lowers	150	LF	$ 65.00	$ 9,750
	79T	Uppers	38	LF	$ 45.00	$ 1,688
	79L	Lowers	100	LF	$ 65.00	$ 6,500
	79L	Uppers	25	LF	$ 45.00	$ 1,125
	79D	Lowers	50	LF	$ 65.00	$ 3,250
	79D	Uppers	13	LF	$ 45.00	$ 563
		Sub-Total for Wood, Plastics, Composites:				**$ 707,200**
		THERMAL AND MOISTURE PROTECTION				
071000		**Waterproofing**				
		Waterproofing		EXCLUDED		$ -
072000		**Thermal Protection**				

Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit	Rate ($)	Total ($)
		Alt 1A/1B - Administrative Services (Smaller Footprint)				$ -
	79S	Exterior Wall Thermal Insulation	1	ALLOW	$ 10,000.00	$ 10,000
	79S	Allowance for Cants @ Perimeter & Pads	1	ALLOW	$ 5,000.00	$ 5,000
		Alt 1C - Administration & Theater Pre-Function				$ -
	79T	Exterior Wall Thermal Insulation	1	ALLOW	$ 10,000.00	$ 10,000
	79T	Allowance for Cants @ Perimeter & Pads	1	ALLOW	$ 5,000.00	$ 5,000
		Alt 2A - Administration & Special Services				$ -
	79L	Exterior Wall Thermal Insulation	1	ALLOW	$ 10,000.00	$ 10,000
	79L	Allowance for Cants @ Perimeter & Pads	1	ALLOW	$ 5,000.00	$ 5,000
		Alt 2B - Dance Department				$ -
	79D	Exterior Wall Thermal Insulation	1	ALLOW	$ 10,000.00	$ 10,000
	79D	Allowance for Cants @ Perimeter & Pads	1	ALLOW	$ 5,000.00	$ 5,000
072500		**Weather Barriers**				
		Weather Barriers		EXCLUDED		$ -
075000		**Membrane Roofing**				
		Alt 1A/1B - Administrative Services (Smaller Footprint)				$ -
	79S	New single ply roof, includes 10% replacement of sheathing	18,100	SF	$ 10.00	$ 181,000
	79S	Walk Pads	560	LF	$ 10.00	$ 5,600
	79S	Re-roofing N of Clearstory Windows	4,640	SF	$ 10.00	$ 46,400
		Alt 1C - Administration & Theater Pre-Function				$ -
	79T	New single ply roof, includes 10% replacement of sheathing	22,200	SF	$ 10.00	$ 222,000
	79T	Walk Pads	759	LF	$ 10.00	$ 7,590
	79T	Re-roofing N of Clearstory Windows	7,456	SF	$ 10.00	$ 74,560
		Alt 2A - Administration & Special Services				$ -
	79L	New single ply roof, includes 10% replacement of sheathing	22,200	SF	$ 10.00	$ 222,000
	79L	Walk Pads	759	LF	$ 10.00	$ 7,590
	79L	Re-roofing N of Clearstory Windows	7,456	SF	$ 10.00	$ 74,560
		Alt 2B - Dance Department				$ -
	79D	New single ply roof, includes 10% replacement of sheathing	19,100	SF	$ 10.00	$ 191,000
	79D	Walk Pads	1,014	LF	$ 10.00	$ 10,140
	79D	Re-roofing N of Clearstory Windows	5,408	SF	$ 10.00	$ 54,080
076000		**Flashing and Sheet Metal**				
	79S	New Drip edge (including canopy)	1	ALLOW	$ 10,000.00	$ 10,000
	79S	Gutters & Downspouts	1	ALLOW	$ 10,000.00	$ 10,000
	79S	Reglet and counter flashing	1	ALLOW	$ 7,500.00	$ 7,500
		Alt 1C - Administration & Theater Pre-Function				
	79T	New Drip edge (including canopy)	1	ALLOW	$ 10,000.00	$ 10,000
	79T	Gutters & Downspouts	1	ALLOW	$ 10,000.00	$ 10,000
	79T	Reglet and counter flashing	1	ALLOW	$ 7,500.00	$ 7,500
		Alt 2A - Administration & Special Services				
	79L	New Drip edge (including canopy)	1	ALLOW	$ 10,000.00	$ 10,000
	79L	Gutters & Downspouts	1	ALLOW	$ 10,000.00	$ 10,000
	79L	Reglet and counter flashing	1	ALLOW	$ 7,500.00	$ 7,500

Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit	Rate ($)		Total ($)	
	79T	New Drip edge (including canopy)	1	ALLOW	$	10,000.00	$	10,000
	79T	Gutters & Downspouts	1	ALLOW	$	10,000.00	$	10,000
	79T	Reglet and counter flashing	1	ALLOW	$	7,500.00	$	7,500
	79L	New Drip edge (including canopy)	1	ALLOW	$	10,000.00	$	10,000
	79L	Gutters & Downspouts	1	ALLOW	$	10,000.00	$	10,000
	79L	Reglet and counter flashing	1	ALLOW	$	7,500.00	$	7,500
	79D	New Drip edge (including canopy)	1	ALLOW	$	10,000.00	$	10,000
	79D	Gutters & Downspouts	1	ALLOW	$	10,000.00	$	10,000
	79D	Reglet and counter flashing	1	ALLOW	$	7,500.00	$	7,500
078000		**Fire and Smoke Protection**						
		Fire and Smoke Protection		EXCLUDED			$	-
		Sub-Total for Thermal And Moisture Protection:					**$**	**1,321,520**
		OPENINGS						
081000		**Doors and Frames**						
		Alt 1A/1B - Administrative Services (Smaller Footprint)					$	-
	79S	Repair and Refinish Existing Wood Door @ Bldg 7	3	EA	$	1,500.00	$	4,500
	79S	Repair and Refinish Existing Wood Door @ Bldg 8	5	EA	$	1,500.00	$	7,500
	79S	Repair and Refinish Existing Wood Door @ Bldg 9	7	EA	$	1,500.00	$	10,500
	79S	New Hardware on Existing Wood Doors	15	EA	$	500.00	$	7,500
	79S	New Hollow Metal Doors w/ Metal Frame	14	EA	$	2,500.00	$	35,000
	79S	Frame in New Interior Solid Wood Doors	16	EA	$	2,500.00	$	40,000
		Alt 1C - Administration & Theater Pre-Function					$	-
	79T	Repair and Refinish Existing Wood Door @ Bldg 7	3	EA	$	1,500.00	$	4,500
	79T	Repair and Refinish Existing Wood Door @ Bldg 8	5	EA	$	1,500.00	$	7,500
	79T	Repair and Refinish Existing Wood Door @ Bldg 9	7	EA	$	1,500.00	$	10,500
	79T	New Hardware on Existing Wood Doors	15	EA	$	500.00	$	7,500
	79T	New Hollow Metal Doors w/ Metal Frame	14	EA	$	2,500.00	$	35,000
	79T	Frame in New Interior Solid Wood Doors	20	EA	$	2,500.00	$	50,000
		Alt 2A - Administration & Special Services					$	-
	79L	Repair and Refinish Existing Wood Door @ Bldg 7	3	EA	$	1,500.00	$	4,500
	79L	Repair and Refinish Existing Wood Door @ Bldg 8	5	EA	$	1,500.00	$	7,500
	79L	Repair and Refinish Existing Wood Door @ Bldg 9	7	EA	$	1,500.00	$	10,500
	79L	New Hardware on Existing Wood Doors	15	EA	$	500.00	$	7,500
	79L	New Hollow Metal Doors w/ Metal Frame	14	EA	$	2,500.00	$	35,000
	79L	Frame in New Interior Solid Wood Doors	20	EA	$	2,500.00	$	50,000
		Alt 2B - Dance Department					$	-
	79D	Repair and Refinish Existing Wood Door @ Bldg 7	3	EA	$	1,500.00	$	4,500
	79D	Repair and Refinish Existing Wood Door @ Bldg 8	5	EA	$	1,500.00	$	7,500
	79D	Repair and Refinish Existing Wood Door @ Bldg 9	7	EA	$	1,500.00	$	10,500
	79D	New Hardware on Existing Wood Doors	15	EA	$	500.00	$	7,500
	79D	New Hollow Metal Doors w/ Metal Frame	14	EA	$	2,500.00	$	35,000
	79D	Frame in New Interior Solid Wood Doors	16	EA	$	2,500.00	$	40,000
083000		**Specialty Doors and Frames**						
		Specialty Doors and Frames		EXCLUDED			$	-
084000		**Entrances, Storefronts, and Curtain Walls**						
		Alt 1A/1B - Administrative Services (Smaller Footprint)					$	-

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Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit	Rate ($)	Total ($)
	79S	New Glazed Aluminum Storefront Doors @ Bldg 8	2	EA	$ 7,500.00	$ 15,000
	79S	New Glazed Aluminum Single Storefront Doors	2	EA	$ 5,000.00	$ 10,000
		Alt 1C - Administration & Theater Pre-Function				$ -
	79T	New Glazed Aluminum Storefront Doors @ Bldg 8	2	EA	$ 7,500.00	$ 15,000
	79T	New Glazed Aluminum Single Storefront Doors	3	EA	$ 5,000.00	$ 15,000
		Alt 2A - Administration & Special Services				$ -
	79L	New Glazed Aluminum Storefront Doors @ Bldg 8	2	EA	$ 7,500.00	$ 15,000
	79L	New Glazed Aluminum Single Storefront Doors	3	EA	$ 5,000.00	$ 15,000
		Alt 2B - Dance Department				$ -
	79D	New Glazed Aluminum Storefront Doors @ Bldg 8	2	EA	$ 7,500.00	$ 15,000
	79D	New Glazed Aluminum Single Storefront Doors	3	EA	$ 5,000.00	$ 15,000
085000		**Windows**				
		Alt 1A/1B - Administrative Services (Smaller Footprint)				$ -
	79S	Windows (glass and finish)				
	79S	Aluminum window walls	3,121	SF	$ 45.00	$ 140,445
	79S	Aluminum clearstory	1,752	SF	$ 45.00	$ 78,840
	79S	Fixed Aluminum Windows	210	SF	$ 45.00	$ 9,450
	79S	Allowance for Water testing of Installed Assemblies	1	ALLOW	$ 10,000.00	$ 10,000
	79S	Mock Up Allowance Alt 1	1	ALLOW	$ 10,000.00	$ 10,000
	79S	Clean/Repair Louvers	500	SF	$ 15.00	$ 7,500
		Alt 1C - Administration & Theater Pre-Function				$ -
	79T	Windows (glass and finish)				
	79T	Aluminum window walls	3,801	SF	$ 45.00	$ 171,045
	79T	Aluminum clearstory	1,992	SF	$ 45.00	$ 89,640
	79T	Fixed Aluminum Windows	240	SF	$ 45.00	$ 10,800
	79T	Allowance for Water testing of Installed Assemblies	1	ALLOW	$ 10,000.00	$ 10,000
	79T	Mock Up Allowance Alt 1	1	ALLOW	$ 10,000.00	$ 10,000
	79T	Clean/Repair Louvers	500	SF	$ 15.00	$ 7,500
		Alt 2A - Administration & Special Services				$ -
	79L	Windows (glass and finish)				
	79L	Aluminum window walls	3,801	SF	$ 45.00	$ 171,045
	79L	Aluminum clearstory	1,992	SF	$ 45.00	$ 89,640
	79L	Fixed Aluminum Windows	240	SF	$ 45.00	$ 10,800
	79L	Allowance for Water testing of Installed Assemblies	1	ALLOW	$ 10,000.00	$ 10,000
	79L	Mock Up Allowance Alt 1	1	ALLOW	$ 10,000.00	$ 10,000
	79L	Clean/Repair Louvers	500	SF	$ 15.00	$ 7,500
		Alt 2B - Dance Department				$ -
	79D	Windows (glass and finish)				
	79D	Aluminum window walls	3,321	SF	$ 45.00	$ 149,445
	79D	Aluminum clearstory	1,832	SF	$ 45.00	$ 82,440
	79D	Fixed Aluminum Windows	210	SF	$ 45.00	$ 9,450
	79D	Allowance for Water testing of Installed Assemblies	1	ALLOW	$ 10,000.00	$ 10,000
	79D	Mock Up Allowance Alt 1	1	ALLOW	$ 10,000.00	$ 10,000
	79D	Clean/Repair Louvers	500	SF	$ 15.00	$ 7,500
086000		**Skylights**				
		Alt 1A/1B - Administrative Services (Smaller Footprint)				

Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit		Rate ($)		Total ($)
	79S	New Skylights at Buildings 8/9	10	EA	$	2,500.00	$	25,000
	79S	Exterior Sun Control @ Bldg. 8/9 Patio						
	79S	Salvage/Repair Existing Wood	1,598	SF	$	2.50	$	3,995
	79S	3x8 Redwood Members - 16' Length	18	EA	$	5,000.00	$	90,000
		Alt 1C - Administration & Theater Pre-Function						
	79T	New Skylights at Buildings 8/9	10	EA	$	2,500.00	$	25,000
	79T	Exterior Sun Control @ Bldg. 8/9 Patio						
	79T	Salvage/Repair Existing Wood	2,197	SF	$	2.50	$	5,493
	79T	3x8 Redwood Members - 16' Length	18	EA	$	5,000.00	$	90,000
		Alt 2A - Administration & Special Services						
	79L	New Skylights at Buildings 8/9	10	EA	$	2,500.00	$	25,000
	79L	Exterior Sun Control @ Bldg. 8/9 Patio						
	79L	Salvage/Repair Existing Wood	2,197	SF	$	2.50	$	5,493
	79L	3x8 Redwood Members - 16' Length	18	EA	$	5,000.00	$	90,000
		Alt 2B - Dance Department						
	79D	New Skylights at Buildings 8/9	10	EA	$	2,500.00	$	25,000
	79D	Exterior Sun Control @ Bldg. 8/9 Patio						
	79D	Salvage/Repair Existing Wood	2,197	SF	$	2.50	$	5,493
	79D	3x8 Redwood Members - 16' Length	18	EA	$	5,000.00	$	90,000
088000		**Glazing**						
		Glazing		EXCLUDED			$	-
		Sub-Total for Openings:					**$**	**2,158,513**
		FINISHES						
092000		**Plaster and Gypsum Board**						
		Alt 1A/1B - Administrative Services (Smaller Footprint)						
	79S	New wood framed partitions walls	4000	SF	$	15.00	$	60,000
	79S	Allowance for New Framing & Furring	1	ALLOW	$	25,600.00	$	25,600
	79S	Allowance for Patching of Existing Walls	1	ALLOW	$	16,800.00	$	16,800
		Alt 1C - Administration & Theater Pre-Function						
	79T	New wood framed partitions walls	5200	SF	$	15.00	$	78,000
	79T	Allowance for New Framing & Furring	1	ALLOW	$	25,600.00	$	25,600
	79T	Allowance for Patching of Existing Walls	1	ALLOW	$	16,800.00	$	16,800
		Alt 2A - Administration & Special Services						
	79L	New wood framed partitions walls	4000	SF	$	15.00	$	60,000
	79L	Allowance for New Framing & Furring	1	ALLOW	$	25,600.00	$	25,600
	79L	Allowance for Patching of Existing Walls	1	ALLOW	$	16,800.00	$	16,800
		Alt 2B - Dance Department						
	79D	New wood framed partitions walls	5200	SF	$	15.00	$	78,000
	79D	Allowance for New Framing & Furring	1	ALLOW	$	25,600.00	$	25,600
	79D	Allowance for Patching of Existing Walls	1	ALLOW	$	16,800.00	$	16,800
093000		**Ceramic Tile**						
		Alt 1A/1B - Administrative Services (Smaller Footprint)						
	79S	Restroom Floor Tile - Mortar Bed Sloped to Drain	659	SF	$	25.00	$	16,475
	79S	Restroom Cer Tile Base	140	LF	$	8.00	$	1,120

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Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit	Rate ($)	Total ($)
	79S	Restroom Wall Tile - Thinset	560	SF	$ 20.00	$ 11,200
	79S	Food Service Base	80	LF	$ 8.00	$ 640
		Alt 1C - Administration & Theater Pre-Function				
	79T	Restroom Floor Tile - Mortar Bed Sloped to Drain	671	SF	$ 25.00	$ 16,775
	79T	Restroom Cer Tile Base	142	LF	$ 8.00	$ 1,136
	79T	Restroom Wall Tile - Thinset	568	SF	$ 20.00	$ 11,360
	79T	Food Service Base	80	LF	$ 8.00	$ 640
		Alt 2A - Administration & Special Services				
	79L	Restroom Floor Tile - Mortar Bed Sloped to Drain	696	SF	$ 25.00	$ 17,400
	79L	Restroom Cer Tile Base	168	LF	$ 8.00	$ 1,344
	79L	Restroom Wall Tile - Thinset	672	SF	$ 20.00	$ 13,440
	79L	Food Service Base	80	LF	$ 8.00	$ 640
		Alt 2B - Dance Department				
	79D	Restroom Floor Tile - Mortar Bed Sloped to Drain	671	SF	$ 25.00	$ 16,775
	79D	Restroom Cer Tile Base	142	LF	$ 8.00	$ 1,136
	79D	Restroom Wall Tile - Thinset	568	SF	$ 20.00	$ 11,360
	79D	Food Service Base	90	LF	$ 8.00	$ 720
095000		**Acoustical Ceilings**				
		Alt 1A/1B - Administrative Services (Smaller Footprint)				
	79S	2x2 ACT @ Admin	3,882	SF	$ 5.75	$ 22,319
	79S	Celotex refurb	11,645	SF	$ 4.00	$ 46,578
		Alt 1C - Administration & Theater Pre-Function				
	79T	2x2 ACT @ Admin	3,743	SF	$ 5.75	$ 21,524
	79T	Celotex refurb	11,230	SF	$ 4.00	$ 44,919
	79T	2x2 ACT Premium @ Theater	3,074	SF	$ 7.75	$ 23,824
		Alt 2A - Administration & Special Services				
	79L	2x2 ACT	4,915	SF	$ 5.75	$ 28,261
	79L	Celotex refurb	14,745	SF	$ 4.00	$ 58,980
		Alt 2B - Dance Department				
	79D	2x2 ACT	3,508	SF	$ 5.75	$ 20,172
	79D	Celotex refurb	10,525	SF	$ 4.00	$ 42,099
096000		**Flooring**				
		Alt 1A/1B - Administrative Services (Smaller Footprint)				
	79S	Carpet Squares at Offices @ Admin	1,828	SY	$ 42.50	$ 77,699
	79S	Polish and Seal Concrete Floors @ IDF / Electrical	1,106	SF	$ 2.50	$ 2,765
	79S	Flooring @ Food Service	384	SF	$ 5.00	$ 1,920
	79S	Rubber Base	2,123	LF	$ 3.25	$ 6,900
	79S	Floor Prep Allowance	18,100	SF	$ 2.50	$ 45,250
		Alt 1C - Administration & Theater Pre-Function				
	79T	Carpet Squares at Offices @ Admin	1,662	SY	$ 42.50	$ 70,640
	79T	Carpet Squares at Offices @ Theater	342	SY	$ 42.50	$ 14,516
	79T	Polish and Seal Concrete Floors @ IDF / Electrical / Storage	2,269	SF	$ 2.50	$ 5,673
	79T	Flooring @ Food Service	384	SF	$ 5.00	$ 1,920
	79T	Rubber Base	2,551	LF	$ 3.25	$ 8,291
	79T	Floor Prep Allowance	22,200	SF	$ 2.50	$ 55,500

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Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit	Rate ($)		Total ($)	
		Alt 2A - Administration & Special Services						
	79L	Carpet Squares at Offices @ Admin	2,180	SY	$	42.50	$	92,645
	79L	Polish and Seal Concrete Floors @ IDF / Electrical	1,131	SF	$	2.50	$	2,828
	79L	Flooring @ Food Service	380	SF	$	5.00	$	1,900
	79L	Rubber Base	2,392	LF	$	3.25	$	7,774
	79L	Floor Prep Allowance	22,200	SF	$	2.50	$	55,500
		Alt 2B - Dance Department						
	79D	Carpet Squares at Offices @ Admin	1,404	SY	$	42.50	$	59,665
	79D	Polish and Seal Concrete Floors @ IDF / Electrical / Storage	3,714	SF	$	2.50	$	9,285
	79D	Flooring @ Food Service	480	SF	$	5.00	$	2,400
	79D	Rubber Base	2,481	LF	$	3.25	$	8,063
	79D	Floor Prep Allowance	19,100	SF	$	2.50	$	47,750
098000		**Acoustic Treatment**						
		Acoustic Treatment		EXCLUDED			$	-
099000		**Painting and Coating**						
		Alt 1A/1B - Administrative Services (Smaller Footprint)						
	79S	Prep and paint existing doors	15	EA	$	300.00	$	4,500
	79S	Prep and paint new doors	16	EA	$	200.00	$	3,200
	79S	Restroom Walls	700	SF	$	2.50	$	1,750
	79S	Misc. Caulking by Painter	1	ALLOW	$	5,000.00	$	5,000
	79S	Interior Drywall Walls, 9'	19,827	SF	$	1.50	$	29,741
	79S	Drywall Ceilings @ Bathrooms	659	SF	$	1.25	$	824
	79S	Drywall Ceilings @ IDF/Electrical	1,106	SF	$	1.25	$	1,383
	79S	Drywall Ceilings @ Food Service	384	SF	$	1.25	$	480
	79S	Touch Up and Trade Damage	1	ALLOW	$	4,000.00	$	4,000
		Alt 1C - Administration & Theater Pre-Function						
	79T	Prep and paint existing doors	15	EA	$	300.00	$	4,500
	79T	Prep and paint new doors	20	EA	$	200.00	$	4,000
	79T	Restroom Walls	710	SF	$	2.50	$	1,775
	79T	Misc. Caulking by Painter	1	ALLOW	$	5,000.00	$	5,000
	79T	Interior Drywall Walls, 9'	23,679	SF	$	1.50	$	35,519
	79T	Drywall Ceilings @ Bathrooms	671	SF	$	1.25	$	839
	79T	Drywall Ceilings @ IDF/Electrical	1,192	SF	$	1.25	$	1,490
	79T	Drywall Ceilings @ Food Service	384	SF	$	1.25	$	480
	79T	Drywall Ceilings @ Storage	1,077	SF	$	1.25	$	1,346
	79T	Touch Up and Trade Damage	1	ALLOW	$	4,000.00	$	4,000
		Alt 2A - Administration & Special Services						
	79L	Prep and paint existing doors	15	EA	$	300.00	$	4,500
	79L	Prep and paint new doors	20	EA	$	200.00	$	4,000
	79L	Restroom Walls	840	SF	$	2.50	$	2,100
	79L	Misc. Caulking by Painter	1	ALLOW	$	5,000.00	$	5,000
	79L	Interior Drywall Walls, 9'	22,248	SF	$	1.50	$	33,372
	79L	Drywall Ceilings @ Bathrooms	696	SF	$	1.25	$	870
	79L	Drywall Ceilings @ IDF/Electrical	1,131	SF	$	1.25	$	1,414
	79L	Drywall Ceilings @ Food Service	380	SF	$	1.25	$	475
	79L	Touch Up and Trade Damage	1	ALLOW	$	4,000.00	$	4,000
		Alt 2B - Dance Department						

SEAROCK + STAFFORD
CONSTRUCTION MANAGEMENT

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Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit	Rate ($)		Total ($)	
	79D	Prep and paint existing doors	15	EA	$	300.00	$	4,500
	79D	Prep and paint new doors	16	EA	$	200.00	$	3,200
	79D	Restroom Walls	3,355	SF	$	2.50	$	8,388
	79D	Misc. Caulking by Painter	1	ALLOW	$	5,000.00	$	5,000
	79D	Interior Drywall Walls, 9'	23,840	SF	$	1.50	$	35,760
	79D	Drywall Ceilings @ Bathrooms	671	SF	$	1.25	$	839
	79D	Drywall Ceilings @ IDF/Electrical/Storage	3,714	SF	$	1.25	$	4,643
	79D	Drywall Ceilings @ Food Service	480	SF	$	1.25	$	600
	79D	Touch Up and Trade Damage	1	ALLOW	$	4,000.00	$	4,000
		Sub-Total for Finishes:					**$**	**1,687,805**
		SPECIALTIES						
102000		**Specialties**						
		Alt 1A/1B - Administrative Services (Smaller Footprint)					$	-
	79S	Signage	1	ALLOW	$	15,000.00	$	15,000
		Alt 1C - Administration & Theater Pre-Function					$	-
	79T	Signage	1	ALLOW	$	15,000.00	$	15,000
		Alt 2A - Administration & Special Services					$	-
	79L	Signage	1	ALLOW	$	15,000.00	$	15,000
		Alt 2B - Dance Department					$	-
	79D	Signage	1	ALLOW	$	30,000.00	$	30,000
		Sub-Total for Specialties:					**$**	**75,000**
		EQUIPMENT						
110000		**Equipment**						
		Equipment		EXCLUDED			$	-
111000		**Parking Control Equipment**						
		Parking Control Equipment		EXCLUDED			$	-
111500		**Security Equipment**						
		Security Equipment		EXCLUDED			$	-
113000		**Residential Equipment**						
		Residential Equipment		EXCLUDED			$	-
114000		**Foodservice Equipment**						
		Alt 1A/1B - Administrative Services (Smaller Footprint)					$	-
	79S	Food Service Equipment Allowance	1	ALLOW	$	25,000.00	$	25,000
		Alt 1C - Administration & Theater Pre-Function					$	-
	79T	Food Service Equipment Allowance	1	ALLOW	$	25,000.00	$	25,000
		Alt 2A - Administration & Special Services					$	-
	79L	Food Service Equipment Allowance	1	ALLOW	$	25,000.00	$	25,000
		Alt 2B - Dance Department					$	-
	79D	Food Service Equipment Allowance	1	ALLOW	$	25,000.00	$	25,000

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CSI	Complex	Description	Quantity	Unit	Rate ($)	Total ($)
111500		**Educational Equipment**				
		Educational Equipment		EXCLUDED		$ -
116000		**Audio Visual Equipment**				
		Alt 1A/1B - Administrative Services (Smaller Footprint)				$ -
	79S	A/V Allowance	18,100	SF	$ 3.50	$ 63,350
		Alt 1C - Administration & Theater Pre-Function				$ -
	79T	A/V Allowance	22,200	SF	$ 3.50	$ 77,700
	79T	Theater A/V Allowance	3,074	SF	$ 50.00	$ 153,700
		Alt 2A - Administration & Special Services				$ -
	79L	A/V Allowance	22,200	SF	$ 3.50	$ 77,700
		Alt 2B - Dance Department				$ -
	79D	A/V Allowance	19,100	SF	$ 3.50	$ 66,850
116500		**Athletic and Recreational Equipment**				
		Athletic and Recreational Equipment		EXCLUDED		$ -
117000		**Healthcare Equipment**				
		Healthcare Equipment		EXCLUDED		$ -
119000		**Other Equipment**				
		Other Equipment		EXCLUDED		$ -
		Sub-Total for Equipment:				**$ 539,300**
		FURNISHINGS				
120000		**Furnishings**				
		Furnishings		EXCLUDED		$ -
122000		**Window Treatments**				
		Alt 1A/1B - Administrative Services (Smaller Footprint)				$ -
	79S	Manual Window Shades Alt 1	2,833	SF	$ 20.00	$ 56,660
	79S	Motorized Shades at Clerestory Alt 1	685	SF	$ 50.00	$ 34,250
		Alt 1C - Administration & Theater Pre-Function				$ -
	79T	Manual Window Shades Alt 1	2,833	SF	$ 20.00	$ 56,660
	79T	Motorized Shades at Clerestory Alt 1	685	SF	$ 50.00	$ 34,250
		Alt 2A - Administration & Special Services				$ -
	79L	Manual Window Shades Alt 1	2,833	SF	$ 20.00	$ 56,660
	79L	Motorized Shades at Clerestory Alt 1	685	SF	$ 50.00	$ 34,250
		Alt 2B - Dance Department				$ -
	79D	Manual Window Shades Alt 1	2,833	SF	$ 20.00	$ 56,660
	79D	Motorized Shades at Clerestory Alt 1	685	SF	$ 50.00	$ 34,250
126000		**Multiple Seating**				
		Multiple Seating		EXCLUDED		$ -
		Sub-Total for Furnishings:				**$ 363,640**

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CSI	Complex	Description	Quantity	Unit		Rate ($)		Total ($)
		SPECIAL CONSTRUCTION						
130000		**Special Construction**						
		Alt 1A/1B - Administrative Services (Smaller Footprint)						
	79S	Reconstruct Historical Fireplace	1	ALLOW	$	25,000.00	$	25,000
		Alt 1C - Administration & Theater Pre-Function						
	79T	Reconstruct Historical Fireplace	1	ALLOW	$	25,000.00	$	25,000
		Alt 2A - Administration & Special Services						
	79L	Reconstruct Historical Fireplace	1	ALLOW	$	25,000.00	$	25,000
		Alt 2B - Dance Department						
	79D	Reconstruct Historical Fireplace		EXCLUDED			$	-
		Sub-Total for Special Construction:					**$**	**25,000**
		CONVEYING EQUIPMENT						
142000		**Elevators**						
		Elevators		EXCLUDED			$	-
143000		**Escalators**					$	-
		Escalators		EXCLUDED			$	-
		Sub-Total for Conveying Equipment:					**$**	**-**
		FIRE SUPPRESSION						
210000		**Fire Sprinklers**						
		Alt 1A/1B - Administrative Services (Smaller Footprint)					$	-
	79S	D/B Wet pipe sprinkler system	18,100	SF	$	4.25	$	76,925
	79S	New service	1	ALLOW	$	15,000.00	$	15,000
		Alt 1C - Administration & Theater Pre-Function					$	-
	79T	D/B Wet pipe sprinkler system	22,200	SF	$	4.25	$	94,350
	79T	New service	1	ALLOW	$	15,000.00	$	15,000
		Alt 2A - Administration & Special Services					$	-
	79L	D/B Wet pipe sprinkler system	22,200	SF	$	4.25	$	94,350
	79L	New service	1	ALLOW	$	15,000.00	$	15,000
		Alt 2B - Dance Department					$	-
	79D	D/B Wet pipe sprinkler system	19,100	SF	$	4.25	$	81,175
	79D	New service	1	ALLOW	$	30,000.00	$	30,000
		Sub-Total for Fire Suppression:					**$**	**91,925**
		PLUMBING						
220000		**Plumbing General**						
		Alt 1A/1B - Administrative Services (Smaller Footprint)						
	79S	WC Wall Hung Flush Valve	3	EA		3,500.00	$	10,500
	79S	Urinal Wall Hung Flush Valve	1	EA		3,150.00	$	3,150
	79S	Restroom Lavs	4	EA		2,800.00	$	11,200
	79S	Service Sinks	1	EA		3,400.00	$	3,400
	79S	Drinking Fountain Wall Hung Elect Hi/Low	2	EA		4,200.00	$	8,400
	79S	Allowance for Food Prep/service & other new piping	384	SF		20.00	$	7,680

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CSI	Complex	Description	Quantity	Unit	Rate ($)		Total ($)
	79S	Unforeseen Fixture Allowance - 20% Add	20%	EA	44,330.00	$	8,866
		Alt 1C - Administration & Theater Pre-Function					
	79T	WC Wall Hung Flush Valve	3	EA	3,500.00	$	10,500
	79T	Urinal Wall Hung Flush Valve	1	EA	3,150.00	$	3,150
	79T	Restroom Lavs	4	EA	2,800.00	$	11,200
	79T	Service Sinks	1	EA	3,400.00	$	3,400
	79T	Drinking Fountain Wall Hung Elect Hi/Low	2	EA	4,200.00	$	8,400
	79T	Allowance for Food Prep/service & other new piping	384	SF	20.00	$	7,680
	79T	Unforeseen Fixture Allowance - 20% Add	20%	EA	44,330.00	$	8,866
		Alt 2A - Administration & Special Services					
	79L	WC Wall Hung Flush Valve	3	EA	3,500.00	$	10,500
	79L	Urinal Wall Hung Flush Valve	1	EA	3,150.00	$	3,150
	79L	Restroom Lavs	4	EA	2,800.00	$	11,200
	79L	Service Sinks	1	EA	3,400.00	$	3,400
	79L	Drinking Fountain Wall Hung Elect Hi/Low	2	EA	4,200.00	$	8,400
	79L	Allowance for Food Prep/service & other new piping	384	SF	20.00	$	7,680
	79L	Unforeseen Fixture Allowance - 20% Add	20%	EA	44,330.00	$	8,866
		Alt 2B - Dance Department					
	79D	WC Wall Hung Flush Valve	3	EA	3,500.00	$	10,500
	79D	Urinal Wall Hung Flush Valve	1	EA	3,150.00	$	3,150
	79D	Restroom Lavs	4	EA	2,800.00	$	11,200
	79D	Service Sinks	1	EA	3,400.00	$	3,400
	79D	Drinking Fountain Wall Hung Elect Hi/Low	2	EA	4,200.00	$	8,400
	79D	Allowance for Food Prep/service & other new piping	480	SF	20.00	$	9,600
	79D	Allowance for Locker Rooms & other new piping	1,700	SF	20.00	$	34,000
	79D	Unforeseen Fixture Allowance - 20% Add	20%	EA	46,250.00	$	9,250
221000		**Plumbing Piping**					
223000		**Plumbing Equipment**					
224000		**Plumbing Fixtures**					
227000		**Plumbing Miscellaneous**					
		Sub-Total for Plumbing :				**$**	**249,088**

HEATING, VENTILATING & AIR CONDITIONING (HVAC)

CSI	Complex	Description	Quantity	Unit		Rate ($)		Total ($)
230000		**HVAC General**						
		Alt 1A/1B - Administrative Services (Smaller Footprint)						
	79S	HVAC System	18,100	SF	$	22.00	$	398,200
		Alt 1C - Administration & Theater Pre-Function						
	79T	HVAC System	22,200	SF	$	22.00	$	488,400
		Alt 2A - Administration & Special Services						
	79L	HVAC System	22,200	SF	$	22.00	$	488,400
		Alt 2A - Administration & Special Services						
	79D	HVAC System	19,100	SF	$	22.00	$	420,200

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CSI	Complex	Description	Quantity	Unit	Rate ($)	Total ($)
232000		**HVAC Piping and Pumps**				
233000		**HVAC Air Distribution**				
237000		**HVAC Equipment**				
239000		**HVAC Miscellaneous**				
		Sub-Total for Heating, Ventilating & Air Conditioning (Hvac):				**$ 1,795,200**
		ELECTRICAL				
260000		**Electrical General**				$ -
		Alt 1A/1B - Administrative Services (Smaller Footprint)				
	79S	Electrical System	18,100	SF	$ 30.00	$ 543,000
	79S	Power @ Food Service Room	1	ALLOW	$ 7,700.00	$ 7,700
		Alt 1C - Administration & Theater Pre-Function				
	79T	Electrical System	22,200	SF	$ 30.00	$ 666,000
	79T	Power @ Food Service Room	1	ALLOW	$ 7,700.00	$ 7,700
		Alt 2A - Administration & Special Services				
	79L	Electrical System	22,200	SF	$ 30.00	$ 666,000
	79L	Power @ Food Service Room	1	ALLOW	$ 7,700.00	$ 7,700
		Alt 2B - Dance Department				
	79D	Electrical System	19,100	SF	$ 30.00	$ 573,000
	79D	Power @ Food Service Room	1	ALLOW	$ 7,700.00	$ 7,700
261000		**Electrical Service**				
262000		**Electrical Distribution**				
265000		**Lighting**				
266000		**Power Devices**				
269000		**Miscellaneous Electrical**				
		Sub-Total for Electrical:				**$ 2,478,800**
		COMMUNICATIONS				
270000		**Communications**				$ -
		Alt 1A/1B - Administrative Services (Smaller Footprint)				
	79S	IT/Data System	18,100	SF	$ 3.00	$ 54,300
		Alt 1C - Administration & Theater Pre-Function				
	79T	IT/Data System	22,200	SF	$ 3.00	$ 66,600
	79T	Theater IT/Data System	3,074	SF	$ 3.00	$ 9,222
		Alt 2A - Administration & Special Services				
	79L	IT/Data System	22,200	SF	$ 3.00	$ 66,600
		Alt 2B - Dance Department				

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Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit	Rate ($)	Total ($)
	79D	IT/Data System	19,100	SF	$ 3.00	$ 57,300
271000		**Cabling**				
272000		**Data Communications**				
273000		**Voice Communications**				
274000		**Audio-Video Communications**				
		Sub-Total for Communications:				**$ 254,022**
		ELECTRONIC SAFETY AND SECURITY				
280000		**Electronic Safety and Security**				$ -
		Alt 1A/1B - Administrative Services (Smaller Footprint)				
	79S	FLS System	18,100	SF	$ 4.00	$ 72,400
		Alt 1C - Administration & Theater Pre-Function				
	79T	FLS System	22,200	SF	$ 4.00	$ 88,800
		Alt 2A - Administration & Special Services				
	79L	FLS System	22,200	SF	$ 4.00	$ 88,800
		Alt 2B - Dance Department				
	79D	FLS System	19,100	SF	$ 4.00	$ 76,400
		Sub-Total for Electronic Safety And Security:				**$ 326,400**
		EARTHWORK				
310000		**Earthwork**				$ -
		Alt 1A/1B - Administrative Services (Smaller Footprint)				
	79S	Site work allowance	1	ALLOW	$ 15,000.00	$ 15,000
		Alt 1C - Administration & Theater Pre-Function				
	79T	Site work allowance	1	ALLOW	$ 15,000.00	$ 15,000
		Alt 2A - Administration & Special Services				
	79L	Site work allowance	1	ALLOW	$ 15,000.00	$ 15,000
		Alt 2B - Dance Department				
	79D	Site work allowance	1	ALLOW	$ 15,000.00	$ 15,000
311000		**Site Cleaning**				$ -
314000		**Shoring and Underpinning**				$ -
316000		**Special Foundations and Load-Bearing Elements**				$ -
		Sub-Total for Earthwork:				**$ 60,000**
		EXTERIOR IMPROVEMENTS				
321000		**Paving**				$ -
323000		**Site Improvements**				$ -

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Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit	Rate ($)		Total ($)	
		Alt 1A/1B - Administrative Services (Smaller Footprint)						
	79S	Site Improvement Allowance	1	ALLOW	$	25,000.00	$	25,000
		Alt 1C - Administration & Theater Pre-Function						
	79T	Site Improvement Allowance	1	ALLOW	$	25,000.00	$	25,000
		Alt 2A - Administration & Special Services						
	79L	Site Improvement Allowance	1	ALLOW	$	25,000.00	$	25,000
		Alt 2B - Dance Department						
	79D	Site Improvement Allowance	1	ALLOW	$	25,000.00	$	25,000
328000		**Irrigation**					$	-
		Alt 1A/1B - Administrative Services (Smaller Footprint)						
	79S	Irrigation Allowance	5,000	SF	$	2.00	$	10,000
		Alt 1C - Administration & Theater Pre-Function						
	79T	Irrigation Allowance	5,000	SF	$	2.00	$	10,000
		Alt 2A - Administration & Special Services						
	79L	Irrigation Allowance	5,000	SF	$	2.00	$	10,000
		Alt 2B - Dance Department						
	79D	Irrigation Allowance	5,000	SF	$	2.00	$	10,000
329000		**Planting**					$	-
		Alt 1A/1B - Administrative Services (Smaller Footprint)						
	79S	Planting Allowance	5,000	SF	$	2.00	$	10,000
		Alt 1C - Administration & Theater Pre-Function						
	79T	Planting Allowance	5,000	SF	$	2.00	$	10,000
		Alt 2A - Administration & Special Services						
	79L	Planting Allowance	5,000	SF	$	2.00	$	10,000
		Alt 2B - Dance Department						
	79D	Planting Allowance	5,000	SF	$	2.00	$	10,000
		Sub-Total for Exterior Improvements:					**$**	**180,000**
		UTILITIES						
330000		**Utilities**					$	-
		Alt 1A/1B - Administrative Services (Smaller Footprint)						
	79S	Site Lighting	18,100	SF	$	1.50	$	27,150
	79S	Storm Drainage Allowance	18,100	SF	$	1.00	$	18,100
	79S	Landscape & French Drain Allowance	18,100	SF	$	0.50	$	9,050
		Alt 1C - Administration & Theater Pre-Function						
	79T	Site Lighting	22,200	SF	$	1.50	$	33,300
	79T	Storm Drainage Allowance	22,200	SF	$	1.00	$	22,200
	79T	Landscape & French Drain Allowance	22,200	SF	$	0.50	$	11,100
		Alt 2A - Administration & Special Services						
	79L	Site Lighting	22,200	SF	$	1.50	$	33,300

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Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit	Rate ($)	Total ($)
	79L	Storm Drainage Allowance	22,200	SF	$ 1.00	$ 22,200
	79L	Landscape & French Drain Allowance	22,200	SF	$ 0.50	$ 11,100
		Alt 2B - Dance Department				
	79D	Site Lighting	19,100	SF	$ 1.50	$ 28,650
	79D	Storm Drainage Allowance	19,100	SF	$ 1.00	$ 19,100
	79D	Landscape & French Drain Allowance	19,100	SF	$ 0.50	$ 9,550
331000		**Water Utilities**				$ -
333000		**Sanitary Sewerage Utilities**				
334000		**Storm Drainage Utilities**				
337000		**Electrical Utilities**				
338000		**Communications Utilities**				$ -
		Sub-Total for Utilities:				**$ 244,800**

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Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit	Rate ($)	Total ($)
		GENERAL WORK ITEMS				
010000		**General Requirements**				
		General Requirements	INCLUDED IN GENERAL CONDITIONS			$ -
015000		**Temporary Facilities and Controls**				
		Temporary Facilities and Controls	INCLUDED IN GENERAL CONDITIONS			$ -
		Sub-Total for General Work Items:				**$ -**
		EXISTING CONDITIONS				
024000		**Demolition**				
		Alt 1A/1B - Special Services and Honors				
	1214H	General Building Demolition	6,808	SF	$ 4.50	$ 30,636
	1214H	Electrical Demolition & Safe-Off	10,667	SF	$ 0.50	$ 5,334
	1214H	Mechanical Demolition & Safe-off	10,667	SF	$ 0.80	$ 8,534
	1214H	Demo restroom slab Alt 1 (assumes food service area as well)	1,200	SF	$ 6.00	$ 7,200
	1214H	Interior wall demolition Alt 1 (assumes 12' high & allowance for protection	1,920	SF	$ 8.00	$ 15,360
	1214H	Abatement Allowance	10,667	SF	$ 10.00	$ 106,670
	1214H	Sawcut & Demo Existing Slab (HVAC)	10,667	SF	$ 2.50	$ 26,668
	1214H	Demo for Structural Work Access (14 only, 5')	165	SF	$ 6.00	$ 990
	1214H	Demo for Misc. Structural Work Access Alt 1	6,808	SF	$ 0.50	$ 3,404
	1214H	Allowance for unforeseen MEP demo	6,808	SF	$ 0.75	$ 5,106
	1214H	Debris Disposal Allowance	10	DUMPSTERS	$ 600.00	$ 6,000
		Alt 1C - Student and Community Functions				
	1214S	General Building Demolition	6,808	SF	$ 4.50	$ 30,636
	1214S	Electrical Demolition & Safe-Off	10,667	SF	$ 0.50	$ 5,334
	1214S	Mechanical Demolition & Safe-off	10,667	SF	$ 0.80	$ 8,534
	1214S	Demo restroom slab Alt 1 (assumes food service area as well)	1,200	SF	$ 6.00	$ 7,200
	1214S	Interior wall demolition Alt 1 (assumes 12' high & allowance for protection	1,152	SF	$ 8.00	$ 9,216
	1214S	Abatement Allowance	10,667	SF	$ 10.00	$ 106,670
	1214S	Sawcut & Demo Existing Slab (HVAC)	10,667	SF	$ 2.50	$ 26,668
	1214S	Demo for Structural Work Access (14 only, 5')	165	SF	$ 6.00	$ 990
	1214S	Demo for Misc. Structural Work Access Alt 1	6,808	SF	$ 0.50	$ 3,404
	1214S	Allowance for unforeseen MEP demo	10,667	SF	$ 0.75	$ 8,000
	1214S	Debris Disposal Allowance	10	DUMPSTERS	$ 600.00	$ 6,000
		Alt 2A/2B - Interdisciplinary Center				
	1214I	General Building Demolition	6,808	SF	$ 4.50	$ 30,636
	1214I	Electrical Demolition & Safe-Off	10,667	SF	$ 0.50	$ 5,334
	1214I	Mechanical Demolition & Safe-off	10,667	SF	$ 0.80	$ 8,534
	1214I	Demo restroom slab Alt 1 (assumes food service area as well)	1,200	SF	$ 6.00	$ 7,200
	1214I	Interior wall demolition Alt 1 (assumes 12' high & allowance for protection	1,920	SF	$ 8.00	$ 15,360
	1214I	Abatement Allowance	10,667	SF	$ 10.00	$ 106,670
	1214I	Sawcut & Demo Existing Slab (HVAC)	10,667	SF	$ 2.50	$ 26,668
	1214I	Demo for Structural Work Access (14 only, 5')	165	SF	$ 6.00	$ 990
	1214I	Demo for Misc. Structural Work Access Alt 1	6,808	SF	$ 0.50	$ 3,404
	1214I	Allowance for unforeseen MEP demo	6,808	SF	$ 0.75	$ 5,106
	1214I	Debris Disposal Allowance	10	DUMPSTERS	$ 600.00	$ 6,000
026000		**Abatement**				
		Abatement	INCLUDED ABOVE			$ -

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Buildings 12-14

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Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit		Rate ($)		Total ($)
		Sub-Total for Existing Conditions:					**$**	**644,452**
		CONCRETE						
030000		**Concrete**						
		Footings & Foundations						
	1214H	Grade beams - assumed as 3'-0" x 1'-6" - 14	6	CY	$	225.00	$	1,238
	1214H	Reinforcing Steel - 275 lbs / cy	1,512.50	LBS	$	1.25	$	1,891
	1214H	Forming Allowance	99	SF	$	4.50	$	446
	1214H	Excavation by Hand	6	CY	$	65.00	$	358
	1214H	Premium for Tie-Ins to Existing (Drilling, Doweling, Grouting)	15%	PREMIUM	$	3,573.63	$	536
	1214S	Grade beams - assumed as 3'-0" x 1'-6" - 14	6	CY	$	225.00	$	1,238
	1214S	Reinforcing Steel - 275 lbs / cy	1,512.50	LBS	$	1.25	$	1,891
	1214S	Forming Allowance	99	SF	$	4.50	$	446
	1214S	Excavation by Hand	6	CY	$	65.00	$	358
	1214S	Premium for Tie-Ins to Existing (Drilling, Doweling, Grouting)	15%	PREMIUM	$	3,573.63	$	536
	1214I	Grade beams - assumed as 3'-0" x 1'-6" - 14	6	CY	$	225.00	$	1,238
	1214I	Reinforcing Steel - 275 lbs / cy	1,512.50	LBS	$	1.25	$	1,891
	1214I	Forming Allowance	99	SF	$	4.50	$	446
	1214I	Excavation by Hand	6	CY	$	65.00	$	358
	1214I	Premium for Tie-Ins to Existing (Drilling, Doweling, Grouting)	15%	PREMIUM	$	3,573.63	$	536
	1214H	Spoil Disposal	6	CY	$	27.50	$	151
	1214S	Spoil Disposal	6	CY	$	27.50	$	151
	1214I	Spoil Disposal	6	CY	$	27.50	$	151
	1214H	Rock Chipping Allowance	1	ALLOW	$	2,500.00	$	2,500
	1214S	Rock Chipping Allowance	1	ALLOW	$	2,500.00	$	2,500
	1214I	Rock Chipping Allowance	1	ALLOW	$	2,500.00	$	2,500
	1214H	Allowance for unforeseen strengthening of existing footings (10% of new footing cost)	1	ALLOW	$	357.36	$	357
	1214S	Allowance for unforeseen strengthening of existing footings (10% of new footing cost)	1	ALLOW	$	269.36	$	269
	1214I	Allowance for unforeseen strengthening of existing footings (10% of new footing cost)	1	ALLOW	$	133.90	$	134
	1214H	Patch back slabs Demo 'd for Foundation Work - 14					$	-
	1214H	Dowels to Existing @ 12" o.c.	33	EA	$	36.25	$	1,196
	1214H	Reinforcing Steel - 1.34#/sf	221	LBS	$	1.25	$	276
	1214H	Concrete @ 6"	3	CY	$	275.00	$	840
	1214S	Patch back slabs Demo 'd for Foundation Work - 14					$	-
	1214S	Dowels to Existing @ 12" o.c.	33	EA	$	36.25	$	1,196
	1214S	Reinforcing Steel - 1.34#/sf	221	LBS	$	1.25	$	276
	1214S	Concrete @ 6"	3	CY	$	275.00	$	840
	1214I	Patch back slabs Demo 'd for Foundation Work - 14					$	-
	1214I	Dowels to Existing @ 12" o.c.	33	EA	$	36.25	$	1,196
	1214I	Reinforcing Steel - 1.34#/sf	221	LBS	$	1.25	$	276
	1214I	Concrete @ 6"	3	CY	$	275.00	$	840
	1214H	Replace Slab Alt 1 (HVAC, restroom & food)	2,800	SF	$	14.00	$	39,201
	1214S	Replace Slab Alt 2 (HVAC, restroom & food)	2,800	SF	$	14.00	$	39,201
	1214I	Replace Slab Alt 3 (HVAC, restroom & food)	2,800	SF	$	14.00	$	39,201
	1214H	Epoxy Injection & Crack Repair @ Existing Exterior Concrete Walls (Assume 4" per SF of Concrete Façade) - Route, Clean, Inject & Sand	22	LF	$	25.00	$	541
	1214S	Epoxy Injection & Crack Repair @ Existing Exterior Concrete Walls (Assume 4" per SF of Concrete Façade) - Route, Clean, Inject & Sand	22	LF	$	25.00	$	541

Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit	Rate ($)	Total ($)
	1214I	Epoxy Injection & Crack Repair @ Existing Exterior Concrete Walls (Assume 4" per SF of Concrete Façade) - Route, Clean, Inject & Sand	22	LF	$ 25.00	$ 541
	1214H	Historic Renovation/Campus Environment Premium	15%	PREMIUM	$ 49,530.51	$ 7,430
	1214S	Historic Renovation/Campus Environment Premium	15%	PREMIUM	$ 49,442.51	$ 7,416
	1214I	Historic Renovation/Campus Environment Premium	15%	PREMIUM	$ 49,307.05	$ 7,396
032000		**Concrete Reinforcing**				
033000		**Cast-in-Place Concrete**				
034000		**Precast Concrete**				
		Sub-Total for Concrete:				**$ 170,522**
		MASONRY				
042000		**CMU**				
	1214H	Clean and repair Precast Sills Alt. 1	1	ALLOW	$ 5,000.00	$ 5,000
	1214S	Clean and repair Precast Sills Alt. 2	1	ALLOW	$ 5,000.00	$ 5,000
	1214I	Clean and repair Precast Sills Alt. 3	1	ALLOW	$ 5,000.00	$ 5,000
	1214H	1AB				$ -
	1214H	Spalled and Cracked Brick Treatment	5,832	SF	$ 1.05	$ 6,124
	1214H	Replacement allowance	100	EA	$ 150.00	$ 15,000
	1214H	Cracked and Detoriated Joint Treatment 5%	292	SF	$ 1.05	$ 306
	1214H	Efflorescence Treatment	5,832	SF	$ 1.00	$ 5,832
	1214H	Soiling and Biological Growth Treatment	200	SF	$ 1.50	$ 300
	1214H	Brick Wing Walls				$ -
	1214H	Spalled and Cracked Brick Treatment	2,169	SF	$ 1.05	$ 2,277
	1214H	Replacement allowance 20%	1,854	EA	$ 20.00	$ 37,077
	1214S	1C				$ -
	1214S	Spalled and Cracked Brick Treatment	5,832	SF	$ 1.05	$ 6,124
	1214S	Replacement allowance	100	EA	$ 150.00	$ 15,000
	1214S	Cracked and Detoriated Joint Treatment 5%	292	SF	$ 1.05	$ 306
	1214S	Efflorescence Treatment	5,832	SF	$ 1.00	$ 5,832
	1214S	Soiling and Biological Growth Treatment	200	SF	$ 1.50	$ 300
	1214S	Brick Wing Walls				$ -
	1214S	Spalled and Cracked Brick Treatment	2,169	SF	$ 1.05	$ 2,277
	1214S	Replacement allowance 20%	1,854	EA	$ 20.00	$ 37,077
	1214I	2AB				$ -
	1214I	Spalled and Cracked Brick Treatment	5,832	SF	$ 1.05	$ 6,124
	1214I	Replacement allowance	100	EA	$ 150.00	$ 15,000
	1214I	Cracked and Detoriated Joint Treatment 5%	292	SF	$ 1.05	$ 306
	1214I	Efflorescence Treatment	5,832	SF	$ 1.00	$ 5,832
	1214I	Soiling and Biological Growth Treatment	200	SF	$ 1.50	$ 300
	1214I	Brick Wing Walls				$ -
	1214I	Spalled and Cracked Brick Treatment	2,169	SF	$ 1.05	$ 2,277
	1214I	Replacement allowance 20%	1,854	EA	$ 20.00	$ 37,077
		Sub-Total for Masonry:				**$ 215,748**
		METALS				
051000		**Structural Steel**				
	1214H	Moment/brace frames at 14 south wall (assumed 10' high) - assumes using W8x21, 3 posts/2 bays	1.26	TONS	$ 6,000.00	$ 7,560

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Buildings 12-14 **April 3, 2015**

Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit	Rate ($)		Total ($)	
	1214S	Moment/brace frames at 14 south wall (assumed 10' high) - assumes using W8x21	1.26	TONS	$	6,000.00	$	7,560
	1214I	Moment/brace frames at 14 south wall (assumed 10' high) - assumes using W8x21	1.26	TONS	$	6,000.00	$	7,560
	1214H	Allowance for Seismic Upgrade at Masonry	1.00	ALLOW	$	30,000.00	$	30,000
	1214S	Allowance for Seismic Upgrade at Masonry	1.00	ALLOW	$	30,000.00	$	30,000
	1214I	Allowance for Seismic Upgrade at Masonry	1.00	ALLOW	$	30,000.00	$	30,000
	1214H	Historic Renovation/Campus Environment Premium	15%	PREMIUM	$	37,560.00	$	5,634
	1214S	Historic Renovation/Campus Environment Premium	15%	PREMIUM	$	37,560.00	$	5,634
	1214I	Historic Renovation/Campus Environment Premium	15%	PREMIUM	$	13,194.00	$	1,979
053000		**Metal Decking**						
054000		**Cold-Formed Metal Framing**						
055000		**Miscellaneous Metal**						
057000		**Decorative Metal**						
		Sub-Total for Metals:					**$**	**125,927**
		WOOD, PLASTICS, COMPOSITES						
061000		**Rough Carpentry**						
	1214H	Roof Framing Bldg 14	1,600	SF	$	20.00	$	32,000
	1214S	Roof Framing Bldg 14	1,600	SF	$	20.00	$	32,000
	1214I	Roof Framing Bldg 14	1,600	SF	$	20.00	$	32,000
	1214H	Wall Framing Bldg 14	371	SF	$	16.00	$	5,928
	1214S	Wall Framing Bldg 14	371	SF	$	16.00	$	5,928
	1214I	Wall Framing Bldg 14	371	SF	$	16.00	$	5,928
	1214H	Wall to Roof Connections 14	43	EA	$	1,000.00	$	42,500
	1214S	Wall to Roof Connections 14	43	EA	$	1,000.00	$	42,500
	1214I	Wall to Roof Connections 14	43	EA	$	1,000.00	$	42,500
	1214H	New Door Opening at 14	1	ALLOW	$	5,000.00	$	5,000
	1214S	New Door Opening at 14	1	ALLOW	$	5,000.00	$	5,000
	1214I	New Door Opening at 14	1	ALLOW	$	5,000.00	$	5,000
	1214H	Allowance for Misc Shaped Blocking	1	ALLOW	$	5,000.00	$	5,000
	1214S	Allowance for Misc Shaped Blocking	1	ALLOW	$	5,000.00	$	5,000
	1214I	Allowance for Misc Shaped Blocking	1	ALLOW	$	5,000.00	$	5,000
	1214H	Skylight openings	9	EA	$	1,000.00	$	9,000
	1214S	Skylight openings	9	EA	$	1,000.00	$	9,000
	1214I	Skylight openings	9	EA	$	1,000.00	$	9,000
	1214H	Unforeseen Rough Carpentry	1	ALLOW	$	20,000.00	$	20,000
	1214S	Unforeseen Rough Carpentry	1	ALLOW	$	20,000.00	$	20,000
	1214I	Unforeseen Rough Carpentry	1	ALLOW	$	20,000.00	$	20,000
062000		**Finish Carpentry**						
							$	-
	1214H	Cabinetry preserve and restore	1	ALLOW	$	5,000.00	$	5,000
	1214S	Cabinetry preserve and restore	1	ALLOW	$	5,000.00	$	5,000
	1214I	Cabinetry preserve and restore	1	ALLOW	$	5,000.00	$	5,000
064000		**Architectural Woodwork**						
	1214H	Lowers	80	LF	$	65.00	$	5,200

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Buildings 12-14

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Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit	Rate ($)	Total ($)
	1214H	Uppers	20	LF	$ 45.00	$ 900
	1214S	Lowers	200	LF	$ 65.00	$ 13,000
	1214S	Uppers	50	LF	$ 45.00	$ 2,250
	1214I	Lowers	300	LF	$ 65.00	$ 19,500
	1214I	Uppers	75	LF	$ 45.00	$ 3,375
		Sub-Total for Wood, Plastics, Composites:				**$ 417,509**
		THERMAL AND MOISTURE PROTECTION				
071000		**Waterproofing**				
072000		**Thermal Protection**				
	1214H	1AB				$ -
	1214H	Exterior Wall Thermal Insulation	1	ALLOW	$ 15,000.00	$ 15,000
	1214H	Allowance for Cants @ Perimeter & Pads	1	ALLOW	$ 5,000.00	$ 5,000
	1214S	1C				$ -
	1214S	Exterior Wall Thermal Insulation	1	ALLOW	$ 15,000.00	$ 15,000
	1214S	Allowance for Cants @ Perimeter & Pads	1	ALLOW	$ 5,000.00	$ 5,000
	1214I	2AB				$ -
	1214I	Exterior Wall Thermal Insulation	1	ALLOW	$ 15,000.00	$ 15,000
	1214I	Allowance for Cants @ Perimeter & Pads	1	ALLOW	$ 5,000.00	$ 5,000
072500		**Weather Barriers**				
075000		**Membrane Roofing**				
		Buildings 12-14				
	1214H	Membrane Roofing	14,099	SF	$ 10.00	$ 140,990
	1214S	Membrane Roofing	14,099	SF	$ 10.00	$ 140,990
	1214I	Membrane Roofing	14,099	SF	$ 10.00	$ 140,990
	1214H	Walk Pads Alt. 1	1	ALLOW	$ 5,000.00	$ 5,000
	1214S	Walk Pads Alt 2	1	ALLOW	$ 5,000.00	$ 5,000
	1214I	Walk Pads Alt. 3	1	ALLOW	$ 5,000.00	$ 5,000
						$ -
076000		**Flashing and Sheet Metal**				
	1214H	Allowance for Sheet Metal	1	ALLOW	$ 20,000.00	$ 20,000
	1214S	Allowance for Sheet Metal	1	ALLOW	$ 20,000.00	$ 20,000
	1214I	Allowance for Sheet Metal	1	ALLOW	$ 20,000.00	$ 20,000
078000		**Fire and Smoke Protection**				
		Sub-Total for Thermal And Moisture Protection:				**$ 557,970**
		OPENINGS				
081000		**Doors and Frames**				
	1214H	Restore '(E) Doors and Frames	24	EA	$ 500.00	$ 12,000
	1214S	Restore '(E) Doors and Frames	23	EA	$ 500.00	$ 11,500
	1214I	Restore '(E) Doors and Frames	21	EA	$ 500.00	$ 10,500
	1214H	Repair/Replace Hardware at '(E) Doors	24	EA	$ 1,250.00	$ 30,000
	1214S	Repair/Replace Hardware at '(E) Doors	23	EA	$ 1,250.00	$ 28,750
	1214I	Repair/Replace Hardware at '(E) Doors	21	EA	$ 1,250.00	$ 26,250
	1214H	New Door and Hardware at S elev of 14	1	EA	$ 3,000.00	$ 3,000
	1214S	New Door and Hardware at S elev of 14	1	EA	$ 3,000.00	$ 3,000

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Buildings 12-14

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Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit	Rate ($)	Total ($)
	1214I	New Door and Hardware at S elev of 14	1	EA	$ 3,000.00	$ 3,000
	1214H	New Storefont Door and Hardware	1	EA	$ 4,500.00	$ 4,500
	1214S	New Storefont Door and Hardware	1	EA	$ 4,500.00	$ 4,500
	1214I	New Storefont Door and Hardware	1	EA	$ 4,500.00	$ 4,500
	1214H	New Bifold Door Allowance	1	EA	$ 30,000.00	$ 30,000
	1214S	New Bifold Door Allowance	1	EA	$ 30,000.00	$ 30,000
	1214I	New Bifold Door Allowance	1	EA	$ 30,000.00	$ 30,000
083000		**Specialty Doors and Frames**				
084000		**Entrances, Storefronts, and Curtain Walls**				
085000		**Windows**				
	1214H	Aluminum window restoration	1,554	SF	$ 45.00	$ 69,930
	1214S	Aluminum window restoration	1,554	SF	$ 45.00	$ 69,930
	1214I	Aluminum window restoration	1,554	SF	$ 45.00	$ 69,930
	1214H	Aluminum window clerestory	1,009	SF	$ 45.00	$ 45,405
	1214S	Aluminum window clerestory	1,009	SF	$ 45.00	$ 45,405
	1214I	Aluminum window clerestory	1,009	SF	$ 45.00	$ 45,405
	1214H	New storefront at 14	150	SF	$ 100.00	$ 15,000
	1214S	New storefront at 14	150	SF	$ 100.00	$ 15,000
	1214I	New storefront at 14	150	SF	$ 100.00	$ 15,000
	1214H	Restore storefront at 13	281	SF	$ 90.00	$ 25,290
	1214S	Restore storefront at 13	281	SF	$ 90.00	$ 25,290
	1214I	Restore storefront at 13	281	SF	$ 90.00	$ 25,290
	1214H	Skylights	9	EA	$ 2,500.00	$ 22,500
	1214S	Skylights	9	EA	$ 2,500.00	$ 22,500
	1214I	Skylights	9	EA	$ 2,500.00	$ 22,500
	1214H	Allowance for Water testing of Installed Assemblies	1	ALLOW	$ 10,000.00	$ 10,000
	1214S	Allowance for Water testing of Installed Assemblies	1	ALLOW	$ 10,000.00	$ 10,000
	1214I	Allowance for Water testing of Installed Assemblies	1	ALLOW	$ 10,000.00	$ 10,000
	1214H	Mock Up Allowance	1	ALLOW	$ 5,000.00	$ 5,000
	1214S	Mock Up Allowance	1	ALLOW	$ 5,000.00	$ 5,000
	1214I	Mock Up Allowance	1	ALLOW	$ 5,000.00	$ 5,000
086000		**Skylights**				
088000		**Glazing**				
		Sub-Total for Openings:				**$ 810,875**
		FINISHES				
092000		**Plaster and Gypsum Board**				
	1214H	New Plaster at 14	171	SF	$ 20.00	$ 3,420
	1214S	New Plaster at 14	171	SF	$ 20.00	$ 3,420
	1214I	New Plaster at 14	171	SF	$ 20.00	$ 3,420
	1214H	Replace Damaged Plywood (50%)	280	SF	$ 15.00	$ 4,193
	1214S	Replace Damaged Plywood (50%)	280	SF	$ 15.00	$ 4,193
	1214I	Replace Damaged Plywood (50%)	280	SF	$ 15.00	$ 4,193
	1214H	New wood framed partitions walls	160	LF	$ 16.00	$ 2,560
	1214S	New wood framed partitions walls	192	LF	$ 16.00	$ 3,072
	1214I	New wood framed partitions walls	128	LF	$ 16.00	$ 2,048
	1214H	Drywall Ceilings (restrooms & food prep/service)	1,250	SF	$ 12.00	$ 15,000

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Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit		Rate ($)		Total ($)
	1214S	Drywall Ceilings (restrooms & food prep/service)	1,250	SF	$	12.00	$	15,000
	1214I	Drywall Ceilings (restrooms & food prep/service)	1,250	SF	$	12.00	$	15,000
093000		**Ceramic Tile**						
	1214H	Restroom Floor Tile - Mortar Bed Sloped to Drain	611	SF	$	25.00	$	15,275
	1214S	Restroom Floor Tile - Mortar Bed Sloped to Drain	960	SF	$	25.00	$	24,000
	1214I	Restroom Floor Tile - Mortar Bed Sloped to Drain	930	SF	$	25.00	$	23,250
	1214H	Restroom Wall Tile - Thinset 9'	900	SF	$	20.00	$	18,000
	1214S	Restroom Wall Tile - Thinset 9'	1,170	SF	$	20.00	$	23,400
	1214I	Restroom Wall Tile - Thinset 9'	1,170	SF	$	20.00	$	23,400
	1214H	Restroom Cer Tile Base	100	LF	$	8.00	$	800
	1214S	Restroom Cer Tile Base	130	LF	$	8.00	$	1,040
	1214I	Restroom Cer Tile Base	130	LF	$	8.00	$	1,040
095000		**Acoustical Ceilings**						
	1214H	2x2 ACT	1,938	SF	$	5.75	$	11,141
	1214H	Celotex refurb	5,813	SF	$	4.00	$	23,250
	1214S	2x2 ACT	2,003	SF	$	5.75	$	11,514
	1214S	Celotex refurb	6,008	SF	$	4.00	$	24,030
	1214I	2x2 ACT	1,908	SF	$	5.75	$	10,968
	1214I	Celotex refurb	5,723	SF	$	4.00	$	22,890
096000		**Flooring**						
	1214H	Carpet Squares at Offices, Conference, Classrooms, Admin & Circulation	861	SY	$	42.50	$	36,597
	1214S	Carpet Squares at Offices, Conference, Classrooms, Admin & Circulation	890	SY	$	42.50	$	37,825
	1214I	Carpet Squares at Offices, Conference, Classrooms, Admin & Circulation	848	SY	$	42.50	$	36,031
	1214H	Rubber Base	850	LF	$	3.25	$	2,763
	1214S	Rubber Base	850	LF	$	3.25	$	2,763
	1214I	Rubber Base	850	LF	$	3.25	$	2,763
	1214H	Polish and Seal Concrete Floors	1,250	SF	$	2.50	$	3,125
	1214S	Polish and Seal Concrete Floors	1,150	SF	$	2.50	$	2,875
	1214I	Polish and Seal Concrete Floors	1,150	SF	$	2.50	$	2,875
	1214H	Floor Prep Allowance	2,961	SF	$	1.00	$	2,961
	1214S	Floor Prep Allowance	2,890	SF	$	1.00	$	2,890
	1214I	Floor Prep Allowance	2,848	SF	$	1.00	$	2,848
098000		**Acoustic Treatment**						
099000		**Painting and Coating**						
	1214H	Concrete Façade Strip + Clean and Prep	65	SF	$	7.50	$	488
	1214S	Concrete Façade Strip + Clean and Prep	65	SF	$	7.50	$	488
	1214I	Concrete Façade Strip + Clean and Prep	65	SF	$	7.50	$	488
	1214H	Finish plywood	559	SF	$	2.75	$	1,537
	1214S	Finish plywood	559	SF	$	2.75	$	1,537
	1214I	Finish plywood	559	SF	$	2.75	$	1,537
	1214H	Prep and paint existing doors	24	EA	$	300.00	$	7,200
	1214S	Prep and paint existing doors	23	EA	$	300.00	$	6,900
	1214I	Prep and paint existing doors	21	EA	$	300.00	$	6,300
	1214H	Prep and paint new doors	1	EA	$	200.00	$	200
	1214S	Prep and paint new doors	1	EA	$	200.00	$	200

Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit	Rate ($)	Total ($)
	1214I	Prep and paint new doors	1	EA	$ 200.00	$ 200
	1214H	Prep and paint Eaves & Soffits	628	SF	$ 4.00	$ 2,512
	1214S	Prep and paint Eaves & Soffits	628	SF	$ 4.00	$ 2,512
	1214I	Prep and paint Eaves & Soffits	628	SF	$ 4.00	$ 2,512
	1214H	Misc. Caulking by Painter	1	ALLOW	$ 2,500.00	$ 2,500
	1214S	Misc. Caulking by Painter	1	ALLOW	$ 2,500.00	$ 2,500
	1214I	Misc. Caulking by Painter	1	ALLOW	$ 2,500.00	$ 2,500
	1214H	Interior Drywall Walls, 9'	9,650	SF	$ 1.10	$ 10,615
	1214S	Interior Drywall Walls, 9'	9,650	SF	$ 1.10	$ 10,615
	1214I	Interior Drywall Walls, 9'	9,650	SF	$ 1.10	$ 10,615
	1214H	Drywall Ceilings	1,250	SF	$ 1.25	$ 1,563
	1214S	Drywall Ceilings	1,250	SF	$ 1.25	$ 1,563
	1214I	Drywall Ceilings	1,250	SF	$ 1.25	$ 1,563
	1214H	Touch Up and Trade Damage	1	ALLOW	$ 5,000.00	$ 5,000
	1214S	Touch Up and Trade Damage	1	ALLOW	$ 5,000.00	$ 5,000
	1214I	Touch Up and Trade Damage	1	ALLOW	$ 5,000.00	$ 5,000
		Sub-Total for Finishes:				**$ 539,473**
		SPECIALTIES				
102000		**Specialties**				
	1214H	Signage	1	ALLOW	$ 15,000.00	$ 15,000
	1214S	Signage	1	ALLOW	$ 15,000.00	$ 15,000
	1214I	Signage	1	ALLOW	$ 15,000.00	$ 15,000
	1214H	White Boards	1	ALLOW	$ 5,000.00	$ 5,000
	1214S	White Boards	1	ALLOW	$ 5,000.00	$ 5,000
	1214I	White Boards	1	ALLOW	$ 5,000.00	$ 5,000
	1214H	Lockers	1	ALLOW	$ 5,000.00	$ 5,000
	1214S	Lockers	1	ALLOW	$ 5,000.00	$ 5,000
	1214I	Lockers	1	ALLOW	$ 5,000.00	$ 5,000
		Sub-Total for Specialties:				**$ 75,000**
		EQUIPMENT				
110000		**Equipment**				
111000		**Parking Control Equipment**				
111500		**Security Equipment**				
113000		**Residential Equipment**				
114000		**Foodservice Equipment**				
	1214H	Food Prep/Service Allowance	1	EA	$ 25,000.00	$ 25,000
	1214S	Food Prep/Service Allowance	1	EA	$ 25,000.00	$ 25,000
	1214I	Food Prep/Service Allowance	1	EA	$ 25,000.00	$ 25,000
111500		**Educational Equipment**				
116000		**Audio Visual Equipment**				
	1214H	AV Allowance	1	EA	$ 50,000.00	$ 50,000
	1214S	AV Allowance	1	EA	$ 50,000.00	$ 50,000
	1214I	AV Allowance	1	EA	$ 50,000.00	$ 50,000

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Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit	Rate ($)	Total ($)
116500		**Athletic and Recreational Equipment**				
117000		**Healthcare Equipment**				
119000		**Other Equipment**				
		Sub-Total for Equipment:				**$ 225,000**
		FURNISHINGS				
120000		**Furnishings**				
122000		**Window Treatments**				
	1214H	Manual Window Shades	1,835	SF	$ 20.00	$ 36,700
	1214S	Manual Window Shades	1,835	SF	$ 20.00	$ 36,700
	1214I	Manual Window Shades	1,835	SF	$ 20.00	$ 36,700
	1214H	Motorized Shades at Clerestory	1,009	SF	$ 50.00	$ 50,450
	1214S	Motorized Shades at Clerestory	1,009	SF	$ 50.00	$ 50,450
	1214I	Motorized Shades at Clerestory	1,009	SF	$ 50.00	$ 50,450
126000		**Multiple Seating**				
		Sub-Total for Furnishings:				**$ 261,450**
		SPECIAL CONSTRUCTION				
130000		**Special Construction**				
		Sub-Total for Special Construction:				**$ -**
		CONVEYING EQUIPMENT				
142000		**Elevators**				
143000		**Escalators**				$ -
		Sub-Total for Conveying Equipment:				**$ -**
		FIRE SUPPRESSION				
210000		**Fire Sprinklers**				
	1214H	D/B Wet pipe sprinkler system	10,667	SF	$ 5.00	$ 53,335
	1214S	D/B Wet pipe sprinkler system	10,667	SF	$ 5.00	$ 53,335
	1214I	D/B Wet pipe sprinkler system	10,667	SF	$ 5.00	$ 53,335
	1214H	New service	1	ALLOW	$ 15,000.00	$ 15,000
	1214S	New service	1	ALLOW	$ 15,000.00	$ 15,000
	1214I	New service	1	ALLOW	$ 15,000.00	$ 15,000
		Sub-Total for Fire Suppression:				**$ 205,005**
		PLUMBING				
220000		**Plumbing General**				
	1214H	Plumbing System	10,667	SF	$ 6.00	$ 64,002
	1214S	Plumbing System	10,667	SF	$ 6.00	$ 64,002
	1214I	Plumbing System	10,667	SF	$ 6.00	$ 64,002

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Buildings 12-14

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Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit	Rate ($)	Total ($)
221000		**Plumbing Piping**				
223000		**Plumbing Equipment**				
224000		**Plumbing Fixtures**				
227000		**Plumbing Miscellaneous**				
		Sub-Total for Plumbing :				**$ 192,006**
		HEATING, VENTILATING & AIR CONDITIONING (HVAC)				
230000		**HVAC General**				
	1214H	HVAC System	10,667	SF	$ 22.00	$ 234,674
	1214S	HVAC System	10,667	SF	$ 22.00	$ 234,674
	1214I	HVAC System	10,667	SF	$ 22.00	$ 234,674
232000		**HVAC Piping and Pumps**				
233000		**HVAC Air Distribution**				
237000		**HVAC Equipment**				
239000		**HVAC Miscellaneous**				
		Sub-Total for Heating, Ventilating & Air Conditioning (Hvac):				**$ 704,022**
		ELECTRICAL				
260000		**Electrical General**				$ -
	1214H	Electrical System	10,667	SF	$ 30.00	$ 320,010
	1214S	Electrical System	10,667	SF	$ 30.00	$ 320,010
	1214I	Electrical System	10,667	SF	$ 30.00	$ 320,010
261000		**Electrical Service**				
262000		**Electrical Distribution**				
265000		**Lighting**				
266000		**Power Devices**				
269000		**Miscellaneous Electrical**				
		Sub-Total for Electrical:				**$ 960,030**
		COMMUNICATIONS				
270000		**Communications**				$ -
	1214H	IT/Data System	10,667	SF	$ 3.00	$ 32,001
	1214S	IT/Data System	10,667	SF	$ 3.00	$ 32,001
	1214I	IT/Data System	10,667	SF	$ 3.00	$ 32,001
271000		**Cabling**				

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Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit	Rate ($)	Total ($)
272000		**Data Communications**				
273000		**Voice Communications**				
274000		**Audio-Video Communications**				
		Sub-Total for Communications:				**$ 96,003**
		ELECTRONIC SAFETY AND SECURITY				
280000		**Electronic Safety and Security**				$ -
	1214H	FLS System	10,667	SF	$ 4.00	$ 42,668
	1214S	FLS System	10,667	SF	$ 4.00	$ 42,668
	1214I	FLS System	10,667	SF	$ 4.00	$ 42,668
		Sub-Total for Electronic Safety And Security:				**$ 128,004**
		EARTHWORK				
310000		**Earthwork**				$ -
	1214H	Sitework allowance	1	ALLOW	$ 30,000.00	$ 30,000
	1214S	Sitework allowance	1	ALLOW	$ 30,000.00	$ 30,000
	1214I	Sitework allowance	1	ALLOW	$ 30,000.00	$ 30,000
311000		**Site Cleaning**				$ -
314000		**Shoring and Underpinning**				$ -
316000		**Special Foundations and Load-Bearing Elements**				$ -
		Sub-Total for Earthwork:				**$ 90,000**
		EXTERIOR IMPROVEMENTS				
321000		**Paving**				$ -
	1214H	Paving	10,600	SF	$ 10.00	$ 106,000
	1214S	Paving	10,600	SF	$ 10.00	$ 106,000
	1214I	Paving	10,600	SF	$ 10.00	$ 106,000
323000		**Site Improvements**				$ -
	1214H	Walkway, planter, site wall allowance	1	ALLOW	$ 50,000.00	$ 50,000
	1214S	Walkway, planter, site wall allowance	1	ALLOW	$ 50,000.00	$ 50,000
	1214I	Walkway, planter, site wall allowance	1	ALLOW	$ 50,000.00	$ 50,000
328000		**Irrigation**				$ -
	1214H	Irrigation Allowance	1	ALLOW	$ 25,000.00	$ 25,000
	1214S	Irrigation Allowance	1	ALLOW	$ 25,000.00	$ 25,000
	1214I	Irrigation Allowance	1	ALLOW	$ 25,000.00	$ 25,000
329000		**Planting**				$ -
	1214H	landscape Allowance	1	ALLOW	$ 25,000.00	$ 25,000
	1214S	landscape Allowance	1	ALLOW	$ 25,000.00	$ 25,000
	1214I	landscape Allowance	1	ALLOW	$ 25,000.00	$ 25,000
		Sub-Total for Exterior Improvements:				**$ 618,000**

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Buildings 12-14

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Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit		Rate ($)		Total ($)
		UTILITIES						
330000		**Utilities**					$	-
	1214H	Site Lighting	1	ALLOW	$	25,000.00	$	25,000
	1214S	Site Lighting	1	ALLOW	$	25,000.00	$	25,000
	1214I	Site Lighting	1	ALLOW	$	25,000.00	$	25,000
	1214H	Storm Drainage Allowance	1	ALLOW	$	25,000.00	$	25,000
	1214S	Storm Drainage Allowance	1	ALLOW	$	25,000.00	$	25,000
	1214I	Storm Drainage Allowance	1	ALLOW	$	25,000.00	$	25,000
331000		**Water Utilities**					$	-
333000		**Sanitary Sewerage Utilities**					$	-
334000		**Storm Drainage Utilities**					$	-
337000		**Electrical Utilities**					$	-
338000		**Communications Utilities**					$	-
		Sub-Total for Utilities:					**$**	**150,000**

SEAROCK + STAFFORD
CONSTRUCTION MANAGEMENT

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Buildings 35-39 April 3, 2015

Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit		Rate ($)		Total ($)
		GENERAL WORK ITEMS						
010000		**General Requirements**						
015000		**Temporary Facilities and Controls**						
		EXISTING CONDITIONS						
024000		**Demolition**						
	3539I	General Building Demolition Alt 1 (36, 37, & 38)	4,526	SF	$	4.50	$	20,367
	3539S	General Building Demolition Alt 2 (36, 37, 38, & 39)	17,468	SF	$	4.50	$	78,606
	3539I	Electrical Demolition & Safe-Off Alt 1	4,526	SF	$	0.50	$	2,263
	3539S	Electrical Demolition & Safe-Off Alt 2	17,468	SF	$	0.50	$	8,734
	3539I	Mechanical Demolition & Safe-off Alt 1	4,526	SF	$	0.80	$	3,621
	3539S	Mechanical Demolition & Safe-off Alt 2	17,468	SF	$	0.80	$	13,974
	3539I	Sawcut & Demo Existing Slab Alt 1 (food prep)	500	SF	$	7.00	$	3,500
	3539S	Sawcut & Demo Existing Slab Alt 2 (food prep)	480	SF	$	7.00	$	3,360
	3539I	Demo Bldg. 37 restroom slab Alt 1	2,061	SF	$	6.00	$	12,366
	3539I	Demo for Structural Work Access Alt 1 (slab at N. wall 35 & 36, 5')	1,680	SF	$	6.00	$	10,080
	3539I	Demo for Structural Work Access Alt 1 (slab at N. wall 37, 5')	60	SF	$	6.00	$	360
	3539S	Demo for Structural Work Access Alt 2 (slab at N wall 35, 5')	775	SF	$	6.00	$	4,650
	3539I	Demo for Misc. Structural Work Access Alt 1	4,526	SF	$	0.50	$	2,263
	3539S	Demo for Misc. Structural Work Access Alt 2	17,468	SF	$	0.50	$	8,734
	3539I	Allowance for unforeseen MEP demo Alt 1	4,526	SF	$	0.75	$	3,395
	3539S	Allowance for unforeseen MEP demo Alt 2	17,468	SF	$	0.75	$	13,101
	3539I	Abatement Allowance Alt 1	4,526	SF	$	10.00	$	45,260
	3539S	Abatement Allowance Alt 2	17,468	SF	$	10.00	$	174,680
	3539I	Debris Disposal Allowance (6" of debris per sf of Building) Alt 1	3	DUMPSTERS	$	600.00	$	1,800
	3539S	Debris Disposal Allowance (6" of debris per sf of Building) Alt 2	9	DUMPSTERS	$	600.00	$	5,400
026000		**Abatement**						
		Included above					$	-
		Sub-Total for Existing Conditions:					**$**	**416,514**
		CONCRETE						
030000		**Concrete**						
032000		**Concrete Reinforcing**						
	3539I	Footings & Foundations						
	3539I	Grade beams - assumed as 3'-0" x 1'-6" - 35 & 36 Alt. 1	56	CY	$	150.00	$	8,400
	3539I	Reinforcing Steel - 275 lbs / cy	15,400	LBS	$	1.25	$	19,250
	3539I	Forming Allowance	1,008	SF	$	4.50	$	4,536
	3539I	Excavation by Hand	56	CY	$	35.00	$	1,960
	3539I	Premium for Tie-Ins to Existing (Drilling, Doweling, Grouting)	10%	PREMIUM	$	32,186.00	$	3,219
	3539I	Grade beams - assumed as 3'-0" x 1'-6" - 37 Alt. 1	2	CY	$	225.00	$	450
	3539I	Reinforcing Steel - 275 lbs / cy	550.00	LBS	$	1.25	$	688
	3539I	Forming Allowance	36	SF	$	4.50	$	162
	3539I	Excavation by Hand	2	CY	$	65.00	$	130
	3539I	Premium for Tie-Ins to Existing (Drilling, Doweling, Grouting)	10%	PREMIUM	$	1,299.50	$	130
	3539I	Tie-Down Anchors - Assume 50 LF Each		LF	$	175.00	$	-
	3539S	Grade beams - assumed as 3'-0" x 1'-6" - 35 Alt. 2	26	CY	$	225.00	$	5,813
	3539S	Reinforcing Steel - 275 lbs / cy	7,104.17	LBS	$	1.25	$	8,880
	3539S	Forming Allowance	465	SF	$	4.50	$	2,093
	3539S	Excavation by Hand	26	CY	$	65.00	$	1,679

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Buildings 35-39

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Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit		Rate ($)		Total ($)
	3539S	Premium for Tie-Ins to Existing (Drilling, Doweling, Grouting)	15%	PREMIUM	$	16,785.21	$	2,518
	3539I	Spoil Disposal Alt. 1	58	CY	$	27.50	$	1,595
	3539I	Rock Chipping Allowance Alt. 1	1	ALLOW	$	5,000.00	$	5,000
	3539I	Allowance for unforeseen strengthening of existing footings (10% of new footing cost) Alt. 1	1	ALLOW	$	3,348.55	$	3,349
	3539I	Historic Renovation/Campus Environment Premium Alt 1	15%	PREMIUM	$	48,867.60	$	7,330
	3539S	Spoil Disposal Alt. 2	26	CY	$	27.50	$	710
	3539S	Rock Chipping Allowance Alt. 2	1	ALLOW	$	2,500.00	$	2,500
	3539S	Allowance for unforeseen strengthening of existing footings (10% of new footing cost) Alt. 2	1	ALLOW	$	1,678.52	$	1,679
	3539S	Historic Renovation/Campus Environment Premium Alt 2	15%	PREMIUM	$	25,871.09	$	3,881
033000		**Cast-in-Place Concrete**						
	3539I	Patch back slabs Demo 'd for Foundation Work - 35, 36, 37 - Alt 1					$	-
	3539I	Dowels to Existing @ 12" o.c.	348	EA	$	36.25	$	12,615
	3539I	Reinforcing Steel - 1.34#/sf	2,332	LBS	$	1.25	$	2,915
	3539I	Concrete @ 6"	32	CY	$	275.00	$	8,861
	3539S	Patch back slabs Demo 'd for Foundation Work - 35 - Alt 2					$	-
	3539S	Dowels to Existing @ 12" o.c.	155	EA	$	36.25	$	5,619
	3539S	Reinforcing Steel - 1.34#/sf	1,039	LBS	$	1.25	$	1,298
	3539S	Concrete @ 6"	14	CY	$	275.00	$	3,947
	3539I	Replace Slab Alt 1 (food prep)	500	SF	$	12.50	$	6,250
	3539S	Replace Slab Alt 2 (food prep)	480	SF	$	12.50	$	6,000
	3539I	Replace Bldg. 37 restroom slab Alt 1	2,061	SF	$	12.50	$	25,763
	3539I	Footings for tube steel posts at new 36 Breezeway Allowance - Alt. 1	4.0	EA	$	2,000.00	$	8,000
	3539I	Epoxy Injection & Crack Repair @ Existing Exterior Concrete Walls (Assume 4" per SF of Concrete Façade) - Route, Clean, Inject & Sand - Alt 1	40	LF	$	25.00	$	1,007
	3539S	Epoxy Injection & Crack Repair @ Existing Exterior Concrete Walls (Assume 4" per SF of Concrete Façade) - Route, Clean, Inject & Sand - Alt 2	11	LF	$	25.00	$	283
	3539I	Historic Renovation/Campus Environment Premium Alt 1	15%	PREMIUM	$	65,410.44	$	9,812
	3539S	Historic Renovation/Campus Environment Premium Alt 2	15%	PREMIUM	$	17,146.68	$	2,572
034000		**Precast Concrete**						
		Sub-Total for Concrete:					**$**	**180,890**

MASONRY

CSI	Complex	Description	Quantity	Unit		Rate ($)		Total ($)
042000		**CMU**						
	3539I	Alt. 1					$	-
	3539I	Spalled and Cracked Brick Treatment 35-39 - Alt. 1	5,570	SF	$	1.05	$	5,849
	3539I	Replacement allowance 35-39 - Alt. 1	50	EA	$	150.00	$	7,500
	3539I	Cracked and Detoriated Joint Treatment 35-39 - Alt. 1	5,570	SF	$	1.05	$	5,849
	3539I	Efflorescence Treatment 35-39 - Alt. 1	5,570	SF	$	1.00	$	5,570
	3539I	Soiling and Biological Growth Treatment 35-39 - Alt. 1	250	SF	$	1.50	$	375
	3539I	Brick Wing Walls Alt 1					$	-
	3539I	Spalled and Cracked Brick Treatment 9'tall - 35 - Alt. 1	2,268	SF	$	1.05	$	2,381
	3539I	Replacement allowance 25% - 35 - Alt. 1	567	SF	$	20.00	$	11,340
	3539I	Efflorescence Treatment 35 - Alt. 1	2,268	SF	$	1.00	$	2,268
	3539S	Alt. 2					$	-
	3539S	Spalled and Cracked Brick Treatment 35 - Alt. 2	482	SF	$	1.05	$	506

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Buildings 35-39

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Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit	Rate ($)		Total ($)	
	3539S	Cracked and Detoriated Joint Treatment 35 - Alt. 2	482	SF	$	1.05	$	506
	3539S	Efflorescence Treatment 35 - Alt. 2	482	SF	$	1.05	$	506
	3539S	Soiling and Biological Growth Treatment 35 - Alt. 2	250	SF	$	1.50	$	375
	3539S	Brick Wing Walls Alt 2					$	-
	3539S	Spalled and Cracked Brick Treatment 9'tall - 35 - Alt. 2	2,268	SF	$	1.05	$	2,381
	3539S	Replacement allowance 25% - 35 - Alt. 2	567	SF	$	20.00	$	11,340
	3539S	Efflorescence Treatment 35 - Alt. 2	2,268	SF	$	1.00	$	2,268
		Sub-Total for Masonry:					**$**	**59,014**
		METALS						
051000		**Structural Steel**						
	3539I	Tube steel posts at new 36 Breezeway Allowance - Assume 6" x 6" x 1/4" HSS, 12' tall - Alt. 1	0.5	TONS	$	6,000.00	$	2,739
	3539I	Moment/brace frames at 35/36 north wall (assumed 10' high) - Alt 1 - assumes using W8x15	5	TONS	$	6,000.00	$	28,350
	3539S	Moment/brace frames at 35 north wall (assumed 10' high) - Alt 2	2	TONS	$	6,000.00	$	13,230
	3539I	Spray Applied Fireproofing at Exposed W Shape Beams - Alt 1	1.0	ALLOW	$	15,000.00	$	15,000
	3539S	Spray Applied Fireproofing at Exposed W Shape Beams - Alt 2	1.0	ALLOW	$	10,000.00	$	10,000
	3539I	Allow for Misc Embeds - Alt. 1	1.0	ALLOW	$	10,000.00	$	10,000
	3539I	Allow for Misc. Unforeseen Structural Steel - Alt. 1	1.0	ALLOW	$	10,000.00	$	10,000
	3539S	Allow for Misc Embeds Alt 2	1.0	ALLOW	$	5,000.00	$	5,000
	3539S	Allow for Misc. Unforeseen Structural Steel Alt. 2	1.0	ALLOW	$	5,000.00	$	5,000
	3539I	Historic Renovation/Campus Environment Premium Alt 1	15%	PREMIUM	$	66,088.88	$	9,913
	3539S	Historic Renovation/Campus Environment Premium Alt 2	15%	PREMIUM	$	33,230.00	$	4,985
053000		**Metal Decking**						
054000		**Cold-Formed Metal Framing**						
055000		**Miscellaneous Metal**						
057000		**Decorative Metal**						
		Sub-Total for Metals:					**$**	**114,217**
		WOOD, PLASTICS, COMPOSITES						
061000		**Rough Carpentry**						
	3539I	New openings in Makerspace - Alt 1						
	3539I	Labor	64	HRS	$	85.00	$	5,440
	3539I	Material	1	ALLOW	$	2,000.00	$	2,000
	3539I	Door relocation allowance for new shear walls at 35 - Alt 1	1	ALLOW	$	5,000.00	$	5,000
	3539S	Door relocation allowance for new shear walls at 35 - Alt 2	1	ALLOW	$	5,000.00	$	5,000
	3539I	Wood Diaphragm cross ties 35-39 -Alt. 1	14,074	SF	$	2.00	$	28,148
	3539I	Wood Diaphragm collectors/drags 37 -Alt. 1	4,300	SF	$	2.00	$	8,600
	3539S	Wood Diaphragm cross ties 35 -Alt. 2	6,380	SF	$	2.00	$	12,760
	3539I	Wall to Roof Connections 37 & 39 - Alt. 1	108	EA	$	1,000.00	$	107,750
	3539I	Skylight openings at 35, 36, & 37 Alt 1	12	EA	$	1,000.00	$	12,000
	3539S	Skylights openings at 35 Alt 2	4	EA	$	1,000.00	$	4,000
	3539I	Allowance for Misc Shaped Blocking Alt 1	1	ALLOW	$	2,500.00	$	2,500
	3539S	Allowance for Misc Shaped Blocking Alt 2	1	ALLOW	$	1,250.00	$	1,250
	3539I	Unforeseen Rough Carpentry Alt 1	1	ALLOW	$	10,000.00	$	10,000
	3539S	Unforeseen Rough Carpentry Alt 2	1	ALLOW	$	5,000.00	$	5,000
	3539I	Temporary Shoring Allowance at new 36 Breezeway					$	-

SEAROCK + STAFFORD
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Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit	Rate ($)	Total ($)
	3539I	Labor	32	HRS	$ 85.00	$ 2,720
	3539I	Material	1	LS	$ 2,500.00	$ 2,500
062000		**Finish Carpentry**				
	3539I	Cabinetry preserve and restore Alt 1	40	LF	$ 100.00	$ 4,000
064000		**Architectural Woodwork**				
	3539I	Lowers	200	LF	$ 65.00	$ 13,000
	3539I	Uppers	50	LF	$ 45.00	$ 2,250
	3539S	Lowers	50	LF	$ 65.00	$ 3,250
	3539S	Uppers	13	LF	$ 45.00	$ 563
		Sub-Total for Wood, Plastics, Composites:				**$ 237,731**
		THERMAL AND MOISTURE PROTECTION				
071000		**Waterproofing**				
072000		**Thermal Protection**				
	3539I	Alt 1				$ -
	3539I	Exterior Wall Thermal Insulation	1	ALLOW	$ 10,000.00	$ 10,000
	3539I	Tapered Roof Insulation		SF	$ 4.25	$ -
	3539I	Allowance for Cants @ Perimeter & Pads	1	ALLOW	$ 5,000.00	$ 5,000
	3539S	Alt 2				$ -
	3539S	Exterior Wall Thermal Insulation	1	ALLOW	$ 5,000.00	$ 5,000
	3539S	Tapered Roof Insulation		SF	$ 4.25	$ -
	3539S	Allowance for Cants @ Perimeter & Pads	1	ALLOW	$ 2,500.00	$ 2,500
072500		**Weather Barriers**				
075000		**Membrane Roofing**				
	3539I	New single ply roof, includes 10% replacement of sheathing Alt 1	12,983	SF	$ 10.00	$ 129,830
	3539I	Walk Pads Alt. 1	1	ALLOW	$ 5,000.00	$ 5,000
	3539S	New single ply roof, includes 10% replacement of sheathing Alt 2	6,200	SF	$ 10.00	$ 62,000
	3539S	Walk Pads Alt. 2	1	ALLOW	$ 2,500.00	$ 2,500
	3539I	New single ply roof 37, includes 10% replacement of sheathing Alt 1	6,155	SF	$ 10.00	$ 61,550
	3539I	Walk Pads 37 Alt. 1	1	ALLOW	$ 2,500.00	$ 2,500
	3539I	Canopy Roofs				$ -
	3539I	New single ply roof, includes 25% replacement of sheathing Alt 1	7,669	SF	$ 11.50	$ 88,194
	3539I	Walk Pads Alt. 1	1	ALLOW	$ 5,000.00	$ 5,000
	3539S	New single ply roof, includes 25% replacement of sheathing Alt 2	3,655	SF	$ 11.50	$ 42,033
	3539S	Walk Pads Alt. 2	1	ALLOW	$ 2,500.00	$ 2,500
	3539I	Copper dome repair allowance Alt. 1	1	ALLOW	$ 20,000.00	$ 20,000
	3539I	Bituminous Membrane Wrap @ top of Parapet (4' high) Alt 1	1,332	SF	$ 2.50	$ 3,330
						$ -
076000		**Flashing and Sheet Metal**				
	3539I	New Drip edge 35 and 36 Alt 1 (including canopy)	1	ALLOW	$ 10,000.00	$ 10,000
	3539S	New Drip edge 35 Alt 2 (including canopy)	1	ALLOW	$ 5,000.00	$ 5,000
	3539I	Gutters & Downspouts 35 and 36 Alt 1	1	ALLOW	$ 10,000.00	$ 10,000
	3539S	Gutters & Downspouts 35 Alt 2	1	ALLOW	$ 5,000.00	$ 5,000
	3539I	Reglet and counterflashing 37 Alt 1	1	ALLOW	$ 7,500.00	$ 7,500
078000		**Fire and Smoke Protection**				

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Buildings 35-39 April 3, 2015

Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit	Rate ($)	Total ($)
		Sub-Total for Thermal And Moisture Protection:				**$ 484,436**
		OPENINGS				
081000		**Doors and Frames**				
	3539I	New frames and door relocation for new shear walls at 35 - Alt 1	5	EA	$ 1,000.00	$ 5,000
	3539I	New door hardware and reinstall Alt 1	27	EA	$ 1,250.00	$ 33,750
	3539S	New door hardware and reinstall Alt 2	11	EA	$ 1,250.00	$ 13,750
	3539I	New HM door and frame to replace existing and Mech Room Alt 1	1	EA	$ 2,500.00	$ 2,500
	3539I	New HM door and frame Alt 1	2	EA	$ 2,500.00	$ 5,000
	3539I	New wood doors and frames - Alt 1	6	EA	$ 3,000.00	$ 18,000
	3539S	New wood doors and frames - Alt 2	2	EA	$ 3,000.00	$ 6,000
083000		**Specialty Doors and Frames**				
084000		**Entrances, Storefronts, and Curtain Walls**				
085000		**Windows**				
	3539I	Windows (glass and finish)				$ -
	3539I	Aluminum window walls at 35 & 36 Alt 1	2,582	SF	$ 45.00	$ 116,190
	3539S	Aluminum window walls at 35 Alt 2	1,182	SF	$ 45.00	$ 53,190
	3539I	Aluminum clerestory at 35, 36, & 37 Alt 1	685	SF	$ 45.00	$ 30,825
	3539S	Aluminum clerestory at 35 Alt 2	314	SF	$ 45.00	$ 14,130
	3539I	Wood windows at 37 Alt 1	251	SF	$ 45.00	$ 11,295
	3539I	Skylights at 35, 36, & 37 Alt 1	12	EA	$ 2,500.00	$ 30,000
	3539S	Skylights at 35 Alt 2	4	EA	$ 2,500.00	$ 10,000
	3539I	Allowance for Water testing of Installed Assemblies Alt 1	1	ALLOW	$ 20,000.00	$ 20,000
	3539I	Mock Up Allowance Alt 1	1	ALLOW	$ 10,000.00	$ 10,000
	3539S	Allowance for Water testing of Installed Assemblies Alt 2	1	ALLOW	$ 10,000.00	$ 10,000
	3539S	Mock Up Allowance Alt 2	1	ALLOW	$ 5,000.00	$ 5,000
086000		**Skylights**				
088000		**Glazing**				
		Sub-Total for Openings:				**$ 394,630**
		FINISHES				
092000		**Plaster and Gypsum Board**				
	3539I	Restoration of Existing Plaster 35-37 - Alt 1				$ -
	3539I	Water Damage	500	SF	$ 20.00	$ 10,000
	3539I	Incompatible repairs	200	SF	$ 20.00	$ 4,000
	3539S	Restoration of Existing Plaster 35 - Alt 2	1666			$ -
	3539S	Water Damage	100	SF	$ 20.00	$ 2,000
	3539S	Incompatible repairs	50	SF	$ 20.00	$ 1,000
	3539I	Replace Damaged Plywood 35-37 - Alt 1	800	SF	$ 15.00	$ 12,000
	3539S	Replace Damaged Plywood 35 - Alt 2	250	SF	$ 15.00	$ 3,750
	3539I	New wood framed partitions walls - Alt 1	150	LF	$ 160.00	$ 24,000
	3539S	Replace Damaged Plywood 35 - Alt 2	50	LF	$ 150.00	$ 7,500
	3539I	Restroom Walls - Alt. 1	1,692	SF	$ 12.00	$ 20,304
	3539I	Drywall Ceilings (restrooms & food prep/service) - Alt 1	3,130	SF	$ 12.00	$ 37,560
	3539S	Drywall Ceilings - Alt 2	480	SF	$ 12.00	$ 5,760

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Buildings 35-39

April 3, 2015

Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit	Rate ($)		Total ($)	
093000		**Ceramic Tile**						
	3539I	Restroom Floor Tile - Mortar Bed Sloped to Drain Alt. 1	1,000	SF	$	25.00	$	25,000
	3539I	Restroom Cer Tile Base Alt. 1	190	LF	$	8.00	$	1,520
	3539I	Restroom Wall Tile - Thinset Alt. 1	846	SF	$	20.00	$	16,920
095000		**Acoustical Ceilings**						
	3539I	2x2 ACT Alt 1	3,111	SF	$	5.75	$	17,888
	3539S	2x2 ACT Alt 2	1,225	SF	$	5.75	$	7,044
	3539I	Celotex refurb	9,333	SF	$	4.00	$	37,332
	3539S	Celotex refurb	3,675	SF	$	4.00	$	14,700
096000		**Flooring**						
	3539I	Carpet Squares at Offices, Conference, Classrooms, Admin & Circulation Alt 1	1,383	SY	$	42.50	$	58,763
	3539S	Carpet Squares at Offices, Conference, Classrooms, Admin & Circulation Alt 2	544	SY	$	42.50	$	23,139
	3539I	Rubber Base	1,590	LF	$	3.25	$	5,168
	3539S	Rubber Base	300	LF	$	3.25	$	975
	3539I	Polish and Seal Concrete Floors Alt 1	6,980	SF	$	2.50	$	17,450
	3539S	Polish and Seal Concrete Floors Alt 2	1,000	SF	$	2.50	$	2,500
	3539I	Floor Prep Allowance	19,424	SF	$	1.00	$	19,424
	3539S	Floor Prep Allowance	5,900	SF	$	1.00	$	5,900
098000		**Acoustic Treatment**						
099000		**Painting and Coating**						
	3539I	Concrete Façade Strip + Clean and Prep, 9'6" high, 39 Alt. 1	950	SF	$	7.50	$	7,125
	3539I	Crack Repair 39 Alt 1	10	LF	$	50.00	$	500
	3539I	Re-Paint Façade with Elastomeric 39 Alt 1	950	SF	$	2.75	$	2,613
	3539I	Parapet Cap 39 Alt. 1	100	LF	$	4.00	$	400
	3539I	Restoration of Existing Plaster 35-37 - Alt 1	5861	SF	$	2.75	$	16,118
	3539S	Restoration of Existing Plaster 35 - Alt 2	1666	SF	$	2.75	$	4,582
	3539I	Aluminum Louvers Alt 1	1,490	SF	$	4.00	$	5,960
	3539S	Aluminum Louvers (new) Alt 1	575	SF	$	4.00	$	2,300
	3539I	Prep and paint existing doors Alt 1	12	EA	$	300.00	$	3,600
	3539S	Prep and paint existing doors Alt 2	4	EA	$	300.00	$	1,200
	3539I	Prep and paint new doors Alt 1	6	EA	$	200.00	$	1,200
	3539S	Prep and paint new doors Alt 2	2	EA	$	200.00	$	400
	3539I	Prep and paint Eaves & Soffits Alt 1	1,539	SF	$	4.00	$	6,156
	3539S	Prep and paint Eaves & Soffits Alt 2	769.50	SF	$	4.00	$	3,078
	3539I	Restroom Walls - Alt. 1	846	SF	$	2.50	$	2,115
	3539I	Misc. Caulking by Painter Alt 1	1	ALLOW	$	5,000.00	$	5,000
	3539S	Misc. Caulking by Painter Alt 2	1	ALLOW	$	2,500.00	$	2,500
	3539I	Interior Drywall Walls, 9' Alt 1	18,234	SF	$	1.10	$	20,057
	3539S	Interior Drywall Walls, 9' Alt 2	4,230	SF	$	1.10	$	4,653
	3539I	Drywall Ceilings Alt. 1	3,130	SF	$	1.25	$	3,913
	3539S	Drywall Ceilings Alt. 2	-	SF	$	1.25	$	-
	3539I	Touch Up and Trade Damage alt 1	1	ALLOW	$	4,000.00	$	4,000
	3539S	Touch Up and Trade Damage alt 2	1	ALLOW	$	2,000.00	$	2,000
		Sub-Total for Finishes:					**$**	**481,065**

SPECIALTIES

SEAROCK + STAFFORD
CONSTRUCTION MANAGEMENT

Orange Coast College Draft Conceptual Budget

Buildings 35-39 — **April 3, 2015**

Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit	Rate ($)		Total ($)	
102000		**Specialties**						
	3539I	Aluminum Louvers (new)	1,400	SF	$	30.00	$	42,000
	3539S	Aluminum Louvers (new)	575	SF	$	30.00	$	17,250
	3539I	Signage Alt 1	1	ALLOW	$	15,000.00	$	15,000
	3539S	Signage Alt 2	1	ALLOW	$	5,000.00	$	5,000
	3539I	White Boards - Salvage and reinstall Alt 1	10	EA	$	250.00	$	2,500
	3539S	White Boards - Salvage and reinstall Alt 1	8	EA	$	250.00	$	2,000
	3539I	Lockers Alt 1	1	ALLOW	$	5,000.00	$	5,000
		Sub-Total for Specialties:					**$**	**88,750**
		EQUIPMENT						
110000		**Equipment**						
111000		**Parking Control Equipment**						
111500		**Security Equipment**						
113000		**Residential Equipment**						
114000		**Foodservice Equipment**						
	3539I	Food Prep/Service Allowance Alt 1	1	EA	$	25,000.00	$	25,000
	3539S	Food Service Allowance Alt 2	1	EA	$	10,000.00	$	10,000
111500		**Educational Equipment**						
116000		**Audio Visual Equipment**						
	3539I	Alt 1 Allowance	1	EA	$	50,000.00	$	50,000
	3539S	Alt 2 Allowance	1	EA	$	25,000.00	$	25,000
116500		**Athletic and Recreational Equipment**						
117000		**Healthcare Equipment**						
119000		**Other Equipment**						
		Sub-Total for Equipment:					**$**	**110,000**
		FURNISHINGS						
120000		**Furnishings**						
122000		**Window Treatments**						
	3539I	Manual Window Shades Alt 1	2,833	SF	$	20.00	$	56,660
	3539I	Motorized Shades at Clerestory Alt 1	685	SF	$	50.00	$	34,250
	3539S	Manual Window Shades Alt 2	800	SF	$	20.00	$	16,000
	3539S	Motorized Shades at Clerestory Alt 2	280	SF	$	50.00	$	14,000
126000		**Multiple Seating**						
		Sub-Total for Furnishings:					**$**	**120,910**
		SPECIAL CONSTRUCTION						
130000		**Special Construction**						

Orange Coast College Draft Conceptual Budget

Buildings 35-39 April 3, 2015

Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit	Rate ($)	Total ($)
		Sub-Total for Special Construction:				**$ -**
		CONVEYING EQUIPMENT				
142000		**Elevators**				
143000		**Escalators**				$ -
		Sub-Total for Conveying Equipment:				**$ -**
		FIRE SUPPRESSION				
210000		**Fire Sprinklers**				
	3539I	D/B Wet pipe sprinkler system Alt 1	19,782	SF	$ 4.25	$ 84,074
	3539S	D/B Wet pipe sprinkler system Alt 2	4,900	SF	$ 4.25	$ 20,825
	3539I	New service Alt 1	1	ALLOW	$ 15,000.00	$ 15,000
	3539S	New service Alt 2	1	ALLOW	$ 15,000.00	$ 15,000
		Sub-Total for Fire Suppression:				**$ 134,899**
		PLUMBING				
220000		**Plumbing General**				
	3539I	Alt 1				$ -
	3539I	WC Wall Hung Flush Valve	3	EA	3,500.00	$ 10,500
	3539I	Urinal Wall Hung Flush Valve	1	EA	3,150.00	$ 3,150
	3539I	Restroom Lavs	4	EA	2,800.00	$ 11,200
	3539I	Service Sinks	1	EA	3,400.00	$ 3,400
	3539I	Drinking Fountain Wall Hung Elect Hi/Low	2	EA	4,200.00	$ 8,400
	3539I	Allowance for Food Prep/service & other new piping	1,630	SF	20.00	$ 32,600
	3539I	Unforeseen Fixture Allowance - 20% Add	20%	EA	69,250.00	$ 13,850
	3539S	Alt 2				$ -
	3539S	Plumbing Allowance	6,200	SF	6.00	$ 37,200
221000		**Plumbing Piping**				
223000		**Plumbing Equipment**				
224000		**Plumbing Fixtures**				
227000		**Plumbing Miscellaneous**				
		Sub-Total for Plumbing :				**$ 120,300**
		HEATING, VENTILATING & AIR CONDITIONING (HVAC)				
230000		**HVAC General**				
	3539I	HVAC System Alt 1	19,782	SF	$ 22.00	$ 435,204
	3539S	HVAC System Alt 2	4,900	SF	$ 22.00	$ 107,800
232000		**HVAC Piping and Pumps**				
233000		**HVAC Air Distribution**				
237000		**HVAC Equipment**				

Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit	Rate ($)	Total ($)
239000		**HVAC Miscellaneous**				
		Sub-Total for Heating, Ventilating & Air Conditioning (Hvac):				**$ 543,004**
		ELECTRICAL				
260000		**Electrical General**				$ -
	3539I	Electrical System Alt 1	19,782	SF	$ 30.00	$ 593,460
	3539S	Electrical System Alt 2	4,900	SF	$ 30.00	$ 147,000
261000		**Electrical Service**				
262000		**Electrical Distribution**				
265000		**Lighting**				
266000		**Power Devices**				
269000		**Miscellaneous Electrical**				
		Sub-Total for Electrical:				**$ 740,460**
		COMMUNICATIONS				
270000		**Communications**				$ -
	3539I	IT/Data System Alt 1	19,782	SF	$ 3.00	$ 59,346
	3539S	IT/Data System Alt 2	4,900	SF	$ 3.00	$ 14,700
271000		**Cabling**				
272000		**Data Communications**				
273000		**Voice Communications**				
274000		**Audio-Video Communications**				
		Sub-Total for Communications:				**$ 74,046**
		ELECTRONIC SAFETY AND SECURITY				
280000		**Electronic Safety and Security**				$ -
	3539I	FLS System Alt 1	19,782	SF	$ 4.00	$ 79,128
	3539S	FLS System Alt 2	4,900	SF	$ 4.00	$ 19,600
		Sub-Total for Electronic Safety And Security:				**$ 98,728**
		EARTHWORK				
310000		**Earthwork**				$ -
	3539I	Sitework allowance Alt 1	1	ALLOW	$ 15,000.00	$ 15,000
	3539S	Sitework allowance Alt 2		ALLOW	$ 30,000.00	$ -
311000		**Site Cleaning**				$ -
	3539S	Site Demo / Clear/Grub Site Alt. 2	35,000	SF	$ 3.00	$ 105,000
314000		**Shoring and Underpinning**				$ -

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Buildings 35-39

April 3, 2015

Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit		Rate ($)		Total ($)
316000		**Special Foundations and Load-Bearing Elements**					$	-
		Sub-Total for Earthwork:					**$**	**120,000**
		EXTERIOR IMPROVEMENTS						
321000		**Paving**					$	-
323000		**Site Improvements**					$	-
	3539I	Alt 1 Allowance	1	ALLOW	$	10,000.00	$	10,000
	3539S	Alt 2 Allowance		ALLOW	$	40,000.00	$	-
328000		**Irrigation**					$	-
	3539I	Alt 1 Allowance	5,000	SF	$	2.00	$	10,000
	3539S	Alt 2 Allowance		SF	$	2.00	$	-
329000		**Planting**					$	-
	3539I	Alt 1 Allowance	5,000	SF	$	2.00	$	10,000
	3539S	Alt 2 Allowance		SF	$	2.00	$	-
		Sub-Total for Exterior Improvements:					**$**	**30,000**
		UTILITIES						
330000		**Utilities**					$	-
	3539I	Site Lighting Alt 1	1	ALLOW	$	25,000.00	$	25,000
	3539S	Site Lighting Alt 2		ALLOW	$	25,000.00	$	-
	3539I	Storm Drainage Allowance Alt 1	1	ALLOW	$	10,000.00	$	10,000
	3539S	Storm Drainage Allowance Alt 2		ALLOW	$	20,000.00	$	-
	3539I	Landscape & French Drain Allowance Alt 1	1	ALLOW	$	5,000.00	$	5,000
	3539S	Landscape & French Drain Allowance Alt 2		ALLOW	$	10,000.00	$	-
331000		**Water Utilities**					$	-
333000		**Sanitary Sewerage Utilities**					$	-
334000		**Storm Drainage Utilities**					$	-
337000		**Electrical Utilities**					$	-
338000		**Communications Utilities**					$	-
		Sub-Total for Utilities:					**$**	**40,000**

Orange Coast College Draft Conceptual Budget

Pool / Bleachers 93, Stadium 105, Field House 110

April 3, 2015

Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit	Rate ($)		Total ($)	
		GENERAL WORK ITEMS						
010000		**General Requirements**						
		General Requirements	INCLUDED IN GENERAL CONDITIONS				$	-
015000		**Temporary Facilities and Controls**						
		Temporary Facilities and Controls	INCLUDED IN GENERAL CONDITIONS				$	-
		Sub-Total for General Work Items:					**$**	**-**
		EXISTING CONDITIONS						
024000		**Demolition**						
		Alt 1A/1B - Administrative Services (Smaller Footprint)						
	93	Remove Fencing	1	ALLOW	$	5,000.00	$	5,000
	105	General Building Demolition	200	SF	$	50.00	$	10,000
	93	Saw cut & Demo Existing pool deck	5,000	SF	$	7.00	$	35,000
	93D	Saw cut & Demo Existing pool deck and pools	10,175	SF	$	7.00	$	71,225
	FH	General Building Demolition	160	SF	$	50.00	$	8,000
	FHD	General Building Demolition	5,850	SF	$	4.50	$	26,325
	FHD	Electrical Demolition & Safe-Off	5,850	SF	$	0.50	$	2,925
	FHD	Mechanical Demolition & Safe-off	5,850	SF	$	0.80	$	4,680
	FHD	Debris Disposal Allowance (6" of debris per sf of Building)	10	DUMPSTERS	$	450.00	$	4,500
026000		**Abatement**						
	93	Abatement Allowance	1	ALLOW	$	50,000.00	$	50,000
	105	Abatement Allowance	1	ALLOW	$	15,000.00	$	15,000
	FH	Abatement Allowance	160	SF	$	25.00	$	4,000
	FHD	Abatement Allowance	5,850	SF	$	10.00	$	58,500
		Sub-Total for Existing Conditions:					**$**	**295,155**
		CONCRETE						
030000		**Concrete**						
	93	Concrete Repair	125	SF	$	100.00	$	12,500
	93	New pool deck	5,000	SF	$	10.00	$	50,000
	105	Expansion Joint	100	LF	$	50.00	$	5,000
	105	Remove and Reinstall Bleachers	1	ALLOW	$	20,000.00	$	20,000
	105	Concrete Repair	2,077	SF	$	25.00	$	51,925
	105	Remove and Reinstall Bleachers	1	ALLOW			$	-
	105	Concrete Repair (cut out, see alternate description)		sf	$	156.25	$	-
	105	Retaining Wall Repair Allowance	1	ALLOW	$	20,000.00	$	20,000
	FH	Patch back slabs Demo 'd for new restrooms (25% of sf)					$	-
	FH	Dowels to Existing @ 12" o.c.	1	ALLOW	$	2,500.00	$	2,500
	FH	Reinforcing Steel - 1.34#/sf	536	LBS	$	1.25	$	670
	FH	Concrete @ 6"	7	CY	$	275.00	$	2,037
032000		**Concrete Reinforcing**						
033000		**Cast-in-Place Concrete**						
034000		**Precast Concrete**						

SEAROCK + STAFFORD
CONSTRUCTION MANAGEMENT

Orange Coast College Draft Conceptual Budget

Pool / Bleachers 93, Stadium 105, Field House 110

April 3, 2015

Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit	Rate ($)	Total ($)
		Sub-Total for Concrete:				**$ 164,632**
		MASONRY				
042000		**CMU**				
		Sub-Total for Masonry:				**$ -**
		METALS				
051000		**Structural Steel**				
	105	Moment/brace frames at Press Box (assumed 10' high) - Alt 1 - assumes using W8x21	1	TONS	$ 6,000.00	$ 5,418
053000		**Metal Decking**				
054000		**Cold-Formed Metal Framing**				
055000		**Miscellaneous Metal**				
	105	Allowance for investigation of railing issues	1	ALLOW	$ 15,000.00	$ 15,000
	105	New tube railing at Press Box	4	LF	$ 300.00	$ 1,200
057000		**Decorative Metal**				
		Sub-Total for Metals:				**$ 21,618**
		WOOD, PLASTICS, COMPOSITES				
061000		**Rough Carpentry**				
	105	Rework at trellis	1	ALLOW	$ 5,000.00	$ 5,000
	FH	New openings in FH				
	FH	Labor	128	HRS	$ 85.00	$ 10,880
	FH	Material	1	ALLOW	$ 4,000.00	$ 4,000
062000		**Finish Carpentry**				
064000		**Architectural Woodwork**				
		Sub-Total for Wood, Plastics, Composites:				**$ 19,880**
		THERMAL AND MOISTURE PROTECTION				
071000		**Waterproofing**				
072000		**Thermal Protection**				
	FH	Wall Insulation	1	ALLOW	$ 10,000.00	$ 10,000
072500		**Weather Barriers**				
075000		**Membrane Roofing**				
	FH	New single ply roof, includes 10% replacement of sheathing Alt 1	5,600	SF	$ 10.00	$ 56,000
076000		**Flashing and Sheet Metal**				
	FH	Sheet Metal Allowance	1	ALLOW	$ 10,000.00	$ 10,000
078000		**Fire and Smoke Protection**				
		Sub-Total for Thermal And Moisture Protection:				**$ 76,000**

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Pool / Bleachers 93, Stadium 105, Field House 110

April 3, 2015

Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit		Rate ($)		Total ($)
		OPENINGS						
081000		**Doors and Frames**						
	FH	New door hardware and fix existing doors	6	EA	$	1,750.00	$	10,500
	FH	New HM door and hardware	10	EA	$	2,500.00	$	25,000
	FH	New wood doors and frames - Alt 1	4	EA	$	3,000.00	$	12,000
083000		**Specialty Doors and Frames**						
084000		**Entrances, Storefronts, and Curtain Walls**						
085000		**Windows**						
	105	New Windows at Press Box	100	SF	$	65.00	$	6,500
	FH	Allowance for Repair of Existing Windows/Sashes/seals	1	ALLOW	$	10,000.00	$	10,000
086000		**Skylights**						
088000		**Glazing**						
		Sub-Total for Openings:					**$**	**64,000**
		FINISHES						
092000		**Plaster and Gypsum Board**						
	93	Replaster Pools (assumed 8' deep)	8588	SF	$	5.00	$	42,940
	105	Patch plaster at press box	1	ALLOW	$	5,000.00	$	5,000
	FH	Allowance for Repair of Existing exterior Walls (5%)	200	SF	$	50.00	$	10,000
	FH	New wood framed partitions walls	80	LF	$	160.00	$	12,800
	FH	Drywall Ceilings	1,600	SF	$	12.00	$	19,200
093000		**Ceramic Tile**						
	93	Tile at Pools (assumed 1' tall at perimeter)	436	SF	$	25.00	$	10,900
	FH	Restroom Floor Tile - Mortar Bed Sloped to Drain	1,600	SF	$	25.00	$	40,000
	FH	Restroom Cer Tile Base	240	LF	$	8.00	$	1,920
	FH	Restroom Wall Tile - Thinset	2,160	SF	$	25.00	$	54,000
095000		**Acoustical Ceilings**						
	FH	2x2 ACT	5,600	SF	$	7.50	$	42,000
096000		**Flooring**						
	FH	Carpet Squares at Offices @ Admin	622	SY	$	42.50	$	26,444
098000		**Acoustic Treatment**						
099000		**Painting and Coating**						
	93	Concrete Façade Strip + Clean and Prep, 9'6" high, 39	1,000	SF	$	7.50	$	7,500
	93	Crack Repair	25	LF	$	50.00	$	1,250
	105	Paint at press box	1	ALLOW	$	5,000.00	$	5,000
	105	Paint at trellis	1	ALLOW	$	2,500.00	$	2,500
	105	Prep and paint existing doors	2	EA	$	300.00	$	600
	FH	Interior Drywall Walls, 9'	4,680	SF	$	1.50	$	7,020
	FH	Drywall Ceilings @ Bathrooms	1,600	SF	$	1.25	$	2,000
		Sub-Total for Finishes:					**$**	**291,074**

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CONSTRUCTION MANAGEMENT

Orange Coast College Draft Conceptual Budget

Pool / Bleachers 93, Stadium 105, Field House 110

April 3, 2015

Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit	Rate ($)	Total ($)
		SPECIALTIES				
102000		**Specialties**				
	93	Signage	1	ALLOW	$ 7,500.00	$ 7,500
	FH	Lockers	1	ALLOW	$ 5,000.00	$ 5,000
		Sub-Total for Specialties:				**$ 12,500**
		EQUIPMENT				
110000		**Equipment**				
111000		**Parking Control Equipment**				
111500		**Security Equipment**				
113000		**Residential Equipment**				
114000		**Foodservice Equipment**				
111500		**Educational Equipment**				
116000		**Audio Visual Equipment**				
116500		**Athletic and Recreational Equipment**				
117000		**Healthcare Equipment**				
119000		**Other Equipment**				
		Sub-Total for Equipment:				**$ -**
		FURNISHINGS				
120000		**Furnishings**				
122000		**Window Treatments**				
	FH	Allowance for Repair of Existing Windows/Sashes/seals	1	ALLOW	$ 2,500.00	$ 2,500
126000		**Multiple Seating**				
		Sub-Total for Furnishings:				**$ 2,500**
		SPECIAL CONSTRUCTION				
130000		**Special Construction**				
		Sub-Total for Special Construction:				**$ -**
		CONVEYING EQUIPMENT				
142000		**Elevators**				
143000		**Escalators**				$ -
		Sub-Total for Conveying Equipment:				**$ -**
		FIRE SUPPRESSION				
210000		**Fire Sprinklers**				

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Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit	Rate ($)	Total ($)
	FH	D/B Wet pipe sprinkler system Alt 1	5,600	SF	$ 4.25	$ 23,800
	FH	New service Alt 1	1	ALLOW	$ 15,000.00	$ 15,000
		Sub-Total for Fire Suppression:				**$ 23,800**
		PLUMBING				
220000		**Plumbing General**				
	93	New Drinking Fountain	1	EA	10,000.00	$ 10,000
	93	Relocate Pool Equipment	1	EA	10,000.00	$ 10,000
	FH	Plumbing System	5,600	SF	$ 6.00	$ 33,600
221000		**Plumbing Piping**				
223000		**Plumbing Equipment**				
224000		**Plumbing Fixtures**				
227000		**Plumbing Miscellaneous**				
		Sub-Total for Plumbing :				**$ 53,600**
		HEATING, VENTILATING & AIR CONDITIONING (HVAC)				
230000		**HVAC General**				
	FH	HVAC System	5,600	SF	$ 22.00	$ 123,200
232000		**HVAC Piping and Pumps**				
233000		**HVAC Air Distribution**				
237000		**HVAC Equipment**				
239000		**HVAC Miscellaneous**				
		Sub-Total for Heating, Ventilating & Air Conditioning (Hvac):				**$ 123,200**
		ELECTRICAL				
260000		**Electrical General**				$ -
	FH	Electrical System	5,600	SF	$ 15.00	$ 84,000
261000		**Electrical Service**				
262000		**Electrical Distribution**				
265000		**Lighting**				
266000		**Power Devices**				
269000		**Miscellaneous Electrical**				
		Sub-Total for Electrical:				**$ 84,000**
		COMMUNICATIONS				
270000		**Communications**				$ -

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Pool / Bleachers 93, Stadium 105, Field House 110

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Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit	Rate ($)	Total ($)
	FH	IT/Data System	5,600	SF	$ 3.00	$ 16,800
271000		**Cabling**				
272000		**Data Communications**				
273000		**Voice Communications**				
274000		**Audio-Video Communications**				
		Sub-Total for Communications:				**$ 16,800**
		ELECTRONIC SAFETY AND SECURITY				
280000		**Electronic Safety and Security**				$ -
		Sub-Total for Electronic Safety And Security:				**$ -**
		EARTHWORK				
310000		**Earthwork**				$ -
311000		**Site Cleaning**				$ -
314000		**Shoring and Underpinning**				$ -
316000		**Special Foundations and Load-Bearing Elements**				$ -
		Sub-Total for Earthwork:				**$ -**
		EXTERIOR IMPROVEMENTS				
321000		**Paving**				$ -
323000		**Site Improvements**				$ -
	93	Fencing at Pool Deck	200	LF	$ 300.00	$ 60,000
	93	Gates at Pool Deck	4	EA	$ 2,500.00	$ 10,000
	93D	Allowance for finish grade	10,175	SF	$ 1.50	$ 15,263
	FHD	Allowance to treat demo'd site	5,850	SF	$ 3.50	$ 20,475
328000		**Irrigation**				$ -
	93	Planting Allowance	1	ALLOW	$ 10,000.00	$ 10,000
329000		**Planting**				$ -
	93	Planting Allowance	1	ALLOW	$ 10,000.00	$ 10,000
		Sub-Total for Exterior Improvements:				**$ 125,738**
		UTILITIES				
330000		**Utilities**				$ -
331000		**Water Utilities**				$ -
333000		**Sanitary Sewerage Utilities**				
334000		**Storm Drainage Utilities**				

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CONSTRUCTION MANAGEMENT

Orange Coast College Draft Conceptual Budget

Pool / Bleachers 93, Stadium 105, Field House 110

April 3, 2015

Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit	Rate ($)	Total ($)
337000		**Electrical Utilities**				
338000		**Communications Utilities**				$ -
		Sub-Total for Utilities:				**$ -**

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Building 10 April 3, 2015

Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit	Rate ($)	Total ($)
		GENERAL WORK ITEMS				
010000		**General Requirements**				
		General Requirements	INCLUDED IN GENERAL CONDITIONS			$ -
015000		**Temporary Facilities and Controls**				
		Temporary Facilities and Controls	INCLUDED IN GENERAL CONDITIONS			$ -
		Sub-Total for General Work Items:				**$ -**
		EXISTING CONDITIONS				
024000		**Demolition**				
	10D	General Building Demolition	8,461	SF	$ 6.00	$ 50,766
	10D	Electrical Demolition & Safe-Off	8,461	SF	$ 0.50	$ 4,231
	10D	Mechanical Demolition & Safe-off	8,461	SF	$ 0.80	$ 6,769
	10D	Demo Existing Slab	8,461	SF	$ 7.00	$ 59,227
	10D	Allowance for unforeseen MEP demo	8,461	SF	$ 0.75	$ 6,346
	10D	Debris Disposal Allowance (6" of debris per sf of Building)	25	DUMPSTERS	$ 450.00	$ 11,250
026000		**Abatement**				
	10D	Abatement Allowance	8,461	SF	$ 12.50	$ 105,763
		Sub-Total for Existing Conditions:				**$ 244,351**
		CONCRETE				
030000		**Concrete**				
032000		**Concrete Reinforcing**				
033000		**Cast-in-Place Concrete**				
034000		**Precast Concrete**				
		Sub-Total for Concrete:				**$ -**
		MASONRY				
042000		**CMU**				
		Sub-Total for Masonry:				**$ -**
		METALS				
051000		**Structural Steel**				
053000		**Metal Decking**				
054000		**Cold-Formed Metal Framing**				
055000		**Miscellaneous Metal**				
057000		**Decorative Metal**				
		Sub-Total for Metals:				**$ -**

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CONSTRUCTION MANAGEMENT

Orange Coast College Draft Conceptual Budget

Building 10

April 3, 2015

Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit	Rate ($)	Total ($)
		WOOD, PLASTICS, COMPOSITES				
061000		Rough Carpentry				
062000		Finish Carpentry				
064000		Architectural Woodwork				
		Sub-Total for Wood, Plastics, Composites:				$ -
		THERMAL AND MOISTURE PROTECTION				
071000		Waterproofing				
072000		Thermal Protection				
072500		Weather Barriers				
075000		Membrane Roofing				
076000		Flashing and Sheet Metal				
078000		Fire and Smoke Protection				
		Sub-Total for Thermal And Moisture Protection:				$ -
		OPENINGS				
081000		Doors and Frames				
083000		Specialty Doors and Frames				
084000		Entrances, Storefronts, and Curtain Walls				
085000		Windows				
086000		Skylights				
088000		Glazing				
		Sub-Total for Openings:				$ -
		FINISHES				
092000		Plaster and Gypsum Board				
093000		Ceramic Tile				
095000		Acoustical Ceilings				
096000		Flooring				
098000		Acoustic Treatment				
099000		Painting and Coating				
		Sub-Total for Finishes:				$ -

Orange Coast College Draft Conceptual Budget

Building 10

April 3, 2015

Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit	Rate ($)	Total ($)
		SPECIALTIES				
102000		Specialties				
		Sub-Total for Specialties:				$ -
		EQUIPMENT				
110000		Equipment				
111000		Parking Control Equipment				
111500		Security Equipment				
113000		Residential Equipment				
114000		Foodservice Equipment				
111500		Educational Equipment				
116000		Audio Visual Equipment				
116500		Athletic and Recreational Equipment				
117000		Healthcare Equipment				
119000		Other Equipment				
		Sub-Total for Equipment:				$ -
		FURNISHINGS				
120000		Furnishings				
122000		Window Treatments				
126000		Multiple Seating				
		Sub-Total for Furnishings:				$ -
		SPECIAL CONSTRUCTION				
130000		Special Construction				
		Sub-Total for Special Construction:				$ -
		CONVEYING EQUIPMENT				
142000		Elevators				
143000		Escalators				$ -
		Sub-Total for Conveying Equipment:				$ -
		FIRE SUPPRESSION				
210000		Fire Sprinklers				
		Sub-Total for Fire Suppression:				$ -

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CONSTRUCTION MANAGEMENT

Orange Coast College Draft Conceptual Budget

Building 10

April 3, 2015

Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit	Rate ($)	Total ($)
		PLUMBING				
220000		Plumbing General				
221000		Plumbing Piping				
223000		Plumbing Equipment				
224000		Plumbing Fixtures				
227000		Plumbing Miscellaneous				
		Sub-Total for Plumbing :				$ -
		HEATING, VENTILATING & AIR CONDITIONING (HVAC)				
230000		HVAC General				
232000		HVAC Piping and Pumps				
233000		HVAC Air Distribution				
237000		HVAC Equipment				
239000		HVAC Miscellaneous				
		Sub-Total for Heating, Ventilating & Air Conditioning (Hvac):				$ -
		ELECTRICAL				
260000		Electrical General				$ -
261000		Electrical Service				
262000		Electrical Distribution				
265000		Lighting				
266000		Power Devices				
269000		Miscellaneous Electrical				
		Sub-Total for Electrical:				$ -
		COMMUNICATIONS				
270000		Communications				$ -
271000		Cabling				
272000		Data Communications				
273000		Voice Communications				
274000		Audio-Video Communications				

Orange Coast College Draft Conceptual Budget

Building 10

April 3, 2015

Detailed Breakdown Systems - Construction Costs

CSI	Complex	Description	Quantity	Unit	Rate ($)	Total ($)
		Sub-Total for Communications:				**$ -**
		ELECTRONIC SAFETY AND SECURITY				
280000		**Electronic Safety and Security**				$ -
		Sub-Total for Electronic Safety And Security:				**$ -**
		EARTHWORK				
310000		**Earthwork**				$ -
	10D	Earthwork allowance	1	ALLOW	$ 15,000.00	$ 15,000
311000		**Site Cleaning**				$ -
	10D	Earthwork allowance	1	ALLOW	$ 15,000.00	$ 15,000
314000		**Shoring and Underpinning**				$ -
316000		**Special Foundations and Load-Bearing Elements**				$ -
		Sub-Total for Earthwork:				**$ 30,000**
		EXTERIOR IMPROVEMENTS				
321000		**Paving**				$ -
323000		**Site Improvements**				$ -
	10D	Paving Allowance	1	ALLOW	$ 20,000.00	$ 20,000
328000		**Irrigation**				$ -
	10D	Irrigation Allowance	8,461	SF	$ 2.00	$ 16,922
329000		**Planting**				$ -
	10D	Planting Allowance	8,461	SF	$ 2.00	$ 16,922
		Sub-Total for Exterior Improvements:				**$ 53,844**
		UTILITIES				
330000		**Utilities**				$ -
		Alt 1A/1B - Administrative Services (Smaller Footprint)				
	10D	Site Lighting	8,461	SF	$ 1.50	$ 12,692
	10D	Storm Drainage Allowance	8,461	SF	$ 1.00	$ 8,461
331000		**Water Utilities**				$ -
333000		**Sanitary Sewerage Utilities**				
334000		**Storm Drainage Utilities**				
337000		**Electrical Utilities**				
338000		**Communications Utilities**				$ -
		Sub-Total for Utilities:				**$ 21,153**

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APPENDIX E

Hazards Assessment

DUDEK

MAIN OFFICE
605 THIRD STREET
ENCINITAS, CALIFORNIA 92024
T 760.942.5147 T 800.450.1818 F 760.632.0164

MEMORANDUM

To:	Rachel Struglia
From:	Glenna McMahon, Khristina Leyba
Subject:	Hazards Assessment for Orange Coast College Program EIR 2701 Fairview Road Costa Mesa, CA 92626
Date:	January 10, 2014
Attachment(s):	A - EDR Radius Report, B - County of Orange Environmental Health Records, C - Hazards Interview Questionnaire, D - Aerial Photographs and Topographic Maps, E - Sanborn Fire Maps

This hazards assessment was prepared for the Orange Coast College Vision 2020 Facilities Master Plan Program Environmental Impact Report (EIR). This hazards assessment consists of review and summary of the following data: 1) a database search of regulatory agency records, 2) local environmental health department files for the subject property, 3) historical aerial photographs, historical topographic maps, and Sanborn Fire Insurance maps, 4) interview with the facilities manager, and 5) records on or near the subject property listed on GeoTracker (online database maintained by the Regional Water Board). The objective of the hazards assessment is to determine if there have been any impacts to the proposed project area/subject property due to current or past hazardous materials storage or use.

The subject property consists of an approximately 158-acre parcel in Costa Mesa, California (Figure 1). The subject property is occupied by Orange Coast College and consists of athletic fields, parking lots and buildings (Figure 2). The subject property is bordered by Adams Avenue to the north, Fairview Road to the east, Merrimac Way to the south, and residential homes to the west.

REGULATORY RECORDS REVIEW

Dudek reviewed a regulatory agency records search report conducted by Environmental Data Resources (EDR) on November 4, 2013 (Attachment A). The EDR report listed sixty-eight sites within the American Society for Testing and Materials (ASTM) standard search radii of the subject property.

The subject property was listed in the EDR Report in the following databases: CA AST, CA EMI, CA FID UST, CA HAZNET, CA HIST CORTESE, CA HIST UST, CA NPDES, CA SWRCY, CA SWEEPS UST, CA UST, CA LUST, HIST FTTS, FINDS, FTTS, NY MANIFEST, and RCRA-LQG. Two leaking underground storage tanks (LUST) were reported; both are for gasoline releases to soil only. A release was reported in 1989 and the case was closed on August 31, 1990. Another release was reported in 1999 and the case was closed on February 2, 2000.

Sixty-seven additional sites were identified within the ASTM-specified distances of the subject property. Thirty of these sites are listed in databases associated with permitting and hazardous material storage or disposal. Based on the information provided in the databases for these sites, it is unlikely they have impacted the environmental conditions at the subject property.

Thirty-two sites are listed in the Leaking Underground Storage Tank (LUST) database. For sixteen sites, the LUST listing is for a release to soil only. These sites are located either down or cross-gradient from the subject property and have been granted case closure. The depth to water (DTW) in the area is approximately 77 feet below ground surface (bgs). Of the sixteen sites, one is adjacent to the subject property; "Coast Comm College Dist Admin" is located at 1370 Adam Avenue. This site is listed in the following databases: CA UST, CA SWEEPS, CA SWEEPS UST, CA FID UST, CA HIST CORTEE, and CA LUST. A release to soil occurred on site and was granted closure on August 31, 1990. Given the closed status and soil only release for these sites, it is unlikely they have impacted the environmental conditions at the subject property. Fifteen sites listed in the LUST database are for a release to groundwater. These sites are greater than 1/8 mile from the subject property and have reached case closure. Given the closed status and location of the fourteen sites, they are also unlikely to have impacted the environmental conditions at the subject property.

Of the thirty-two sites, one had a release of gasoline to soil and groundwater. Remediation was performed in 2002 and the case received granted closure on September 12, 2005. This site is located more than 1/2 mile north of the subject property. Given the distance from the subject property and closed status, it is unlikely that this site has impacted environmental conditions at the subject property.

Five sites were listed in the LUST database have an open case status. These sites are discussed below.

1. Shell Service Station at 1201 East Baker Street is located 0.30 mile west northwest of the subject property. The site is listed in the following databases: RCRA-SQG, CA HIST

CORTESE, CA LUST, CA FIS UST, CA SWEEPS UST, and CA EMI. Approximately 80 gallons of gasoline was released during fuel line repairs. According to the *Corrective Action Plan for Monitored Natural Attenuation Report* prepared by Conestoga-Rovers & Associates, soil vapor extraction (SVE) was used to remove over 33,000 pounds of hydrocarbons from the source areas. In addition, 1.6 million gallons of groundwater and approximately 3 pounds of dissolved hydrocarbons were extracted. Based on the June 2013 groundwater monitoring report groundwater depth is approximately 40 feet bgs and groundwater flow is primarily to the southwest. Two groundwater monitoring wells are approximately 0.20 miles northwest of the subject property. Contaminant concentrations of concern are below detection limits in both wells with the exception of benzene in one well. Benzene was 1.1 µg/L; however this concentration is below the Environmental Protection Agency maximum contaminant level (MCL) of 5 µg/L. Given the distance to the subject property and groundwater flow, it is not expected that this site has impacted the environmental conditions of the subject property.

2. Exxon #7-0865 at 1195 Baker Street is located 0.30 mile north northeast of the subject property. The site is listed in the following databases: CA HIST CORTESE, CA LUST, CA FID UST, CA UST, CA HIST UST, and CA SWEEPS UST. Gasoline was released to groundwater in 1992. According to the *Low Threat Closure Report* dated October 1, 2013, the impacted groundwater beneath the site is stable. Based on plume maps presented in the 2012 fourth quarter groundwater monitoring report, contaminant concentrations at the southernmost wells nearest to the subject property were either not detected or below the regulatory limits. According to GeoTracker, this site is eligible for closure as of March 21, 2013. Based on the limited extent of the contaminant plumes and eligibility for closure of this site, it is unlikely that this site has impacted the environmental conditions of the subject property.

3. Mobil Station (18-HNR) site at 3006 Harbor Boulevard is located 0.50 mile northwest of the subject property. The site is listed in the following databases: CA LUST, CA FID, CA SWEEPS UST, and CA CHMIRS. Gasoline was released to groundwater in August 2000. The groundwater flow direction is primarily to the south and the depth to water is approximately 56 feet bgs. The site's environmental consultant, Blaes Environmental, stated that the site has been adequately remediated. According to GeoTracker, the site is eligible for closure as of March 23, 2012. Given the distance and recent eligibility of closure, it is unlikely that the site has impacted the environmental conditions at the subject property.

4. Harbor Fair Exxon Corner Market at 2502 Harbor Boulevard is located 0.35 mile southwest of the subject property. The site is listed in the following databases: CA HIST CORTESE, CA FID UST, CA SWEEPS UST, and CA LUST. Diesel and waste oil were released to groundwater in December 1991. According to GeoTracker, the site is eligible for closure as of October 21, 2012. Based on the distance and downgradient location of the site and recent eligibility of closure, it is unlikely that the site has impacted the environmental conditions at the subject property.

5. Costa Mesa Air National Guard is located 0.73 mile east of the subject property, south of Presidio Drive and west of Newport Boulevard. The site is listed in the following databases: CA HIST Cal-Sites, CA Cortese, CA RESPONSE, CA ENVIROSTOR, and FUDS. The site is an 8.5-acre facility that has been active since 1964. Activities include routine maintenance of vehicles, generators, and various ground equipment. Hazardous wastes resulting from these activities include varying amounts of waste fuels, oils, paints, thinners, and solvents. A preliminary assessment was submitted in December 1990; no further action was concluded. In December 2002, an Environmental Baseline Survey was submitted and a total of nine areas of concern were identified. The Department of Toxic Substances Control (DTSC) requested additional sampling. Given the distance from the subject property and cross-gradient location, it is unlikely that the site has impacted the environmental conditions at the subject property.

The EDR Report identified twelve sites located in Costa Mesa, CA that were not mapped due to limited address information. Dudek further researched the location of each site. Nine of the unmapped sites are not located within one mile of the project area. Two sites are not in any databases indicating a release has occurred. The last listing, Costa Mesa Air National Guard site, is located within one mile of the subject property and was discussed in detail above.

LOCAL AGENCY RECORDS

County of Orange Environmental Health (EH) has records for two closed LUST cases at the subject property (Attachment B). Both of the cases involved fuel releases related to USTs at the college. The records also indicated that an additional UST was removed from near the Maintenance Building.

A release was reported after the removal of three USTs located near the Farm Maintenance Facility located on the west-central portion of the college (A, Figure 3). The USTs (one 1,000-gallon diesel, one 250-gallon weed oil, and one 250-gallon waste oil) were removed in 1988 and the tank pit was excavated to approximately 25 feet bgs. Soil samples analyzed revealed the presence of petroleum hydrocarbons and volatile organic compounds (VOCs). Three soil borings were advanced in June 1989 to a maximum depth of 33 feet bgs. Soil samples collected from the borings showed low concentrations of petroleum hydrocarbons. A letter from the County of Orange EH dated December 5, 1989 stated that aviation fuel was detected in the soil at the site. Two additional borings, one 20° angle and one vertical, were advanced in January 1990 to 40 and 35 feet bgs, respectively. Laboratory analytical results for the soil samples indicated that petroleum hydrocarbons were not detected deeper than 20 feet bgs in the vertical boring; petroleum hydrocarbons were not detected in any of the samples collected from the angle boring. The maximum concentration of petroleum hydrocarbons was 43 mg/kg detected in the vertical boring at 15 and 20 feet bgs. County of Orange EH granted closure for this release in August 1990.

A 1,000-gallon gasoline UST and associated piping was reportedly removed from near the Maintenance Building in August 1998 (B, Figure 3). Soil samples did not indicate the presence of a release and a case was not opened for this UST removal.

Diesel fuel-impacted soils were discovered in October 1999 near the Student Success Building located in the southeastern portion of the college (C, Figure 3). A concrete tank was discovered during trenching activities for seismic retrofitting inside of the building. The building was reportedly formerly used by the U.S. Army as barracks and was likely used to provide fuel for heating the building; the UST was reportedly removed in the 1940s. The concrete UST was located in the southeastern portion of the building that was present on-site prior to the construction of the college. Four soil borings were hand-augered on November 2, 1999 to between 10 and 15 feet bgs. Five soil borings were advanced to between 20 and 30 feet bgs using a direct push drill rig. The maximum concentration of total petroleum hydrocarbons as diesel (TPHd) was 7,400 mg/kg in a sample collected from 15 feet bgs in the boring closest to the former UST. The direct push soil borings soil samples contained a maximum concentration of TPHd of 6,200 mg/kg at 20 feet bgs. TPHd was not detected in soil samples collected from 25 and 30 feet bgs. County of Orange EH granted closure for this release in February 2000.

According to the proposed construction and demolition areas identified in the Orange Coast College Vision 2020 Facilities Master Plan Initial Study (Figures 3 and 4), the tank formerly located in the Student Success building is in an area slated for demoltion. While the case was closed by the county, research indicated that impacted soil may still be present, thus further investigation may be necessary.

INTERVIEW WITH MAINTENANCE AND OPERATIONS DIRECTOR

Mark Goode, Director of Maintenance and Operations for Orange Coast College, was interviewed regarding background information and current uses of the subject property (Attachment C). Mr. Goode has been the Director for about 30 years.

Current use of the property is for education and has been for approximately 62 years. Prior use of the property was a training facility for the Santa Ana Airbase. The property has been used for industrial activities including a recycling facility, gasoline station and an aircraft repair program. The gasoline station is only for equipment and campus vehicles. Aboveground storage tanks (ASTs) contain gasoline and diesel fuel. The aircraft repair program on campus currently has one AST aviation fuel tank (1, Figure 3). According to Mr. Goode, approximately 10 years ago a UST containing aviation fuel was removed; no releases were reported (2, Figure3). Clean fill dirt has been transported onto the subject property for construction purposes. During the interview Mr. Goode identified an area where a pond was located previously (Figure 3), cattle and pigs were kept in the vicinity. The pond was used for irrigation. Mr. Goode stated he had no knowledge of the details of the diesel releases to soil in 1989 and 1990.

Based on the interview with Mr. Goode, the area where cattle and pigs were kept may have potential environmental impacts to the subject property. The two tanks identified by Mr. Goode have no reported releases but are located in the vicinity of planned renovation at building 11 (Figure 4).

AERIAL PHOTOGRAPH REVIEW

Historical aerial photographs from EDR (Attachment D) were reviewed to determine if evidence of recognized environmental conditions was present on the subject property. Historical aerial photographs from 1938, 1947, 1953, 1963, 1972, 1977, 1990, 1995, 2005, 2009, 2010, and 2012 were reviewed.

In the 1938 photograph, the subject property and surrounding areas appear to be used for agriculture. There are a few buildings.

In the 1947 photograph, the subject property appears to be cleared land. At the southern portion of the property, two rows of rectangular buildings are visible. Similar rectangular buildings and a few agricultural fields are visible on surrounding properties.

In the 1953 photograph, the majority of the subject property is developed with a track and baseball field on the eastern portion of the property and buildings on the southern portion of the subject property. The northwestern portion of the subject property still appears to be used for agriculture. More roads are apparent in the surrounding areas and appear mostly unchanged.

In 1963, in the southern portion of the subject property more parking lots and buildings are apparent. The agricultural fields to the south of the property are now a residential development and land to the southeast is cleared.

In the 1972 aerial photograph, a major road (Adams Avenue) now borders the northern end of the subject property. A few campus buildings and a parking lot are visible on the western portion of the subject property; however the majority appears to still be used for agriculture. Adjacent agricultural fields to the west are now replaced with residential housing.

In the 1977 photograph, the subject property appears to be similar to the 1972 photograph. More residential development is visible to the west and north of the subject property. Other surrounding areas appear similar to the 1972 photograph.

In the 1990 photograph, the agricultural fields on the western end of the subject property show expanded parking areas and additional campus buildings. A baseball field and a paved parking lot are now visible southeast of the subject property.

In the 1995 aerial photograph, the northwestern portion of the subject property appears to be cleared land and the remaining parts of the property appear to be similar to the 1990 photograph.

In the 2005 photograph, the northwestern portion of the property is developed with a few campus buildings and an extended parking lot. The rest of the subject property and surrounding areas appear to be similar to the 1995 photograph.

From 2009 to 2012 the subject property and surrounding areas appear to be unchanged.

Aerial photographs indicate that the subject property was used for agricultural purposes; therefore, residual pesticides and metals may be present in the soil.

TOPOGRAPHIC MAP REVIEW

Historical topographic maps from EDR (Attachment D) were reviewed to determine if evidence of recognized environmental conditions was present on the subject property. The historical topographic maps from 1901, 1902, 1935, 1942, 1951, 1965, 1972, and 1981 were reviewed.

In the 1901 topographic map, no development is shown in the vicinity of the subject property. The Newport Beach Branch of the Southern Pacific Railroad runs northeast by southwest several miles to the southeast of the property.

In the 1902 map, no development is shown on the subject property. A few buildings are depicted in the vicinity of the subject property.

In the 1935 map, no development is shown on the subject property. The area south of the subject property is mostly developed. The Santa Ana River is several miles to the west of the subject property.

In the 1942 map, road infrastructure is more prominent near the subject property. The subject property is bordered to the north by Adams Avenue and to the east Old Santa Ana Road. One building is depicted along Adams Ave within the subject property. The Southern Pacific Railroad has been replaced by Newport Boulevard.

In the 1951 map, the subject property is identified as Orange Coast College. Additional road infrastructure extends both north and east of the property. Buildings are depicted in the southern portion of the subject property and in adjacent areas to the north and east.

In the 1965 map, the subject property has been further developed. A track and sports field is now depicted on northern portion of the subject property. Old Santa Ana Road is now named Fairview road. The surrounding areas are depicted as built up areas.

In 1972 map, improvements to Adams Avenue north of the subject property depict the road location similar to present day. The subject property and surrounding areas appear unchanged in both 1972 and 1981 maps.

SANBORN MAP REVIEW

Dudek reviewed historical sanborn fire insurance maps (Attachment E). These provide information regarding historical activities, such as property use, property address, chemical storage and street configuration. Sanborn maps for years 1915, 1922, 1929, and 1932 were reviewed. The subject property is an unmapped property and no maps were reviewed.

SUMMARY

This hazards assessment was conducted for the Orange Coast College Vision 2020 Facilities Master Plan Program EIR. This hazards assessment consisted of research and review of regulatory agency records and historical source information to determine if there have been any environmental impacts to the subject property. Previous impacts to the subject property were identified.

Sixty-seven sites were identified within the ASTM-specified distances from the subject property. Thirty of the sites are listed in databases associated with permitting and hazardous material storage or disposal. Based on the information provided in the databases for these sites, it is unlikely they have impacted the environmental conditions of the subject property. Thirty-two sites were identified in the LUST database, all have received case closure. Given the closed status and information provided in the databases, they are unlikely to have impacted the environmental conditions at the subject property. Five sites were identified in the LUST database and are open cases. Given the distance to the subject property and/or location, these sites are unlikely to have impacted the environmental conditions of the subject property.

Two LUST listings were identified on the subject property. Dudek reviewed records at County of Orange EH regarding the releases. Both cases were due to fuel releases to soil and both cases are closed. According to the Orange Coast College Vision 2020 Facilities Master Plan Initial Study, proposed demolition areas include the Student Success Center where one of the former LUSTs was identified. While the case was closed by the County, impacted soil may still be present, and therefore could be encountered during demolition.

Based on the interview with Mr. Goode, the area where cattle and pigs were kept may have potential environmental impacts to the subject property. The two tanks identified by Mr. Goode have no reported releases but are located in the vicinity of planned renovation at building 11 (Figure 4).

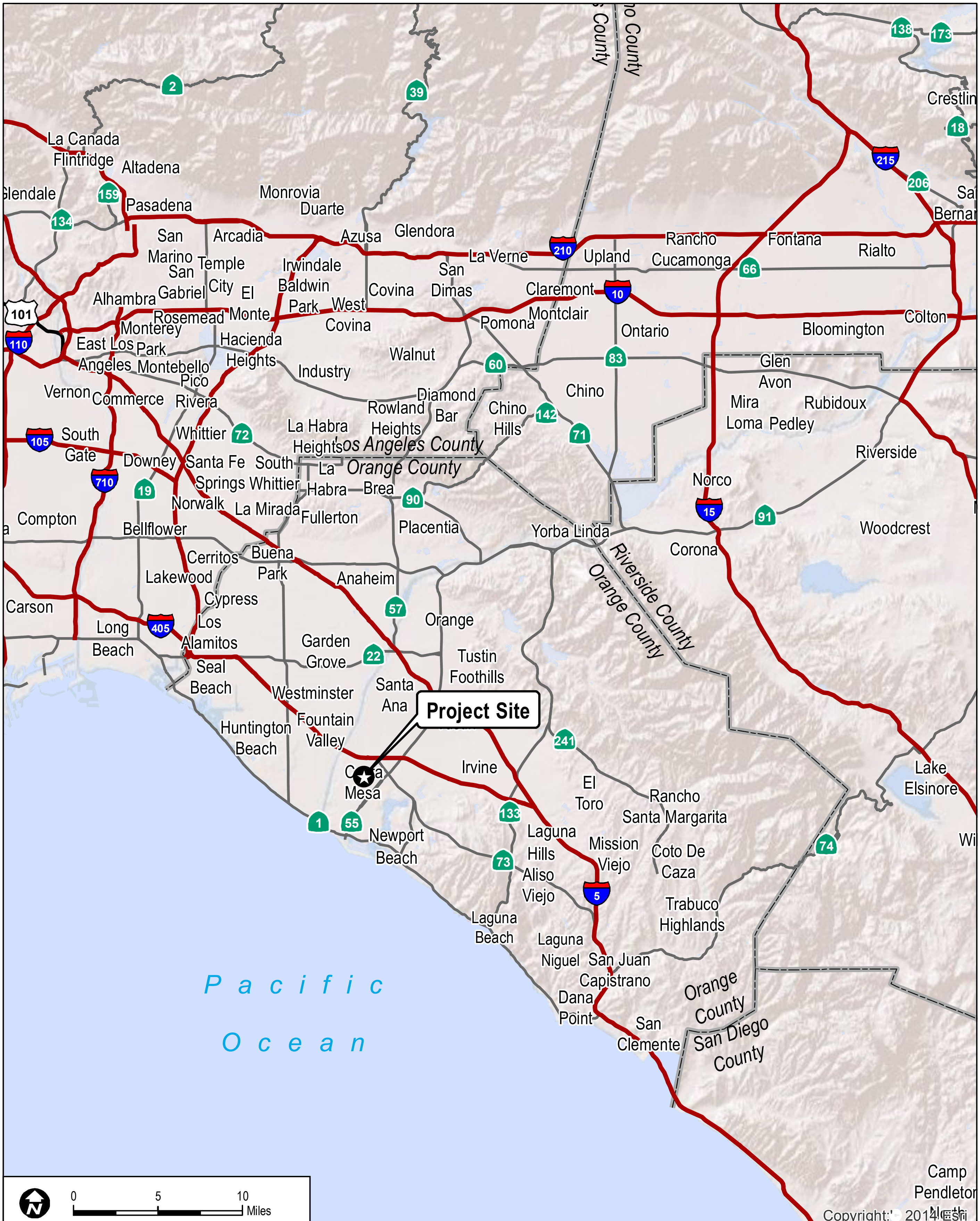
Based on the review of the aerial photographs and topographic maps, aerial photographs indicate that the subject property was used for agricultural purposes; therefore, residual pesticides and metals may be present in the soil.

If construction plans change and the former pond and/or additional tank areas (Figure 3) will be impacted, mitigation measures may be necessary.

REFERENCES

Corrective Action Plan for Monitored Natural Attenuation Report, Conestoga-Rovers & Associates. 31 May 2013.

Low Threat Closure Report, Cardno ERI. 1 October 2012.



SOURCE: ESRI 2013

FIGURE 1
Vicinity Map

7910

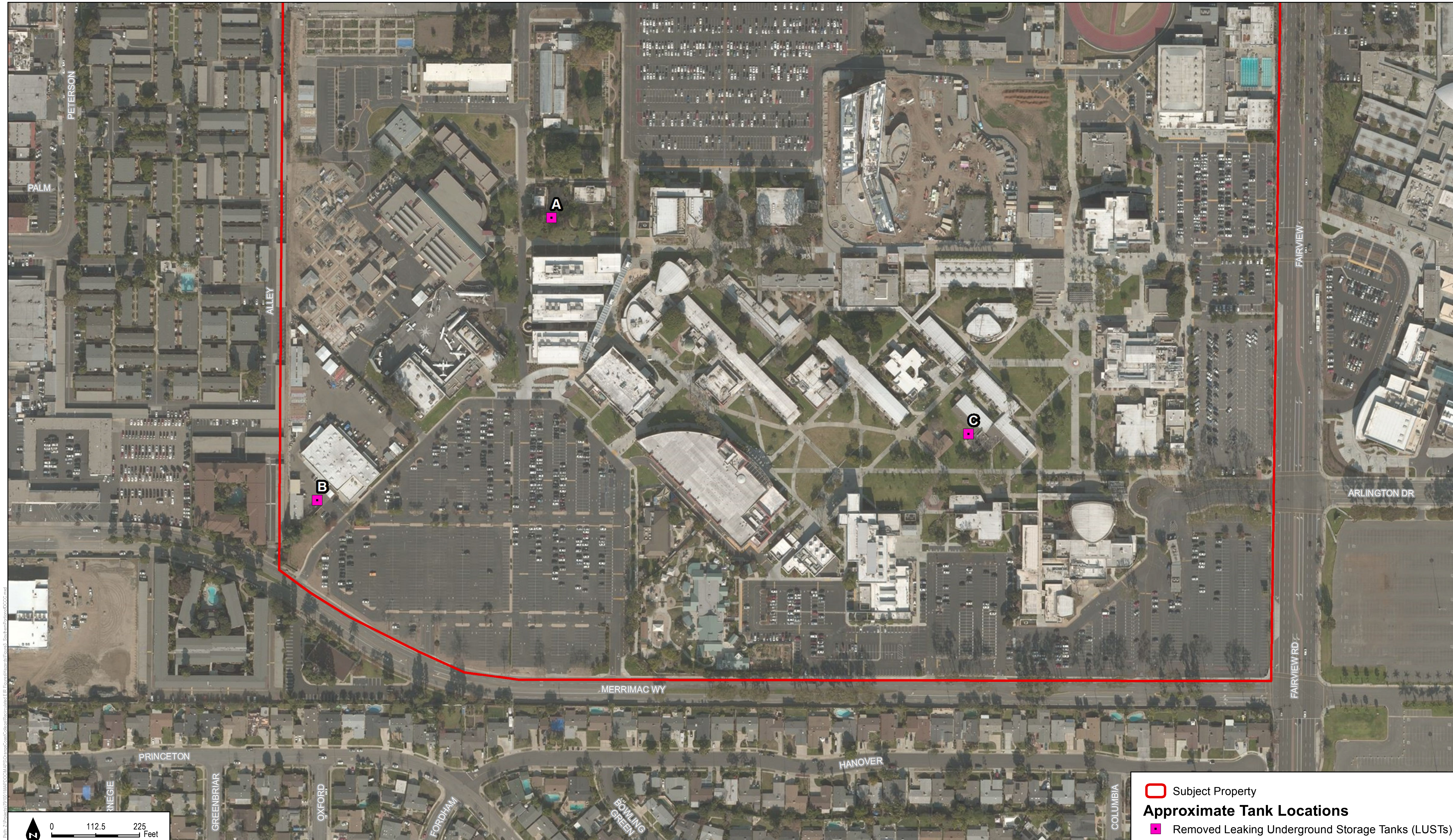
Hazards Assessment - Orange Coast Community College 2701 Fairview Road Costa Mesa, CA 92626

SOURCE: Bing Imagery, 2015; Coast Community College Vision Plan, 2012; County of Orange.

FIGURE 2
Site Map

Hazards Assessment - Orange Coast Community College 2701 Fairview Road Costa Mesa, CA 92626

7910



SOURCE: Bing Imagery, 2015; Coast Community College Vision Plan, 2012; County of Orange.

7910

FIGURE 3

Southern Portion of the Orange Coast Community College

Hazards Assessment - Orange Coast Community College 2701 Fairview Road Costa Mesa, CA 92626

SOURCE: Bing Imagery, 2015, Coast Community College Vision Plan 2012, County of Orange.

FIGURE 4

Proposed Campus Land Use

7910

Hazards Assessment - Orange Coast Community College 2701 Fairview Road Costa Mesa, CA 92626

Project Boundary

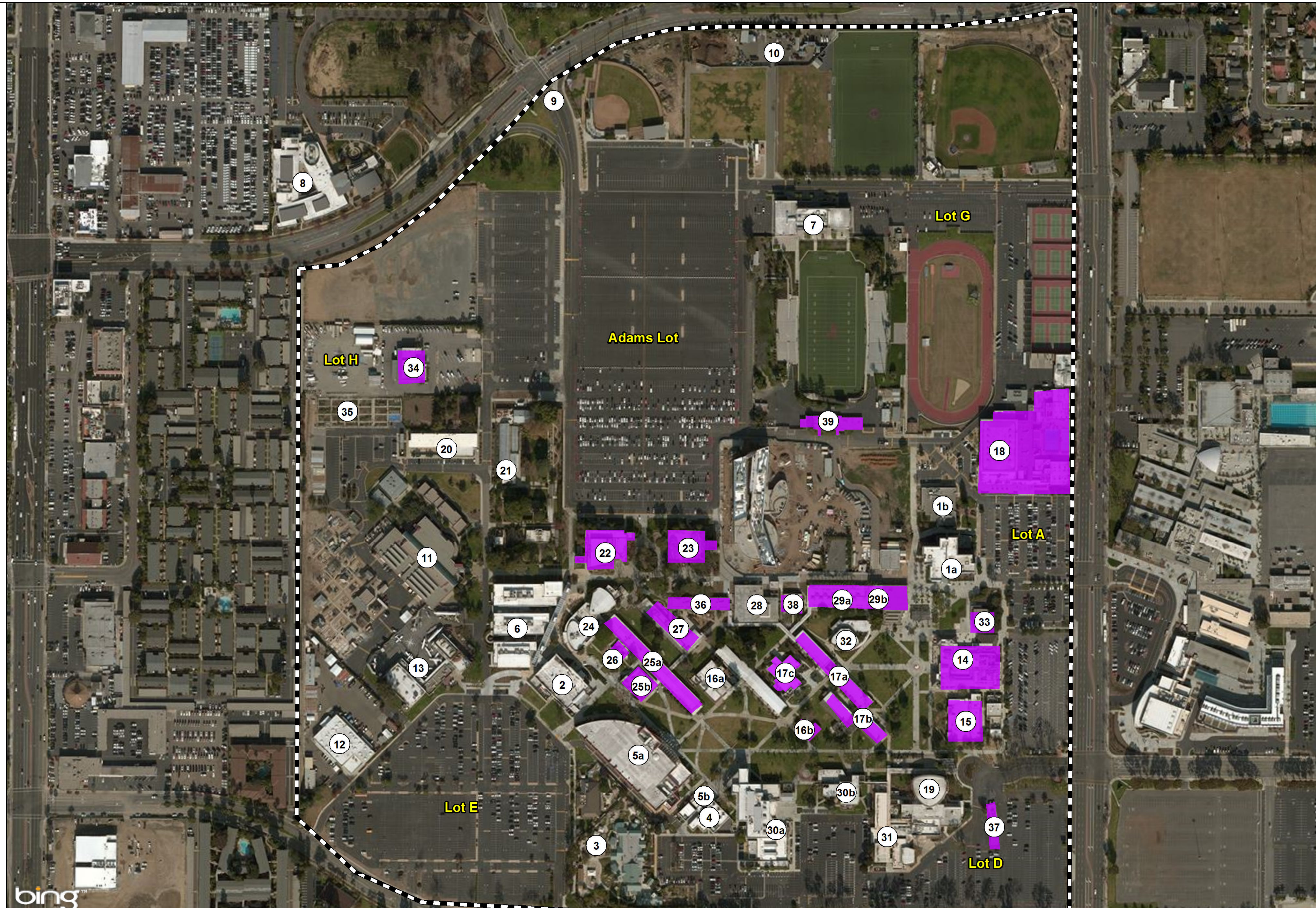
Proposed Demolition Sites

Campus Land Use

1a,Norman E. Watson Hall (Student Services/Administration)
1b, Student Health Center
2, Lewis Center for Applied Science
3, Harry and Grace Steele Early Childhood Lab School and Children's Center
4, Frank M Doyle Arts Pavilion
5a, Library
5b, Starbucks Coffee
6, Consumer, Allied Health and Bio Sci
7, Fitness Complex and Outdoor Field Labs
8, District Headquarters
9, Main Campus Entry (Students)
10, Recycling Center
11, Technology Center
12, Fran Albers Maintenance and Operations Center
13, Skill Center
14, Student Center
15, Administration
16a, Haley Business Learning Center
16b, Faculty House
17a, Classrooms and Laboratories
17b, Student Success Center
17c, Special Services
18, Locker Rooms, Pool, Stadium, Gym
19, Robert B Moore Theatre
20, Information Technology
21, Horticulture
22, Chemistry
23, Virgil D Sessions Center for Literature and Languages
24, Science Hall and Math Lecture Halls
25a, Math Wing
25b, Reprographics
26, Planetarium
27, Journalism
28, Computing Center
29a, Social and Behavioral Sciences
29b, Bookstore
30a, Arts Center
30b, Fine Arts
31, Music Building
32, Giles T Brown Forum
33, Bursar's Office
34, District Transportation
35, Horticulture Garden Lab
36, Writer's Row
37, Campus Public Safety
38, 150 Annex

N

0 155 310 Feet



SOURCE: Bing Imagery, 2015; Coast Community College Vision Plan, 2012; Count of Orange, 2015.

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FIGURE 5

Proposed Demolition

Hazards Assessment - Orange Coast Community College 2701 Fairview Road Costa Mesa, CA 92626

ATTACHMENT A

EDR Radius Report

Orange Coast College
2701 Fairview Road
Costa Mesa, CA 92626

Inquiry Number: 3772737.2s
October 30, 2013

The EDR Radius Map™ Report with GeoCheck®

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
Toll Free: 800.352.0050
www.edrnet.com

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SECTION | **PAGE**

GEOCHECK ADDENDUM

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

2701 FAIRVIEW ROAD
COSTA MESA, CA 92626

COORDINATES

Latitude (North):	33.6720000 - 33˚ 40' 19.20''
Longitude (West):	117.9116000 - 117˚ 54' 41.76''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	415490.2
UTM Y (Meters):	3725968.2
Elevation:	61 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	33117-F8 NEWPORT BEACH (DIGITAL), CA
Most Recent Revision:	0

AERIAL PHOTOGRAPHY IN THIS REPORT

Photo Year:	2012
Source:	USDA

TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 8 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
ORANGE COAST COLLEGE 2701 FAIRVIEW RD COSTA MESA, CA 92626	RCRA-LQG FTTS HIST FTTS FINDS CA NPDES CA HIST CORTESE CA SWRCY CA LUST Status: Completed - Case Closed CA FID UST CA HIST UST CA AST NY MANIFEST CA EMI	CAD981981236
ORANGE COAST COLLEGE(RECYCLYIN 2701 FAIRVIEW RD COSTA MESA, CA 92626	CA HIST UST	N/A

EXECUTIVE SUMMARY

ORANGE COAST COLLEGE 2701 FAIRVIEW RD COSTA MESA, CA 92626	CA HAZNET	N/A
CELLCO - MESA VERDE 2701 FAIRVIEW ROAD COSTA MESA, CA	FINDS	N/A
ORANGE COAST COLLEGE 2701 FAIRVIEW RD COSTA MESA, CA 92626	CA UST CA SWEEPS UST	N/A

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL - National Priority List
Proposed NPL - Proposed National Priority List Sites
NPL LIENS - Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL - National Priority List Deletions

Federal CERCLIS list

CERCLIS - Comprehensive Environmental Response, Compensation, and Liability Information System
FEDERAL FACILITY - Federal Facility Site Information listing

Federal RCRA CORRACTS facilities list

CORRACTS - Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF - RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-CESQG - RCRA - Conditionally Exempt Small Quantity Generator

Federal institutional controls / engineering controls registries

US ENG CONTROLS - Engineering Controls Sites List

EXECUTIVE SUMMARY

US INST CONTROL - - - - - - - - - - Sites with Institutional Controls
LUCIS - Land Use Control Information System

Federal ERNS list

ERNS - Emergency Response Notification System

State and tribal landfill and/or solid waste disposal site lists

CA SWF/LF - - - - - - - - - - - - - - - - - Solid Waste Information System

State and tribal leaking storage tank lists

INDIAN LUST - - - - - - - - - - - - - - - Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

INDIAN UST - - - - - - - - - - - - - - - - - Underground Storage Tanks on Indian Land
FEMA UST - - - - - - - - - - - - - - - - - - Underground Storage Tank Listing

State and tribal voluntary cleanup sites

CA VCP - Voluntary Cleanup Program Properties
INDIAN VCP - - - - - - - - - - - - - - - - - Voluntary Cleanup Priority Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS - - - - - - - - - - A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

DEBRIS REGION 9 - - - - - - - - - - Torres Martinez Reservation Illegal Dump Site Locations
ODI - Open Dump Inventory
CA WMUDS/SWAT - - - - - - - - - - Waste Management Unit Database
CA HAULERS - - - - - - - - - - - - - - - Registered Waste Tire Haulers Listing
INDIAN ODI - - - - - - - - - - - - - - - - - Report on the Status of Open Dumps on Indian Lands

Local Lists of Hazardous waste / Contaminated Sites

US CDL - Clandestine Drug Labs
CA SCH - School Property Evaluation Program
CA Toxic Pits - - - - - - - - - - - - - - - - - Toxic Pits Cleanup Act Sites
CA CDL - Clandestine Drug Labs
US HIST CDL - - - - - - - - - - - - - - - National Clandestine Laboratory Register

Local Land Records

LIENS 2 - CERCLA Lien Information
CA LIENS - - - - - - - - - - - - - - - - - - - Environmental Liens Listing
CA DEED - - - - - - - - - - - - - - - - - - - Deed Restriction Listing

Records of Emergency Release Reports

HMIRS - Hazardous Materials Information Reporting System

CA LDS	Land Disposal Sites Listing
CA SPILLS 90	SPILLS 90 data from FirstSearch

Other Ascertainable Records

DOT OPS	Incident and Accident Data
DOD	Department of Defense Sites
CONSENT	Superfund (CERCLA) Consent Decrees
ROD	Records Of Decision
UMTRA	Uranium Mill Tailings Sites
US MINES	Mines Master Index File
TRIS	Toxic Chemical Release Inventory System
TSCA	Toxic Substances Control Act
SSTS	Section 7 Tracking Systems
ICIS	Integrated Compliance Information System
PADS	PCB Activity Database System
MLTS	Material Licensing Tracking System
RADINFO	Radiation Information Database
RAATS	RCRA Administrative Action Tracking System
RMP	Risk Management Plans
CA UIC	UIC Listing
CA CUPA Listings	CUPA Resources List
CA WIP	Well Investigation Program Case List
CA ENF	Enforcement Action Listing
INDIAN RESERV	Indian Reservations
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
CA PROC	Certified Processors Database
CA MWMP	Medical Waste Management Program Listing
CA HWT	Registered Hazardous Waste Transporter Database
CA Financial Assurance	Financial Assurance Information Listing
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
COAL ASH DOE	Steam-Electric Plant Operation Data
PCB TRANSFORMER	PCB Transformer Registration Database
US FIN ASSUR	Financial Assurance Information
EPA WATCH LIST	EPA WATCH LIST
PRP	Potentially Responsible Parties
2020 COR ACTION	2020 Corrective Action Program List
LEAD SMELTERS	Lead Smelter Sites

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP	EDR Proprietary Manufactured Gas Plants

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

EXECUTIVE SUMMARY

STANDARD ENVIRONMENTAL RECORDS

Federal CERCLIS NFRAP site List

CERC-NFRAP: Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

A review of the CERC-NFRAP list, as provided by EDR, and dated 04/26/2013 has revealed that there is 1 CERC-NFRAP site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
METROPOLITAN CIRCUITS INC #2	1261 LOGAN AVE	N 1/8 - 1/4 (0.225 mi.)	K60	116

Federal RCRA generators list

RCRA-LQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

A review of the RCRA-LQG list, as provided by EDR, and dated 07/11/2013 has revealed that there are 2 RCRA-LQG sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CVS PHARMACY NO 8830	2701 HARBOR BLVD	WSW 1/8 - 1/4 (0.172 mi.)	40	78

Lower Elevation	Address	Direction / Distance	Map ID	Page
VELIE CIRCITS INC	***1267 LOGAN AVE.***	***N 1/8 - 1/4 (0.225 mi.)***	***K64***	***119***

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 07/11/2013 has revealed that there are 11 RCRA-SQG sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
NEWPORT MESA UNIFIED SCHOOL DI	***2650 FAIRVIEW RD***	***ESE 0 - 1/8 (0.017 mi.)***	***C14***	***38***
COSTA MESA LINCOLN MERCURY INC	***2626 HARBOR BLVD***	***WSW 1/8 - 1/4 (0.161 mi.)***	***H32***	***59***
NABERS CADILLAC	***2600 HARBOR BLVD***	***SW 1/8 - 1/4 (0.173 mi.)***	***I43***	***85***
ICC COLLISION CENTERS	2600 HARBOR BLVD	SW 1/8 - 1/4 (0.173 mi.)	I44	87

EXECUTIVE SUMMARY

Lower Elevation	Address	Direction / Distance	Map ID	Page
CONELL CHEVROLET	***2828 HARBOR BLVD***	***WNW 1/8 - 1/4 (0.180 mi.)***	***J47***	***90***
COSTA MESA MITSUBISHI	***2833 HARBOR BLVD***	***WNW 1/8 - 1/4 (0.199 mi.)***	***J51***	***98***
COSTA MESA MITSUBISHI	***2860 HARBOR BLVD***	***WNW 1/8 - 1/4 (0.209 mi.)***	***J54***	***106***
NISSAN COSTA MESA	***2845 HARBOR BLVD***	***WNW 1/8 - 1/4 (0.216 mi.)***	***J56***	***110***
COIT DRAPERY & CARPET CLEANERS	***1297 LOGAN AVE***	***N 1/8 - 1/4 (0.230 mi.)***	***M72***	***153***
FREEWAY AUTO BODY	***1306 LOGAN AVE***	***NNW 1/8 - 1/4 (0.236 mi.)***	***M75***	***161***
ORCHID CLEANERS	***1548 ADAMS***	***WNW 1/8 - 1/4 (0.245 mi.)***	***76***	***163***

State- and tribal - equivalent NPL

CA RESPONSE: Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

A review of the CA RESPONSE list, as provided by EDR, and dated 09/05/2013 has revealed that there are 2 CA RESPONSE sites within approximately 1 mile of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
METROPOLITAN CIRCUITS	***1267 LOGAN AVENUE***	***N 1/8 - 1/4 (0.225 mi.)***	***K65***	***127***
COSTA MESA AIR NATIONAL GUARD	***S OF PRESIDIO DR & WEST***	***E 1/2 - 1 (0.940 mi.)***	***113***	***340***

State- and tribal - equivalent CERCLIS

CA ENVIROSTOR: The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

A review of the CA ENVIROSTOR list, as provided by EDR, and dated 09/05/2013 has revealed that there are 7 CA ENVIROSTOR sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
SANTA ANA AAB Status: Inactive - Needs Evaluation		ESE 1/4 - 1/2 (0.323 mi.)	R90	231

Lower Elevation	Address	Direction / Distance	Map ID	Page
(CAMFP) SCHOOL DISTRICT Status: Inactive - Needs Evaluation		NW 0 - 1/8 (0.116 mi.)	D16	40
COSTA MESA AF PLT Status: Inactive - Needs Evaluation		NW 0 - 1/8 (0.116 mi.)	D17	41
(CMAFP) CITY COSTA MESA Status: Inactive - Needs Evaluation		NW 0 - 1/8 (0.116 mi.)	D18	42
METROPOLITAN CIRCUITS Status: Certified	***1267 LOGAN AVENUE***	***N 1/8 - 1/4 (0.225 mi.)***	***K65***	***127***

EXECUTIVE SUMMARY

Lower Elevation	Address	Direction / Distance	Map ID	Page
(CMAFP) SANTA ANA AIRUG Status: Inactive - Needs Evaluation		ESE 1/2 - 1 (0.818 mi.)	112	339
COSTA MESA AIR NATIONAL GUARD Status: Active	***S OF PRESIDIO DR & WEST***	***E 1/2 - 1 (0.940 mi.)***	***113***	***340***

State and tribal leaking storage tank lists

CA LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the State Water Resources Control Board Leaking Underground Storage Tank Information System.

A review of the CA LUST list, as provided by EDR, and dated 09/16/2013 has revealed that there are 40 CA LUST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
PLAINS HOME CENTER Status: Completed - Case Closed	***2666 HARBOR BLVD***	***WSW 1/8 - 1/4 (0.159 mi.)***	***G29***	***56***
JOHNSON LINCOLN/MERCURY Status: Completed - Case Closed	***2626 HARBOR***	***WSW 1/8 - 1/4 (0.161 mi.)***	***H33***	***61***
NABERS CADILLAC, INC. Status: Completed - Case Closed	***2600 HARBOR BLVD***	***SW 1/8 - 1/4 (0.173 mi.)***	***I42***	***80***
CITY OF COSTA MESA (POLICE DP) Status: Completed - Case Closed	***99 FAIR DR***	***SE 1/4 - 1/2 (0.257 mi.)***	***N77***	***166***
COSTA MESA POLICE DEPT	99 FAIR DR	SE 1/4 - 1/2 (0.257 mi.)	N78	171
EXXON SERVICE STATION Status: Completed - Case Closed	***2490 FAIRVIEW***	***SSE 1/4 - 1/2 (0.295 mi.)***	***80***	***174***
ORANGE COAST JEEP EAGLE Status: Completed - Case Closed	***2524 HARBOR BLVD***	***SW 1/4 - 1/2 (0.309 mi.)***	***87***	***219***
HARBOR FAIR EXXON CORNER MKT Status: Open - Eligible for Closure	***2502 HARBOR BLVD***	***SW 1/4 - 1/2 (0.349 mi.)***	***S93***	***238***
FAIRVIEW DEVELOPMENT CENTER Status: Completed - Case Closed	***2501 HARBOR BL***	***SW 1/4 - 1/2 (0.380 mi.)***	***S97***	***257***
HIX PONTIAC Status: Completed - Case Closed	***2480 HARBOR BLVD,***	***SSW 1/4 - 1/2 (0.402 mi.)***	***100***	***289***
UNOCAL #5436 Status: Completed - Case Closed	***1645 ADAMS AVE***	***W 1/4 - 1/2 (0.488 mi.)***	***109***	***323***

Lower Elevation	Address	Direction / Distance	Map ID	Page
COAST COMM COLLEGE DIST ADMIN Status: Completed - Case Closed	***1370 ADAMS AVE***	***NW 0 - 1/8 (0.015 mi.)***	***B11***	***34***
SHELL SERVICE STATION Status: Completed - Case Closed	***2800 HARBOR***	***WNW 1/8 - 1/4 (0.157 mi.)***	***E22***	***44***
MOBIL STATION (18-HD4) Status: Completed - Case Closed	***2799 HARBOR BLVD***	***W 1/8 - 1/4 (0.170 mi.)***	***E36***	***67***
99706 Status: Completed - Case Closed	***2801 HARBOR BLVD***	***WNW 1/8 - 1/4 (0.171 mi.)***	***E39***	***74***

EXECUTIVE SUMMARY

Lower Elevation	Address	Direction / Distance	Map ID	Page
UNIVERSITY OLDSMOBILE	***2850 HARBOR BLVD***	***WNW 1/8 - 1/4 (0.198 mi.)***	***J49***	***94***
Status: Completed - Case Closed				
COSTA MESA MITSUBISHI	***2833 HARBOR BLVD***	***WNW 1/8 - 1/4 (0.199 mi.)***	***J51***	***98***
Status: Completed - Case Closed				
HOLMES TUTTLE NISSAN INC	***2845 HARBOR BLVD***	***WNW 1/8 - 1/4 (0.216 mi.)***	***J57***	***111***
Status: Completed - Case Closed				
BOAT TRANSIT CO	***1343 LOGAN***	***N 1/8 - 1/4 (0.226 mi.)***	***M67***	***147***
Status: Completed - Case Closed				
VILLA MARTINIQUE	1425 VILLAGE WAY	NW 1/4 - 1/2 (0.270 mi.)	79	172
Status: Completed - Case Closed				
SHELL SERVICE STATION	***1201 E BAKER STREET***	***NNE 1/4 - 1/2 (0.297 mi.)***	***O81***	***179***
Status: Open - Remediation				
EXXON #7-0865	***1195 BAKER ST***	***NNE 1/4 - 1/2 (0.299 mi.)***	***O82***	***189***
EXXON #7-0865	1195 BAKER ST	NNE 1/4 - 1/2 (0.300 mi.)	O83	192
Status: Open - Eligible for Closure				
CHEVRON STATION 9 9915	***3000 FAIRVIEW***	***NNE 1/4 - 1/2 (0.301 mi.)***	***O84***	***196***
Status: Completed - Case Closed				
COSTA MESA HONDA	***2888 HARBOR BLVD***	***NW 1/4 - 1/2 (0.306 mi.)***	***P85***	***208***
Status: Completed - Case Closed				
BAKER EQUIP RENTALS & SALES	***1151 BAKER ST***	***NNE 1/4 - 1/2 (0.307 mi.)***	***Q86***	***214***
Status: Completed - Case Closed				
COSTA MESA FIRE STATION #1	2803 ROYAL PALM	W 1/4 - 1/2 (0.323 mi.)	89	225
Status: Completed - Case Closed				
SOUTH COAST ACURA	***2925 HARBOR BLVD***	***NW 1/4 - 1/2 (0.338 mi.)***	***P91***	***232***
Status: Completed - Case Closed				
ATLAS CHRYSLER PLYMOUTH	***2929 HARBOR BLVD***	***NW 1/4 - 1/2 (0.350 mi.)***	***P94***	***246***
ATLAS DODGE CHRYSLER PLYMOUTH	***2929 HARBOR BLVD***	***NW 1/4 - 1/2 (0.350 mi.)***	***P95***	***251***
Status: Completed - Case Closed				
GALLACHER INVESTMENT CO	***1127 BAKER ST***	***NE 1/4 - 1/2 (0.365 mi.)***	***T96***	***254***
Status: Completed - Case Closed				
SULLIVAN CONCRETE TEXTURES	***1111 BAKER ST***	***NE 1/4 - 1/2 (0.390 mi.)***	***T99***	***284***
Status: Completed - Case Closed				
METRO CAR WASH	***2950 HARBOR BLVD***	***NW 1/4 - 1/2 (0.402 mi.)***	***U101***	***293***
Status: Completed - Case Closed				
PAULINA GAS STATION	***1045 EL CAMINO***	***ENE 1/4 - 1/2 (0.423 mi.)***	***V103***	***303***
ADEPT MFG	2990 GRACE LN	NE 1/4 - 1/2 (0.423 mi.)	104	306
Status: Completed - Case Closed				
YOUR NEIGHBORHOOD GAS STATION	***1045 EL CAMINO***	***ENE 1/4 - 1/2 (0.427 mi.)***	***V105***	***309***
Status: Completed - Case Closed				
YOUR NEIGHBORHOOD GAS STATION	1045 EL CAMINO DRIVE	ENE 1/4 - 1/2 (0.427 mi.)	V106	313
PRESTIGE STN #673 (ARCO #5185)	***1450 BAKER ST***	***NNW 1/4 - 1/2 (0.434 mi.)***	***107***	***314***
Status: Completed - Case Closed				
TEXACO SERVICE STATION 121876	***3001 HARBOR BLVD***	***NW 1/4 - 1/2 (0.485 mi.)***	***W108***	***317***
Status: Completed - Case Closed				
MOBIL STATION (18-HNR)	***3006 HARBOR BLVD***	***NW 1/4 - 1/2 (0.497 mi.)***	***W110***	***326***
Status: Open - Eligible for Closure				

EXECUTIVE SUMMARY

CA SLIC: SLIC Region comes from the California Regional Water Quality Control Board.

A review of the CA SLIC list, as provided by EDR, and dated 09/16/2013 has revealed that there are 2 CA SLIC sites within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
METROPOLITAN VELIE CIRCUITS Facility Status: Completed - Case Closed	***1261 LOGAN AVENUE***	***N 1/8 - 1/4 (0.225 mi.)***	***K59***	***115***
ITT / JABSCO FACILITY Facility Status: Completed - Case Closed	***1485 DALE WAY***	***NW 1/4 - 1/2 (0.423 mi.)***	***U102***	***302***

State and tribal registered storage tank lists

CA UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database.

A review of the CA UST list, as provided by EDR, and dated 09/16/2013 has revealed that there are 16 CA UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
COSTA MESA HIGH SCHOOL	***2650 FAIRVIEW RD***	***ESE 0 - 1/8 (0.017 mi.)***	***C13***	***37***
PLAINS HOME CENTER	***2666 HARBOR BLVD***	***WSW 1/8 - 1/4 (0.159 mi.)***	***G29***	***56***
COSTA MESA LINCOLN MERCURY INC	***2626 HARBOR BLVD***	***WSW 1/8 - 1/4 (0.161 mi.)***	***H32***	***59***
NABERS CADILLAC INC	2600 HARBOR BLVD	SW 1/8 - 1/4 (0.173 mi.)	I45	89

Lower Elevation	Address	Direction / Distance	Map ID	Page
COAST COMMUNITY COLL/TRANS	***1370 ADAMS AVE***	***NW 0 - 1/8 (0.015 mi.)***	***B8***	***31***
SHELL (1818-1507)	***2800 HARBOR BLVD***	***WNW 1/8 - 1/4 (0.157 mi.)***	***E25***	***51***
MOBIL STATION (18-HD4)	***2799 HARBOR BLVD***	***W 1/8 - 1/4 (0.170 mi.)***	***E36***	***67***
CHEVRON STATION #99706	2801 HARBOR BLVD # 9970	WNW 1/8 - 1/4 (0.171 mi.)	E38	74
CONELL CHEVROLET	***2828 HARBOR BLVD***	***WNW 1/8 - 1/4 (0.180 mi.)***	***J47***	***90***
UNIVERSITY OLDSMOBILE	***2850 HARBOR BLVD***	***WNW 1/8 - 1/4 (0.198 mi.)***	***J49***	***94***
COSTA MESA MITSUBISHI	***2833 HARBOR BLVD***	***WNW 1/8 - 1/4 (0.199 mi.)***	***J51***	***98***
UNIVERSITY SALES & SERVICE	***2850 HARBOR BLVD***	***WNW 1/8 - 1/4 (0.209 mi.)***	***J52***	***102***
HOLMES TUTTLE NISSAN INC	***2845 HARBOR BLVD***	***WNW 1/8 - 1/4 (0.216 mi.)***	***J57***	***111***
COAST GENERAL TIRE	***2855 HARBOR BLVD***	***WNW 1/8 - 1/4 (0.225 mi.)***	***L61***	***117***
VELIE CIRCITS INC	***1267 LOGAN AVE.***	***N 1/8 - 1/4 (0.225 mi.)***	***K64***	***119***
BOAT TRANSIT INC	***1343 LOGAN AVE***	***N 1/8 - 1/4 (0.226 mi.)***	***M66***	***146***

CA AST: A listing of aboveground storage tank petroleum storage tank locations.

A review of the CA AST list, as provided by EDR, and dated 08/01/2009 has revealed that there are 2 CA AST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
NABERS CADILLAC	***2600 HARBOR BLVD***	***SW 1/8 - 1/4 (0.173 mi.)***	***I43***	***85***

Lower Elevation	Address	Direction / Distance	Map ID	Page
Not reported	2828 HARBOR BLVD	WNW 1/8 - 1/4 (0.180 mi.)	J46	90

EXECUTIVE SUMMARY

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Hazardous waste / Contaminated Sites

CA HIST Cal-Sites: Formerly known as ASPIS, this database contains both known and potential hazardous substance sites. The source is the California Department of Toxic Substance Control. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

A review of the CA HIST Cal-Sites list, as provided by EDR, and dated 08/08/2005 has revealed that there are 2 CA HIST Cal-Sites sites within approximately 1 mile of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
METROPOLITAN CIRCUITS	***1267 LOGAN AVENUE***	***N 1/8 - 1/4 (0.225 mi.)***	***K65***	***127***
COSTA MESA AIR NATIONAL GUARD	***S OF PRESIDIO DR & WEST***	***E 1/2 - 1 (0.940 mi.)***	***113***	***340***

Local Lists of Registered Storage Tanks

CA FID UST: The Facility Inventory Database contains active and inactive underground storage tank locations. The source is the State Water Resource Control Board.

A review of the CA FID UST list, as provided by EDR, and dated 10/31/1994 has revealed that there are 7 CA FID UST sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
COAST COMMUNITY COLL/TRANS	1370 ADAMS AVE	NW 0 - 1/8 (0.015 mi.)	B10	34
SHELL OIL CO	***2800 N HARBOR/ ADAMS***	***WNW 1/8 - 1/4 (0.157 mi.)***	***E23***	***48***
MOBIL STATION (18-HD4)	***2799 HARBOR BLVD***	***W 1/8 - 1/4 (0.170 mi.)***	***E36***	***67***
COSTA MESA MITSUBISHI	***2833 HARBOR BLVD***	***WNW 1/8 - 1/4 (0.199 mi.)***	***J51***	***98***
COSTA MESA MITSUBISHI	***2860 HARBOR BLVD***	***WNW 1/8 - 1/4 (0.209 mi.)***	***J54***	***106***
COAST GENERAL TIRE	***2855 HARBOR BLVD***	***WNW 1/8 - 1/4 (0.225 mi.)***	***L61***	***117***
VELIE CIRCITS INC	***1267 LOGAN AVE.***	***N 1/8 - 1/4 (0.225 mi.)***	***K64***	***119***

CA HIST UST: Historical UST Registered Database.

A review of the CA HIST UST list, as provided by EDR, and dated 10/15/1990 has revealed that there are 15 CA HIST UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
COSTA MESA HIGH SCHOOL	***2650 FAIRVIEW RD***	***ESE 0 - 1/8 (0.017 mi.)***	***C13***	***37***
KERM RIMA HARDWARE, INC.	2666 HARBOR BLVD	WSW 1/8 - 1/4 (0.159 mi.)	G28	56
COSTA MESA LINCOLN MERCURY INC	***2626 HARBOR BLVD***	***WSW 1/8 - 1/4 (0.161 mi.)***	***H32***	***59***
NABERS CADILLAC, INC.	***2600 HARBOR BLVD***	***SW 1/8 - 1/4 (0.173 mi.)***	***I42***	***80***

Lower Elevation	Address	Direction / Distance	Map ID	Page
DISTRICT TRANSPORTATION	1370 ADAMS AVE	NW 0 - 1/8 (0.015 mi.)	B9	33
AVO ASYAN	2800 HARBOR BLVD	WNW 1/8 - 1/4 (0.157 mi.)	E24	50
KAMRAN HEIDARIAN	2799 HARBOR BLVD	W 1/8 - 1/4 (0.170 mi.)	E34	66
99706	***2801 HARBOR BLVD***	***WNW 1/8 - 1/4 (0.171 mi.)***	***E39***	***74***
CONELL CHEVROLET	***2828 HARBOR BLVD***	***WNW 1/8 - 1/4 (0.180 mi.)***	***J47***	***90***
UNIVERSITY SALES & SERVICE	***2850 HARBOR BLVD***	***WNW 1/8 - 1/4 (0.209 mi.)***	***J52***	***102***

EXECUTIVE SUMMARY

Lower Elevation	Address	Direction / Distance	Map ID	Page
UNIVERSITY HONDA	*2860 HARBOR BLVD*	*WNW 1/8 - 1/4 (0.209 mi.)*	*J53*	*105*
HOLMES TUTTLE NISSAN INC	*2845 HARBOR BLVD*	*WNW 1/8 - 1/4 (0.216 mi.)*	*J57*	*111*
COAST GENERAL TIRE	*2855 HARBOR BLVD*	*WNW 1/8 - 1/4 (0.225 mi.)*	*L61*	*117*
VELIE CIRCITS INC	*1267 LOGAN AVE.*	*N 1/8 - 1/4 (0.225 mi.)*	*K64*	*119*
BOAT TRANSIT INC	*1343 LOGAN AVE*	*N 1/8 - 1/4 (0.226 mi.)*	*M66*	*146*

CA SWEEPS UST: Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

A review of the CA SWEEPS UST list, as provided by EDR, and dated 06/01/1994 has revealed that there are 8 CA SWEEPS UST sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
COAST COMMUNITY COLL/TRANS	*1370 ADAMS AVE*	*NW 0 - 1/8 (0.015 mi.)*	*B8*	*31*
SHELL (1818-1507)	*2800 HARBOR BLVD*	*WNW 1/8 - 1/4 (0.157 mi.)*	*E25*	*51*
MOBIL STATION (18-HD4)	*2799 HARBOR BLVD*	*W 1/8 - 1/4 (0.170 mi.)*	*E36*	*67*
COSTA MESA MITSUBISHI	*2833 HARBOR BLVD*	*WNW 1/8 - 1/4 (0.199 mi.)*	*J51*	*98*
UNIVERSITY SALES & SERVICE	*2850 HARBOR BLVD*	*WNW 1/8 - 1/4 (0.209 mi.)*	*J52*	*102*
UNIVERSITY HONDA	*2860 HARBOR BLVD*	*WNW 1/8 - 1/4 (0.209 mi.)*	*J53*	*105*
COAST GENERAL TIRE	*2855 HARBOR BLVD*	*WNW 1/8 - 1/4 (0.225 mi.)*	*L61*	*117*
VELIE CIRCITS INC	*1267 LOGAN AVE.*	*N 1/8 - 1/4 (0.225 mi.)*	*K64*	*119*

Other Ascertainable Records

RCRA NonGen / NLR: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 07/11/2013 has revealed that there are 4 RCRA NonGen / NLR sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
DUNCAN ELECTRONICS INC	*2865 FAIRVIEW RD*	*NE 0 - 1/8 (0.003 mi.)*	*6*	*27*
SHELL OIL CO	*2800 N HARBOR/ ADAMS*	*WNW 1/8 - 1/4 (0.157 mi.)*	*E23*	*48*
UNIVERSITY SALES & SERVICE	*2850 HARBOR BLVD*	*WNW 1/8 - 1/4 (0.209 mi.)*	*J52*	*102*
R I CHEMICAL, INC	*1281 LOGAN AVE UNIT H*	*N 1/8 - 1/4 (0.227 mi.)*	*K69*	*150*

FUDS: The Listing includes locations of Formerly Used Defense Sites Properties where the US Army Corps Of Engineers is actively working or will take necessary cleanup actions.

A review of the FUDS list, as provided by EDR, and dated 12/31/2011 has revealed that there is 1 FUDS site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
SANTA ANA ARMY AIR BASE		ESE 1/4 - 1/2 (0.320 mi.)	R88	224

EXECUTIVE SUMMARY

CA BOND EXP. PLAN: Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

A review of the CA BOND EXP. PLAN list, as provided by EDR, and dated 01/01/1989 has revealed that there is 1 CA BOND EXP. PLAN site within approximately 1 mile of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
METROPOLITAN CIRCUITS	*1267 LOGAN AVENUE*	*N 1/8 - 1/4 (0.225 mi.)*	*K65*	*127*

CA HIST CORTESE: The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

A review of the CA HIST CORTESE list, as provided by EDR, and dated 04/01/2001 has revealed that there are 25 CA HIST CORTESE sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
JOHNSON LINCOLN/MERCURY	*2626 HARBOR*	*WSW 1/8 - 1/4 (0.161 mi.)*	*H33*	*61*
NABERS CADILLAC, INC.	*2600 HARBOR BLVD*	*SW 1/8 - 1/4 (0.173 mi.)*	*I42*	*80*
ORANGE COAST JEEP EAGLE	*2524 HARBOR BLVD*	*SW 1/4 - 1/2 (0.309 mi.)*	*87*	*219*
HARBOR FAIR EXXON CORNER MKT	*2502 HARBOR BLVD*	*SW 1/4 - 1/2 (0.349 mi.)*	*S93*	*238*
FAIRVIEW DEVELOPMENT CENTER	*2501 HARBOR BL*	*SW 1/4 - 1/2 (0.380 mi.)*	*S97*	*257*
HIX PONTIAC	*2480 HARBOR BLVD,*	*SSW 1/4 - 1/2 (0.402 mi.)*	*100*	*289*
UNOCAL #5436	*1645 ADAMS AVE*	*W 1/4 - 1/2 (0.488 mi.)*	*109*	*323*

Lower Elevation	Address	Direction / Distance	Map ID	Page
COAST COMM COLLEGE DIST ADMIN	*1370 ADAMS AVE*	*NW 0 - 1/8 (0.015 mi.)*	*B11*	*34*
SHELL SERVICE STATION	*2800 HARBOR*	*WNW 1/8 - 1/4 (0.157 mi.)*	*E22*	*44*
MOBIL STATION (18-HD4)	*2799 HARBOR BLVD*	*W 1/8 - 1/4 (0.170 mi.)*	*E36*	*67*
CONELL CHEVROLET	*2828 HARBOR BLVD*	*WNW 1/8 - 1/4 (0.180 mi.)*	*J47*	*90*
COSTA MESA MITSUBISHI	*2833 HARBOR BLVD*	*WNW 1/8 - 1/4 (0.199 mi.)*	*J51*	*98*
HOLMES TUTTLE NISSAN INC	*2845 HARBOR BLVD*	*WNW 1/8 - 1/4 (0.216 mi.)*	*J57*	*111*
METROPOLITAN CIRCUITS	*1267 LOGAN AVENUE*	*N 1/8 - 1/4 (0.225 mi.)*	*K65*	*127*
BOAT TRANSIT CO	*1343 LOGAN*	*N 1/8 - 1/4 (0.226 mi.)*	*M67*	*147*
SHELL SERVICE STATION	*1201 E BAKER STREET*	*NNE 1/4 - 1/2 (0.297 mi.)*	*O81*	*179*
EXXON #7-0865	*1195 BAKER ST*	*NNE 1/4 - 1/2 (0.299 mi.)*	*O82*	*189*
COSTA MESA HONDA	*2888 HARBOR BLVD*	*NW 1/4 - 1/2 (0.306 mi.)*	*P85*	*208*
BAKER EQUIP RENTALS & SALES	*1151 BAKER ST*	*NNE 1/4 - 1/2 (0.307 mi.)*	*Q86*	*214*
SOUTH COAST ACURA	*2925 HARBOR BLVD*	*NW 1/4 - 1/2 (0.338 mi.)*	*P91*	*232*
OLYMPIAN OIL CO	1139 BAKER	NE 1/4 - 1/2 (0.347 mi.)	Q92	238
ATLAS CHRYSLER PLYMOUTH	*2929 HARBOR BLVD*	*NW 1/4 - 1/2 (0.350 mi.)*	*P94*	*246*
GALLACHER INVESTMENT CO	*1127 BAKER ST*	*NE 1/4 - 1/2 (0.365 mi.)*	*T96*	*254*
SULLIVAN CONCRETE TEXTURES	*1111 BAKER ST*	*NE 1/4 - 1/2 (0.390 mi.)*	*T99*	*284*
YOUR NEIGHBORHOOD GAS STATION	*1045 EL CAMINO*	*ENE 1/4 - 1/2 (0.427 mi.)*	*V105*	*309*

CA Notify 65: Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

A review of the CA Notify 65 list, as provided by EDR, and dated 10/21/1993 has revealed that there are 2 CA Notify 65 sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
COSTA MESA AIR NATIONAL GUARD	*2651 NEWPORT BOULEVARD*	*SE 1/2 - 1 (0.517 mi.)*	*111*	*335*

Lower Elevation	Address	Direction / Distance	Map ID	Page
HOLMES TUTTLE NISSAN INC	*2845 HARBOR BLVD*	*WNW 1/8 - 1/4 (0.216 mi.)*	*J57*	*111*

CA DRYCLEANERS: A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaners' agents; linen supply; coin-operated laundries and cleaning; drycleaning plants except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

A review of the CA DRYCLEANERS list, as provided by EDR, and dated 09/10/2013 has revealed that there are 3 CA DRYCLEANERS sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CROWN CLEANERS	*2750 HARBOR BLVD*	*W 1/8 - 1/4 (0.158 mi.)*	*F27*	*54*

Lower Elevation	Address	Direction / Distance	Map ID	Page
COIT DRAPERY & CARPET CLEANERS	*1297 LOGAN AVE*	*N 1/8 - 1/4 (0.230 mi.)*	*M72*	*153*
ORCHID CLEANERS	*1548 ADAMS*	*WNW 1/8 - 1/4 (0.245 mi.)*	*76*	*163*

CA HWP: Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

A review of the CA HWP list, as provided by EDR, and dated 08/28/2013 has revealed that there is 1 CA HWP site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
FAIRVIEW DEVELOPMENTAL CENTER	*2501 HARBOR BLVD*	*SW 1/4 - 1/2 (0.380 mi.)*	*S98*	*276*

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR US Hist Auto Stat: EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR US Hist Auto Stat list, as provided by EDR, has revealed that there are 16 EDR US

EXECUTIVE SUMMARY

Hist Auto Stat sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
Not reported	263 BOWLING GREEN DR	S 0 - 1/8 (0.094 mi.)	15	40
Not reported	2550 COLUMBIA DR	SSE 1/8 - 1/4 (0.145 mi.)	20	43
Not reported	2640 HARBOR BLVD	WSW 1/8 - 1/4 (0.160 mi.)	G30	59
Not reported	2626 HARBOR BLVD	WSW 1/8 - 1/4 (0.160 mi.)	H31	59
Not reported	2600 HARBOR BLVD	SW 1/8 - 1/4 (0.173 mi.)	I41	80

Lower Elevation	Address	Direction / Distance	Map ID	Page
Not reported	1300 ADAMS AVE	N 0 - 1/8 (0.016 mi.)	12	37
Not reported	2799 HARBOR BLVD	W 1/8 - 1/4 (0.170 mi.)	E35	67
Not reported	1500 ELM AVE	WNW 1/8 - 1/4 (0.186 mi.)	J48	94
Not reported	2833 HARBOR BLVD	WNW 1/8 - 1/4 (0.199 mi.)	J50	98
Not reported	2845 HARBOR BLVD	WNW 1/8 - 1/4 (0.216 mi.)	J55	110
Not reported	2855 HARBOR BLVD	WNW 1/8 - 1/4 (0.225 mi.)	L62	118
Not reported	1202 LOGAN AVE	NNE 1/8 - 1/4 (0.225 mi.)	63	118
Not reported	1260 LOGAN AVE	N 1/8 - 1/4 (0.227 mi.)	K68	149
Not reported	1281 LOGAN AVE	N 1/8 - 1/4 (0.227 mi.)	K70	153
Not reported	1304 LOGAN AVE	NNW 1/8 - 1/4 (0.235 mi.)	M73	160
Not reported	1306 LOGAN AVE	NNW 1/8 - 1/4 (0.236 mi.)	M74	160

EDR US Hist Cleaners: EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR’s review was limited to those categories of sources that might, in EDR’s opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR’s HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR US Hist Cleaners list, as provided by EDR, has revealed that there are 7 EDR US Hist Cleaners sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
Not reported	425 MERRIMAC WAY	SW 0 - 1/8 (0.013 mi.)	7	31
Not reported	438 PRINCETON DR	SW 1/8 - 1/4 (0.129 mi.)	19	43
Not reported	253 PRINCETON DR	S 1/8 - 1/4 (0.153 mi.)	21	43
Not reported	2750 HARBOR BLVD	W 1/8 - 1/4 (0.158 mi.)	F26	53

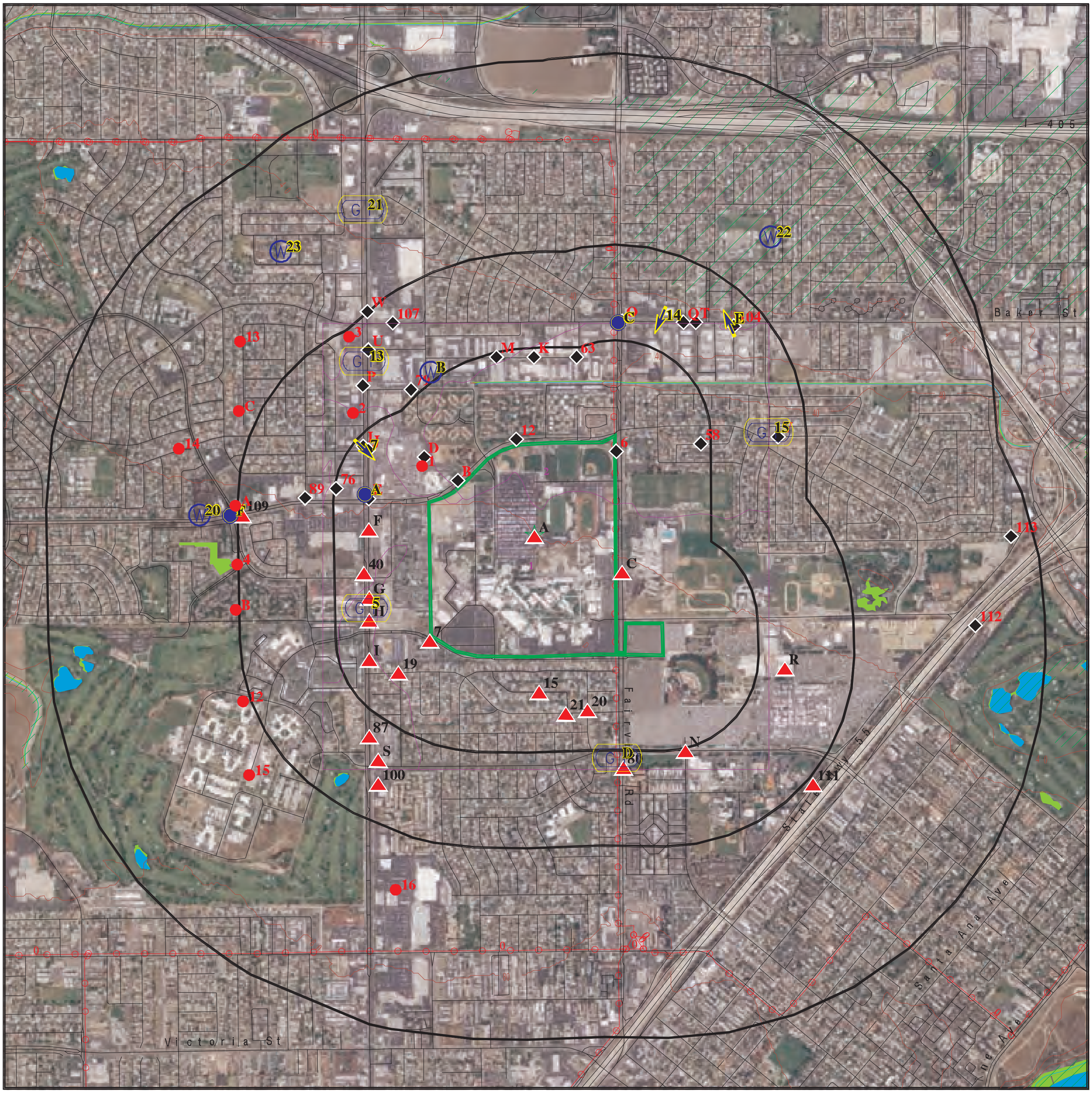
Lower Elevation	Address	Direction / Distance	Map ID	Page
Not reported	2801 HARBOR BLVD	WNW 1/8 - 1/4 (0.171 mi.)	E37	73
Not reported	1102 CORONA LN	ENE 1/8 - 1/4 (0.224 mi.)	58	114
Not reported	1297 LOGAN AVE	N 1/8 - 1/4 (0.230 mi.)	M71	153

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 12 records.

Site Name	Database(s)
COSTA MESA AIR NATIONAL G	CA HIST CORTESE
JIFFY LUBE	CA SWEEPS UST
BP WEST COAST PRODUCTS LLC 07009	CA HAZNET
ORANGE COUNTY MOTORSPORT	CA HAZNET
SOUTH COAST AUTO CLINIC	CA HAZNET
SOUTH COAST PLAZA	CA HAZNET
SOUTH COAST PLAZA	CA HAZNET
PACIFIC BELL	RCRA-LQG
4579 ORANGE COUNTY ENVIRONMENTAL H	FINDS
17662 ORANGE COUNTY ENVIRONMENTAL	FINDS
SOUTH COAST METRO CENTER	FINDS
SOUTH COAST CENTER ASSOCIATES	CA EMI

OVERVIEW MAP - 3772737.2s



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Oil & Gas pipelines from USGS
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- Areas of Concern

0 1/4 1/2 1 Miles

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Orange Coast College ADDRESS: 2701 Fairview Road Costa Mesa CA 92626 LAT/LONG: 33.672 / 117.9116	CLIENT: Dudek & Associates CONTACT: Laura Roll INQUIRY #: 3772737.2s DATE: October 30, 2013 7:38 pm

DETAIL MAP - 3772737.2s

Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

Sensitive Receptors

National Priority List Sites

Dept. Defense Sites

Indian Reservations BIA

Power transmission lines

Oil & Gas pipelines from USGS

100-year flood zone

500-year flood zone

National Wetland Inventory

Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Orange Coast College	CLIENT:	Dudek & Associates
ADDRESS:	2701 Fairview Road Costa Mesa CA 92626	CONTACT:	Laura Roll
		INQUIRY #:	3772737.2s
LAT/LONG:	33.672 / 117.9116	DATE:	October 30, 2013 7:39 pm

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	TP		NR	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
CERCLIS	0.500		0	0	0	NR	NR	0
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site List								
CERC-NFRAP	0.500		0	1	0	NR	NR	1
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250	1	0	2	NR	NR	NR	3
RCRA-SQG	0.250		1	10	NR	NR	NR	11
RCRA-CESQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
LUCIS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	TP		NR	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
CA RESPONSE	1.000		0	1	0	1	NR	2
State- and tribal - equivalent CERCLIS								
CA ENVIROSTOR	1.000		3	1	1	2	NR	7
State and tribal landfill and/or solid waste disposal site lists								
CA SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
CA LUST	0.500	1	1	10	29	NR	NR	41

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
CA SLIC	0.500		0	1	1	NR	NR	2
INDIAN LUST	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
CA UST	0.250	1	2	14	NR	NR	NR	17
CA AST	0.250	1	0	2	NR	NR	NR	3
INDIAN UST	0.250		0	0	NR	NR	NR	0
FEMA UST	0.250		0	0	NR	NR	NR	0
State and tribal voluntary cleanup sites								
CA VCP	0.500		0	0	0	NR	NR	0
INDIAN VCP	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
CA WMUDS/SWAT	0.500		0	0	0	NR	NR	0
CA SWRCY	0.500	1	0	0	0	NR	NR	1
CA HAULERS	TP		NR	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US CDL	TP		NR	NR	NR	NR	NR	0
CA HIST Cal-Sites	1.000		0	1	0	1	NR	2
CA SCH	0.250		0	0	NR	NR	NR	0
CA Toxic Pits	1.000		0	0	0	0	NR	0
CA CDL	TP		NR	NR	NR	NR	NR	0
US HIST CDL	TP		NR	NR	NR	NR	NR	0
Local Lists of Registered Storage Tanks								
CA FID UST	0.250	1	1	6	NR	NR	NR	8
CA HIST UST	0.250	2	2	13	NR	NR	NR	17
CA SWEEPS UST	0.250	1	1	7	NR	NR	NR	9
Local Land Records								
LIENS 2	TP		NR	NR	NR	NR	NR	0
CA LIENS	TP		NR	NR	NR	NR	NR	0
CA DEED	0.500		0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0
CA CHMIRS	TP		NR	NR	NR	NR	NR	0
CA LDS	TP		NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
CA MCS	TP		NR	NR	NR	NR	NR	0
CA Orange Co. Industrial Site	TP		NR	NR	NR	NR	NR	0
CA SPILLS 90	TP		NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		1	3	NR	NR	NR	4
DOT OPS	TP		NR	NR	NR	NR	NR	0
DOD	1.000		0	0	0	0	NR	0
FUDS	1.000		0	0	1	0	NR	1
CONSENT	1.000		0	0	0	0	NR	0
ROD	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
FTTS	TP	1	NR	NR	NR	NR	NR	1
HIST FTTS	TP	1	NR	NR	NR	NR	NR	1
SSTS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
FINDS	TP	2	NR	NR	NR	NR	NR	2
RAATS	TP		NR	NR	NR	NR	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	1	0	0	NR	1
CA NPDES	TP	1	NR	NR	NR	NR	NR	1
CA UIC	TP		NR	NR	NR	NR	NR	0
CA Cortese	0.500		0	0	0	NR	NR	0
CA HIST CORTESE	0.500	1	1	9	15	NR	NR	26
CA CUPA Listings	0.250		0	0	NR	NR	NR	0
NY MANIFEST	0.250	1	0	0	NR	NR	NR	1
CA Notify 65	1.000		0	1	0	1	NR	2
CA DRYCLEANERS	0.250		0	3	NR	NR	NR	3
CA WIP	0.250		0	0	NR	NR	NR	0
CA ENF	TP		NR	NR	NR	NR	NR	0
CA HAZNET	TP	1	NR	NR	NR	NR	NR	1
CA EMI	TP	1	NR	NR	NR	NR	NR	1
INDIAN RESERV	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
CA WDS	TP		NR	NR	NR	NR	NR	0
CA PROC	0.500		0	0	0	NR	NR	0
CA MWMP	0.250		0	0	NR	NR	NR	0
CA HWT	0.250		0	0	NR	NR	NR	0
CA Financial Assurance	TP		NR	NR	NR	NR	NR	0
CA HWP	1.000		0	0	1	0	NR	1
COAL ASH EPA	0.500		0	0	0	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
US AIRS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
EDR MGP	1.000		0	0	0	0	NR	0
EDR US Hist Auto Stat	0.250		2	14	NR	NR	NR	16
EDR US Hist Cleaners	0.250		1	6	NR	NR	NR	7

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
A1 Target Property	**ORANGE COAST COLLEGE 2701 FAIRVIEW RD COSTA MESA, CA 92626**	**RCRA-LQG FTTS HIST FTTS FINDS CA NPDES CA HIST CORTESE CA SWRCY CA LUST CA FID UST CA HIST UST CA AST NY MANIFEST CA EMI**	**1000315143 CAD981981236**
Actual: 61 ft.	**Site 1 of 5 in cluster A**		

RCRA-LQG:

Date form received by agency:	03/08/2010
Facility name:	ORANGE COAST COLLEGE
Facility address:	2701 FAIRVIEW ROAD COSTA MESA, CA 92626
EPA ID:	CAD981981236
Mailing address:	FAIRVIEW ROAD COSTA MESA, CA 92626
Contact:	DEEPAK CHAUHAN
Contact address:	ADAMS AVE. COSTA MESA, CA 92626
Contact country:	Not reported
Contact telephone:	(714) 438-4733
Contact email:	DCHAUHAN@MAIL.CCCS.EDU
EPA Region:	09
Land type:	State
Classification:	Large Quantity Generator
Description:	Handler: generates 1,000 kg or more of hazardous waste during any calendar month; or generates more than 1 kg of acutely hazardous waste during any calendar month; or generates more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month; or generates 1 kg or less of acutely hazardous waste during any calendar month, and accumulates more than 1 kg of acutely hazardous waste at any time; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates more than 100 kg of that material at any time

Owner/Operator Summary:

Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	District
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported
Owner/operator name:	COAST COMMUNITY COLLEGE
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported

ORANGE COAST COLLEGE (Continued) **1000315143**

Owner/operator telephone:	(415) 555-1212
Legal status:	District
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported
Owner/operator name:	COAST COMMUNITY COLLEGE
Owner/operator address:	ADAMS AVE COSTA MESA, CA 92626
Owner/operator country:	Not reported
Owner/operator telephone:	(714) 438-4733
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	01/01/1996
Owner/Op end date:	Not reported
Owner/operator name:	DEEPAK CHAUHAN
Owner/operator address:	Not reported Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	State
Owner/Operator Type:	Operator
Owner/Op start date:	07/01/2005
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Universal Waste Summary:

Waste type:	Batteries
Accumulated waste on-site:	Yes
Generated waste on-site:	No
Waste type:	Lamps
Accumulated waste on-site:	Yes
Generated waste on-site:	No
Waste type:	Pesticides
Accumulated waste on-site:	Yes
Generated waste on-site:	No

ORANGE COAST COLLEGE (Continued) **1000315143**

Waste type: Thermostats
Accumulated waste on-site: Yes
Generated waste on-site: No

Historical Generators:

Date form received by agency: 09/01/1996
Facility name: ORANGE COAST COLLEGE
Classification: Large Quantity Generator

Date form received by agency: 09/01/1996
Facility name: ORANGE COAST COLLEGE
Classification: Small Quantity Generator

Date form received by agency: 04/06/1987
Facility name: ORANGE COAST COLLEGE
Classification: Small Quantity Generator

Hazardous Waste Summary:

Waste code: 135
Waste name: 135

Waste code: 151
Waste name: 151

Waste code: 181
Waste name: 181

Waste code: 214
Waste name: 214

Waste code: 223
Waste name: 223

Waste code: 541
Waste name: 541

Waste code: 551
Waste name: 551

Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

ORANGE COAST COLLEGE (Continued) **1000315143**

Waste code: D003
Waste name: A MATERIAL IS CONSIDERED TO BE A REACTIVE HAZARDOUS WASTE IF IT IS NORMALLY UNSTABLE, REACTS VIOLENTLY WITH WATER, GENERATES TOXIC GASES WHEN EXPOSED TO WATER OR CORROSIVE MATERIALS, OR IF IT IS CAPABLE OF DETONATION OR EXPLOSION WHEN EXPOSED TO HEAT OR A FLAME. ONE EXAMPLE OF SUCH WASTE WOULD BY WASTE GUNPOWDER.

Waste code: D011
Waste name: SILVER

Facility Has Received Notices of Violations:
Regulation violated: Not reported
Area of violation: State Statute or Regulation
Date violation determined: 07/24/2008
Date achieved compliance: 08/27/2008
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 07/24/2008
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:
Evaluation date: 06/17/2009
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 07/24/2008
Evaluation: FOCUSED COMPLIANCE INSPECTION
Area of violation: State Statute or Regulation
Date achieved compliance: 08/27/2008
Evaluation lead agency: State

Evaluation date: 01/13/2005
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State Contractor/Grantee

FTTS:
Case Number: Not reported
Docket Number: 09-88-0019
Complaint Issue Date: 04/22/88
Abatement Amount: 335500.0000
Proposed Penalty: 1930.0000
Final Assessment: 5000.0000
Final Order Date: 02/01/89
Close Date: / /
Violations(s): PCB, Use
PCB, Dispose
PCB, Failure to Maintain Records

ORANGE COAST COLLEGE (Continued) **1000315143**

FTTS INSP:

Inspection Number:	19870924CA001 1
Region:	09
Inspection Date:	09/24/87
Inspector:	BERMAN
Violation occurred:	Yes
Investigation Type:	Section 6 PCB State Conducted
Investigation Reason:	For Cause, Government
Legislation Code:	TSCA
Facility Function:	User

HIST FTTS:

Case Number:	Not reported
Docket Number:	09-88-0019
Complaint Issue Date:	04/22/1988
Abatement Amount:	335500.000
Proposed Penalty:	1930.0000
Final Assessment:	5000.0000
Final Order Date:	02/01/1989
Close Date:	/ /
Violations(s):	PCB, Use PCB, Dispose PCB, Failure to Maintain Records

HIST FTTS INSP:

Inspection Number:	19870924CA001 1
Region:	09
Inspection Date:	Not reported
Inspector:	BERMAN
Violation occurred:	Yes
Investigation Type:	Section 6 PCB State Conducted
Investigation Reason:	For Cause, Government
Legislation Code:	TSCA
Facility Function:	User

FINDS:

Registry ID: 110002763670

Environmental Interest/Information System

NCDB (National Compliance Data Base) supports implementation of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and the Toxic Substances Control Act (TSCA). The system tracks inspections in regions and states with cooperative agreements, enforcement actions, and settlements.

California Hazardous Waste Tracking System - Datamart (HWTS-DATAMART) provides California with information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of

ORANGE COAST COLLEGE (Continued) **1000315143**

events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

HAZARDOUS WASTE BIENNIAL REPORTER

NPDES:

Npdes Number:	CAS000002
Facility Status:	Terminated
Agency Id:	0
Region:	8
Regulatory Measure Id:	400705
Order No:	2009-0009-DWQ
Regulatory Measure Type:	Enrollee
Place Id:	Not reported
WDID:	8 30C356893
Program Type:	Construction
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	12/08/2009
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	06/13/2011
Discharge Name:	Coast Community College District
Discharge Address:	1370 Adams Ave
Discharge City:	Costa Mesa
Discharge State:	California
Discharge Zip:	92626

Npdes Number:	CAS000002
Facility Status:	Terminated
Agency Id:	0
Region:	8
Regulatory Measure Id:	356345
Order No:	2009-0009-DWQ
Regulatory Measure Type:	Enrollee
Place Id:	Not reported
WDID:	8 30C354126
Program Type:	Construction
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	12/04/2008
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	06/09/2011
Discharge Name:	Coast Community College Dist
Discharge Address:	1370 Adams Ave
Discharge City:	Costa Mesa
Discharge State:	California
Discharge Zip:	92626

CORTESE:

Region:	CORTESE
Facility County Code:	30
Reg By:	LTNKA
Reg Id:	083000788T

ORANGE COAST COLLEGE (Continued) **1000315143**

SWRCY:

Reg Id:	19369
Cert Id:	RC1009
Mailing Address:	P O Box 5005
Mailing City:	Costa Mesa
Mailing State:	CA
Mailing Zip Code:	92626
Website:	Not reported
Phone Number:	Not reported
Grand Father:	N
Rural:	N
Operation Begin Date:	09/29/1987
Aluminium:	Y
Glass:	Y
Plastic:	Y
Bimetal:	Y
Agency:	N/A
Monday Hours Of Operation:	9:00 am - 5:00 pm
Tuesday Hours Of Operation:	9:00 am - 5:00 pm
Wednesday Hours Of Operation:	9:00 am - 5:00 pm
Thursday Hours Of Operation:	9:00 am - 5:00 pm
Friday Hours Of Operation:	9:00 am - 5:00 pm
Saturday Hours Of Operation:	9:00 am - 5:00 pm
Sunday Hours Of Operation:	CLOSED
Cert Status:	Operational
Organization ID:	19369
Organization Name:	ASOCC Recycling Center
Agency Reg ID:	N/A
Operation End Date:	Not reported

LUST:

Region:	STATE
Global Id:	T0605970448
Latitude:	33.668707
Longitude:	-117.911426
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	02/02/2000
Lead Agency:	ORANGE COUNTY LOP
Case Worker:	DB
Local Agency:	ORANGE COUNTY LOP
RB Case Number:	Not reported
LOC Case Number:	99UT055
File Location:	Local Agency
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Diesel
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0605970448
Contact Type:	Local Agency Caseworker
Contact Name:	DENAMARIE BAKER
Organization Name:	ORANGE COUNTY LOP
Address:	1241 E. DYER ROAD, STE. 120
City:	SANTA ANA

ORANGE COAST COLLEGE (Continued) **1000315143**

Email:	dbaker@ochca.com
Phone Number:	7144336255
Global Id:	T0605970448
Contact Type:	Regional Board Caseworker
Contact Name:	PATRICIA HANNON
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	phannon@waterboards.ca.gov
Phone Number:	Not reported

Status History:

Global Id:	T0605970448
Status:	Completed - Case Closed
Status Date:	02/02/2000
Global Id:	T0605970448
Status:	Open - Case Begin Date
Status Date:	11/08/1999

Regulatory Activities:

Global Id:	T0605970448
Action Type:	Other
Date:	01/01/1950
Action:	Leak Reported
Global Id:	T0605970448
Action Type:	Other
Date:	01/01/1950
Action:	Leak Discovery

Region:	STATE
Global Id:	T0605900626
Latitude:	33.6690267
Longitude:	-117.9079647
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	08/31/1990
Lead Agency:	ORANGE COUNTY LOP
Case Worker:	DB
Local Agency:	ORANGE COUNTY LOP
RB Case Number:	083000788T
LOC Case Number:	88UT091
File Location:	Local Agency
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Diesel, Waste Oil / Motor / Hydraulic / Lubricating, Gasoline, Aviation
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0605900626
Contact Type:	Regional Board Caseworker
Contact Name:	PATRICIA HANNON

ORANGE COAST COLLEGE (Continued) **1000315143**

Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	phannon@waterboards.ca.gov
Phone Number:	Not reported
Global Id:	T0605900626
Contact Type:	Local Agency Caseworker
Contact Name:	DENAMARIE BAKER
Organization Name:	ORANGE COUNTY LOP
Address:	1241 E. DYER ROAD, STE. 120
City:	SANTA ANA
Email:	dbaker@ochca.com
Phone Number:	7144336255

Status History:

Global Id:	T0605900626
Status:	Completed - Case Closed
Status Date:	08/31/1990
Global Id:	T0605900626
Status:	Open - Case Begin Date
Status Date:	10/20/1989

Regulatory Activities:

Global Id:	T0605900626
Action Type:	Other
Date:	01/01/1950
Action:	Leak Discovery
Global Id:	T0605900626
Action Type:	Other
Date:	01/01/1950
Action:	Leak Reported

ORANGE CO. LUST:

Region:	ORANGE
Facility Id:	99UT055
Current Status:	Certification (Case Closed)
Released Substance:	Diesel fuel oil and additives, Nos.1-D, 2-D, 2-4
Date Closed:	02/02/2000
Case Type:	Soil Only
Record ID:	RO0002462
Region:	ORANGE
Facility Id:	88UT091
Current Status:	Certification (Case Closed)
Released Substance:	Diesel fuel oil and additives, Nos.1-D, 2-D, 2-4
Date Closed:	08/31/1990
Case Type:	Soil Only
Record ID:	RO0002987
Region:	ORANGE
Facility Id:	88UT091
Current Status:	Not reported

ORANGE COAST COLLEGE (Continued) **1000315143**

Released Substance: Waste oil/Used oil
Date Closed: 08/31/1990
Case Type: Not reported
Record ID: RO0002987

Region: ORANGE
Facility Id: 88UT091
Current Status: Not reported
Released Substance: Miscellaneous motor vehicle fuel
Date Closed: 08/31/1990
Case Type: Not reported
Record ID: RO0002987

Region: ORANGE
Facility Id: 88UT091
Current Status: Not reported
Released Substance: Jet Fuel and additives: A (kerosene type), A-1 (kerosene type), B (wide cut or naphtha)
Date Closed: 08/31/1990
Case Type: Not reported
Record ID: RO0002987

LUST REG 8:
Region: 8
County: Orange
Regional Board: Santa Ana Region
Facility Status: Case Closed
Case Number: 083000788T
Local Case Num: 88UT091
Case Type: Soil only
Substance: 12034,12035,
Qty Leaked: 0
Abate Method: Not reported
Cross Street: Not reported
Enf Type: Not reported
Funding: Not reported
How Discovered: Tank Closure
How Stopped: Close Tank
Leak Cause: Unknown
Leak Source: Unknown
Global ID: T0605900626
How Stopped Date: 9/9/9999
Enter Date: Not reported
Review Date: Not reported
Prelim Assess: Not reported
Discover Date: 10/20/1989
Enforcement Date: Not reported
Close Date: 8/31/1990
Workplan: Not reported
Pollution Char: Not reported
Remed Plan: Not reported
Remed Action: Not reported
Monitoring: Not reported
Enter Date: Not reported
GW Qualifies: Not reported
Soil Qualifies: Not reported
Operator: Not reported

ORANGE COAST COLLEGE (Continued) **1000315143**

Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.6690267
Longitude:	-117.9079647
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	0
MTBE Tested:	Not Required to be Tested.
MTBE Class:	*
Staff:	PAH
Staff Initials:	AR
Lead Agency:	Local Agency
Local Agency:	30000L
Hydr Basin #:	Not reported
Beneficial:	MUN
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Summary:	Not reported

Region:	8
County:	Orange
Regional Board:	Santa Ana Region
Facility Status:	Case Closed
Case Number:	Not reported
Local Case Num:	99UT055
Case Type:	Soil only
Substance:	Diesel
Qty Leaked:	0
Abate Method:	Not reported
Cross Street:	Not reported
Enf Type:	Not reported
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Close Tank
Leak Cause:	Unknown
Leak Source:	Unknown
Global ID:	T0605970448
How Stopped Date:	9/9/9999
Enter Date:	Not reported
Review Date:	Not reported
Prelim Assess:	Not reported
Discover Date:	11/8/1999
Enforcement Date:	Not reported
Close Date:	2/2/2000
Workplan:	Not reported
Pollution Char:	Not reported
Remed Plan:	Not reported
Remed Action:	Not reported
Monitoring:	Not reported
Enter Date:	Not reported
GW Qualifies:	Not reported
Soil Qualifies:	Not reported
Operator:	Not reported

ORANGE COAST COLLEGE (Continued) **1000315143**

Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	Not reported
Longitude:	Not reported
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	0
MTBE Tested:	Not Required to be Tested.
MTBE Class:	*
Staff:	PAH
Staff Initials:	AR
Lead Agency:	Local Agency
Local Agency:	30000L
Hydr Basin #:	Not reported
Beneficial:	MUN
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Summary:	Not reported

CA FID UST:

Facility ID:	30003506
Regulated By:	UTNKA
Regulated ID:	Not reported
Cortese Code:	Not reported
SIC Code:	Not reported
Facility Phone:	7144325760
Mail To:	Not reported
Mailing Address:	1370 ADAMS
Mailing Address 2:	Not reported
Mailing City,St,Zip:	COSTA MESA 92626
Contact:	Not reported
Contact Phone:	Not reported
DUNs Number:	Not reported
NPDES Number:	Not reported
EPA ID:	Not reported
Comments:	Not reported
Status:	Active

HIST UST:

Region:	STATE
Facility ID:	00000028654
Facility Type:	Other
Other Type:	EDUCATION
Total Tanks:	0001
Contact Name:	DAVID HILL
Telephone:	7144320202
Owner Name:	COAST COMMUNITY COLLEGE DISTRI
Owner Address:	1370 ADAMS AVENUE
Owner City,St,Zip:	COSTA MESA, CA 92626

Tank Num:	001
Container Num:	8

ORANGE COAST COLLEGE (Continued) **1000315143**

Year Installed: 1972
Tank Capacity: 00002000
Tank Used for: PRODUCT
Type of Fuel: Not reported
Tank Construction: Not reported
Leak Detection: Visual

AST:
Owner: ORANGE COAST COLLEGE
Total Gallons: 1,320
Certified Unified Program Agencies: Orange

NY MANIFEST:
EPA ID: CAD981981236
Country: USA
Mailing Name: ORANGE COAST COLLEGE
Mailing Contact: BEN KOLLMEYER
Mailing Address: 1370 ADAMS AVE
Mailing Address 2: Not reported
Mailing City: COSTA MESA
Mailing State: CA
Mailing Zip: 92626
Mailing Zip4: Not reported
Mailing Country: USA
Mailing Phone: 714-438-4728

Document ID: NYB7731666
Manifest Status: Completed after the designated time period for a TSDF to get a copy to the DEC
Trans1 State ID: Not reported
Trans2 State ID: 11340PNY
Generator Ship Date: 970307
Trans1 Recv Date: 970307
Trans2 Recv Date: 970307
TSD Site Recv Date: 970321
Part A Recv Date: 970321
Part B Recv Date: 970402
Generator EPA ID: CAD981981236
Trans1 EPA ID: ARD069748192
Trans2 EPA ID: NYD980769947
TSDF ID: NYD000632372
Waste Code: D001 - NON-LISTED IGNITABLE WASTES
Quantity: 00400
Units: P - Pounds
Number of Containers: 002
Container Type: CY - Cylinders
Handling Method: T Chemical, physical, or biological treatment.
Specific Gravity: 100
Year: 97

EMI:
Year: 1990
County Code: 30
Air Basin: SC
Facility ID: 58591
Air District Name: SC

ORANGE COAST COLLEGE (Continued) **1000315143**

SIC Code:	8221
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	6
Reactive Organic Gases Tons/Yr:	5
Carbon Monoxide Emissions Tons/Yr:	1
NOX - Oxides of Nitrogen Tons/Yr:	2
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0
Year:	1995
County Code:	30
Air Basin:	SC
Facility ID:	58591
Air District Name:	SC
SIC Code:	8221
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	2
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

A2 **ORANGE COAST COLLEGE(RECYCLYIN** **CA HIST UST** **U001576823**
Target **2701 FAIRVIEW RD** **N/A**
Property **COSTA MESA, CA 92626**

Site 2 of 5 in cluster A

Actual:
61 ft.

HIST UST:

Region:	STATE
Facility ID:	00000023030
Facility Type:	Other
Other Type:	EDUCATION
Total Tanks:	0007
Contact Name:	DAVID HILL
Telephone:	7144320202
Owner Name:	COAST COMMUNITY COLLEGE DISTRI
Owner Address:	1370 ADAMS AVENUE
Owner City,St,Zip:	COSTA MESA, CA 92626
Tank Num:	001
Container Num:	7
Year Installed:	1982
Tank Capacity:	00000100
Tank Used for:	WASTE
Type of Fuel:	PREMIUM
Tank Construction:	Not reported
Leak Detection:	Visual
Tank Num:	002
Container Num:	6

ORANGE COAST COLLEGE(RECYCLYIN (Continued)) **U001576823**

Year Installed:	Not reported
Tank Capacity:	00000250
Tank Used for:	PRODUCT
Type of Fuel:	Not reported
Tank Construction:	Not reported
Leak Detection:	Visual

Tank Num:	003
Container Num:	5
Year Installed:	Not reported
Tank Capacity:	00000250
Tank Used for:	WASTE
Type of Fuel:	PREMIUM
Tank Construction:	Not reported
Leak Detection:	Visual

Tank Num:	004
Container Num:	4
Year Installed:	Not reported
Tank Capacity:	00001000
Tank Used for:	PRODUCT
Type of Fuel:	DIESEL
Tank Construction:	Not reported
Leak Detection:	Stock Inventor

Tank Num:	005
Container Num:	3
Year Installed:	Not reported
Tank Capacity:	00001000
Tank Used for:	PRODUCT
Type of Fuel:	REGULAR
Tank Construction:	Not reported
Leak Detection:	Visual, Stock Inventor

Tank Num:	006
Container Num:	2
Year Installed:	1978
Tank Capacity:	00009000
Tank Used for:	PRODUCT
Type of Fuel:	DIESEL
Tank Construction:	Not reported
Leak Detection:	Stock Inventor

Tank Num:	007
Container Num:	1
Year Installed:	1980
Tank Capacity:	00010000
Tank Used for:	PRODUCT
Type of Fuel:	DIESEL
Tank Construction:	Not reported
Leak Detection:	Visual, Stock Inventor

A3 **ORANGE COAST COLLEGE** **CA HAZNET** **S113011287**
Target **2701 FAIRVIEW RD** **N/A**
Property **COSTA MESA, CA 92626**

Site 3 of 5 in cluster A

Actual:
61 ft.

HAZNET:

Year: 2012
Gepaid: CAD981981236
Contact: DEEPAK CHAUHAN EHS SPECIALIST
Telephone: 7144384733
Mailing Name: Not reported
Mailing Address: 1370 ADAMS AVE
Mailing City,St,Zip: COSTA MESA, CA 926260000
Gen County: Orange
TSD EPA ID: CAD008364432
TSD County: Los Angeles
Waste Category: Not reported
Disposal Method: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.02085
Facility County: Orange

Year: 2012
Gepaid: CAD981981236
Contact: DEEPAK CHAUHAN EHS SPECIALIST
Telephone: 7144384733
Mailing Name: Not reported
Mailing Address: 1370 ADAMS AVE
Mailing City,St,Zip: COSTA MESA, CA 926260000
Gen County: Orange
TSD EPA ID: CAD008364432
TSD County: Los Angeles
Waste Category: Not reported
Disposal Method: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.75
Facility County: Orange

Year: 2012
Gepaid: CAD981981236
Contact: DEEPAK CHAUHAN EHS SPECIALIST
Telephone: 7144384733
Mailing Name: Not reported
Mailing Address: 1370 ADAMS AVE
Mailing City,St,Zip: COSTA MESA, CA 926260000
Gen County: Orange
TSD EPA ID: CAD003963592
TSD County: Santa Clara
Waste Category: Not reported
Disposal Method: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.7089
Facility County: Orange

Year: 2012
Gepaid: CAD981981236
Contact: DEEPAK CHAUHAN EHS SPECIALIST
Telephone: 7144384733

ORANGE COAST COLLEGE (Continued) **S113011287**

Mailing Name:	Not reported
Mailing Address:	1370 ADAMS AVE
Mailing City,St,Zip:	COSTA MESA, CA 926260000
Gen County:	Orange
TSD EPA ID:	AZC950823111
TSD County:	99
Waste Category:	Not reported
Disposal Method:	Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Tons:	16
Facility County:	Orange

Year:	2012
Gepaid:	CAD981981236
Contact:	DEEPAK CHAUHAN EHS SPECIALIST
Telephone:	7144384733
Mailing Name:	Not reported
Mailing Address:	1370 ADAMS AVE
Mailing City,St,Zip:	COSTA MESA, CA 926260000
Gen County:	Orange
TSD EPA ID:	CAD008364432
TSD County:	Los Angeles
Waste Category:	Not reported
Disposal Method:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.175
Facility County:	Orange

Click this hyperlink while viewing on your computer to access
198 additional CA_HAZNET: record(s) in the EDR Site Report.

A4 **CELLCO - MESA VERDE** **FINDS** **1012304848**
Target **2701 FAIRVIEW ROAD** **N/A**
Property **COSTA MESA, CA**

Site 4 of 5 in cluster A

Actual:
61 ft.

FINDS:

Registry ID: 110040415324

Environmental Interest/Information System

ICIS (Integrated Compliance Information System) is the Integrated Compliance Information System and provides a database that, when complete, will contain integrated Enforcement and Compliance information across most of EPA's programs. The vision for ICIS is to replace EPA's independent databases that contain Enforcement data with a single repository for that information. Currently, ICIS contains all Federal Administrative and Judicial enforcement actions. This information is maintained in ICIS by EPA in the Regional offices and it Headquarters. A future release of ICIS will replace the Permit Compliance System (PCS) which supports the NPDES and will integrate that information with Federal actions already in the system. ICIS also has the capability to track other activities occurring in the Region that support Compliance and Enforcement programs. These include; Incident Tracking, Compliance Assistance, and Compliance Monitoring.

A5
Target
Property

ORANGE COAST COLLEGE
2701 FAIRVIEW RD
COSTA MESA, CA 92626

CA UST **1008186573**
CA SWEEPS UST **N/A**

Site 5 of 5 in cluster A

Actual:
61 ft.

UST:

Facility ID:	6695
Latitude:	33.66923
Longitude:	-117.90774

SWEEPS UST:

Status:	Not reported
Comp Number:	6695
Number:	Not reported
Board Of Equalization:	Not reported
Referral Date:	Not reported
Action Date:	Not reported
Created Date:	Not reported
Tank Status:	Not reported
Owner Tank Id:	Not reported
Swrcb Tank Id:	30-000-006695-000001
Actv Date:	Not reported
Capacity:	4000
Tank Use:	UNKNOWN
Stg:	PRODUCT
Content:	Not reported
Number Of Tanks:	4

Status:	Not reported
Comp Number:	6695
Number:	Not reported
Board Of Equalization:	Not reported
Referral Date:	Not reported
Action Date:	Not reported
Created Date:	Not reported
Tank Status:	Not reported
Owner Tank Id:	Not reported
Swrcb Tank Id:	30-000-006695-000002
Actv Date:	Not reported
Capacity:	1000
Tank Use:	UNKNOWN
Stg:	PRODUCT
Content:	Not reported
Number Of Tanks:	Not reported

Status:	Not reported
Comp Number:	6695
Number:	Not reported
Board Of Equalization:	Not reported
Referral Date:	Not reported
Action Date:	Not reported
Created Date:	Not reported
Tank Status:	Not reported
Owner Tank Id:	Not reported
Swrcb Tank Id:	30-000-006695-000003
Actv Date:	Not reported
Capacity:	1000
Tank Use:	UNKNOWN

ORANGE COAST COLLEGE (Continued) **1008186573**

Stg:	PRODUCT
Content:	Not reported
Number Of Tanks:	Not reported

Status:	Not reported
Comp Number:	6695
Number:	Not reported
Board Of Equalization:	Not reported
Referral Date:	Not reported
Action Date:	Not reported
Created Date:	Not reported
Tank Status:	Not reported
Owner Tank Id:	Not reported
Swrcb Tank Id:	30-000-006695-000004
Actv Date:	Not reported
Capacity:	2000
Tank Use:	UNKNOWN
Stg:	PRODUCT
Content:	Not reported
Number Of Tanks:	Not reported

Status:	Active
Comp Number:	6695
Number:	9
Board Of Equalization:	Not reported
Referral Date:	09-30-92
Action Date:	09-15-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	Not reported
Swrcb Tank Id:	30-000-006695-000005
Actv Date:	Not reported
Capacity:	1000
Tank Use:	M.V. FUEL
Stg:	P
Content:	REG UNLEADED
Number Of Tanks:	2

Status:	Active
Comp Number:	6695
Number:	9
Board Of Equalization:	Not reported
Referral Date:	09-30-92
Action Date:	09-15-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	Not reported
Swrcb Tank Id:	30-000-006695-000008
Actv Date:	Not reported
Capacity:	2000
Tank Use:	M.V. FUEL
Stg:	P
Content:	AVIA. GAS
Number Of Tanks:	Not reported

6 **NE** **< 1/8** **0.003 mi.** **18 ft.**	**DUNCAN ELECTRONICS INC** **2865 FAIRVIEW RD** **COSTA MESA, CA**	**RCRA NonGen / NLR** **FINDS** **CA HAZNET** **CA EMI**	**1000167837** **CAD008366445**

Relative: **Lower**

Actual: **52 ft.**

RCRA NonGen / NLR:

Date form received by agency:	06/07/1995
Facility name:	DUNCAN ELECTRONICS INC
Facility address:	2865 FAIRVIEW RD COSTA MESA, CA 92626
EPA ID:	CAD008366445
Contact:	RICHARD RAMIREZ
Contact address:	15771 RED HILL AVE TUSTIN, CA 92626
Contact country:	US
Contact telephone:	(714) 258-7500
Contact email:	Not reported
EPA Region:	09
Land type:	Private
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	SYSTRON-DONNER CORPORATION
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No

DUNCAN ELECTRONICS INC (Continued) **1000167837**

Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

Evaluation Action Summary:
Evaluation date: 06/22/1994
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State Contractor/Grantee

FINDS:

Registry ID: 110002633357

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

HAZNET:
Year: 1995
Gepaid: CAD008366445
Contact: BEI SENSORS AND MOTION SYSTEMS
Telephone: 8183620300
Mailing Name: Not reported
Mailing Address: 13100 TELFAIR AVE
Mailing City,St,Zip: SYLMAR, CA 913423573
Gen County: Not reported
TSD EPA ID: CAT080010101
TSD County: Not reported
Waste Category: Unspecified solvent mixture
Disposal Method: Not reported
Tons: .2293
Facility County: Orange

Year: 1995
Gepaid: CAD008366445
Contact: BEI SENSORS AND MOTION SYSTEMS
Telephone: 8183620300
Mailing Name: Not reported
Mailing Address: 13100 TELFAIR AVE
Mailing City,St,Zip: SYLMAR, CA 913423573
Gen County: Not reported
TSD EPA ID: CAT080010101
TSD County: Not reported
Waste Category: Other organic solids
Disposal Method: Transfer Station
Tons: .0125
Facility County: Orange

Year: 1995

DUNCAN ELECTRONICS INC (Continued) **1000167837**

Gepaid: CAD008366445
Contact: BEI SENSORS AND MOTION SYSTEMS
Telephone: 8183620300
Mailing Name: Not reported
Mailing Address: 13100 TELFAIR AVE
Mailing City,St,Zip: SYLMAR, CA 913423573
Gen County: Not reported
TSD EPA ID: CAD000088252
TSD County: Not reported
Waste Category: Liquids with halogenated organic compounds >= 1,000 Mg./L
Disposal Method: Transfer Station
Tons: .2293
Facility County: Orange

Year: 1995
Gepaid: CAD008366445
Contact: BEI SENSORS AND MOTION SYSTEMS
Telephone: 8183620300
Mailing Name: Not reported
Mailing Address: 13100 TELFAIR AVE
Mailing City,St,Zip: SYLMAR, CA 913423573
Gen County: Not reported
TSD EPA ID: CAD000088252
TSD County: Not reported
Waste Category: Liquids with halogenated organic compounds >= 1,000 Mg./L
Disposal Method: Not reported
Tons: .2293
Facility County: Orange

Year: 1995
Gepaid: CAD008366445
Contact: BEI SENSORS AND MOTION SYSTEMS
Telephone: 8183620300
Mailing Name: Not reported
Mailing Address: 13100 TELFAIR AVE
Mailing City,St,Zip: SYLMAR, CA 913423573
Gen County: Not reported
TSD EPA ID: CAT080022148
TSD County: Not reported
Waste Category: Laboratory waste chemicals
Disposal Method: Transfer Station
Tons: .2501
Facility County: Orange

Click this hyperlink while viewing on your computer to access
7 additional CA_HAZNET: record(s) in the EDR Site Report.

EMI:
Year: 1987
County Code: 30
Air Basin: SC
Facility ID: 21833
Air District Name: SC
SIC Code: 3679
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported

DUNCAN ELECTRONICS INC (Continued) **1000167837**

Total Organic Hydrocarbon Gases Tons/Yr: 3
Reactive Organic Gases Tons/Yr: 0
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers & Smllr Tons/Yr: 0

Year: 1990
County Code: 30
Air Basin: SC
Facility ID: 21833
Air District Name: SC
SIC Code: 1731
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 3
Reactive Organic Gases Tons/Yr: 0
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers & Smllr Tons/Yr: 0

Year: 1993
County Code: 30
Air Basin: SC
Facility ID: 21833
Air District Name: SC
SIC Code: 3825
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 1
Reactive Organic Gases Tons/Yr: 0
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers & Smllr Tons/Yr: 0

Year: 1995
County Code: 30
Air Basin: SC
Facility ID: 21833
Air District Name: SC
SIC Code: 3825
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 1
Reactive Organic Gases Tons/Yr: 0
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0

DUNCAN ELECTRONICS INC (Continued) **1000167837**

Part. Matter 10 Micrometers & Smllr Tons/Yr: 0

7
SW
< 1/8
0.013 mi.
66 ft.

425 MERRIMAC WAY
COSTA MESA, CA 92626

EDR US Hist Cleaners **1015059625**
N/A

Relative:
Higher

Actual:
67 ft.

EDR Historical Cleaners:

Name:	SWANSONS CARPET CLEANING
Year:	2001
Address:	425 MERRIMAC WAY
Name:	SWANSONS CARPET CLEANING
Year:	2002
Address:	425 MERRIMAC WAY
Name:	SWANSONS CARPET CLEANING
Year:	2003
Address:	425 MERRIMAC WAY

B8
NW
< 1/8
0.015 mi.
81 ft.

COAST COMMUNITY COLL/TRANS
1370 ADAMS AVE
COSTA MESA, CA 92626

CA UST **U003432923**
CA SWEEPS UST **N/A**

Site 1 of 4 in cluster B

Relative:
Lower

Actual:
58 ft.

UST:

Facility ID:	6690
Latitude:	33.67397
Longitude:	-117.9153

SWEEPS UST:

Status:	Not reported
Comp Number:	6690
Number:	Not reported
Board Of Equalization:	Not reported
Referral Date:	Not reported
Action Date:	Not reported
Created Date:	Not reported
Tank Status:	Not reported
Owner Tank Id:	Not reported
Swrcb Tank Id:	30-000-006690-000007
Actv Date:	Not reported
Capacity:	500
Tank Use:	UNKNOWN
Stg:	PRODUCT
Content:	Not reported
Number Of Tanks:	5
Status:	Not reported
Comp Number:	6690
Number:	Not reported
Board Of Equalization:	Not reported
Referral Date:	Not reported
Action Date:	Not reported

COAST COMMUNITY COLL/TRANS (Continued) **U003432923**

Created Date:	Not reported
Tank Status:	Not reported
Owner Tank Id:	Not reported
Swrcb Tank Id:	30-000-006690-000008
Actv Date:	Not reported
Capacity:	500
Tank Use:	UNKNOWN
Stg:	PRODUCT
Content:	Not reported
Number Of Tanks:	Not reported

Status:	Not reported
Comp Number:	6690
Number:	Not reported
Board Of Equalization:	Not reported
Referral Date:	Not reported
Action Date:	Not reported
Created Date:	Not reported
Tank Status:	Not reported
Owner Tank Id:	Not reported
Swrcb Tank Id:	30-000-006690-000009
Actv Date:	Not reported
Capacity:	1500
Tank Use:	UNKNOWN
Stg:	PRODUCT
Content:	Not reported
Number Of Tanks:	Not reported

Status:	Not reported
Comp Number:	6690
Number:	Not reported
Board Of Equalization:	Not reported
Referral Date:	Not reported
Action Date:	Not reported
Created Date:	Not reported
Tank Status:	Not reported
Owner Tank Id:	Not reported
Swrcb Tank Id:	30-000-006690-000010
Actv Date:	Not reported
Capacity:	4
Tank Use:	UNKNOWN
Stg:	PRODUCT
Content:	Not reported
Number Of Tanks:	Not reported

Status:	Not reported
Comp Number:	6690
Number:	Not reported
Board Of Equalization:	Not reported
Referral Date:	Not reported
Action Date:	Not reported
Created Date:	Not reported
Tank Status:	Not reported
Owner Tank Id:	Not reported
Swrcb Tank Id:	30-000-006690-000011
Actv Date:	Not reported
Capacity:	500

COAST COMMUNITY COLL/TRANS (Continued) **U003432923**

Tank Use: UNKNOWN
Stg: PRODUCT
Content: Not reported
Number Of Tanks: Not reported

Status: Active
Comp Number: 6690
Number: 9
Board Of Equalization: Not reported
Referral Date: 09-30-92
Action Date: 09-15-92
Created Date: 02-29-88
Tank Status: A
Owner Tank Id: Not reported
Swrcb Tank Id: 30-000-006690-000005
Actv Date: Not reported
Capacity: 4000
Tank Use: M.V. FUEL
Stg: P
Content: REG UNLEADED
Number Of Tanks: 2

Status: Active
Comp Number: 6690
Number: 9
Board Of Equalization: Not reported
Referral Date: 09-30-92
Action Date: 09-15-92
Created Date: 02-29-88
Tank Status: A
Owner Tank Id: Not reported
Swrcb Tank Id: 30-000-006690-000006
Actv Date: Not reported
Capacity: 1000
Tank Use: M.V. FUEL
Stg: P
Content: DIESEL
Number Of Tanks: Not reported

B9 **DISTRICT TRANSPORTATION** **CA HIST UST** **U001576794**
NW **1370 ADAMS AVE** **N/A**
< 1/8 **COSTA MESA, CA 92626**
0.015 mi.
81 ft. **Site 2 of 4 in cluster B**

Relative:
Lower

Actual:
58 ft.

HIST UST:
Region: STATE
Facility ID: 00000028136
Facility Type: Gas Station
Other Type: Not reported
Total Tanks: 0002
Contact Name: BOB SANDS
Telephone: 7144325762
Owner Name: COAST COMMUNITY COLLEGE DISTRI
Owner Address: 1370 ADAMS AVE.
Owner City,St,Zip: COSTA MESA, CA 92626

Tank Num: 001

DISTRICT TRANSPORTATION (Continued) **U001576794**

Container Num:	#1
Year Installed:	1976
Tank Capacity:	00001000
Tank Used for:	PRODUCT
Type of Fuel:	DIESEL
Tank Construction:	Not reported
Leak Detection:	Visual

Tank Num:	002
Container Num:	#2
Year Installed:	1976
Tank Capacity:	00003000
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Tank Construction:	Not reported
Leak Detection:	Visual

B10 **COAST COMMUNITY COLL/TRANS** **CA FID UST** **S101609519**
NW **1370 ADAMS AVE** **N/A**
< 1/8 **COSTA MESA, CA 92626**
0.015 mi.
81 ft. **Site 3 of 4 in cluster B**

Relative:
Lower

Actual:
58 ft.

CA FID UST:

Facility ID:	30017322
Regulated By:	UTNKA
Regulated ID:	Not reported
Cortese Code:	Not reported
SIC Code:	Not reported
Facility Phone:	7145551212
Mail To:	Not reported
Mailing Address:	1370 ADAMS
Mailing Address 2:	Not reported
Mailing City,St,Zip:	COSTA MESA 92626
Contact:	Not reported
Contact Phone:	Not reported
DUNs Number:	Not reported
NPDES Number:	Not reported
EPA ID:	Not reported
Comments:	Not reported
Status:	Active

B11 **COAST COMM COLLEGE DIST ADMIN** **CA HIST CORTESE** **U003147636**
NW **1370 ADAMS AVE** **CA LUST** **N/A**
< 1/8 **COSTA MESA, CA 92626**
0.015 mi.
81 ft. **Site 4 of 4 in cluster B**

Relative:
Lower

Actual:
58 ft.

CORTESE:

Region:	CORTESE
Facility County Code:	30
Reg By:	LTNKA
Reg Id:	083001313T

LUST:

Region:	STATE

COAST COMM COLLEGE DIST ADMIN (Continued) **U003147636**

Global Id:	T0605901004
Latitude:	33.674709
Longitude:	-117.915733
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	08/31/1990
Lead Agency:	ORANGE COUNTY LOP
Case Worker:	DB
Local Agency:	ORANGE COUNTY LOP
RB Case Number:	083001313T
LOC Case Number:	89UT198
File Location:	Local Agency
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0605901004
Contact Type:	Regional Board Caseworker
Contact Name:	PATRICIA HANNON
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	phannon@waterboards.ca.gov
Phone Number:	Not reported

Global Id:	T0605901004
Contact Type:	Local Agency Caseworker
Contact Name:	DENAMARIE BAKER
Organization Name:	ORANGE COUNTY LOP
Address:	1241 E. DYER ROAD, STE. 120
City:	SANTA ANA
Email:	dbaker@ochca.com
Phone Number:	7144336255

Status History:

Global Id:	T0605901004
Status:	Completed - Case Closed
Status Date:	08/31/1990

Global Id:	T0605901004
Status:	Open - Case Begin Date
Status Date:	10/20/1989

Regulatory Activities:

Global Id:	T0605901004
Action Type:	Other
Date:	01/01/1950
Action:	Leak Discovery

Global Id:	T0605901004
Action Type:	Other
Date:	01/01/1950
Action:	Leak Reported

COAST COMM COLLEGE DIST ADMIN (Continued) **U003147636**

ORANGE CO. LUST:

Region:	ORANGE
Facility Id:	89UT198
Current Status:	Certification (Case Closed)
Released Substance:	Gasoline-Automotive (motor gasoline and additives), leaded & unleaded
Date Closed:	08/31/1990
Case Type:	Soil Only
Record ID:	RO0001375

LUST REG 8:

Region:	8
County:	Orange
Regional Board:	Santa Ana Region
Facility Status:	Case Closed
Case Number:	083001313T
Local Case Num:	89UT198
Case Type:	Soil only
Substance:	Gasoline
Qty Leaked:	0
Abate Method:	Not reported
Cross Street:	Not reported
Enf Type:	Not reported
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Close Tank
Leak Cause:	Unknown
Leak Source:	Unknown
Global ID:	T0605901004
How Stopped Date:	9/9/9999
Enter Date:	Not reported
Review Date:	Not reported
Prelim Assess:	Not reported
Discover Date:	10/20/1989
Enforcement Date:	Not reported
Close Date:	8/31/1990
Workplan:	Not reported
Pollution Char:	Not reported
Remed Plan:	Not reported
Remed Action:	Not reported
Monitoring:	Not reported
Enter Date:	Not reported
GW Qualifies:	Not reported
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.6733945
Longitude:	-117.918215
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	1
MTBE Tested:	Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.
MTBE Class:	*

COAST COMM COLLEGE DIST ADMIN (Continued) **U003147636**

Staff:	PAH
Staff Initials:	AR
Lead Agency:	Local Agency
Local Agency:	30000L
Hydr Basin #:	Not reported
Beneficial:	MUN
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Summary:	Not reported

12
North **1300 ADAMS AVE**
< 1/8 **COSTA MESA, CA 92626**
0.016 mi.
85 ft.

EDR US Hist Auto Stat **1015201071**
N/A

Relative: Lower
Actual: 54 ft.

EDR Historical Auto Stations:

Name:	BITE ME AUTOMOTIVE ASSESSORIES
Year:	2001
Address:	1300 ADAMS AVE

C13 **COSTA MESA HIGH SCHOOL**
ESE **2650 FAIRVIEW RD**
< 1/8 **COSTA MESA, CA 92626**
0.017 mi.
90 ft. **Site 1 of 2 in cluster C**

CA NPDES
CA UST
CA HIST UST
U001576792
N/A

Relative: Higher
Actual: 61 ft.

NPDES:

Npdes Number:	CAS000002
Facility Status:	Active
Agency Id:	0
Region:	8
Regulatory Measure Id:	414261
Order No:	2009-0009-DWQ
Regulatory Measure Type:	Enrollee
Place Id:	Not reported
WDID:	8 30C361550
Program Type:	Construction
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	07/28/2011
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	Newport Mesa Unified School District
Discharge Address:	2985 Bear Street
Discharge City:	Costa Mesa
Discharge State:	California
Discharge Zip:	92626

Npdes Number:	CAS000002
Facility Status:	Active
Agency Id:	0
Region:	8
Regulatory Measure Id:	415894
Order No:	2009-0009-DWQ
Regulatory Measure Type:	Enrollee

COSTA MESA HIGH SCHOOL (Continued) **U001576792**

Place Id:	Not reported
WDID:	8 30C361551
Program Type:	Construction
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	07/28/2011
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	Newport Mesa Unified School District
Discharge Address:	2985 Bear St Building E
Discharge City:	Costa Mesa
Discharge State:	California
Discharge Zip:	92626

UST:

Facility ID:	6694
Latitude:	33.66982
Longitude:	-117.9077

HIST UST:

Region:	STATE
Facility ID:	00000029959
Facility Type:	Other
Other Type:	SCHOOL DISTRICT
Total Tanks:	0001
Contact Name:	RAYMOND R. SCHNIERER
Telephone:	7145563240
Owner Name:	NEWPORT-MESA UNIFIED SCHOOL DI
Owner Address:	P.O. BOX 1368
Owner City,St,Zip:	NEWPORT BEACH, CA 92663

Tank Num:	001
Container Num:	1
Year Installed:	1958
Tank Capacity:	00002000
Tank Used for:	PRODUCT
Type of Fuel:	REGULAR
Tank Construction:	Not reported
Leak Detection:	Stock Inventor

C14
ESE
< 1/8
0.017 mi.
90 ft.

NEWPORT MESA UNIFIED SCHOOL DIST
2650 FAIRVIEW RD
COSTA MESA, CA

Site 2 of 2 in cluster C

RCRA-SQG **1000348908**
FINDS **CAD981431570**

Relative:
Higher

Actual:
61 ft.

RCRA-SQG:

Date form received by agency:	07/22/1986
Facility name:	NEWPORT MESA UNIFIED SCHOOL DIST
Facility address:	2650 FAIRVIEW RD COSTA MESA, CA 92626
EPA ID:	CAD981431570
Mailing address:	2985A BEAR ST COSTA MESA, CA 92626
Contact:	ENVIRONMENTAL MANAGER
Contact address:	2650 FAIRVIEW RD COSTA MESA, CA 92626
Contact country:	US

NEWPORT MESA UNIFIED SCHOOL DIST (Continued) **1000348908**

Contact telephone:	(714) 556-3185
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	NEWPORT MESA UNIFIED SCHOOL DIST
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	District
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	District
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

FINDS:

Registry ID: 110002703085

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of

NEWPORT MESA UNIFIED SCHOOL DIST (Continued) **1000348908**

events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

15
South
< 1/8
0.094 mi.
494 ft.

263 BOWLING GREEN DR
COSTA MESA, CA 92626

EDR US Hist Auto Stat **1015374394** **N/A**

Relative: **Higher**

Actual: **69 ft.**

EDR Historical Auto Stations:

Name:	STEVES REPAIR
Year:	2002
Address:	263 BOWLING GREEN DR

D16
NW
< 1/8
0.116 mi.
613 ft.

(CAMFP) SCHOOL DISTRICT

COSTA MESA, CA

Site 1 of 3 in cluster D

CA ENVIROSTOR **S107735757** **N/A**

Relative: **Lower**

Actual: **56 ft.**

ENVIROSTOR:

Site Type:	Military Evaluation
Site Type Detailed:	FUDS
Acres:	Not reported
NPL:	NO
Regulatory Agencies:	SMBRP
Lead Agency:	SMBRP
Program Manager:	Not reported
Supervisor:	Douglas Bautista
Division Branch:	Cleanup Cypress
Facility ID:	80000027
Site Code:	Not reported
Assembly:	74
Senate:	37
Special Program:	Not reported
Status:	Inactive - Needs Evaluation
Status Date:	07/01/2005
Restricted Use:	NO
Site Mgmt. Req.:	NONE SPECIFIED
Funding:	DERA
Latitude:	33.675
Longitude:	-117.9166
APN:	NONE SPECIFIED
Past Use:	NONE SPECIFIED
Potential COC:	NONE SPECIFIED
Confirmed COC:	NONE SPECIFIED, NONE SPECIFIED
Potential Description:	NONE SPECIFIED
Alias Name:	CA99799F693700
Alias Type:	Federal Facility ID
Alias Name:	J09CA0041
Alias Type:	INPR
Alias Name:	80000027
Alias Type:	Envirostor ID Number

(CAMFP) SCHOOL DISTRICT (Continued) **S107735757**

Completed Info:
Completed Area Name: Not reported
Completed Sub Area Name: Not reported
Completed Document Type: Not reported
Completed Date: Not reported
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

D17 **COSTA MESA AF PLT** **CA ENVIROSTOR** **S107736173**
NW **N/A**
< 1/8 **COSTA MESA, CA**
0.116 mi.
613 ft. **Site 2 of 3 in cluster D**

Relative:
Lower

Actual:
56 ft.

ENVIROSTOR:
Site Type: Military Evaluation
Site Type Detailed: FUDS
Acres: Not reported
NPL: NO
Regulatory Agencies: SMBRP
Lead Agency: SMBRP
Program Manager: Not reported
Supervisor: Douglas Bautista
Division Branch: Cleanup Cypress
Facility ID: 80000231
Site Code: Not reported
Assembly: 74
Senate: 37
Special Program: Not reported
Status: Inactive - Needs Evaluation
Status Date: 07/01/2005
Restricted Use: NO
Site Mgmt. Req.: NONE SPECIFIED
Funding: DERA
Latitude: 33.675
Longitude: -117.9166
APN: NONE SPECIFIED
Past Use: NONE SPECIFIED
Potential COC: NONE SPECIFIED
Confirmed COC: NONE SPECIFIED, NONE SPECIFIED
Potential Description: NONE SPECIFIED
Alias Name: CA99799F542000
Alias Type: Federal Facility ID
Alias Name: J09CA0311
Alias Type: INPR
Alias Name: 80000231
Alias Type: Envirostor ID Number

COSTA MESA AF PLT (Continued) **S107736173**

Completed Info:
Completed Area Name: Not reported
Completed Sub Area Name: Not reported
Completed Document Type: Not reported
Completed Date: Not reported
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

D18	**(CMAFP) CITY COSTA MESA**	**CA ENVIROSTOR**	**S107735758**
NW			**N/A**
< 1/8	**COSTA MESA, CA**		
0.116 mi.			
613 ft.	**Site 3 of 3 in cluster D**		
Relative: Lower			
Actual: 56 ft.			

ENVIROSTOR:
Site Type: Military Evaluation
Site Type Detailed: FUDS
Acres: Not reported
NPL: NO
Regulatory Agencies: SMBRP
Lead Agency: SMBRP
Program Manager: Not reported
Supervisor: Douglas Bautista
Division Branch: Cleanup Cypress
Facility ID: 80000021
Site Code: Not reported
Assembly: 74
Senate: 37
Special Program: Not reported
Status: Inactive - Needs Evaluation
Status Date: 07/01/2005
Restricted Use: NO
Site Mgmt. Req.: NONE SPECIFIED
Funding: DERA
Latitude: 33.675
Longitude: -117.9166
APN: NONE SPECIFIED
Past Use: NONE SPECIFIED
Potential COC: NONE SPECIFIED
Confirmed COC: NONE SPECIFIED, NONE SPECIFIED
Potential Description: NONE SPECIFIED
Alias Name: CA99799F693600
Alias Type: Federal Facility ID
Alias Name: J09CA0035
Alias Type: INPR
Alias Name: 80000021
Alias Type: Envirostor ID Number

(CMAFP) CITY COSTA MESA (Continued) **S107735758**

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Inventory Project Report (INPR)
Completed Date: 03/04/1993
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

19
SW **438 PRINCETON DR**
1/8-1/4 **COSTA MESA, CA 92626**
0.129 mi.
681 ft.

EDR US Hist Cleaners **1015061357**
N/A

Relative: Higher
Actual: 68 ft.

EDR Historical Cleaners:
Name: STAR WHITE LAUNDRY
Year: 2004
Address: 438 PRINCETON DR

20
SSE **2550 COLUMBIA DR**
1/8-1/4 **COSTA MESA, CA 92626**
0.145 mi.
766 ft.

EDR US Hist Auto Stat **1015368100**
N/A

Relative: Higher
Actual: 70 ft.

EDR Historical Auto Stations:
Name: EDS AUTOMOTIVE
Year: 2010
Address: 2550 COLUMBIA DR

21
South **253 PRINCETON DR**
1/8-1/4 **COSTA MESA, CA 92626**
0.153 mi.
806 ft.

EDR US Hist Cleaners **1015028743**
N/A

Relative: Higher
Actual: 71 ft.

EDR Historical Cleaners:
Name: BROTHERS CARPET & UPHOLSTERY CLEANING
Year: 1999
Address: 253 PRINCETON DR

E22 WNW 1/8-1/4 0.157 mi. 831 ft.	**SHELL SERVICE STATION 2800 HARBOR COSTA MESA, CA 92626**	**CA HIST CORTESE CA LUST**	**S100855874 N/A**

Site 1 of 10 in cluster E

Relative: **Lower**

Actual: **59 ft.**

CORTESE:
Region: CORTESE
Facility County Code: 30
Reg By: LTNKA
Reg Id: 083000344T

LUST:
Region: STATE
Global Id: T0605900270
Latitude: 33.6733305
Longitude: -117.919058
Case Type: LUST Cleanup Site
Status: Completed - Case Closed
Status Date: 09/19/1994
Lead Agency: ORANGE COUNTY LOP
Case Worker: DB
Local Agency: ORANGE COUNTY LOP
RB Case Number: 083000344T
LOC Case Number: 93UT013
File Location: Local Agency
Potential Media Affect: Soil
Potential Contaminants of Concern: Gasoline
Site History: Not reported

Click here to access the California GeoTracker records for this facility:

Contact:
Global Id: T0605900270
Contact Type: Local Agency Caseworker
Contact Name: DENAMARIE BAKER
Organization Name: ORANGE COUNTY LOP
Address: 1241 E. DYER ROAD, STE. 120
City: SANTA ANA
Email: dbaker@ochca.com
Phone Number: 7144336255

Global Id: T0605900270
Contact Type: Regional Board Caseworker
Contact Name: CARL BERNHARDT
Organization Name: SANTA ANA RWQCB (REGION 8)
Address: 3737 MAIN STREET, SUITE 500
City: RIVERSIDE
Email: cbernhardt@waterboards.ca.gov
Phone Number: 9517824495

Status History:
Global Id: T0605900270
Status: Completed - Case Closed
Status Date: 09/19/1994

Global Id: T0605900270
Status: Open - Case Begin Date
Status Date: 02/01/1993

SHELL SERVICE STATION (Continued) **S100855874**

Regulatory Activities:

Global Id:	T0605900270
Action Type:	Other
Date:	01/01/1950
Action:	Leak Discovery
Global Id:	T0605900270
Action Type:	Other
Date:	01/01/1950
Action:	Leak Reported
Global Id:	T0605900270
Action Type:	REMEDIATION
Date:	01/01/1950
Action:	Excavation

Region:	STATE
Global Id:	T0605997625
Latitude:	33.67372
Longitude:	-117.918856
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	03/31/1988
Lead Agency:	ORANGE COUNTY LOP
Case Worker:	DB
Local Agency:	ORANGE COUNTY LOP
RB Case Number:	Not reported
LOC Case Number:	86UT122
File Location:	Local Agency
Potential Media Affect:	Under Investigation
Potential Contaminants of Concern:	Other Solvent or Non-Petroleum Hydrocarbon
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0605997625
Contact Type:	Local Agency Caseworker
Contact Name:	DENAMARIE BAKER
Organization Name:	ORANGE COUNTY LOP
Address:	1241 E. DYER ROAD, STE. 120
City:	SANTA ANA
Email:	dbaker@ochca.com
Phone Number:	7144336255
Global Id:	T0605997625
Contact Type:	Regional Board Caseworker
Contact Name:	CARL BERNHARDT
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	cbernhardt@waterboards.ca.gov
Phone Number:	9517824495

Status History:

Global Id:	T0605997625

SHELL SERVICE STATION (Continued) **S100855874**

Status:	Completed - Case Closed
Status Date:	03/31/1988
Global Id:	T0605997625
Status:	Completed - Case Closed
Status Date:	03/31/1988
Global Id:	T0605997625
Status:	Open - Case Begin Date
Status Date:	07/29/1986

ORANGE CO. LUST:

Region:	ORANGE
Facility Id:	93UT013
Current Status:	Certification (Case Closed)
Released Substance:	Gasoline-Automotive (motor gasoline and additives), leaded & unleaded
Date Closed:	09/19/1994
Case Type:	Soil Only
Record ID:	RO0001192
Region:	ORANGE
Facility Id:	86UT122
Current Status:	Certification (Case Closed)
Released Substance:	Hydrocarbons
Date Closed:	06/24/1986
Case Type:	Undetermined
Record ID:	RO0001237

LUST REG 8:

Region:	8
County:	Orange
Regional Board:	Santa Ana Region
Facility Status:	Case Closed
Case Number:	083000344T
Local Case Num:	93UT013
Case Type:	Soil only
Substance:	Gasoline
Qty Leaked:	0
Abate Method:	Not reported
Cross Street:	Not reported
Enf Type:	Not reported
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Close Tank
Leak Cause:	Unknown
Leak Source:	Unknown
Global ID:	T0605900270
How Stopped Date:	9/9/9999
Enter Date:	Not reported
Review Date:	Not reported
Prelim Assess:	Not reported
Discover Date:	2/1/1993
Enforcement Date:	Not reported
Close Date:	9/19/1994
Workplan:	Not reported

SHELL SERVICE STATION (Continued) **S100855874**

Pollution Char:	Not reported
Remed Plan:	Not reported
Remed Action:	Not reported
Monitoring:	Not reported
Enter Date:	Not reported
GW Qualifies:	Not reported
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.6733305
Longitude:	-117.919058
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	1
MTBE Tested:	Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.
MTBE Class:	*
Staff:	CAB
Staff Initials:	AR
Lead Agency:	Local Agency
Local Agency:	30000L
Hydr Basin #:	Not reported
Beneficial:	MUN
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Summary:	Not reported

Region:	8
County:	Orange
Regional Board:	Santa Ana Region
Facility Status:	Case Closed
Case Number:	Not reported
Local Case Num:	86UT122
Case Type:	Undefined
Substance:	Hydrocarbons
Qty Leaked:	0
Abate Method:	Not reported
Cross Street:	Not reported
Enf Type:	Not reported
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Close Tank
Leak Cause:	Unknown
Leak Source:	Unknown
Global ID:	T0605997625
How Stopped Date:	9/9/9999
Enter Date:	Not reported
Review Date:	Not reported
Prelim Assess:	Not reported
Discover Date:	1/1/1965
Enforcement Date:	Not reported
Close Date:	6/24/1986
Workplan:	Not reported

SHELL SERVICE STATION (Continued) **S100855874**

Pollution Char: Not reported
Remed Plan: Not reported
Remed Action: Not reported
Monitoring: Not reported
Enter Date: Not reported
GW Qualifies: Not reported
Soil Qualifies: Not reported
Operator: Not reported
Facility Contact: Not reported
Interim: Not reported
Oversite Program: LUST
Latitude: Not reported
Longitude: Not reported
MTBE Date: Not reported
Max MTBE GW: Not reported
MTBE Concentration: 0
Max MTBE Soil: Not reported
MTBE Fuel: 0
MTBE Tested: Not Required to be Tested.
MTBE Class: *
Staff: CAB
Staff Initials: AR
Lead Agency: Local Agency
Local Agency: 30000L
Hydr Basin #: Not reported
Beneficial: MUN
Priority: Not reported
Cleanup Fund Id: Not reported
Work Suspended: Not reported
Summary: Not reported

E23
WNW
1/8-1/4
0.157 mi.
831 ft.

SHELL OIL CO
2800 N HARBOR/ ADAMS
COSTA MESA, CA 92626

Site 2 of 10 in cluster E

RCRA NonGen / NLR **1000288491**
FINDS **CAD981459100**
CA FID UST

Relative:
Lower

Actual:
59 ft.

RCRA NonGen / NLR:
Date form received by agency: 10/12/2000
Facility name: SHELL OIL CO
Facility address: 2800 N HARBOR/ ADAMS
COSTA MESA, CA 92626
EPA ID: CAD981459100
Mailing address: P O BOX 4453
HOUSTON, TX 772104453
Contact: SONDRA BIENVENU
Contact address: 777 WALKER ST
HOUSTON, TX 77002
Contact country: US
Contact telephone: (713) 241-5036
Contact email: Not reported
EPA Region: 09
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: NOT REQUIRED

SHELL OIL CO (Continued) **1000288491**

Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	EQUILON ENTERPRISES LLC
Owner/operator address:	P O BOX 4453 HOUSTON, TX 77210
Owner/operator country:	Not reported
Owner/operator telephone:	(713) 241-2258
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Historical Generators:

Date form received by agency:	09/01/1996
Facility name:	SHELL OIL CO
Classification:	Small Quantity Generator

Hazardous Waste Summary:

Waste code:	D001
Waste name:	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code:	D018
Waste name:	BENZENE

Violation Status:	No violations found

SHELL OIL CO (Continued) **1000288491**

FINDS:

Registry ID: 110002714643

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

CA FID UST:

Facility ID:	30000397
Regulated By:	UTNKA
Regulated ID:	Not reported
Cortese Code:	Not reported
SIC Code:	Not reported
Facility Phone:	7145451729
Mail To:	Not reported
Mailing Address:	P O BOX
Mailing Address 2:	Not reported
Mailing City,St,Zip:	COSTA MESA 92626
Contact:	Not reported
Contact Phone:	Not reported
DUNs Number:	Not reported
NPDES Number:	Not reported
EPA ID:	Not reported
Comments:	Not reported
Status:	Active

E24 **AVO ASYAN** **CA HIST UST** **U001576782**
WNW **2800 HARBOR BLVD** **N/A**
1/8-1/4 **COSTA MESA, CA 92626**
0.157 mi.
831 ft. **Site 3 of 10 in cluster E**

Relative:
Lower

Actual:
59 ft.

HIST UST:

Region:	STATE
Facility ID:	00000001399
Facility Type:	Gas Station
Other Type:	Not reported
Total Tanks:	0004
Contact Name:	SAME
Telephone:	7145451729
Owner Name:	SHELL OIL COMPANY
Owner Address:	P.O. BOX 4848
Owner City,St,Zip:	ANAHEIM, CA 92803
Tank Num:	001
Container Num:	1
Year Installed:	1972
Tank Capacity:	00008000
Tank Used for:	PRODUCT
Type of Fuel:	PREMIUM
Tank Construction:	1/4 inches

AVO ASYAN (Continued) **U001576782**

Leak Detection:	Stock Inventor, 10
Tank Num:	002
Container Num:	2
Year Installed:	1972
Tank Capacity:	00008000
Tank Used for:	PRODUCT
Type of Fuel:	REGULAR
Tank Construction:	1/4 inches
Leak Detection:	Stock Inventor, 10
Tank Num:	003
Container Num:	3
Year Installed:	1972
Tank Capacity:	00005000
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Tank Construction:	1/4 inches
Leak Detection:	Stock Inventor, 10
Tank Num:	004
Container Num:	4
Year Installed:	1972
Tank Capacity:	00005000
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Tank Construction:	1/4 inches
Leak Detection:	Stock Inventor, 10

E25 **SHELL (1818-1507)** **CA UST** **U003803416**
WNW **2800 HARBOR BLVD** **CA SWEEPS UST** **N/A**
1/8-1/4 **COSTA MESA, CA 92626**
0.157 mi.
831 ft. **Site 4 of 10 in cluster E**

Relative:
Lower

Actual:
59 ft.

UST:

Facility ID:	3968
Latitude:	33.67348
Longitude:	-117.91919

SWEEPS UST:

Status:	Active
Comp Number:	3968
Number:	9
Board Of Equalization:	44-000074
Referral Date:	09-30-92
Action Date:	09-15-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	Not reported
Swrcb Tank Id:	30-000-003968-000001
Actv Date:	Not reported
Capacity:	550
Tank Use:	PETROLEUM
Stg:	P
Content:	Not reported
Number Of Tanks:	5

SHELL (1818-1507) (Continued) **U003803416**

Status:	Active
Comp Number:	3968
Number:	9
Board Of Equalization:	44-000074
Referral Date:	09-30-92
Action Date:	09-15-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	Not reported
Swrcb Tank Id:	30-000-003968-000003
Actv Date:	Not reported
Capacity:	5000
Tank Use:	M.V. FUEL
Stg:	P
Content:	DIESEL
Number Of Tanks:	Not reported

Status:	Active
Comp Number:	3968
Number:	9
Board Of Equalization:	44-000074
Referral Date:	09-30-92
Action Date:	09-15-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	Not reported
Swrcb Tank Id:	30-000-003968-000004
Actv Date:	Not reported
Capacity:	5000
Tank Use:	M.V. FUEL
Stg:	P
Content:	DIESEL
Number Of Tanks:	Not reported

Status:	Active
Comp Number:	3968
Number:	9
Board Of Equalization:	44-000074
Referral Date:	09-30-92
Action Date:	09-15-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	Not reported
Swrcb Tank Id:	30-000-003968-000005
Actv Date:	Not reported
Capacity:	7500
Tank Use:	M.V. FUEL
Stg:	P
Content:	REG UNLEADED
Number Of Tanks:	Not reported

Status:	Active
Comp Number:	3968
Number:	9
Board Of Equalization:	44-000074
Referral Date:	09-30-92
Action Date:	09-15-92

SHELL (1818-1507) (Continued) **U003803416**

Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	Not reported
Swrcb Tank Id:	30-000-003968-000006
Actv Date:	Not reported
Capacity:	6000
Tank Use:	M.V. FUEL
Stg:	P
Content:	REG UNLEADED
Number Of Tanks:	Not reported

F26
West
1/8-1/4
0.158 mi.
833 ft.

2750 HARBOR BLVD
COSTA MESA, CA 92626

Site 1 of 2 in cluster F

EDR US Hist Cleaners **1015032931**
N/A

Relative:
Higher

Actual:
62 ft.

EDR Historical Cleaners:

Name:	CROWN CLEANERS
Year:	2003
Address:	2750 HARBOR BLVD
Name:	CROWN CLEANERS
Year:	2004
Address:	2750 HARBOR BLVD
Name:	CROWN CLEANERS
Year:	2005
Address:	2750 HARBOR BLVD
Name:	CROWN CLEANERS
Year:	2006
Address:	2750 HARBOR BLVD
Name:	CROWN CLEANERS
Year:	2008
Address:	2750 HARBOR BLVD
Name:	CROWN CLEANERS
Year:	2010
Address:	2750 HARBOR BLVD
Name:	CROWN CLEANERS
Year:	2011
Address:	2750 HARBOR BLVD
Name:	CROWN CLEANERS
Year:	2012
Address:	2750 HARBOR BLVD

F27
West
1/8-1/4
0.158 mi.
833 ft.

CROWN CLEANERS
2750 HARBOR BLVD
COSTA MESA, CA 92626

Site 2 of 2 in cluster F

CA DRYCLEANERS **1000437498**
CA EMI **N/A**

Relative:
Higher

Actual:
62 ft.

DRYCLEANERS:

EPA Id:	CAL000022365
NAICS Code:	81232
NAICS Description:	Drycleaning and Laundry Services (except Coin-Operated)
SIC Code:	7211
SIC Description:	Power Laundries, Family and Commercial
Create Date:	05/09/1990
Facility Active:	Yes
Inactive Date:	Not reported
Facility Addr2:	Not reported
Owner Name:	CHIN CHONG
Owner Address:	2070 VIA MARIPOSA EAST #P
Owner Address 2:	Not reported
Owner Telephone:	9496378966
Contact Name:	CHIN CHONG/OWNER
Contact Address:	2750 HARBOR BLVD
Contact Address 2:	Not reported
Contact Telephone:	7145458036
EDR Link ID:	CAL000022365

EMI:

Year:	1987
County Code:	30
Air Basin:	SC
Facility ID:	55485
Air District Name:	SC
SIC Code:	7216
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	3
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1990
County Code:	30
Air Basin:	SC
Facility ID:	55485
Air District Name:	SC
SIC Code:	7216
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0

CROWN CLEANERS (Continued) **1000437498**

Part. Matter 10 Micrometers & Smllr Tons/Yr: 0

Year:	1990
County Code:	30
Air Basin:	SC
Facility ID:	64616
Air District Name:	SC
SIC Code:	5812
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1993
County Code:	30
Air Basin:	SC
Facility ID:	55485
Air District Name:	SC
SIC Code:	7216
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1995
County Code:	30
Air Basin:	SC
Facility ID:	55485
Air District Name:	SC
SIC Code:	7216
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

G28 **KERM RIMA HARDWARE, INC.** **CA HIST UST** **U001576816**
WSW **2666 HARBOR BLVD** **N/A**
1/8-1/4 **COSTA MESA, CA 92626**
0.159 mi.
842 ft. **Site 1 of 3 in cluster G**

Relative: Higher

Actual: 67 ft.

HIST UST:

Region:	STATE
Facility ID:	00000008131
Facility Type:	Other
Other Type:	HARDWARE INC.
Total Tanks:	0001
Contact Name:	Not reported
Telephone:	7145467080
Owner Name:	KERM RIMA HARDWARE, INC.
Owner Address:	2666 HARBOR BLVD.
Owner City,St,Zip:	COSTA MESA, CA 92626

Tank Num:	001
Container Num:	01
Year Installed:	Not reported
Tank Capacity:	00005000
Tank Used for:	PRODUCT
Type of Fuel:	Not reported
Tank Construction:	Not reported
Leak Detection:	None

G29 **PLAINS HOME CENTER** **CA LUST** **U003783820**
WSW **2666 HARBOR BLVD** **CA UST** **N/A**
1/8-1/4 **COSTA MESA, CA 92626**
0.159 mi.
842 ft. **Site 2 of 3 in cluster G**

Relative: Higher

Actual: 67 ft.

LUST:

Region:	STATE
Global Id:	T0605900242
Latitude:	33.66999
Longitude:	-117.918594
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	03/27/2003
Lead Agency:	ORANGE COUNTY LOP
Case Worker:	DB
Local Agency:	ORANGE COUNTY LOP
RB Case Number:	083000307T
LOC Case Number:	86UT157
File Location:	Local Agency
Potential Media Affect:	Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern:	Stoddard solvent / Mineral Spriits / Distillates
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0605900242
Contact Type:	Regional Board Caseworker
Contact Name:	TOM E. MBEKE-EKANEM
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE

PLAINS HOME CENTER (Continued) **U003783820**

Email:	tmbeke-ekanem@waterboards.ca.gov
Phone Number:	9513202007
Global Id:	T0605900242
Contact Type:	Local Agency Caseworker
Contact Name:	DENAMARIE BAKER
Organization Name:	ORANGE COUNTY LOP
Address:	1241 E. DYER ROAD, STE. 120
City:	SANTA ANA
Email:	dbaker@ochca.com
Phone Number:	7144336255

Status History:

Global Id:	T0605900242
Status:	Completed - Case Closed
Status Date:	03/27/2003
Global Id:	T0605900242
Status:	Open - Case Begin Date
Status Date:	08/13/1986

Regulatory Activities:

Global Id:	T0605900242
Action Type:	Other
Date:	01/01/1950
Action:	Leak Discovery
Global Id:	T0605900242
Action Type:	ENFORCEMENT
Date:	04/17/2003
Action:	LOP Case Closure Summary to RB
Global Id:	T0605900242
Action Type:	Other
Date:	01/01/1950
Action:	Leak Reported
Global Id:	T0605900242
Action Type:	REMEDIATION
Date:	01/01/1950
Action:	Soil Vapor Extraction (SVE)

ORANGE CO. LUST:

Region:	ORANGE
Facility Id:	86UT157
Current Status:	Certification (Case Closed)
Released Substance:	Paint thinner
Date Closed:	05/23/2003
Case Type:	Other Ground Water
Record ID:	RO0002179

LUST REG 8:

Region:	8
County:	Orange

PLAINS HOME CENTER (Continued) **U003783820**

Regional Board:	Santa Ana Region
Facility Status:	Case Closed
Case Number:	083000307T
Local Case Num:	86UT157
Case Type:	Other ground water affected
Substance:	Paint Thinner
Qty Leaked:	0
Abate Method:	Not reported
Cross Street:	Not reported
Enf Type:	Not reported
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Close Tank
Leak Cause:	Unknown
Leak Source:	Tank
Global ID:	T0605900242
How Stopped Date:	9/9/9999
Enter Date:	Not reported
Review Date:	Not reported
Prelim Assess:	Not reported
Discover Date:	8/13/1986
Enforcement Date:	Not reported
Close Date:	3/27/2003
Workplan:	Not reported
Pollution Char:	Not reported
Remed Plan:	Not reported
Remed Action:	Not reported
Monitoring:	Not reported
Enter Date:	Not reported
GW Qualifies:	=
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.6696696
Longitude:	-117.91903
MTBE Date:	5/3/2002
Max MTBE GW:	4
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	0
MTBE Tested:	MTBE Detected. Site tested for MTBE & MTBE detected
MTBE Class:	*
Staff:	TME
Staff Initials:	AR
Lead Agency:	Local Agency
Local Agency:	30000L
Hydr Basin #:	Not reported
Beneficial:	MUN
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported

Summary: Not reported

UST:

Facility ID: 6441

PLAINS HOME CENTER (Continued) **U003783820**

Latitude: 33.66968
Longitude: -117.91913

G30
WSW **2640 HARBOR BLVD**
1/8-1/4 **COSTA MESA, CA 92626**
0.160 mi.
843 ft. **Site 3 of 3 in cluster G**

EDR US Hist Auto Stat **1015375162**
N/A

Relative:
Higher

Actual:
68 ft.

EDR Historical Auto Stations:
Name: A & S AUTO REPAIR
Year: 2007
Address: 2640 HARBOR BLVD

H31
WSW **2626 HARBOR BLVD**
1/8-1/4 **COSTA MESA, CA 92626**
0.160 mi.
845 ft. **Site 1 of 3 in cluster H**

EDR US Hist Auto Stat **1015374176**
N/A

Relative:
Higher

Actual:
68 ft.

EDR Historical Auto Stations:
Name: COSTA MESA LINCOLN MERCURY
Year: 2003
Address: 2626 HARBOR BLVD

Name: COSTA MESA LINCOLNMERCURY INC
Year: 2011
Address: 2626 HARBOR BLVD

H32 **COSTA MESA LINCOLN MERCURY INC**
WSW **2626 HARBOR BLVD**
1/8-1/4 **COSTA MESA, CA 92626**
0.161 mi.
848 ft. **Site 2 of 3 in cluster H**

RCRA-SQG **1000320802**
FINDS **CAD981582281**
CA UST
CA HIST UST

Relative:
Higher

Actual:
68 ft.

RCRA-SQG:
Date form received by agency: 01/04/1993
Facility name: COSTA MESA LINCOLN MERCURY INC
Facility address: 2626 HARBOR BLVD
COSTA MESA, CA 92626
EPA ID: CAD981582281
Contact: BOB VLISS
Contact address: 2626 HARBOR BLVD
COSTA MESA, CA 92626
Contact country: US
Contact telephone: (714) 540-5630
Contact email: Not reported
EPA Region: 09
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

COSTA MESA LINCOLN MERCURY INC (Continued) **1000320802**

Owner/Operator Summary:

Owner/operator name:	COSTA MESA LINCOLN MERCURY INC
Owner/operator address:	2626 HARBOR BLVD COSTA MESA, CA 92626
Owner/operator country:	Not reported
Owner/operator telephone:	(714) 540-5630
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

FINDS:

Registry ID: 110002722965

Environmental Interest/Information System

California Hazardous Waste Tracking System - Datamart (HWTS-DATAMART) provides California with information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

COSTA MESA LINCOLN MERCURY INC (Continued) **1000320802**

UST:

Facility ID:	1834
Latitude:	33.66879
Longitude:	-117.91912

HIST UST:

Region:	STATE
Facility ID:	00000009686
Facility Type:	Other
Other Type:	AUTO DEALER
Total Tanks:	0001
Contact Name:	BOB VLISS
Telephone:	7145405630
Owner Name:	JOHNSON & SON
Owner Address:	2626 HARBOR BLVD
Owner City,St,Zip:	COSTA MESA, CA 92626
Tank Num:	001
Container Num:	1
Year Installed:	1969
Tank Capacity:	00000500
Tank Used for:	WASTE
Type of Fuel:	WASTE OIL
Tank Construction:	Not reported
Leak Detection:	None

H33
WSW
1/8-1/4
0.161 mi.
848 ft.

JOHNSON LINCOLN/MERCURY
2626 HARBOR
COSTA MESA, CA 92626

CA HIST CORTESE
CA LUST
CA EMI

S102431979
N/A

Site 3 of 3 in cluster H

Relative:
Higher

Actual:
68 ft.

CORTESE:

Region:	CORTESE
Facility County Code:	30
Reg By:	LTNKA
Reg Id:	083001427T

LUST:

Region:	STATE
Global Id:	T0605901080
Latitude:	33.6688346
Longitude:	-117.919042
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	02/28/1991
Lead Agency:	ORANGE COUNTY LOP
Case Worker:	DB
Local Agency:	ORANGE COUNTY LOP
RB Case Number:	083001427T
LOC Case Number:	90UT041
File Location:	Local Agency
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Waste Oil / Motor / Hydraulic / Lubricating
Site History:	Not reported

JOHNSON LINCOLN/MERCURY (Continued) **S102431979**

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0605901080
Contact Type:	Regional Board Caseworker
Contact Name:	PATRICIA HANNON
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	phannon@waterboards.ca.gov
Phone Number:	Not reported
Global Id:	T0605901080
Contact Type:	Local Agency Caseworker
Contact Name:	DENAMARIE BAKER
Organization Name:	ORANGE COUNTY LOP
Address:	1241 E. DYER ROAD, STE. 120
City:	SANTA ANA
Email:	dbaker@ochca.com
Phone Number:	7144336255

Status History:

Global Id:	T0605901080
Status:	Completed - Case Closed
Status Date:	02/28/1991
Global Id:	T0605901080
Status:	Open - Case Begin Date
Status Date:	02/08/1990

Regulatory Activities:

Global Id:	T0605901080
Action Type:	Other
Date:	01/01/1950
Action:	Leak Discovery
Global Id:	T0605901080
Action Type:	Other
Date:	01/01/1950
Action:	Leak Reported

ORANGE CO. LUST:

Region:	ORANGE
Facility Id:	90UT041
Current Status:	Certification (Case Closed)
Released Substance:	Waste oil/Used oil
Date Closed:	02/28/1991
Case Type:	Soil Only
Record ID:	RO0001857

LUST REG 8:

Region:	8
County:	Orange
Regional Board:	Santa Ana Region

JOHNSON LINCOLN/MERCURY (Continued) **S102431979**

Facility Status:	Case Closed
Case Number:	083001427T
Local Case Num:	90UT041
Case Type:	Soil only
Substance:	Waste Oil
Qty Leaked:	0
Abate Method:	Not reported
Cross Street:	Not reported
Enf Type:	Not reported
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Close Tank
Leak Cause:	Unknown
Leak Source:	Unknown
Global ID:	T0605901080
How Stopped Date:	9/9/9999
Enter Date:	Not reported
Review Date:	Not reported
Prelim Assess:	Not reported
Discover Date:	2/8/1990
Enforcement Date:	Not reported
Close Date:	2/28/1991
Workplan:	Not reported
Pollution Char:	Not reported
Remed Plan:	Not reported
Remed Action:	Not reported
Monitoring:	Not reported
Enter Date:	Not reported
GW Qualifies:	Not reported
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.6688346
Longitude:	-117.919042
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	0
MTBE Tested:	Not Required to be Tested.
MTBE Class:	*
Staff:	PAH
Staff Initials:	AR
Lead Agency:	Local Agency
Local Agency:	30000L
Hydr Basin #:	Not reported
Beneficial:	MUN
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Summary:	Not reported

EMI:

Year:	1987
County Code:	30

JOHNSON LINCOLN/MERCURY (Continued) **S102431979**

Air Basin:	SC
Facility ID:	11168
Air District Name:	SC
SIC Code:	5511
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	5
Reactive Organic Gases Tons/Yr:	5
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1990
County Code:	30
Air Basin:	SC
Facility ID:	11168
Air District Name:	SC
SIC Code:	5511
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	1
Reactive Organic Gases Tons/Yr:	1
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	2002
County Code:	30
Air Basin:	SC
Facility ID:	96905
Air District Name:	SC
SIC Code:	5511
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	1
Reactive Organic Gases Tons/Yr:	1
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	2003
County Code:	30
Air Basin:	SC
Facility ID:	96905
Air District Name:	SC
SIC Code:	5511
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported

JOHNSON LINCOLN/MERCURY (Continued) **S102431979**

Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	1
Reactive Organic Gases Tons/Yr:	1
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	2004
County Code:	30
Air Basin:	SC
Facility ID:	96905
Air District Name:	SC
SIC Code:	5511
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0.61554
Reactive Organic Gases Tons/Yr:	0.61
Carbon Monoxide Emissions Tons/Yr:	0.00332
NOX - Oxides of Nitrogen Tons/Yr:	0.0123
SOX - Oxides of Sulphur Tons/Yr:	0.0000787
Particulate Matter Tons/Yr:	0.000711
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	2006
County Code:	30
Air Basin:	SC
Facility ID:	96905
Air District Name:	SC
SIC Code:	5511
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	.7649891044739404588
Reactive Organic Gases Tons/Yr:	.706
Carbon Monoxide Emissions Tons/Yr:	.004
NOX - Oxides of Nitrogen Tons/Yr:	.016
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	.001
Part. Matter 10 Micrometers & Smllr Tons/Yr:	.001

Year:	2007
County Code:	30
Air Basin:	SC
Facility ID:	96905
Air District Name:	SC
SIC Code:	5511
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	.7649891044739404588
Reactive Organic Gases Tons/Yr:	.706
Carbon Monoxide Emissions Tons/Yr:	.004
NOX - Oxides of Nitrogen Tons/Yr:	.016
SOX - Oxides of Sulphur Tons/Yr:	0

JOHNSON LINCOLN/MERCURY (Continued) **S102431979**

Particulate Matter Tons/Yr: .001
Part. Matter 10 Micrometers & Smllr Tons/Yr: .001

E34
West
1/8-1/4
0.170 mi.
900 ft.

KAMRAN HEIDARIAN
2799 HARBOR BLVD
COSTA MESA, CA 92626

Site 5 of 10 in cluster E

CA HIST UST **U001576815**
N/A

Relative:
Lower

Actual:
60 ft.

HIST UST:

Region:	STATE
Facility ID:	00000039171
Facility Type:	Gas Station
Other Type:	Not reported
Total Tanks:	0004
Contact Name:	Not reported
Telephone:	7147546348
Owner Name:	MOBIL OIL CORPORATION
Owner Address:	612 S. FLOWER STREET
Owner City,St,Zip:	LOS ANGELES, CA 90017

Tank Num:	001
Container Num:	1
Year Installed:	Not reported
Tank Capacity:	00009940
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Tank Construction:	Not reported
Leak Detection:	Stock Inventor

Tank Num:	002
Container Num:	2
Year Installed:	Not reported
Tank Capacity:	00008000
Tank Used for:	PRODUCT
Type of Fuel:	REGULAR
Tank Construction:	Not reported
Leak Detection:	Stock Inventor

Tank Num:	003
Container Num:	3
Year Installed:	Not reported
Tank Capacity:	00006000
Tank Used for:	PRODUCT
Type of Fuel:	PREMIUM
Tank Construction:	Not reported
Leak Detection:	Stock Inventor

Tank Num:	004
Container Num:	4
Year Installed:	Not reported
Tank Capacity:	00000280
Tank Used for:	WASTE
Type of Fuel:	WASTE OIL
Tank Construction:	Not reported
Leak Detection:	Stock Inventor

E35 **EDR US Hist Auto Stat** **1015385069**
West **2799 HARBOR BLVD** **N/A**
1/8-1/4 **COSTA MESA, CA 92626**
0.170 mi.
900 ft. **Site 6 of 10 in cluster E**

Relative:
Lower

Actual:
60 ft.

EDR Historical Auto Stations:

Name:	MESA VERDE MOBIL
Year:	2002
Address:	2799 HARBOR BLVD
Name:	MESA VERDE MOBILE
Year:	2003
Address:	2799 HARBOR BLVD
Name:	MESA VERDE MOBILE
Year:	2005
Address:	2799 HARBOR BLVD

E36 **MOBIL STATION (18-HD4)** **CA HIST CORTESE** **U003783785**
West **2799 HARBOR BLVD** **CA LUST** **N/A**
1/8-1/4 **COSTA MESA, CA 92626** **CA FID UST**
0.170 mi. **CA UST**
900 ft. **Site 7 of 10 in cluster E** **CA SWEEPS UST**

Relative:
Lower

Actual:
60 ft.

CORTESE:

Region:	CORTESE
Facility County Code:	30
Reg By:	LTNKA
Reg Id:	083000278T

LUST:

Region:	STATE
Global Id:	T0605900216
Latitude:	33.6731905
Longitude:	-117.919453
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	05/24/2002
Lead Agency:	ORANGE COUNTY LOP
Case Worker:	DB
Local Agency:	ORANGE COUNTY LOP
RB Case Number:	083000278T
LOC Case Number:	94UT024
File Location:	Local Agency
Potential Media Affect:	Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0605900216
Contact Type:	Local Agency Caseworker
Contact Name:	DENAMARIE BAKER
Organization Name:	ORANGE COUNTY LOP
Address:	1241 E. DYER ROAD, STE. 120
City:	SANTA ANA
Email:	dbaker@ochca.com
Phone Number:	7144336255

MOBIL STATION (18-HD4) (Continued) **U003783785**

Global Id:	T0605900216
Contact Type:	Regional Board Caseworker
Contact Name:	ROSE SCOTT
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	rscott@waterboards.ca.gov
Phone Number:	9513206375

Status History:

Global Id:	T0605900216
Status:	Completed - Case Closed
Status Date:	05/24/2002
Global Id:	T0605900216
Status:	Open - Case Begin Date
Status Date:	05/04/1994

Regulatory Activities:

Global Id:	T0605900216
Action Type:	Other
Date:	01/01/1950
Action:	Leak Discovery
Global Id:	T0605900216
Action Type:	Other
Date:	01/01/1950
Action:	Leak Reported
Global Id:	T0605900216
Action Type:	REMEDIATION
Date:	01/01/1950
Action:	Excavation
Global Id:	T0605900216
Action Type:	REMEDIATION
Date:	01/01/1950
Action:	Other (Use Description Field)

Region:	STATE
Global Id:	T0605914736
Latitude:	33.672934
Longitude:	-117.919765
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	05/13/1986
Lead Agency:	ORANGE COUNTY LOP
Case Worker:	DB
Local Agency:	ORANGE COUNTY LOP
RB Case Number:	Not reported
LOC Case Number:	86UT067
File Location:	Local Agency
Potential Media Affect:	Under Investigation
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

MOBIL STATION (18-HD4) (Continued) **U003783785**

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0605914736
Contact Type:	Regional Board Caseworker
Contact Name:	ROSE SCOTT
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	rscott@waterboards.ca.gov
Phone Number:	9513206375
Global Id:	T0605914736
Contact Type:	Local Agency Caseworker
Contact Name:	DENAMARIE BAKER
Organization Name:	ORANGE COUNTY LOP
Address:	1241 E. DYER ROAD, STE. 120
City:	SANTA ANA
Email:	dbaker@ochca.com
Phone Number:	7144336255

Status History:

Global Id:	T0605914736
Status:	Completed - Case Closed
Status Date:	05/13/1986
Global Id:	T0605914736
Status:	Open - Case Begin Date
Status Date:	05/13/1986

ORANGE CO. LUST:

Region:	ORANGE
Facility Id:	94UT024
Current Status:	Certification (Case Closed)
Released Substance:	Gasoline-Automotive (motor gasoline and additives), leaded & unleaded
Date Closed:	05/24/2002
Case Type:	Other Ground Water
Record ID:	RO0001522
Region:	ORANGE
Facility Id:	86UT067
Current Status:	Certification (Case Closed)
Released Substance:	Gasoline-Automotive (motor gasoline and additives), leaded & unleaded
Date Closed:	05/13/1986
Case Type:	Undetermined
Record ID:	RO0002435

LUST REG 8:

Region:	8
County:	Orange
Regional Board:	Santa Ana Region
Facility Status:	Case Closed
Case Number:	083000278T
Local Case Num:	94UT024

MOBIL STATION (18-HD4) (Continued) **U003783785**

Case Type:	Other ground water affected
Substance:	Gasoline
Qty Leaked:	0
Abate Method:	Not reported
Cross Street:	Not reported
Enf Type:	Not reported
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Close Tank
Leak Cause:	Unknown
Leak Source:	Unknown
Global ID:	T0605900216
How Stopped Date:	9/9/9999
Enter Date:	Not reported
Review Date:	Not reported
Prelim Assess:	Not reported
Discover Date:	5/4/1994
Enforcement Date:	Not reported
Close Date:	5/24/2002
Workplan:	Not reported
Pollution Char:	Not reported
Remed Plan:	Not reported
Remed Action:	Not reported
Monitoring:	Not reported
Enter Date:	Not reported
GW Qualifies:	Not reported
Soil Qualifies:	ND
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.6731905
Longitude:	-117.919453
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	10
MTBE Fuel:	1
MTBE Tested:	MTBE Detected. Site tested for MTBE & MTBE detected
MTBE Class:	*
Staff:	RS
Staff Initials:	AR
Lead Agency:	Local Agency
Local Agency:	30000L
Hydr Basin #:	Not reported
Beneficial:	MUN
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Summary:	Not reported

Region:	8
County:	Orange
Regional Board:	Santa Ana Region
Facility Status:	Case Closed
Case Number:	Not reported
Local Case Num:	86UT067

MOBIL STATION (18-HD4) (Continued) **U003783785**

Case Type:	Undefined
Substance:	Gasoline
Qty Leaked:	0
Abate Method:	Not reported
Cross Street:	Not reported
Enf Type:	Not reported
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Close Tank
Leak Cause:	Unknown
Leak Source:	Unknown
Global ID:	T0605914736
How Stopped Date:	9/9/9999
Enter Date:	Not reported
Review Date:	Not reported
Prelim Assess:	Not reported
Discover Date:	1/1/1965
Enforcement Date:	Not reported
Close Date:	5/13/1986
Workplan:	Not reported
Pollution Char:	Not reported
Remed Plan:	Not reported
Remed Action:	Not reported
Monitoring:	Not reported
Enter Date:	Not reported
GW Qualifies:	Not reported
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	Not reported
Longitude:	Not reported
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	1
MTBE Tested:	Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.
MTBE Class:	*
Staff:	RS
Staff Initials:	AR
Lead Agency:	Local Agency
Local Agency:	30000L
Hydr Basin #:	Not reported
Beneficial:	MUN
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Summary:	Not reported

CA FID UST:

Facility ID:	30017219
Regulated By:	UTNKA
Regulated ID:	Not reported
Cortese Code:	Not reported
SIC Code:	Not reported

MOBIL STATION (18-HD4) (Continued) **U003783785**

Facility Phone: 7147546348
Mail To: Not reported
Mailing Address: 3225 GALLOWS RD ATTN: EAR
Mailing Address 2: Not reported
Mailing City,St,Zip: COSTA MESA 92626
Contact: Not reported
Contact Phone: Not reported
DUNs Number: Not reported
NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Active

UST:
Facility ID: 6342
Latitude: 33.67297
Longitude: -117.9194

SWEEPS UST:
Status: Active
Comp Number: 6342
Number: 9
Board Of Equalization: 44-000400
Referral Date: 09-30-92
Action Date: 09-15-92
Created Date: 02-29-88
Tank Status: A
Owner Tank Id: Not reported
Swrcb Tank Id: 30-000-006342-000001
Actv Date: Not reported
Capacity: 1000
Tank Use: PETROLEUM
Stg: P
Content: Not reported
Number Of Tanks: 4

Status: Active
Comp Number: 6342
Number: 9
Board Of Equalization: 44-000400
Referral Date: 09-30-92
Action Date: 09-15-92
Created Date: 02-29-88
Tank Status: A
Owner Tank Id: Not reported
Swrcb Tank Id: 30-000-006342-000004
Actv Date: Not reported
Capacity: 12000
Tank Use: M.V. FUEL
Stg: P
Content: REG UNLEADED
Number Of Tanks: Not reported

Status: Active
Comp Number: 6342
Number: 9

MOBIL STATION (18-HD4) (Continued) **U003783785**

Board Of Equalization:	44-000400
Referral Date:	09-30-92
Action Date:	09-15-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	Not reported
Swrcb Tank Id:	30-000-006342-000005
Actv Date:	Not reported
Capacity:	10000
Tank Use:	M.V. FUEL
Stg:	P
Content:	LEADED
Number Of Tanks:	Not reported

Status:	Active
Comp Number:	6342
Number:	9
Board Of Equalization:	44-000400
Referral Date:	09-30-92
Action Date:	09-15-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	Not reported
Swrcb Tank Id:	30-000-006342-000006
Actv Date:	Not reported
Capacity:	10000
Tank Use:	M.V. FUEL
Stg:	P
Content:	DIESEL
Number Of Tanks:	Not reported

E37
WNW **2801 HARBOR BLVD**
1/8-1/4 **COSTA MESA, CA 92626**
0.171 mi.
904 ft. **Site 8 of 10 in cluster E**

EDR US Hist Cleaners **1015033760**
N/A

Relative:
Lower

Actual:
59 ft.

EDR Historical Cleaners:

Name:	EDEN CLEANERS
Year:	2001
Address:	2801 HARBOR BLVD
Name:	EDEN CLEANERS
Year:	2002
Address:	2801 HARBOR BLVD
Name:	EDEN CLEANERS
Year:	2003
Address:	2801 HARBOR BLVD
Name:	EDEN CLEANERS
Year:	2004
Address:	2801 HARBOR BLVD
Name:	EDEN CLEANERS
Year:	2005
Address:	2801 HARBOR BLVD

E38	**CHEVRON STATION #99706**	**CA UST**	**U003939064**
WNW	**2801 HARBOR BLVD # 99706**		**N/A**
1/8-1/4	**COSTA MESA, CA 92626**		
0.171 mi.			
904 ft.	**Site 9 of 10 in cluster E**		

Relative: **Lower**

Actual: **59 ft.**

UST:

Facility ID:	2079
Latitude:	33.67348
Longitude:	-117.91941

E39	**99706**	**CA LUST**	**U001576865**
WNW	**2801 HARBOR BLVD**	**CA HIST UST**	**N/A**
1/8-1/4	**COSTA MESA, CA 92627**		
0.171 mi.			
904 ft.	**Site 10 of 10 in cluster E**		

Relative: **Lower**

Actual: **59 ft.**

LUST:

Region:	STATE
Global Id:	T0605900388
Latitude:	33.6733165
Longitude:	-117.91945
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	04/04/2003
Lead Agency:	ORANGE COUNTY LOP
Case Worker:	DB
Local Agency:	ORANGE COUNTY LOP
RB Case Number:	083000486T
LOC Case Number:	89UT045
File Location:	Local Agency
Potential Media Affect:	Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0605900388
Contact Type:	Regional Board Caseworker
Contact Name:	TOM E. MBEKE-EKANEM
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	tmbeke-ekanem@waterboards.ca.gov
Phone Number:	9513202007
Global Id:	T0605900388
Contact Type:	Local Agency Caseworker
Contact Name:	DENAMARIE BAKER
Organization Name:	ORANGE COUNTY LOP
Address:	1241 E. DYER ROAD, STE. 120
City:	SANTA ANA
Email:	dbaker@ochca.com
Phone Number:	7144336255

Status History:

Global Id:	T0605900388
Status:	Completed - Case Closed
Status Date:	04/04/2003

99706 (Continued) **U001576865**

Global Id: T0605900388
Status: Open - Case Begin Date
Status Date: 02/16/1989

Regulatory Activities:

Global Id: T0605900388
Action Type: Other
Date: 01/01/1950
Action: Leak Stopped

Global Id: T0605900388
Action Type: ENFORCEMENT
Date: 04/04/2003
Action: LOP Case Closure Summary to RB

Global Id: T0605900388
Action Type: ENFORCEMENT
Date: 05/23/2003
Action: Closure/No Further Action Letter

Global Id: T0605900388
Action Type: Other
Date: 01/01/1950
Action: Leak Discovery

Global Id: T0605900388
Action Type: REMEDIATION
Date: 01/01/1950
Action: Soil Vapor Extraction (SVE)

Global Id: T0605900388
Action Type: REMEDIATION
Date: 01/01/1950
Action: Soil Vapor Extraction (SVE)

Global Id: T0605900388
Action Type: REMEDIATION
Date: 01/01/1950
Action: Soil Vapor Extraction (SVE)

Global Id: T0605900388
Action Type: REMEDIATION
Date: 01/01/1950
Action: Soil Vapor Extraction (SVE)

Global Id: T0605900388
Action Type: Other
Date: 01/01/1950
Action: Leak Reported

ORANGE CO. LUST:

Region: ORANGE
Facility Id: 89UT045
Current Status: Certification (Case Closed)
Released Substance: Gasoline-Automotive (motor gasoline and additives), leaded & unleaded

99706 (Continued) **U001576865**

Date Closed:	05/23/2003
Case Type:	Other Ground Water
Record ID:	RO0001937

LUST REG 8:

Region:	8
County:	Orange
Regional Board:	Santa Ana Region
Facility Status:	Case Closed
Case Number:	083000486T
Local Case Num:	89UT045
Case Type:	Other ground water affected
Substance:	Gasoline
Qty Leaked:	0
Abate Method:	Not reported
Cross Street:	Not reported
Enf Type:	CLOS
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Close Tank
Leak Cause:	Unknown
Leak Source:	Tank
Global ID:	T0605900388
How Stopped Date:	2/16/1989
Enter Date:	Not reported
Review Date:	Not reported
Prelim Assess:	Not reported
Discover Date:	2/16/1989
Enforcement Date:	Not reported
Close Date:	4/4/2003
Workplan:	Not reported
Pollution Char:	Not reported
Remed Plan:	Not reported
Remed Action:	Not reported
Monitoring:	Not reported
Enter Date:	Not reported
GW Qualifies:	=
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.6733165
Longitude:	-117.91945
MTBE Date:	11/8/2001
Max MTBE GW:	75
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	1
MTBE Tested:	MTBE Detected. Site tested for MTBE & MTBE detected
MTBE Class:	*
Staff:	TME
Staff Initials:	AR
Lead Agency:	Local Agency
Local Agency:	30000L
Hydr Basin #:	Not reported
Beneficial:	MUN

99706 (Continued) **U001576865**

Priority: Not reported
Cleanup Fund Id: Not reported
Work Suspended: Not reported
Summary: Not reported

HIST UST:

Region: STATE
Facility ID: 00000063233
Facility Type: Gas Station
Other Type: Not reported
Total Tanks: 0004
Contact Name: GRASSO,ANTHONY A.
Telephone: 7145454755
Owner Name: CHEVRON U.S.A. INC.
Owner Address: 575 MARKET
Owner City,St,Zip: SAN FRANCISCO, CA 94105

Tank Num: 001
Container Num: 1
Year Installed: Not reported
Tank Capacity: 00001000
Tank Used for: WASTE
Type of Fuel: Not reported
Tank Construction: 0000370 unknown
Leak Detection: Stock Inventor

Tank Num: 002
Container Num: 2
Year Installed: Not reported
Tank Capacity: 00010000
Tank Used for: PRODUCT
Type of Fuel: Not reported
Tank Construction: 0000370 unknown
Leak Detection: Stock Inventor

Tank Num: 003
Container Num: 3
Year Installed: Not reported
Tank Capacity: 00010000
Tank Used for: PRODUCT
Type of Fuel: Not reported
Tank Construction: 0000370 unknown
Leak Detection: Stock Inventor

Tank Num: 004
Container Num: 4
Year Installed: Not reported
Tank Capacity: 00010000
Tank Used for: PRODUCT
Type of Fuel: Not reported
Tank Construction: 0000370 unknown
Leak Detection: Stock Inventor

40 **CVS PHARMACY NO 8830** **RCRA-LQG** **1015753097**
WSW **2701 HARBOR BLVD** **CAR000234302**
1/8-1/4 **COSTA MESA, CA 92626**
0.172 mi.
910 ft.

Relative: Higher

Actual: 67 ft.

RCRA-LQG:

Date form received by agency:	01/03/2013
Facility name:	CVS PHARMACY NO 8830
Facility address:	2701 HARBOR BLVD COSTA MESA, CA 92626
EPA ID:	CAR000234302
Mailing address:	ONE CVS DR WOONSOCKET, RI 02895
Contact:	WENDY L BRANT
Contact address:	ONE CVS DR WOONSOCKET, RI 02895
Contact country:	US
Contact telephone:	401-765-1500
Contact email:	WENDY.BRANT@CVSCAREMARK.COM
EPA Region:	09
Classification:	Large Quantity Generator
Description:	Handler: generates 1,000 kg or more of hazardous waste during any calendar month; or generates more than 1 kg of acutely hazardous waste during any calendar month; or generates more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month; or generates 1 kg or less of acutely hazardous waste during any calendar month, and accumulates more than 1 kg of acutely hazardous waste at any time; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates more than 100 kg of that material at any time

Owner/Operator Summary:

Owner/operator name:	GARFIELD BEACH CVS LLC
Owner/operator address:	Not reported Not reported
Owner/operator country:	US
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	06/02/2006
Owner/Op end date:	Not reported
Owner/operator name:	MV PARTNERS
Owner/operator address:	695 TOWN CENTER DR STE 270 COSTA MESA, CA 92626
Owner/operator country:	US
Owner/operator telephone:	714-435-2102
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	01/08/1997
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No

CVS PHARMACY NO 8830 (Continued) **1015753097**

Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code:	D001
Waste name:	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
Waste code:	D002
Waste name:	A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.
Waste code:	P001
Waste name:	2H-1-BENZOPYRAN-2-ONE, 4-HYDROXY-3-(3-OXO-1-PHENYLBUTYL)-, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3%
Waste code:	P042
Waste name:	1,2-BENZENEDIOL, 4-[1-HYDROXY-2-(METHYLAMINO)ETHYL]-, (R)-
Waste code:	P075
Waste name:	NICOTINE, & SALTS
Waste code:	P081
Waste name:	NITROGLYCERINE (R)

Violation Status:	No violations found

I41
SW
1/8-1/4
0.173 mi.
914 ft.

2600 HARBOR BLVD
COSTA MESA, CA 92626

Site 1 of 5 in cluster I

EDR US Hist Auto Stat **1015371408**
N/A

Relative:
Higher

Actual:
69 ft.

EDR Historical Auto Stations:

Name:	NABERS COLLISION CTR
Year:	2002
Address:	2600 HARBOR BLVD
Name:	NABERS CDLC OLDSMBL BODY SHOP
Year:	2003
Address:	2600 HARBOR BLVD
Name:	NABERS OLDSMOBILE INC
Year:	2005
Address:	2600 HARBOR BLVD

I42
SW
1/8-1/4
0.173 mi.
914 ft.

NABERS CADILLAC, INC.
2600 HARBOR BLVD
COSTA MESA, CA 92626

Site 2 of 5 in cluster I

CA HIST CORTESE
CA LUST
CA HIST UST
CA CHMIRS

1000217861
N/A

Relative:
Higher

Actual:
69 ft.

CORTESE:

Region:	CORTESE
Facility County Code:	30
Reg By:	LTNKA
Reg Id:	083001390T

LUST:

Region:	STATE
Global Id:	T0605901050
Latitude:	33.667725
Longitude:	-117.918449
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	01/02/1992
Lead Agency:	ORANGE COUNTY LOP
Case Worker:	DB
Local Agency:	ORANGE COUNTY LOP
RB Case Number:	083001390T
LOC Case Number:	89UT216
File Location:	Local Agency
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Waste Oil / Motor / Hydraulic / Lubricating, Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0605901050
Contact Type:	Local Agency Caseworker
Contact Name:	DENAMARIE BAKER
Organization Name:	ORANGE COUNTY LOP
Address:	1241 E. DYER ROAD, STE. 120
City:	SANTA ANA
Email:	dbaker@ochca.com
Phone Number:	7144336255

NABERS CADILLAC, INC. (Continued) **1000217861**

Global Id:	T0605901050
Contact Type:	Regional Board Caseworker
Contact Name:	ROSE SCOTT
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	rscott@waterboards.ca.gov
Phone Number:	9513206375

Status History:

Global Id:	T0605901050
Status:	Completed - Case Closed
Status Date:	01/02/1992
Global Id:	T0605901050
Status:	Open - Case Begin Date
Status Date:	11/30/1989

Regulatory Activities:

Global Id:	T0605901050
Action Type:	Other
Date:	01/01/1950
Action:	Leak Discovery
Global Id:	T0605901050
Action Type:	Other
Date:	01/01/1950
Action:	Leak Reported

ORANGE CO. LUST:

Region:	ORANGE
Facility Id:	89UT216
Current Status:	Certification (Case Closed)
Released Substance:	Waste oil/Used oil
Date Closed:	01/02/1992
Case Type:	Soil Only
Record ID:	RO0001862
Region:	ORANGE
Facility Id:	89UT216
Current Status:	Not reported
Released Substance:	Motor oil
Date Closed:	01/02/1992
Case Type:	Not reported
Record ID:	RO0001862
Region:	ORANGE
Facility Id:	89UT216
Current Status:	Not reported
Released Substance:	Transmission fluid
Date Closed:	01/02/1992
Case Type:	Not reported
Record ID:	RO0001862
Region:	ORANGE

NABERS CADILLAC, INC. (Continued) **1000217861**

Facility Id:	89UT216
Current Status:	Not reported
Released Substance:	Gasoline-Automotive (motor gasoline and additives), leaded & unleaded
Date Closed:	01/02/1992
Case Type:	Not reported
Record ID:	RO0001862

LUST REG 8:

Region:	8
County:	Orange
Regional Board:	Santa Ana Region
Facility Status:	Case Closed
Case Number:	083001390T
Local Case Num:	89UT216
Case Type:	Soil only
Substance:	12035,800661
Qty Leaked:	0
Abate Method:	Not reported
Cross Street:	Not reported
Enf Type:	Not reported
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Close Tank
Leak Cause:	Unknown
Leak Source:	Unknown
Global ID:	T0605901050
How Stopped Date:	9/9/9999
Enter Date:	Not reported
Review Date:	Not reported
Prelim Assess:	Not reported
Discover Date:	11/30/1989
Enforcement Date:	Not reported
Close Date:	1/2/1992
Workplan:	Not reported
Pollution Char:	Not reported
Remed Plan:	Not reported
Remed Action:	Not reported
Monitoring:	Not reported
Enter Date:	Not reported
GW Qualifies:	Not reported
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.6682927
Longitude:	-117.91905
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	0
MTBE Tested:	Not Required to be Tested.
MTBE Class:	*
Staff:	RS
Staff Initials:	AR
Lead Agency:	Local Agency

NABERS CADILLAC, INC. (Continued) **1000217861**

Local Agency: 30000L
Hydr Basin #: Not reported
Beneficial: MUN
Priority: Not reported
Cleanup Fund Id: Not reported
Work Suspended: Not reported
Summary: Not reported

HIST UST:
Region: STATE
Facility ID: 00000020444
Facility Type: Other
Other Type: AUTO DEALERSHIP
Total Tanks: 0004
Contact Name: ROBERT ROGALSKI
Telephone: 7145409100
Owner Name: NABERS CADILLAC, INC.
Owner Address: 2600 HARBOR BLVD.
Owner City,St,Zip: COSTA MESA, CA 92626

Tank Num: 001
Container Num: 1
Year Installed: 1967
Tank Capacity: 00006000
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Tank Construction: Not reported
Leak Detection: None

Tank Num: 002
Container Num: 2
Year Installed: 1967
Tank Capacity: 00001000
Tank Used for: PRODUCT
Type of Fuel: Not reported
Tank Construction: Not reported
Leak Detection: None

Tank Num: 003
Container Num: 3
Year Installed: 1967
Tank Capacity: 00001000
Tank Used for: PRODUCT
Type of Fuel: Not reported
Tank Construction: Not reported
Leak Detection: None

Tank Num: 004
Container Num: 4
Year Installed: 1967
Tank Capacity: 00001000
Tank Used for: WASTE
Type of Fuel: WASTE OIL
Tank Construction: Not reported
Leak Detection: None

NABERS CADILLAC, INC. (Continued) **1000217861**

CHMIRS:

OES Incident Number: 98-1968
OES notification: 04/27/1998
OES Date: Not reported
OES Time: Not reported
Incident Date: Not reported
Date Completed: Not reported
Property Use: Not reported
Agency Id Number: Not reported
Agency Incident Number: Not reported
Time Notified: Not reported
Time Completed: Not reported
Surrounding Area: Not reported
Estimated Temperature: Not reported
Property Management: Not reported
Special Studies 1: Not reported
Special Studies 2: Not reported
Special Studies 3: Not reported
Special Studies 4: Not reported
Special Studies 5: Not reported
Special Studies 6: Not reported
More Than Two Substances Involved?: Not reported
Resp Agncy Personel # Of Decontaminated: Not reported
Responding Agency Personel # Of Injuries: Not reported
Responding Agency Personel # Of Fatalities: Not reported
Others Number Of Decontaminated: Not reported
Others Number Of Injuries: Not reported
Others Number Of Fatalities: Not reported
Vehicle Make/year: Not reported
Vehicle License Number: Not reported
Vehicle State: Not reported
Vehicle Id Number: Not reported
CA/DOT/PUC/ICC Number: Not reported
Company Name: Not reported
Reporting Officer Name/ID: Not reported
Report Date: Not reported
Comments: Not reported
Facility Telephone: Not reported
Waterway Involved: Yes
Waterway: drain
Spill Site: Not reported
Cleanup By: Unknown
Containment: Not reported
What Happened: Not reported
Type: Not reported
Measure: Not reported
Other: Not reported
Date/Time: Not reported
Year: 1998
Agency: Citizen
Incident Date: 4/27/199812:00:00 AM
Admin Agency: Not reported
Amount: Not reported
Contained: Unknown
Site Type: Merchant/Business
E Date: Not reported
Substance: Auto dealership mechanics waste

NABERS CADILLAC, INC. (Continued) **1000217861**

Quantity Released:	Not reported
BBLS:	0
Cups:	0
CUFT:	0
Gallons:	200
Grams:	0
Pounds:	0
Liters:	0
Ounces:	0
Pints:	0
Quarts:	0
Sheen:	0
Tons:	0
Unknown:	0
Evacuations:	0
Number of Injuries:	0
Number of Fatalities:	0
Description:	Contractor washes down service bays of auto dealership into the street and down into the drains

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I43
SW
1/8-1/4
0.173 mi.
914 ft.

NABERS CADILLAC
2600 HARBOR BLVD
COSTA MESA, CA

RCRA-SQG **1001075486**
FINDS **CAD043324656**
CA AST

Site 3 of 5 in cluster I

Relative:
Higher

Actual:
69 ft.

RCRA-SQG:

Date form received by agency:	08/30/2010
Facility name:	SOUTH COAST AUTO PLAZA
Facility address:	2600 HARBOR BLVD UNIT A COSTA MESA, CA 92626
EPA ID:	CAD043324656
Contact:	ANNETTE BURKARD
Contact address:	2600 HARBOR BLVD COSTA MESA, CA 92626
Contact country:	US
Contact telephone:	714-444-5200
Contact email:	ANNETTE.BURKARD@SOUTHCOASTAUTOPLAZA.COM
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	ARGONAUT HOLDINGS INC
Owner/operator address:	PO BOX 77000 DEPT 771280 DETROIT, MI 48277
Owner/operator country:	US
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	12/20/1996
Owner/Op end date:	Not reported

NABERS CADILLAC (Continued) **1001075486**

Owner/operator name: SOUTH COAST AUTO PLAZA
Owner/operator address: Not reported
Not reported
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 08/01/2010
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 02/19/2008
Facility name: SOUTH COAST AUTO PLAZA
Site name: SOUTH COAST BUICK PONTIAC GMC CADILLAC
Classification: Small Quantity Generator

Date form received by agency: 12/18/1995
Facility name: SOUTH COAST AUTO PLAZA
Site name: NABERS CADILLAC BUICK
Classification: Small Quantity Generator

Hazardous Waste Summary:
Waste code: 135
Waste name: 135

Waste code: 214
Waste name: 214

Waste code: 221
Waste name: 221

Waste code: 222
Waste name: 222

Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET,

NABERS CADILLAC (Continued) **1001075486**

WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Violation Status: No violations found

FINDS:

Registry ID: 110002645264

Environmental Interest/Information System

California Hazardous Waste Tracking System - Datamart (HWTS-DATAMART) provides California with information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

UORS (California - Used Oil Recycling System). California Integrated Waste Management Board (CIWMB) helps communities establish and promote convenient collection opportunities for used oil and used oil filters.

AST:
Owner: SOUTH COAST AUTO PLAZA
Total Gallons: 1,320
Certified Unified Program Agencies: Orange

I44
SW
1/8-1/4
0.173 mi.
914 ft.

ICC COLLISION CENTERS
2600 HARBOR BLVD
COSTA MESA, CA 92626

RCRA-SQG **1010562160**
CAR000187716

Site 4 of 5 in cluster I

Relative:
Higher

Actual:
69 ft.

RCRA-SQG:
Date form received by agency: 11/17/2008
Facility name: ICC COLLISION CENTERS
Facility address: 2600 HARBOR BLVD
UNIT B
COSTA MESA, CA 92626
EPA ID: CAR000187716
Mailing address: 3131 S STANDARD AVE
SANTA ANA, CA 92705
Contact: KELLY KHAN
Contact address: 3131 S STANDARD AVE
SANTA ANA, CA 92705
Contact country: US
Contact telephone: 714-444-3100
Contact email: KKHAN@ICCGROUPS.COM
EPA Region: 09
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of

ICC COLLISION CENTERS (Continued) **1010562160**

hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	ARGONAUNT HOLDINGS INC
Owner/operator address:	PO BOX 77000 DEPT 771280
	DETROIT, MI 48277
Owner/operator country:	US
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	12/20/1996
Owner/Op end date:	Not reported

Owner/operator name:	ICC COLLISION CENTERS
Owner/operator address:	Not reported
	Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	01/05/2009
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Historical Generators:

Date form received by agency:	10/02/2007
Facility name:	ICC COLLISION CENTERS
Site name:	INSURANCE COLLISION CENTERS
Classification:	Small Quantity Generator

Hazardous Waste Summary:

Waste code:	D001
Waste name:	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE

ICC COLLISION CENTERS (Continued) **1010562160**

MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: D005
Waste name: BARIUM

Waste code: D007
Waste name: CHROMIUM

Waste code: D008
Waste name: LEAD

Waste code: F002
Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2-TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE LISTED IN F001, F004, OR F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F003
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Violation Status: No violations found

I45 **NABERS CADILLAC INC** **CA UST** **U003111628**
SW **2600 HARBOR BLVD** **N/A**
1/8-1/4 **COSTA MESA, CA 92626**
0.173 mi.
914 ft. **Site 5 of 5 in cluster I**

Relative:
Higher

Actual:
69 ft.

UST:
Facility ID: 1837
Latitude: 33.66739
Longitude: -117.91913

J46 **CA AST** **A100340525**
WNW **2828 HARBOR BLVD** **N/A**
1/8-1/4 **COSTA MESA, CA 92626**
0.180 mi.
949 ft. **Site 1 of 12 in cluster J**

Relative: Lower

Actual: 57 ft.

AST:

Owner:	CONNELL CHEVROLET
Total Gallons:	1,320
Certified Unified Program Agencies:	Orange

J47 **CONELL CHEVROLET** **RCRA-SQG** **1000204977**
WNW **2828 HARBOR BLVD** **FINDS** **CAD981618325**
1/8-1/4 **COSTA MESA, CA 92626** **CA HIST CORTESE**
0.180 mi. **CA UST**
949 ft. **Site 2 of 12 in cluster J** **CA HIST UST**
CA EMI

Relative: Lower

Actual: 57 ft.

RCRA-SQG:

Date form received by agency:	09/01/1996
Facility name:	CONELL CHEVROLET
Facility address:	2828 HARBOR BLVD COSTA MESA, CA 92626
EPA ID:	CAD981618325
Contact:	Not reported
Contact address:	Not reported Not reported
Contact country:	Not reported
Contact telephone:	Not reported
Contact email:	Not reported
EPA Region:	09
Land type:	Facility is not located on Indian land. Additional information is not known.
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	PAT CONELL
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

CONELL CHEVROLET (Continued) **1000204977**

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 12/08/1986
Facility name: CONELL CHEVROLET
Classification: Large Quantity Generator

Facility Has Received Notices of Violations:
Regulation violated: FR - 262.10-12.A
Area of violation: Generators - General
Date violation determined: 07/24/1990
Date achieved compliance: 05/17/1994
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:
Evaluation date: 05/17/1994
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State Contractor/Grantee

Evaluation date: 07/24/1990
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 05/17/1994
Evaluation lead agency: State Contractor/Grantee

FINDS:

Registry ID: 110002725935

Environmental Interest/Information System
California Hazardous Waste Tracking System - Datamart (HWTS-DATAMART)

CONELL CHEVROLET (Continued) **1000204977**

provides California with information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

CORTESE:

Region:	CORTESE
Facility County Code:	30
Reg By:	LTNKA
Reg Id:	2440

UST:

Facility ID:	1832
Latitude:	33.67457
Longitude:	-117.91918

HIST UST:

Region:	STATE
Facility ID:	00000064305
Facility Type:	Other
Other Type:	AUTO DEALER
Total Tanks:	0004
Contact Name:	STEVEN B. SMITH
Telephone:	7145461200
Owner Name:	CONNELL CHEVROLET
Owner Address:	2828 HARBOR BLVD.
Owner City,St,Zip:	COSTA MESA, CA 92626

Tank Num:	001
Container Num:	1
Year Installed:	Not reported
Tank Capacity:	00000000
Tank Used for:	PRODUCT
Type of Fuel:	WASTE OIL
Tank Construction:	Not reported
Leak Detection:	Visual

Tank Num:	002
Container Num:	2
Year Installed:	Not reported
Tank Capacity:	00000000
Tank Used for:	PRODUCT
Type of Fuel:	06
Tank Construction:	Not reported
Leak Detection:	Visual

Tank Num:	003
Container Num:	3
Year Installed:	Not reported

CONELL CHEVROLET (Continued) **1000204977**

Tank Capacity:	00000000
Tank Used for:	PRODUCT
Type of Fuel:	06
Tank Construction:	Not reported
Leak Detection:	Visual

Tank Num:	004
Container Num:	4
Year Installed:	Not reported
Tank Capacity:	00000000
Tank Used for:	PRODUCT
Type of Fuel:	06
Tank Construction:	Not reported
Leak Detection:	Visual

EMI:

Year:	1993
County Code:	30
Air Basin:	SC
Facility ID:	2440
Air District Name:	SC
SIC Code:	5511
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2
Reactive Organic Gases Tons/Yr:	2
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1995
County Code:	30
Air Basin:	SC
Facility ID:	2440
Air District Name:	SC
SIC Code:	5511
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2
Reactive Organic Gases Tons/Yr:	2
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

J48 | **1500 ELM AVE** | **EDR US Hist Auto Stat** | **1015237248**
WNW **COSTA MESA, CA 92626** **N/A**
1/8-1/4
0.186 mi.
983 ft. **Site 3 of 12 in cluster J**

Relative:
Lower

Actual:
57 ft.

EDR Historical Auto Stations:

Name:	SANDPIPER COLLISION
Year:	2001
Address:	1500 ELM AVE
Name:	SANDPIPER COLLISION
Year:	2008
Address:	1500 ELM AVE
Name:	PACIFIC RV & AUTO
Year:	2009
Address:	1500 ELM AVE
Name:	SANDPIPER COLLISION
Year:	2010
Address:	1500 ELM AVE
Name:	SANDPIPER COLLISION
Year:	2011
Address:	1500 ELM AVE
Name:	SANDPIPER COLLISION
Year:	2012
Address:	1500 ELM AVE

J49 **UNIVERSITY OLDSMOBILE** **CA LUST** **U003299662**
WNW **2850 HARBOR BLVD** **CA UST** **N/A**
1/8-1/4 **COSTA MESA, CA 92626** **CA EMI**
0.198 mi.
1048 ft. **Site 4 of 12 in cluster J**

Relative:
Lower

Actual:
56 ft.

LUST:

Region:	STATE
Global Id:	T0605901146
Latitude:	33.675191
Longitude:	-117.918255
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	10/29/2001
Lead Agency:	ORANGE COUNTY LOP
Case Worker:	DB
Local Agency:	ORANGE COUNTY LOP
RB Case Number:	083001503T
LOC Case Number:	90UT094
File Location:	Local Agency
Potential Media Affect:	Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern:	Diesel, Waste Oil / Motor / Hydraulic / Lubricating, Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0605901146
Contact Type:	Regional Board Caseworker

UNIVERSITY OLDSMOBILE (Continued) **U003299662**

Contact Name: VALERIE JAHN-BULL
Organization Name: SANTA ANA RWQCB (REGION 8)
Address: 3737 MAIN STREET, SUITE 500
City: RIVERSIDE
Email: vjahn-bull@waterboards.ca.gov
Phone Number: 9517824903

Global Id: T0605901146
Contact Type: Local Agency Caseworker
Contact Name: DENAMARIE BAKER
Organization Name: ORANGE COUNTY LOP
Address: 1241 E. DYER ROAD, STE. 120
City: SANTA ANA
Email: dbaker@ochca.com
Phone Number: 7144336255

Status History:
Global Id: T0605901146
Status: Completed - Case Closed
Status Date: 10/29/2001

Global Id: T0605901146
Status: Open - Case Begin Date
Status Date: 03/06/1990

Regulatory Activities:
Global Id: T0605901146
Action Type: ENFORCEMENT
Date: 10/29/2001
Action: Closure/No Further Action Letter

Global Id: T0605901146
Action Type: Other
Date: 01/01/1950
Action: Leak Discovery

Global Id: T0605901146
Action Type: Other
Date: 01/01/1950
Action: Leak Reported

ORANGE CO. LUST:
Region: ORANGE
Facility Id: 90UT094
Current Status: Certification (Case Closed)
Released Substance: Diesel fuel oil and additives, Nos.1-D, 2-D, 2-4
Date Closed: 10/29/2001
Case Type: Other Ground Water
Record ID: RO0000803

Region: ORANGE
Facility Id: 90UT094
Current Status: Not reported
Released Substance: Waste oil/Used oil
Date Closed: 10/29/2001

UNIVERSITY OLDSMOBILE (Continued) **U003299662**

Case Type: Not reported
Record ID: RO0000803

Region: ORANGE
Facility Id: 90UT094
Current Status: Not reported
Released Substance: Gasoline-Automotive (motor gasoline and additives), leaded & unleaded
Date Closed: 10/29/2001
Case Type: Not reported
Record ID: RO0000803

LUST REG 8:
Region: 8
County: Orange
Regional Board: Santa Ana Region
Facility Status: Case Closed
Case Number: 083001503T
Local Case Num: 90UT094
Case Type: Other ground water affected
Substance: 12034,12035,
Qty Leaked: 0
Abate Method: Not reported
Cross Street: Not reported
Enf Type: Not reported
Funding: Not reported
How Discovered: Tank Closure
How Stopped: Close Tank
Leak Cause: Unknown
Leak Source: Unknown
Global ID: T0605901146
How Stopped Date: 9/9/9999
Enter Date: Not reported
Review Date: Not reported
Prelim Assess: Not reported
Discover Date: 3/6/1990
Enforcement Date: Not reported
Close Date: 10/29/2001
Workplan: Not reported
Pollution Char: Not reported
Remed Plan: Not reported
Remed Action: Not reported
Monitoring: Not reported
Enter Date: Not reported
GW Qualifies: Not reported
Soil Qualifies: Not reported
Operator: Not reported
Facility Contact: Not reported
Interim: Not reported
Oversite Program: LUST
Latitude: 33.6750824
Longitude: -117.91907
MTBE Date: Not reported
Max MTBE GW: Not reported
MTBE Concentration: 0
Max MTBE Soil: Not reported
MTBE Fuel: 0
MTBE Tested: Not Required to be Tested.

UNIVERSITY OLDSMOBILE (Continued) **U003299662**

MTBE Class: *
Staff: VJJ
Staff Initials: AR
Lead Agency: Local Agency
Local Agency: 30000L
Hydr Basin #: Not reported
Beneficial: MUN
Priority: Not reported
Cleanup Fund Id: Not reported
Work Suspended: Not reported
Summary: Not reported

UST:
Facility ID: 1839
Latitude: 33.67499
Longitude: -117.91919

EMI:
Year: 1987
County Code: 30
Air Basin: SC
Facility ID: 4195
Air District Name: SC
SIC Code: 5511
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 1
Reactive Organic Gases Tons/Yr: 1
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers & Smllr Tons/Yr: 0

Year: 1990
County Code: 30
Air Basin: SC
Facility ID: 4195
Air District Name: SC
SIC Code: 55
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 1
Reactive Organic Gases Tons/Yr: 1
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers & Smllr Tons/Yr: 0

J50 **2833 HARBOR BLVD** **EDR US Hist Auto Stat** **1015388750**
WNW **COSTA MESA, CA 92626** **N/A**
1/8-1/4
0.199 mi.
1051 ft. **Site 5 of 12 in cluster J**

Relative:
Lower

Actual:
56 ft.

EDR Historical Auto Stations:

Name:	COSTA MESA INFINITI
Year:	1999
Address:	2833 HARBOR BLVD

J51 **COSTA MESA MITSUBISHI** **RCRA-SQG** **1000395237**
WNW **2833 HARBOR BLVD** **FINDS** **CAD981447485**
1/8-1/4 **COSTA MESA, CA** **CA HIST CORTESE**
0.199 mi. **CA LUST**
1051 ft. **Site 6 of 12 in cluster J** **CA FID UST**
CA UST
Relative: **CA SWEEPS UST**
Lower

Actual:
56 ft.

RCRA-SQG:

Date form received by agency:	12/14/1995
Facility name:	COSTA MESA MITSUBISHI
Facility address:	2833 HARBOR BLVD COSTA MESA, CA 92626
EPA ID:	CAD981447485
Contact:	MICHAEL KARLS
Contact address:	2833 HARBOR BLVD COSTA MESA, CA 92626
Contact country:	US
Contact telephone:	(714) 545-1700
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	MMIP DEALER CORP II
Owner/operator address:	2833 HARBOR COSTA MESA, CA 92626
Owner/operator country:	Not reported
Owner/operator telephone:	(714) 545-1700
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

COSTA MESA MITSUBISHI (Continued) **1000395237**

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

FINDS:

Registry ID: 110002710317

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

CORTESE:

Region:	CORTESE
Facility County Code:	30
Reg By:	LTNKA
Reg Id:	083002420T

LUST:

Region:	STATE
Global Id:	T0605901731
Latitude:	33.674512
Longitude:	-117.919682
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	06/10/1996
Lead Agency:	ORANGE COUNTY LOP
Case Worker:	DB
Local Agency:	ORANGE COUNTY LOP
RB Case Number:	083002420T
LOC Case Number:	94UT004
File Location:	Local Agency
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Waste Oil / Motor / Hydraulic / Lubricating
Site History:	Not reported

COSTA MESA MITSUBISHI (Continued) **1000395237**

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0605901731
Contact Type:	Regional Board Caseworker
Contact Name:	VALERIE JAHN-BULL
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	vjahn-bull@waterboards.ca.gov
Phone Number:	9517824903
Global Id:	T0605901731
Contact Type:	Local Agency Caseworker
Contact Name:	DENAMARIE BAKER
Organization Name:	ORANGE COUNTY LOP
Address:	1241 E. DYER ROAD, STE. 120
City:	SANTA ANA
Email:	dbaker@ochca.com
Phone Number:	7144336255

Status History:

Global Id:	T0605901731
Status:	Completed - Case Closed
Status Date:	06/10/1996
Global Id:	T0605901731
Status:	Open - Case Begin Date
Status Date:	11/10/1993

Regulatory Activities:

Global Id:	T0605901731
Action Type:	Other
Date:	01/01/1950
Action:	Leak Reported
Global Id:	T0605901731
Action Type:	ENFORCEMENT
Date:	06/10/1996
Action:	Closure/No Further Action Letter
Global Id:	T0605901731
Action Type:	Other
Date:	01/01/1950
Action:	Leak Discovery

ORANGE CO. LUST:

Region:	ORANGE
Facility Id:	94UT004
Current Status:	Certification (Case Closed)
Released Substance:	Waste oil/Used oil
Date Closed:	06/10/1996
Case Type:	Soil Only
Record ID:	RO0001607

COSTA MESA MITSUBISHI (Continued) **1000395237**

LUST REG 8:

Region:	8
County:	Orange
Regional Board:	Santa Ana Region
Facility Status:	Case Closed
Case Number:	083002420T
Local Case Num:	94UT004
Case Type:	Soil only
Substance:	Waste Oil
Qty Leaked:	0
Abate Method:	Not reported
Cross Street:	Not reported
Enf Type:	Not reported
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Close Tank
Leak Cause:	Unknown
Leak Source:	Unknown
Global ID:	T0605901731
How Stopped Date:	9/9/9999
Enter Date:	Not reported
Review Date:	Not reported
Prelim Assess:	Not reported
Discover Date:	11/10/1993
Enforcement Date:	Not reported
Close Date:	6/10/1996
Workplan:	Not reported
Pollution Char:	Not reported
Remed Plan:	Not reported
Remed Action:	Not reported
Monitoring:	Not reported
Enter Date:	Not reported
GW Qualifies:	Not reported
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.6744354
Longitude:	-117.919409
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	0
MTBE Tested:	Not Required to be Tested.
MTBE Class:	*
Staff:	VJJ
Staff Initials:	AR
Lead Agency:	Local Agency
Local Agency:	30000L
Hydr Basin #:	Not reported
Beneficial:	MUN
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported

Summary: Not reported

COSTA MESA MITSUBISHI (Continued) **1000395237**

CA FID UST:

Facility ID:	30006171
Regulated By:	UTNKA
Regulated ID:	Not reported
Cortese Code:	Not reported
SIC Code:	Not reported
Facility Phone:	7145404491
Mail To:	Not reported
Mailing Address:	2833 HARBOR BLVD
Mailing Address 2:	Not reported
Mailing City,St,Zip:	COSTA MESA 92626
Contact:	Not reported
Contact Phone:	Not reported
DUNs Number:	Not reported
NPDES Number:	Not reported
EPA ID:	Not reported
Comments:	Not reported
Status:	Active

UST:

Facility ID:	1830
Latitude:	33.67477
Longitude:	-117.91941

SWEEPS UST:

Status:	Active
Comp Number:	1830
Number:	9
Board Of Equalization:	44-015824
Referral Date:	09-30-92
Action Date:	09-15-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	Not reported
Swrcb Tank Id:	30-000-001830-000001
Actv Date:	Not reported
Capacity:	1000
Tank Use:	PETROLEUM
Stg:	P
Content:	Not reported
Number Of Tanks:	1

J52
WNW
1/8-1/4
0.209 mi.
1103 ft.

UNIVERSITY SALES & SERVICE
2850 HARBOR BLVD
COSTA MESA, CA

Site 7 of 12 in cluster J

RCRA NonGen / NLR
FINDS
CA UST
CA HIST UST
CA SWEEPS UST

1000431628
CAD981683121

Relative:
Lower

Actual:
55 ft.

RCRA NonGen / NLR:

Date form received by agency:	06/04/2004
Facility name:	UNIVERSITY SALES & SERVICE
Facility address:	2850 HARBOR BLVD COSTA MESA, CA 92626
EPA ID:	CAD981683121
Mailing address:	HARBOR BLVD COSTA MESA, CA 92626

UNIVERSITY SALES & SERVICE (Continued) **1000431628**

Contact:	BRETT PATE
Contact address:	Not reported
	Not reported
Contact country:	US
Contact telephone:	714-546-1200
Contact email:	Not reported
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	BILLLESLIE
Owner/operator address:	NOT REQUIRED
	NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED
	NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	BILLLESLIE
Owner/operator address:	NOT REQUIRED
	NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	01/01/0001
Owner/Op end date:	Not reported

Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED
	NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	01/01/0001
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No

UNIVERSITY SALES & SERVICE (Continued) **1000431628**

Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 09/01/1996
Facility name: UNIVERSITY SALES & SERVICE
Classification: Small Quantity Generator

Violation Status: No violations found

FINDS:

Registry ID: 110002750880

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

UST:
Facility ID: 6437
Latitude: 33.67533
Longitude: -117.91919

HIST UST:
Region: STATE
Facility ID: 00000058384
Facility Type: Other
Other Type: UNIVERSITY
Total Tanks: 0003
Contact Name: BILL R. LESLIE
Telephone: 7145409640
Owner Name: BILL R. LESLIE
Owner Address: 19141 RIDGEVIEW
Owner City,St,Zip: VILLA PARK, CA 92666

Tank Num: 001
Container Num: 1
Year Installed: 1964
Tank Capacity: 00003000
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Tank Construction: Not reported

UNIVERSITY SALES & SERVICE (Continued) **1000431628**

Leak Detection: Visual

Tank Num: 002
Container Num: 2
Year Installed: 1964
Tank Capacity: 00002000
Tank Used for: PRODUCT
Type of Fuel: DIESEL
Tank Construction: Not reported
Leak Detection: Visual

Tank Num: 003
Container Num: 3
Year Installed: 1964
Tank Capacity: 00000500
Tank Used for: WASTE
Type of Fuel: WASTE OIL
Tank Construction: Not reported
Leak Detection: Visual

SWEEPS UST:
Status: Active
Comp Number: 12927
Number: 9
Board Of Equalization: Not reported
Referral Date: 09-30-92
Action Date: 09-15-92
Created Date: 02-29-88
Tank Status: A
Owner Tank Id: Not reported
Swrcb Tank Id: 30-000-012927-000003
Actv Date: Not reported
Capacity: 550
Tank Use: PETROLEUM
Stg: P
Content: Not reported
Number Of Tanks: 1

J53
WNW
1/8-1/4
0.209 mi.
1103 ft.

UNIVERSITY HONDA
2860 HARBOR BLVD
COSTA MESA, CA 92626

CA HIST UST
CA SWEEPS UST
CA Orange Co. Industrial Site

U001576856
N/A

Site 8 of 12 in cluster J

Relative:
Lower

Actual:
55 ft.

HIST UST:
Region: STATE
Facility ID: 00000058385
Facility Type: Other
Other Type: CAR DEALER
Total Tanks: 0001
Contact Name: BILL R. LESLIE
Telephone: 7145400713
Owner Name: BILL R. LESLIE
Owner Address: 19141 RIDGEVIEW
Owner City,St,Zip: VILLA PARK, CA 92666

Tank Num: 001

UNIVERSITY HONDA (Continued) **U001576856**

Container Num: 4
Year Installed: 1982
Tank Capacity: 00000500
Tank Used for: WASTE
Type of Fuel: WASTE OIL
Tank Construction: Not reported
Leak Detection: Visual

SWEEPS UST:
Status: Active
Comp Number: 6437
Number: 9
Board Of Equalization: 44-016482
Referral Date: 09-30-92
Action Date: 09-15-92
Created Date: 02-29-88
Tank Status: A
Owner Tank Id: Not reported
Swrcb Tank Id: 30-000-006437-000001
Actv Date: Not reported
Capacity: 550
Tank Use: PETROLEUM
Stg: P
Content: Not reported
Number Of Tanks: 1

Orange Co. Industrial Site:
Case ID: 95IC035
Region: ORANGE
Record ID: RO0000515
Current Status: CLOSED 12/15/1995
Closure Type: Closure certification issued
Released Chemical: WASTE (OR SLOP) OIL

J54 **COSTA MESA MITSUBISHI** **RCRA-SQG** **1001111777**
WNW **2860 HARBOR BLVD** **FINDS** **CAR000013151**
1/8-1/4 **COSTA MESA, CA 92626** **CA FID UST**
0.209 mi. **CA HAZNET**
1103 ft. **Site 9 of 12 in cluster J**

Relative:
Lower

Actual:
55 ft.

RCRA-SQG:
Date form received by agency: 09/18/2001
Facility name: COSTA MESA MITSUBISHI
Facility address: 2860 HARBOR BLVD
COSTA MESA, CA 926263233
EPA ID: CAR000013151
Contact: DOUG HAVER
Contact address: 2860 HARBOR BLVD
COSTA MESA, CA 926263233
Contact country: US
Contact telephone: (714) 545-1700
Contact email: Not reported
EPA Region: 09
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous

COSTA MESA MITSUBISHI (Continued) **1001111777**

waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	DAVID HUPART
Owner/operator address:	2860 HARBOR BLVD COSTA MESA, CA 92626
Owner/operator country:	Not reported
Owner/operator telephone:	(714) 545-1700
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code:	D001
Waste name:	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
Waste code:	F001
Waste name:	THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLOROETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE, AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Violation Status:	No violations found

FINDS:

Registry ID: 110002912581

COSTA MESA MITSUBISHI (Continued) **1001111777**

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

CA FID UST:

Facility ID:	30017549
Regulated By:	UTNKA
Regulated ID:	Not reported
Cortese Code:	Not reported
SIC Code:	Not reported
Facility Phone:	7145551212
Mail To:	Not reported
Mailing Address:	19141 RIDGEVIEW
Mailing Address 2:	Not reported
Mailing City,St,Zip:	COSTA MESA 92626
Contact:	Not reported
Contact Phone:	Not reported
DUNs Number:	Not reported
NPDES Number:	Not reported
EPA ID:	Not reported
Comments:	Not reported
Status:	Active

HAZNET:

Year:	2003
Gepaid:	CAR000013151
Contact:	BOB SAVOY
Telephone:	7145451700
Mailing Name:	Not reported
Mailing Address:	2860 HARBOR BLVD
Mailing City,St,Zip:	COSTA MESA, CA 926260000
Gen County:	Not reported
TSD EPA ID:	CAT000613893
TSD County:	Not reported
Waste Category:	Aqueous solution with total organic residues less than 10 percent
Disposal Method:	Transfer Station
Tons:	0.01
Facility County:	Orange

Year:	2002
Gepaid:	CAR000013151
Contact:	BOB SAVOY
Telephone:	7145451700
Mailing Name:	Not reported
Mailing Address:	2860 HARBOR BLVD
Mailing City,St,Zip:	COSTA MESA, CA 926260000
Gen County:	Not reported
TSD EPA ID:	CAT000613893
TSD County:	Not reported
Waste Category:	Aqueous solution with total organic residues less than 10 percent
Disposal Method:	Transfer Station

COSTA MESA MITSUBISHI (Continued) **1001111777**

Tons:	0.03
Facility County:	Orange
Year:	2000
Gepaid:	CAR000013151
Contact:	BOB SAVOY
Telephone:	7145451700
Mailing Name:	Not reported
Mailing Address:	2860 HARBOR BLVD
Mailing City,St,Zip:	COSTA MESA, CA 926260000
Gen County:	Not reported
TSD EPA ID:	CAT080013352
TSD County:	Not reported
Waste Category:	Aqueous solution with total organic residues 10 percent or more
Disposal Method:	Recycler
Tons:	1.12
Facility County:	Orange
Year:	1999
Gepaid:	CAR000013151
Contact:	COSTA MESA MITSUBISHI
Telephone:	7145451700
Mailing Name:	Not reported
Mailing Address:	2860 HARBOR BLVD
Mailing City,St,Zip:	COSTA MESA, CA 926260000
Gen County:	Not reported
TSD EPA ID:	CAT080013352
TSD County:	Not reported
Waste Category:	Aqueous solution with total organic residues 10 percent or more
Disposal Method:	Recycler
Tons:	2.6271
Facility County:	Orange
Year:	1999
Gepaid:	CAR000013151
Contact:	COSTA MESA MITSUBISHI
Telephone:	7145451700
Mailing Name:	Not reported
Mailing Address:	2860 HARBOR BLVD
Mailing City,St,Zip:	COSTA MESA, CA 926260000
Gen County:	Not reported
TSD EPA ID:	CAD099452708
TSD County:	Not reported
Waste Category:	Oil/water separation sludge
Disposal Method:	Transfer Station
Tons:	2.5645
Facility County:	Orange

Click this hyperlink while viewing on your computer to access
3 additional CA_HAZNET: record(s) in the EDR Site Report.

J55 **2845 HARBOR BLVD** **EDR US Hist Auto Stat** **1015389330**
WNW **COSTA MESA, CA 92626** **N/A**
1/8-1/4
0.216 mi.
1142 ft. **Site 10 of 12 in cluster J**

Relative: **Lower**

Actual: **55 ft.**

EDR Historical Auto Stations:

Name:	PRIMO SMOG AUTO REPAIR
Year:	2012
Address:	2845 HARBOR BLVD

J56 **NISSAN COSTA MESA** **RCRA-SQG** **1000298578**
WNW **2845 HARBOR BLVD** **FINDS** **CAD981666811**
1/8-1/4 **COSTA MESA, CA 92626**
0.216 mi.
1142 ft. **Site 11 of 12 in cluster J**

Relative: **Lower**

Actual: **55 ft.**

RCRA-SQG:

Date form received by agency:	12/23/1994
Facility name:	NISSAN COSTA MESA
Facility address:	2845 HARBOR BLVD COSTA MESA, CA 92626
EPA ID:	CAD981666811
Mailing address:	HARBOR BLVD COSTA MESA, CA 92626
Contact:	LARS ANDERSSON
Contact address:	2845 HARBOR BLVD COSTA MESA, CA 92626
Contact country:	US
Contact telephone:	(714) 722-2000
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	WILLIAM R PIERCEY
Owner/operator address:	2965 ESTATES DR PARK CITY, UT 84060
Owner/operator country:	Not reported
Owner/operator telephone:	(714) 722-2000
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No

NISSAN COSTA MESA (Continued) **1000298578**

Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

FINDS:

Registry ID: 110002742970

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

J57
WNW
1/8-1/4
0.216 mi.
1142 ft.

HOLMES TUTTLE NISSAN INC
2845 HARBOR BLVD
COSTA MESA, CA 92626

Site 12 of 12 in cluster J

CA HIST CORTESE
CA LUST
CA UST
CA HIST UST
CA Notify 65
CA Orange Co. Industrial Site

U003779347
N/A

Relative:
Lower

Actual:
55 ft.

CORTESE:

Region:	CORTESE
Facility County Code:	30
Reg By:	LTNKA
Reg Id:	083001101T

LUST:

Region:	STATE
Global Id:	T0605900870
Latitude:	33.674957
Longitude:	-117.920019
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	11/13/1989
Lead Agency:	ORANGE COUNTY LOP
Case Worker:	DB
Local Agency:	ORANGE COUNTY LOP
RB Case Number:	083001101T
LOC Case Number:	88UT187
File Location:	Local Agency
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Waste Oil / Motor / Hydraulic / Lubricating
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id: T0605900870

HOLMES TUTTLE NISSAN INC (Continued) **U003779347**

Contact Type:	Regional Board Caseworker
Contact Name:	PATRICIA HANNON
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	phannon@waterboards.ca.gov
Phone Number:	Not reported
Global Id:	T0605900870
Contact Type:	Local Agency Caseworker
Contact Name:	DENAMARIE BAKER
Organization Name:	ORANGE COUNTY LOP
Address:	1241 E. DYER ROAD, STE. 120
City:	SANTA ANA
Email:	dbaker@ochca.com
Phone Number:	7144336255

Status History:

Global Id:	T0605900870
Status:	Completed - Case Closed
Status Date:	11/13/1989
Global Id:	T0605900870
Status:	Open - Case Begin Date
Status Date:	11/04/1988

Regulatory Activities:

Global Id:	T0605900870
Action Type:	Other
Date:	01/01/1950
Action:	Leak Discovery
Global Id:	T0605900870
Action Type:	Other
Date:	01/01/1950
Action:	Leak Reported

ORANGE CO. LUST:

Region:	ORANGE
Facility Id:	88UT187
Current Status:	Certification (Case Closed)
Released Substance:	Waste oil/Used oil
Date Closed:	11/13/1989
Case Type:	Soil Only
Record ID:	RO0000954

LUST REG 8:

Region:	8
County:	Orange
Regional Board:	Santa Ana Region
Facility Status:	Case Closed
Case Number:	083001101T
Local Case Num:	88UT187
Case Type:	Soil only

HOLMES TUTTLE NISSAN INC (Continued) **U003779347**

Substance:	Waste Oil
Qty Leaked:	0
Abate Method:	Not reported
Cross Street:	Not reported
Enf Type:	Not reported
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Close Tank
Leak Cause:	Unknown
Leak Source:	Unknown
Global ID:	T0605900870
How Stopped Date:	9/9/9999
Enter Date:	Not reported
Review Date:	Not reported
Prelim Assess:	Not reported
Discover Date:	11/4/1988
Enforcement Date:	Not reported
Close Date:	11/13/1989
Workplan:	Not reported
Pollution Char:	Not reported
Remed Plan:	Not reported
Remed Action:	Not reported
Monitoring:	Not reported
Enter Date:	Not reported
GW Qualifies:	Not reported
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.6748664
Longitude:	-117.919412
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	0
MTBE Tested:	Not Required to be Tested.
MTBE Class:	*
Staff:	PAH
Staff Initials:	AR
Lead Agency:	Local Agency
Local Agency:	30000L
Hydr Basin #:	Not reported
Beneficial:	MUN
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported

Summary: Not reported

UST:

Facility ID:	1833
Latitude:	33.67514
Longitude:	-117.91941

HIST UST:

HOLMES TUTTLE NISSAN INC (Continued) **U003779347**

Region:	STATE
Facility ID:	00000065752
Facility Type:	Other
Other Type:	DEALER
Total Tanks:	0002
Contact Name:	SERVICE MANAGER JOHN FATRELL
Telephone:	7145406410
Owner Name:	HOLMES TUTTLE INC.
Owner Address:	7 OLD FIELD RD. #B
Owner City,St,Zip:	IRVINE, CA 92714

Tank Num:	001
Container Num:	2
Year Installed:	1971
Tank Capacity:	00001000
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Tank Construction:	Not reported
Leak Detection:	Stock Inventor

Tank Num:	002
Container Num:	1
Year Installed:	Not reported
Tank Capacity:	00000600
Tank Used for:	WASTE
Type of Fuel:	WASTE OIL
Tank Construction:	Not reported
Leak Detection:	Stock Inventor

Notify 65:

Date Reported:	Not reported
Staff Initials:	Not reported
Board File Number:	Not reported
Facility Type:	Not reported
Discharge Date:	Not reported
Incident Description:	90220

Orange Co. Industrial Site:

Case ID:	05IC016
Region:	ORANGE
Record ID:	RO0003355
Current Status:	CLOSED 1/10/2006
Closure Type:	Closure certification issued
Released Chemical:	WASTE (OR SLOP) OIL DICHLOROBENZENE

58
ENE **1102 CORONA LN**
1/8-1/4 **COSTA MESA, CA 92626**
0.224 mi.
1184 ft.

EDR US Hist Cleaners **1014974759**
N/A

Relative:
Lower

Actual:
49 ft.

EDR Historical Cleaners:

Name:	BEACH CLEANERS
Year:	2002
Address:	1102 CORONA LN

K59 METROPOLITAN VELIE CIRCUITS **CA SLIC** **S101854104**
North 1261 LOGAN AVENUE **CA EMI** **N/A**
1/8-1/4 COSTA MESA, CA
0.225 mi.
1187 ft. Site 1 of 7 in cluster K

Relative: Lower

Actual: 46 ft.

SLIC:

Region:	STATE
Facility Status:	**Completed - Case Closed**
Status Date:	11/20/2000
Global Id:	SLT8R0273912
Lead Agency:	DEPARTMENT OF TOXIC SUBSTANCES CONTROL
Lead Agency Case Number:	30360008
Latitude:	33.67878
Longitude:	-117.908743
Case Type:	Cleanup Program Site
Case Worker:	Not reported
Local Agency:	Not reported
RB Case Number:	Not reported
File Location:	DTSC
Potential Media Affected:	Other Groundwater (uses other than drinking water), Soil
Potential Contaminants of Concern:	Other Chlorinated Hydrocarbons, Tetrachloroethylene (PCE), Trichloroethylene (TCE), Arsenic, Chromium, Copper, Lead, Mercury (elemental), Other Metal
Site History:	see Department of Toxic Substances Control website at http://www.envirostor.dtsc.ca.gov/public/

Click here to access the California GeoTracker records for this facility:

SLIC REG 8:

Type:	Soil and Groundwater
Facility Status:	6
Region:	8
Staff:	Kamron Saremi, Tel 909-782-4303, SLIC
Substance:	Kamron Saremi, Tel 909-782-4303, SLIC
Lead Agency:	Kamron Saremi, Tel 909-782-4303, SLIC
Location Code:	Kamron Saremi, Tel 909-782-4303, SLIC
Thomas Bros Code:	Kamron Saremi, Tel 909-782-4303, SLIC

EMI:

Year:	1987
County Code:	30
Air Basin:	SC
Facility ID:	44947
Air District Name:	SC
SIC Code:	2753
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1990

METROPOLITAN VELIE CIRCUITS (Continued) **S101854104**

County Code:	30
Air Basin:	SC
Facility ID:	44947
Air District Name:	SC
SIC Code:	3672
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

K60
North
1/8-1/4
0.225 mi.
1187 ft.

METROPOLITAN CIRCUITS INC #2
1261 LOGAN AVE
COSTA MESA, CA 92626

CERC-NFRAP **1003879083**
CAD982360232

Site 2 of 7 in cluster K

Relative:
Lower

Actual:
46 ft.

CERC-NFRAP:

Site ID:	0902594
Federal Facility:	Not a Federal Facility
NPL Status:	Not on the NPL
Non NPL Status:	NFRAP-Site does not qualify for the NPL based on existing information

CERCLIS-NFRAP Site Contact Details:

Contact Sequence ID:	13052983.00000
Person ID:	9271184.00000
Contact Sequence ID:	13287950.00000
Person ID:	13003854.00000
Contact Sequence ID:	13293545.00000
Person ID:	13003858.00000
Contact Sequence ID:	13299403.00000
Person ID:	13004003.00000

CERCLIS-NFRAP Assessment History:

Action:	PRELIMINARY ASSESSMENT
Date Started:	/ /
Date Completed:	10/01/88
Priority Level:	NFRAP-Site does not qualify for the NPL based on existing information
Action:	ARCHIVE SITE
Date Started:	/ /
Date Completed:	10/01/88
Priority Level:	Not reported
Action:	DISCOVERY
Date Started:	/ /
Date Completed:	11/01/87
Priority Level:	Not reported

L61 **WNW** **1/8-1/4** **0.225 mi.** **1187 ft.**	**COAST GENERAL TIRE** **2855 HARBOR BLVD** **COSTA MESA, CA 92626** **Site 1 of 2 in cluster L**	**CA FID UST** **CA UST** **CA HIST UST** **CA SWEEPS UST**	**1000387224** **N/A**

Relative:
Lower

Actual:
55 ft.

CA FID UST:

Facility ID:	30006856
Regulated By:	UTNKA
Regulated ID:	Not reported
Cortese Code:	Not reported
SIC Code:	Not reported
Facility Phone:	7145551212
Mail To:	Not reported
Mailing Address:	2855 HARBOR BLVD
Mailing Address 2:	Not reported
Mailing City,St,Zip:	COSTA MESA 92626
Contact:	Not reported
Contact Phone:	Not reported
DUNs Number:	Not reported
NPDES Number:	Not reported
EPA ID:	Not reported
Comments:	Not reported
Status:	Active

UST:

Facility ID:	6442
Latitude:	33.67545
Longitude:	-117.91941

HIST UST:

Region:	STATE
Facility ID:	00000002959
Facility Type:	Other
Other Type:	Not reported
Total Tanks:	0001
Contact Name:	PETE OJEDA
Telephone:	7145405710
Owner Name:	DONSWEDLUND, INC. DBA COAST GE
Owner Address:	2855 HARBOR BLVD.
Owner City,St,Zip:	COSTA MESA, CA 92626

Tank Num:	001
Container Num:	1
Year Installed:	1974
Tank Capacity:	00000250
Tank Used for:	WASTE
Type of Fuel:	WASTE OIL
Tank Construction:	Not reported
Leak Detection:	Stock Inventor, None

SWEEPS UST:

Status:	Active
Comp Number:	6442
Number:	9
Board Of Equalization:	44-016483
Referral Date:	09-30-92
Action Date:	09-15-92

COAST GENERAL TIRE (Continued) **1000387224**

Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	Not reported
Swrcb Tank Id:	30-000-006442-000001
Actv Date:	Not reported
Capacity:	280
Tank Use:	PETROLEUM
Stg:	P
Content:	Not reported
Number Of Tanks:	1

L62
WNW **2855 HARBOR BLVD**
1/8-1/4 **COSTA MESA, CA 92626**
0.225 mi.
1187 ft. **Site 2 of 2 in cluster L**

EDR US Hist Auto Stat **1015389889**
N/A

Relative:
Lower

Actual:
55 ft.

EDR Historical Auto Stations:

Name:	KELLOGGS AUTOMOTIVE
Year:	2005
Address:	2855 HARBOR BLVD
Name:	KELLOGGS AUTOMOTIVE
Year:	2008
Address:	2855 HARBOR BLVD
Name:	AMERICAN CAR CARE CTR
Year:	2010
Address:	2855 HARBOR BLVD
Name:	AMERICAN CAR CARE CENTERS
Year:	2011
Address:	2855 HARBOR BLVD
Name:	AMERICAN CAR CARE CENTERS
Year:	2012
Address:	2855 HARBOR BLVD

63
NNE **1202 LOGAN AVE**
1/8-1/4 **COSTA MESA, CA 92626**
0.225 mi.
1189 ft.

EDR US Hist Auto Stat **1015180540**
N/A

Relative:
Lower

Actual:
46 ft.

EDR Historical Auto Stations:

Name:	ORANGE COAST AUTOMOTIVE
Year:	2006
Address:	1202 LOGAN AVE

K64 **VELIE CIRCITS INC** **RCRA-LQG** **1000248362**
North **1267 LOGAN AVE.** **FINDS** **CAD980816763**
1/8-1/4 **COSTA MESA, CA** **CA FID UST**
0.225 mi. **CA UST**
1189 ft. **Site 3 of 7 in cluster K** **CA HIST UST**
CA SWEEPS UST
Relative: **CA WDS**
Lower

Actual:
46 ft.

RCRA-LQG:

Date form received by agency:	02/12/2006
Facility name:	VELIE CIRCUITS
Facility address:	1267 LOGAN AVE COSTA MESA, CA 92626
EPA ID:	CAD980816763
Contact:	RUSSEL GANN
Contact address:	Not reported Not reported
Contact country:	Not reported
Contact telephone:	(714) 751-4994
Contact email:	RNGANN@MSM.COM
EPA Region:	09
Land type:	Private
Classification:	Large Quantity Generator
Description:	Handler: generates 1,000 kg or more of hazardous waste during any calendar month; or generates more than 1 kg of acutely hazardous waste during any calendar month; or generates more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month; or generates 1 kg or less of acutely hazardous waste during any calendar month, and accumulates more than 1 kg of acutely hazardous waste at any time; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates more than 100 kg of that material at any time

Owner/Operator Summary:

Owner/operator name:	DENNY ALLEN CRISWELL
Owner/operator address:	3540 EAST 26TH STREET VERNON, CA 90023
Owner/operator country:	US
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	01/01/2004
Owner/Op end date:	Not reported
Owner/operator name:	VELIE CIRCUITS
Owner/operator address:	Not reported Not reported
Owner/operator country:	US
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	01/01/2004
Owner/Op end date:	Not reported

Handler Activities Summary:

VELIE CIRCITS INC (Continued) **1000248362**

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	Yes
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Historical Generators:

Date form received by agency: 02/01/2004
Facility name: VELIE CIRCUITS
Classification: Large Quantity Generator

Date form received by agency: 10/31/2002
Facility name: VELIE CIRCUITS
Site name: VELIE CIRCUITS, INC.
Classification: Large Quantity Generator

Date form received by agency: 10/12/2000
Facility name: VELIE CIRCUITS
Site name: VELIE CIRCUITS, INC.
Classification: Large Quantity Generator

Date form received by agency: 03/04/1999
Facility name: VELIE CIRCUITS
Site name: VELIE CIRCUITS, INC.
Classification: Large Quantity Generator

Date form received by agency: 09/01/1996
Facility name: VELIE CIRCUITS
Site name: VELIE CIRCUITS INC
Classification: Large Quantity Generator

Date form received by agency: 02/05/1996
Facility name: VELIE CIRCUITS
Site name: VELIE CIRCUITS, INC.
Classification: Large Quantity Generator

Date form received by agency: 03/25/1994
Facility name: VELIE CIRCUITS
Site name: VELIE CIRCUITS INC.
Classification: Large Quantity Generator

Date form received by agency: 02/18/1992
Facility name: VELIE CIRCUITS
Site name: VELIE CIRCUITS INC
Classification: Large Quantity Generator

Date form received by agency: 04/16/1990

VELIE CIRCITS INC (Continued) **1000248362**

Facility name: VELIE CIRCUITS
Site name: VELIE CIRCUITS INC
Classification: Large Quantity Generator

Date form received by agency: 09/22/1983
Facility name: VELIE CIRCUITS
Site name: VELIE CIRCUITS INC
Classification: Large Quantity Generator

Hazardous Waste Summary:
Waste code: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Waste code: F006
Waste name: WASTEWATER TREATMENT SLUDGES FROM ELECTROPLATING OPERATIONS EXCEPT FROM THE FOLLOWING PROCESSES: (1) SULFURIC ACID ANODIZING OF ALUMINUM; (2) TIN PLATING ON CARBON STEEL; (3) ZINC PLATING (SEGREGATED BASIS) ON CARBON STEEL; (4) ALUMINUM OR ZINC-ALUMINUM PLATING ON CARBON STEEL; (5) CLEANING/STRIPPING ASSOCIATED WITH TIN, ZINC AND ALUMINUM PLATING ON CARBON STEEL; AND (6) CHEMICAL ETCHING AND MILLING OF ALUMINUM.

Facility Has Received Notices of Violations:
Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 06/22/2006
Date achieved compliance: 09/27/2006
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 06/22/2006
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:
Evaluation date: 06/22/2006
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 09/27/2006
Evaluation lead agency: Local

Evaluation date: 06/28/2005
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State Contractor/Grantee

VELIE CIRCITS INC (Continued) **1000248362**

Evaluation date:	04/26/2004
Evaluation:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation:	Not reported
Date achieved compliance:	Not reported
Evaluation lead agency:	State Contractor/Grantee
Evaluation date:	04/11/1994
Evaluation:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation:	Not reported
Date achieved compliance:	Not reported
Evaluation lead agency:	State Contractor/Grantee
Evaluation date:	05/05/1992
Evaluation:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation:	Generators - General
Date achieved compliance:	09/27/2006
Evaluation lead agency:	State Contractor/Grantee

FINDS:

Registry ID: 110000479848

Environmental Interest/Information System

US EPA TRIS (Toxics Release Inventory System) contains information from facilities on the amounts of over 300 listed toxic chemicals that these facilities release directly to air, water, land, or that are transported off-site.

California Hazardous Waste Tracking System - Datamart (HWTS-DATAMART) provides California with information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

HAZARDOUS WASTE BIENNIAL REPORTER

CA FID UST:

Facility ID:	30000033
Regulated By:	UTNKA
Regulated ID:	Not reported
Cortese Code:	Not reported
SIC Code:	Not reported
Facility Phone:	7147514994
Mail To:	Not reported
Mailing Address:	16144 HIGH VALLEY PL
Mailing Address 2:	Not reported
Mailing City,St,Zip:	COSTA MESA 92626
Contact:	Not reported
Contact Phone:	Not reported
DUNs Number:	Not reported

VELIE CIRCITS INC (Continued) **1000248362**

NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Active

UST:
Facility ID: 3820
Latitude: 33.67876
Longitude: -117.9117

HIST UST:
Region: STATE
Facility ID: 00000006173
Facility Type: Other
Other Type: ELECTRONICS
Total Tanks: 0001
Contact Name: DALE LAMB
Telephone: 7147514994
Owner Name: VELIE CIRCUITS, INC.
Owner Address: 1267 LOGAN AVENUE
Owner City,St,Zip: COSTA MESA, CA 92626

Tank Num: 001
Container Num: 1
Year Installed: 1978
Tank Capacity: 00020000
Tank Used for: WASTE
Type of Fuel: Not reported
Tank Construction: 10 inches
Leak Detection: Visual

SWEEPS UST:
Status: Active
Comp Number: 3820
Number: 9
Board Of Equalization: Not reported
Referral Date: 09-30-92
Action Date: 04-03-92
Created Date: 02-29-88
Tank Status: A
Owner Tank Id: Not reported
Swrcb Tank Id: 30-000-003820-000014
Actv Date: Not reported
Capacity: 800
Tank Use: PETROLEUM
Stg: P
Content: Not reported
Number Of Tanks: 11

Status: Active
Comp Number: 3820
Number: 9
Board Of Equalization: Not reported
Referral Date: 09-30-92
Action Date: 04-03-92
Created Date: 02-29-88

VELIE CIRCITS INC (Continued) **1000248362**

Tank Status: A
Owner Tank Id: Not reported
Swrcb Tank Id: 30-000-003820-000026
Actv Date: Not reported
Capacity: 800
Tank Use: PETROLEUM
Stg: P
Content: Not reported
Number Of Tanks: Not reported

Status: Active
Comp Number: 3820
Number: 9
Board Of Equalization: Not reported
Referral Date: 09-30-92
Action Date: 04-03-92
Created Date: 02-29-88
Tank Status: A
Owner Tank Id: Not reported
Swrcb Tank Id: 30-000-003820-000027
Actv Date: Not reported
Capacity: 800
Tank Use: PETROLEUM
Stg: P
Content: Not reported
Number Of Tanks: Not reported

Status: Active
Comp Number: 3820
Number: 9
Board Of Equalization: Not reported
Referral Date: 09-30-92
Action Date: 04-03-92
Created Date: 02-29-88
Tank Status: A
Owner Tank Id: Not reported
Swrcb Tank Id: 30-000-003820-000028
Actv Date: Not reported
Capacity: 800
Tank Use: PETROLEUM
Stg: P
Content: Not reported
Number Of Tanks: Not reported

Status: Active
Comp Number: 3820
Number: 9
Board Of Equalization: Not reported
Referral Date: 09-30-92
Action Date: 04-03-92
Created Date: 02-29-88
Tank Status: A
Owner Tank Id: Not reported
Swrcb Tank Id: 30-000-003820-000029
Actv Date: Not reported
Capacity: 800
Tank Use: PETROLEUM

VELIE CIRCITS INC (Continued) **1000248362**

Stg:	P
Content:	Not reported
Number Of Tanks:	Not reported
Status:	Active
Comp Number:	3820
Number:	9
Board Of Equalization:	Not reported
Referral Date:	09-30-92
Action Date:	04-03-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	Not reported
Swrcb Tank Id:	30-000-003820-000030
Actv Date:	Not reported
Capacity:	800
Tank Use:	PETROLEUM
Stg:	P
Content:	Not reported
Number Of Tanks:	Not reported
Status:	Active
Comp Number:	3820
Number:	9
Board Of Equalization:	Not reported
Referral Date:	09-30-92
Action Date:	04-03-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	Not reported
Swrcb Tank Id:	30-000-003820-000031
Actv Date:	Not reported
Capacity:	800
Tank Use:	PETROLEUM
Stg:	P
Content:	Not reported
Number Of Tanks:	Not reported
Status:	Active
Comp Number:	3820
Number:	9
Board Of Equalization:	Not reported
Referral Date:	09-30-92
Action Date:	04-03-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	Not reported
Swrcb Tank Id:	30-000-003820-000032
Actv Date:	Not reported
Capacity:	800
Tank Use:	PETROLEUM
Stg:	P
Content:	Not reported
Number Of Tanks:	Not reported
Status:	Active
Comp Number:	3820

VELIE CIRCITS INC (Continued) **1000248362**

Number:	9
Board Of Equalization:	Not reported
Referral Date:	09-30-92
Action Date:	04-03-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	Not reported
Swrcb Tank Id:	30-000-003820-000033
Actv Date:	Not reported
Capacity:	800
Tank Use:	PETROLEUM
Stg:	P
Content:	Not reported
Number Of Tanks:	Not reported

Status:	Active
Comp Number:	3820
Number:	9
Board Of Equalization:	Not reported
Referral Date:	09-30-92
Action Date:	04-03-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	Not reported
Swrcb Tank Id:	30-000-003820-000034
Actv Date:	Not reported
Capacity:	800
Tank Use:	PETROLEUM
Stg:	P
Content:	Not reported
Number Of Tanks:	Not reported

Status:	Active
Comp Number:	3820
Number:	9
Board Of Equalization:	Not reported
Referral Date:	09-30-92
Action Date:	04-03-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	Not reported
Swrcb Tank Id:	30-000-003820-000035
Actv Date:	Not reported
Capacity:	800
Tank Use:	PETROLEUM
Stg:	P
Content:	Not reported
Number Of Tanks:	Not reported

CA WDS:

Facility ID:	Santa Ana River 30I003385
Facility Type:	Industrial - Facility that treats and/or disposes of liquid or semisolid wastes from any servicing, producing, manufacturing or processing operation of whatever nature, including mining, gravel washing, geothermal operations, air conditioning, ship building and repairing, oil production, storage and disposal operations, water pumping.

VELIE CIRCITS INC (Continued) **1000248362**

Facility Status:	Active - Any facility with a continuous or seasonal discharge that is under Waste Discharge Requirements.
NPDES Number:	CAS000001 The 1st 2 characters designate the state. The remaining 7 are assigned by the Regional Board
Subregion:	8
Facility Telephone:	7147514994
Facility Contact:	GARY KLUECKMAN
Agency Name:	VELIE CIRCUITS INC.
Agency Address:	1267 LOGAN AVENUE
Agency City,St,Zip:	COSTA MESA 92626
Agency Contact:	GARY KLUECKMAN
Agency Telephone:	7147514994
Agency Type:	Private
SIC Code:	3672
SIC Code 2:	Not reported
Primary Waste:	Stormwater Runoff
Primary Waste Type:	Designated/Influent or Solid Wastes that pose a significant threat to water quality because of their high concentrations (E.G., BOD, Hardness, TRF, Chloride). 'Manageable' hazardous wastes (E.G., inorganic salts and heavy metals) are included in this category.
Secondary Waste:	Not reported
Secondary Waste Type:	Not reported
Design Flow:	0
Baseline Flow:	0
Reclamation:	Not reported
POTW:	Not reported
Treat To Water:	Minor Threat to Water Quality. A violation of a regional board order should cause a relatively minor impairment of beneficial uses compared to a major or minor threat. Not: All nurds without a TTWQ will be considered a minor threat to water quality unless coded at a higher Level. A Zero (0) may be used to code those NURDS that are found to represent no threat to water quality.
Complexity:	Category C - Facilities having no waste treatment systems, such as cooling water dischargers or thosewho must comply through best management practices, facilities with passive waste treatment and disposal systems, such as septic systems with subsurface disposal, or dischargers having waste storage systems with land disposal such as dairy waste ponds.

K65
North
1/8-1/4
0.225 mi.
1189 ft.

METROPOLITAN CIRCUITS
1267 LOGAN AVENUE
COSTA MESA, CA 92626

Site 4 of 7 in cluster K

CA HIST Cal-Sites
CA BOND EXP. PLAN
CA HIST CORTESE
CA RESPONSE
CA ENVIROSTOR

S100833316
N/A

Relative:
Lower

Actual:
46 ft.

Calsite:

Facility ID:	30360008
Region:	4
Region Name:	CYPRESS
Branch:	SB
Branch Name:	SO CAL - CYPRESS
File Name:	Not reported
State Senate District:	11202000
Status:	CERTIFIED AS HAVING BEEN REMEDIED SATISFACTORILY UNDER DTSC OVERSIGHT
Status Name:	CERTIFIED
Lead Agency:	DTSC
Lead Agency:	DEPT OF TOXIC SUBSTANCES CONTROL
Facility Type:	RP

METROPOLITAN CIRCUITS (Continued) **S100833316**

Type Name:	RESPONSIBLE PARTY
NPL:	Not Listed
SIC Code:	36
SIC Name:	MANU - ELECTRONIC & OTHER ELECTRIC EQUIP
Access:	Controlled
Cortese:	Not reported
Hazardous Ranking Score:	Not reported
Date Site Hazard Ranked:	Not reported
Groundwater Contamination:	Suspected
Staff Member Responsible for Site:	Not reported
Supervisor Responsible for Site:	Not reported
Region Water Control Board:	SA
Region Water Control Board Name:	SANTA ANA
Lat/Long Direction:	Not reported
Lat/Long (dms):	0 0 0 / 0 0 0
Lat/long Method:	Not reported
Lat/Long Description:	Not reported
State Assembly District Code:	68
State Senate District Code:	35
Facility ID:	30360008
Activity:	DISC
Activity Name:	DISCOVERY
AWP Code:	Not reported
Proposed Budget:	0
AWP Completion Date:	Not reported
Revised Due Date:	Not reported
Comments Date:	08011981
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	CERT
Definition of Status:	CERTIFIED
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	30360008
Activity:	RA
Activity Name:	REMOVAL ACTION
AWP Code:	SOIL
Proposed Budget:	0
AWP Completion Date:	Not reported
Revised Due Date:	Not reported
Comments Date:	09301986
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	CERT
Definition of Status:	CERTIFIED
Liquids Removed (Gals):	0

METROPOLITAN CIRCUITS (Continued) **S100833316**

Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	30360008
Activity:	SS
Activity Name:	SITE SCREENING
AWP Code:	Not reported
Proposed Budget:	0
AWP Completion Date:	Not reported
Revised Due Date:	Not reported
Comments Date:	01021987
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	CERT
Definition of Status:	CERTIFIED
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	30360008
Activity:	ORDER
Activity Name:	I/SE, IORSE, FFA, FFSRA, VCA, EA
AWP Code:	RAO
Proposed Budget:	0
AWP Completion Date:	Not reported
Revised Due Date:	Not reported
Comments Date:	04301988
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	CERT
Definition of Status:	CERTIFIED
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0

METROPOLITAN CIRCUITS (Continued) **S100833316**

Unknown Type:	0
Facility ID:	30360008
Activity:	PPP
Activity Name:	PUBLIC PARTICIPATION PLAN
AWP Code:	Not reported
Proposed Budget:	0
AWP Completion Date:	Not reported
Revised Due Date:	Not reported
Comments Date:	09301990
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	CERT
Definition of Status:	CERTIFIED
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	30360008
Activity:	FDNC
Activity Name:	FINAL DETERMINATION OF NON-COMPLIANCE
AWP Code:	Not reported
Proposed Budget:	0
AWP Completion Date:	Not reported
Revised Due Date:	Not reported
Comments Date:	11301990
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	CERT
Definition of Status:	CERTIFIED
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	30360008
Activity:	FRIFS
Activity Name:	FOCUSED REMEDIAL INVESTIGATION/FEASIBILITY STUDY
AWP Code:	GW
Proposed Budget:	0
AWP Completion Date:	Not reported
Revised Due Date:	Not reported
Comments Date:	06301993

METROPOLITAN CIRCUITS (Continued) **S100833316**

Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	CERT
Definition of Status:	CERTIFIED
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	30360008
Activity:	ORDER
Activity Name:	I/SE, IORSE, FFA, FFSRA, VCA, EA
AWP Code:	AMEND
Proposed Budget:	0
AWP Completion Date:	Not reported
Revised Due Date:	Not reported
Comments Date:	11221993
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	CERT
Definition of Status:	CERTIFIED
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	30360008
Activity:	ORDER
Activity Name:	I/SE, IORSE, FFA, FFSRA, VCA, EA
AWP Code:	I&SE
Proposed Budget:	0
AWP Completion Date:	Not reported
Revised Due Date:	Not reported
Comments Date:	12091994
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	CERT
Definition of Status:	CERTIFIED
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported

METROPOLITAN CIRCUITS (Continued) **S100833316**

Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	30360008
Activity:	CEQA
Activity Name:	CEQA INCLUDING NEGATIVE DECS
AWP Code:	NOD
Proposed Budget:	0
AWP Completion Date:	Not reported
Revised Due Date:	Not reported
Comments Date:	05231995
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	CERT
Definition of Status:	CERTIFIED
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	30360008
Activity:	RIFS
Activity Name:	REMEDIAL INVESTIGATION / FEASIBILITY STUDY
AWP Code:	GW
Proposed Budget:	0
AWP Completion Date:	Not reported
Revised Due Date:	Not reported
Comments Date:	03251996
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	CERT
Definition of Status:	CERTIFIED
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	30360008
Activity:	RA

METROPOLITAN CIRCUITS (Continued) **S100833316**

Activity Name:	REMOVAL ACTION
AWP Code:	SOIL
Proposed Budget:	0
AWP Completion Date:	Not reported
Revised Due Date:	Not reported
Comments Date:	09061995
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	CERT
Definition of Status:	CERTIFIED
Liquids Removed (Gals):	435
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	N
Activity Comments:	EXCAVATION AND DISPOSAL OF NON-RCRA WASTE.
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	30360008
Activity:	RMDL
Activity Name:	REMEDIAL ACTION (RAP REQUIRED)
AWP Code:	S/GW
Proposed Budget:	0
AWP Completion Date:	Not reported
Revised Due Date:	Not reported
Comments Date:	05101999
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	CERT
Definition of Status:	CERTIFIED
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	N
Activity Comments:	750 LBS. VOCS REMOVED (GALLONS)6.6 MILLION GALLONS TREATED
For Commercial Reuse:	0
For Industrial Reuse:	2.50000
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	30360008
Activity:	CERT
Activity Name:	CERTIFICATION
AWP Code:	Not reported
Proposed Budget:	0
AWP Completion Date:	Not reported
Revised Due Date:	Not reported
Comments Date:	11202000
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported

METROPOLITAN CIRCUITS (Continued) **S100833316**

Activity Status:	CERT
Definition of Status:	CERTIFIED
Liquids Removed (Gals):	650
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	X
Action Included Fencing:	Not reported
Removal Action Certification:	N
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	30360008
Activity:	CEQA
Activity Name:	CEQA INCLUDING NEGATIVE DECS
AWP Code:	Not reported
Proposed Budget:	0
AWP Completion Date:	Not reported
Revised Due Date:	Not reported
Comments Date:	10101996
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	CERT
Definition of Status:	CERTIFIED
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	30360008
Activity:	RAW
Activity Name:	REMOVAL ACTION WORKPLAN
AWP Code:	Not reported
Proposed Budget:	0
AWP Completion Date:	Not reported
Revised Due Date:	Not reported
Comments Date:	10101996
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	CERT
Definition of Status:	CERTIFIED
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported

METROPOLITAN CIRCUITS (Continued) **S100833316**

For Commercial Reuse: 0
For Industrial Reuse: 0
For Residential Reuse: 0
Unknown Type: 0
Facility ID: 30360008
Activity: ORDER
Activity Name: I/SE, IORSE, FFA, FFSRA, VCA, EA
AWP Code: SETTL
Proposed Budget: 0
AWP Completion Date: Not reported
Revised Due Date: Not reported
Comments Date: 10121999
Est Person-Yrs to complete: 0
Estimated Size: Not reported
Request to Delete Activity: Not reported
Activity Status: CERT
Definition of Status: CERTIFIED
Liquids Removed (Gals): 0
Liquids Treated (Gals): 0
Action Included Capping: Not reported
Well Decommissioned: Not reported
Action Included Fencing: Not reported
Removal Action Certification: Not reported
Activity Comments: Not reported
For Commercial Reuse: 0
For Industrial Reuse: 0
For Residential Reuse: 0
Unknown Type: 0
Alternate Address: 1267 LOGAN AVENUE
Alternate City,St,Zip: COSTA MESA, CA 92626
Alternate Address: 1261 LOGAN AVENUE (CERCLIS)
Alternate City,St,Zip: COSTA MESA, CA
Alternate Address: 3232 FAIRVIEW (NEW LOCATION)
Alternate City,St,Zip: COSTA MESA, CA
Background Info: This site is a printed circuit board manufacturing plant which was operated by Metropolitan Circuits from 1969 to 1981. The facility is presently occupied by Velie Circuits, which has operated a similar manufacturing plant at the location since 1984. During the production of the printed circuit boards, a process was used that involved the plating of copper and other metals. The soils in the chemical handling and storage areas on the site have been contaminated by metals used in this manufacturing process.
The company completed a prior RI/FS in 1985, and developed a RAP for the excavation and removal of contaminated soil. The RAP was approved in February 1986, and the excavation and removal of soil was implemented in September 1986. However, post-excavation sampling revealed that metals were still present in the soils and that they appeared to be increasing in depth. Therefore, in April 1988, the Department issued an RAO to the RPs requiring them to perform additional site characterization and remediation.
In 1990, an approved RI Workplan was implemented which included soil sampling and installing 2 groundwater monitoring wells. Results showed that the extent of copper-contaminated was undefined and volatile organic compound (VOCs) were present in the soil and groundwater.
In 1991, additional RI work was completed. The extent of

METROPOLITAN CIRCUITS (Continued) **S100833316**

copper-contaminated soil was still undefined, the source of VOCs in the soil and groundwater was not identified, and the ground-water flow direction was unclear.
In 1992, a condensed and conservative Health Risk Assessment (HRA) was prepared by the Department based on information pro-vided in the draft RI Report. The HRA concluded that the soil contaminated with metals and concentrations of VOCs in ground-water, if used as a drinking water source, may pose a significant risk.
After the groundwater flow direction was re-determined, addi-tional investigative work was performed. The purpose of the investigation was to define the copper-contaminated soil area and evaluate groundwater conditions at the site using a cone penetro-meter testing (CPT) survey and placing a groundwater monitoring well offsite. The report on this work concluded that available soil and groundwater data for VOCs is insufficient to identify the source or extent of contamination.
Thus, a limited soil investigation was performed in April 1993 for the purpose of determining if site operation contributed to the groundwater contamination of VOCs.

Comments Date:	08011981
Comments:	03/19/79 EMA - chemical waste onto Logan Avenue.
Comments Date:	01021987
Comments:	Site Screening Done.
Comments Date:	01311984
Comments:	This is the date the site was first listed pursuant to
Comments Date:	01311984
Comments:	section 25356.
Comments Date:	02151995
Comments:	The focused RI/FS workplan was approved.
Comments Date:	03251996
Comments:	Additional contours of contaminated groundwater were
Comments Date:	03251996
Comments:	provided. Pilot test results were also found acceptable.
Comments Date:	03251996
Comments:	RI/FS complete.
Comments Date:	04041995
Comments:	The Removal Action Workplan was tentatively approved.
Comments Date:	04221999
Comments:	DTSC meets with Velie Circuits, agrees that contaminants in
Comments Date:	04221999
Comments:	groundwater have reached asymptotic levels and active
Comments Date:	04221999
Comments:	remediation can be discontinued. Follow-up monitoring is
Comments Date:	04221999
Comments:	needed, both on and off property.
Comments Date:	05101999
Comments:	DTSC has determined that the remedial objectives of the ground-
Comments Date:	05101999
Comments:	water and soil treatment system have been achieved.
Comments Date:	05221995
Comments:	CEQA documents for the Metrolpolitan Circuits site were
Comments Date:	05221995
Comments:	submitted/approved for the planned removal action. The
Comments Date:	05221995
Comments:	proposed activities include excavation and removal of
Comments Date:	05221995

METROPOLITAN CIRCUITS (Continued) **S100833316**

Comments:	metal-contaminated soils.
Comments Date:	05261982
Comments:	Final disposition through LA County Enforcement.
Comments Date:	08011981
Comments:	04/24/79 EMA-WPC - IWDP #202. 05/11/79 County Sanitation -
Comments Date:	08011981
Comments:	discharge to sewer at night.
Comments Date:	08101981
Comments:	Records Search: County Sanitation - problems with discharge
Comments Date:	08101981
Comments:	clean-up.
Comments Date:	09141989
Comments:	Preliminary Assessment Done: On-going remedial investigation
Comments Date:	09141989
Comments:	for this BEP site.
Comments Date:	09181995
Comments:	A Removal Action was conducted at the Metropolitan Circuits
Comments Date:	09181995
Comments:	site consisting of the excavation and disposal of approx-
Comments Date:	09181995
Comments:	imately 435 tons of non-RCRA waste. Clean soil was
Comments Date:	09181995
Comments:	compacted over the excavated areas and certified to at
Comments Date:	09181995
Comments:	least 90% compacted.
Comments Date:	09261989
Comments:	Preliminary Assessment submitted to EPA. No further action
Comments Date:	09261989
Comments:	by EPA.
Comments Date:	09291981
Comments:	Facility Drive-By: Operations moved to 3232 Fairview, also
Comments Date:	09291981
Comments:	in Costa Mesa. Bluegreen stain from lot to street drain.
Comments Date:	09301986
Comments:	Removal Action: Soil excavation.
Comments Date:	10051981
Comments:	Questionnaire sent.
Comments Date:	10101996
Comments:	The CEQA and RAW were completed and approved.
Comments Date:	10101996
Comments:	Onsite pump and treat system (2-phase vapor extraction) to
Comments Date:	10101996
Comments:	remediate 2 perched aquifers contaminated with various VOCs.
Comments Date:	10101996
Comments:	Remediation is just starting - so total removed water is
Comments Date:	10101996
Comments:	not projected at this time. Operating 11/96.
Comments Date:	10121999
Comments:	A settlement agreement was reached with Velie Circuits in which
Comments Date:	10121999
Comments:	final remediation has been approved. O&M will continue until
Comments Date:	10121999
Comments:	the second quarter of the year 2000.
Comments Date:	10221981
Comments:	Questionnaire received.
Comments Date:	11051981
Comments:	Phone Follow-up: Refined solvents onsite. Clarifier has ink

METROPOLITAN CIRCUITS (Continued) **S100833316**

Comments Date:	11051981
Comments:	and plating wastes. Clarifier was full - no plan to empty.
Comments Date:	11051981
Comments:	Stains from sulfuric peroxide.
Comments Date:	11091981
Comments:	State Inspection: Clarified on east side of building. Non-
Comments Date:	11091981
Comments:	odorous material in clarifier. DA torque fluid in
Comments Date:	11091981
Comments:	containers. One 55-gallon drum and 5-gallon bucket. Cement
Comments Date:	11091981
Comments:	block in back nearly dissolved. Stains (blue, yellow,
Comments Date:	11091981
Comments:	orange) around crumbling block. Acid tank was over cement
Comments Date:	11091981
Comments:	block. Reddish stain at back of building; may be rust.
Comments Date:	11091981
Comments:	Security guard on premises.
Comments Date:	11171981
Comments:	Recommend testing of clarifier.
Comments Date:	11231999
Comments:	Velie Circuits submits a proposal to abandon seven monitoring
Comments Date:	11231999
Comments:	wells in the Adams Place (former Our Town Apartments) and one
Comments Date:	11231999
Comments:	on the Lyon Mesa Property. DTSC approves the proposal.
Comments Date:	11292000
Comments:	SOIL AND GROUNDWATER REMEDIATION AT THE SITE HAS BEEN CERTIFIED
Comments Date:	11292000
Comments:	REMEDIATED TO HEALTH-BASED STANDARDS.
Comments Date:	12071981
Comments:	State Inspection: Storage cabinet had solvents, paints, and
Comments Date:	12071981
Comments:	adhesives. Five samples taken. Site photos taken.
Comments Date:	12071994
Comments:	The Department is currently negotiating a Cleanup
Comments Date:	12071994
Comments:	Agreement with Ascon Landfill.
Comments Date:	12091994
Comments:	DTSC issued an Imminent and/or Substantial Endangerment
Comments Date:	12091994
Comments:	Order and Consent Agreement.
Comments Date:	08011981
Comments:	Facility Identified: Phone Co Search.
Comments Date:	08011981
Comments:	Records Search: 07/01/76 NPDES #477B8872, IWP #7-217.
ID Name:	CALSTARS CODE
ID Value:	400096
ID Name:	HWIS IDENTIFICATION CODE
ID Value:	CAD980816763
ID Name:	BEP DATABASE PCODE
ID Value:	P41025
ID Name:	EPA IDENTIFICATION NUMBER
ID Value:	CAD982360232
Alternate Name:	METROPOLITAN WEST (IN 1971)METROPOLITAN CIRCUITSVELIE CIRCUITS INC
Special Programs Code:	CERC2
Special Programs Name:	CERCLA II

METROPOLITAN CIRCUITS (Continued) **S100833316**

CA BOND EXP. PLAN:

Reponsible Party:	RESPONSIBLE PARTY LEAD SITE CLEANUP WORKPLAN
Project Revenue Source Company:	Not reported
Project Revenue Source Addr:	Not reported
Project Revenue Source City,St,Zip:	Not reported
Project Revenue Source Desc:	The responsible parties are in compliance with an order issued by the Department for oversight/monitoring of their cleanup efforts. DHS has budgeted $50,000 for direct costs related to the project. DHS will recover 100 percent of direct costs plus staff costs and overhead related to the project. The responsible parties will pay all costs associated with cleanup.
Site Description:	This site is a former printed circuit board manufacturing plant which operated from 1969 to 1981. The facility is now occupied by Velie Circuits, which has operated a similar manufacturing plant since 1984.
Hazardous Waste Desc:	The soils in chemical handling and storage areas on the site have been contaminated by heavy metals utilized in The manufacturing process. These substances include copper, lead, and zinc.
Threat To Public Health & Env:	The levels of heavy metals in soil may be increasing with depth, which could represent a potential threat to the ground water. The site is located next to the Paularino Channel which eventually drains to the Upper Newport Bay, a wildlife refuge. There is no known exposure of chemicals to workers at this time because of preventive measures taken at the facility.
Site Activity Status:	The company completed a RI/FS and developed a RAP that was approved by the Department if February, 1986. The RAP was implemented in September, 1986 which entailed excavation and removal of contaminated soil. Post-excavation sampling revealed that metals were still present in soils and may be increasing with depth. In April, 1988, DHS issued a RAO to Metropolitan Circuits and Velie Circuits requiring them to characterize the remaining contamination and develop a second RAP. The characterization work will include ground water investigation to determine if usable aquifers are impacted. This work will commence in Fall 1988.

CORTESE:

Region:	CORTESE
Facility County Code:	30
Reg By:	CALSI
Reg Id:	30360008

RESPONSE:

Facility ID:	30360008
Site Type:	State Response
Site Type Detail:	State Response or NPL
Acres:	2.5
National Priorities List:	NO
Cleanup Oversight Agencies:	SMBRP
Lead Agency:	SMBRP
Lead Agency Description:	DTSC - Site Cleanup Program
Project Manager:	Not reported
Supervisor:	* Greg Holmes
Division Branch:	Cleanup Cypress
Site Code:	400096
Site Mgmt. Req.:	NONE SPECIFIED
Assembly:	74
Senate:	37
Special Program Status:	Not reported
Status:	Certified
Status Date:	11/20/2000

METROPOLITAN CIRCUITS (Continued) **S100833316**

Restricted Use:	NO
Funding:	Responsible Party
Latitude:	33.67829
Longitude:	-117.9103
APN:	141-202-15
Past Use:	MANUFACTURING - ELECTRONIC
Potential COC:	Arsenic, Lead, Tetrachloroethylene (PCE, 1,1,1-Trichloroethane (TCA, Trichloroethylene (TCE, Cadmium and compounds, Chromium VI, Copper and compounds, 1,2-Dichloroethane (EDC, 1,1-Dichloroethylene, Mercury and compounds, 1,1,2-Trichloroethane, Zinc
Confirmed COC:	Arsenic, Lead, Tetrachloroethylene (PCE, 1,1,1-Trichloroethane (TCA, Trichloroethylene (TCE, Cadmium and compounds, Chromium VI, Copper and compounds, 1,2-Dichloroethane (EDC, 1,1-Dichloroethylene, Mercury and compounds, 1,1,2-Trichloroethane, Zinc, 1,1,2-Trichloroethane, Tetrachloroethylene (PCE, 1,1,1-Trichloroethane (TCA, Trichloroethylene (TCE, Cadmium and compounds, Chromium VI, Copper and compounds, 1,2-Dichloroethane (EDC, 1,1-Dichloroethylene, Mercury and compounds, Arsenic, Lead, Zinc
Potential Description:	OTH, SOIL, SV, IA, SURFW
Alias Name:	METROPOLITAN WEST (IN 1971)
Alias Type:	Alternate Name
Alias Name:	VELIE CIRCUITS INC
Alias Type:	Alternate Name
Alias Name:	141-202-15
Alias Type:	APN
Alias Name:	CAD982360232
Alias Type:	EPA Identification Number
Alias Name:	110033610634
Alias Type:	EPA (FRS #)
Alias Name:	SLT8R0273912
Alias Type:	GeoTracker Global ID
Alias Name:	CAD980816763
Alias Type:	HWTS Identification Code
Alias Name:	P41025
Alias Type:	PCode
Alias Name:	400096
Alias Type:	Project Code (Site Code)
Alias Name:	30360008
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Removal Action Workplan
Completed Date:	10/10/1996
Comments:	Not reported

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Remedial Action Completion Report
Completed Date:	05/10/1999
Comments:	DTSC has determined that the remedial objectives of the ground- water and soil treatment system have been achieved.

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Removal Action Completion Report
Completed Date:	09/06/1995

METROPOLITAN CIRCUITS (Continued) **S100833316**

Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Remedial Investigation / Feasibility Study
Completed Date:	02/20/1996
Comments:	Additional contours of contaminated groundwater were provided. Pilot test results were also found acceptable. RI/FS complete.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	* Engineering Evaluation / Cost Analysis
Completed Date:	06/30/1993
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Public Participation Plan / Community Relations Plan
Completed Date:	09/30/1990
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Preliminary Assessment Report
Completed Date:	09/14/1989
Comments:	Preliminary Assessment Done: On-going remedial investigation for this BEP site.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Site Screening
Completed Date:	01/02/1987
Comments:	Site Screening Done.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Removal Action Completion Report
Completed Date:	09/30/1986
Comments:	Removal Action: Soil excavation.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	* Discovery
Completed Date:	08/01/1981
Comments:	Facility Identified: Phone Co Search. Records Search: 07/01/76 NPDES #477B8872, IWP #7-217. 03/19/79 EMA - chemical waste onto Logan Avenue. 04/24/79 EMA-WPC - IWDP #202. 05/11/79 County Sanitation - discharge to sewer at night.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Amendment - Order/Agreement
Completed Date:	10/12/1999
Comments:	A settlement agreement was reached with Velie Circuits in which final remediation has been approved. O&M will continue until the second quarter of the year 2000.

METROPOLITAN CIRCUITS (Continued) **S100833316**

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * CEQA
Completed Date: 10/10/1996
Comments: The CEQA and RAW were completed and approved. Onsite pump and treat system (2-phase vapor extraction) to remediate 2 perched aquifers contaminated with various VOCs. Remediation is just starting - so total removed water is not projected at this time. Operating 11/96.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Certification
Completed Date: 11/20/2000
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * CEQA
Completed Date: 05/23/1995
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Imminent and/or Substantial Endangerment Order
Completed Date: 12/09/1994
Comments: DTSC issued an Imminent and/or Substantial Endangerment Order and Consent Agreement.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Amendment - Order/Agreement
Completed Date: 11/22/1993
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Final Determination of Non-Compliance
Completed Date: 11/30/1990
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Unilateral Order (I/SE, RAO, CAO, EPA AO)
Completed Date: 04/11/1988
Comments: RAO

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

METROPOLITAN CIRCUITS (Continued) **S100833316**

ENVIROSTOR:

Site Type:	State Response
Site Type Detailed:	State Response or NPL
Acres:	2.5
NPL:	NO
Regulatory Agencies:	SMBRP
Lead Agency:	SMBRP
Program Manager:	Not reported
Supervisor:	* Greg Holmes
Division Branch:	Cleanup Cypress
Facility ID:	30360008
Site Code:	400096
Assembly:	74
Senate:	37
Special Program:	Not reported
Status:	Certified
Status Date:	11/20/2000
Restricted Use:	NO
Site Mgmt. Req.:	NONE SPECIFIED
Funding:	Responsible Party
Latitude:	33.67829
Longitude:	-117.9103
APN:	141-202-15
Past Use:	MANUFACTURING - ELECTRONIC
Potential COC:	Arsenic, Lead, Tetrachloroethylene (PCE, 1,1,1-Trichloroethane (TCA, Trichloroethylene (TCE, Cadmium and compounds, Chromium VI, Copper and compounds, 1,2-Dichloroethane (EDC, 1,1-Dichloroethylene, Mercury and compounds, 1,1,2-Trichloroethane, Zinc
Confirmed COC:	Arsenic, Lead, Tetrachloroethylene (PCE, 1,1,1-Trichloroethane (TCA, Trichloroethylene (TCE, Cadmium and compounds, Chromium VI, Copper and compounds, 1,2-Dichloroethane (EDC, 1,1-Dichloroethylene, Mercury and compounds, 1,1,2-Trichloroethane, Zinc, 1,1,2-Trichloroethane, Tetrachloroethylene (PCE, 1,1,1-Trichloroethane (TCA, Trichloroethylene (TCE, Cadmium and compounds, Chromium VI, Copper and compounds, 1,2-Dichloroethane (EDC, 1,1-Dichloroethylene, Mercury and compounds, Arsenic, Lead, Zinc
Potential Description:	OTH, SOIL, SV, IA, SURFW
Alias Name:	METROPOLITAN WEST (IN 1971)
Alias Type:	Alternate Name
Alias Name:	VELIE CIRCUITS INC
Alias Type:	Alternate Name
Alias Name:	141-202-15
Alias Type:	APN
Alias Name:	CAD982360232
Alias Type:	EPA Identification Number
Alias Name:	110033610634
Alias Type:	EPA (FRS #)
Alias Name:	SLT8R0273912
Alias Type:	GeoTracker Global ID
Alias Name:	CAD980816763
Alias Type:	HWTS Identification Code
Alias Name:	P41025
Alias Type:	PCode
Alias Name:	400096
Alias Type:	Project Code (Site Code)
Alias Name:	30360008
Alias Type:	Envirostor ID Number

METROPOLITAN CIRCUITS (Continued) **S100833316**

Completed Info:

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Removal Action Workplan
Completed Date: 10/10/1996
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Action Completion Report
Completed Date: 05/10/1999
Comments: DTSC has determined that the remedial objectives of the ground- water and soil treatment system have been achieved.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Removal Action Completion Report
Completed Date: 09/06/1995
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Investigation / Feasibility Study
Completed Date: 02/20/1996
Comments: Additional contours of contaminated groundwater were provided. Pilot test results were also found acceptable. RI/FS complete.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * Engineering Evaluation / Cost Analysis
Completed Date: 06/30/1993
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Public Participation Plan / Community Relations Plan
Completed Date: 09/30/1990
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Assessment Report
Completed Date: 09/14/1989
Comments: Preliminary Assessment Done: On-going remedial investigation for this BEP site.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Screening
Completed Date: 01/02/1987
Comments: Site Screening Done.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Removal Action Completion Report
Completed Date: 09/30/1986
Comments: Removal Action: Soil excavation.

METROPOLITAN CIRCUITS (Continued) **S100833316**

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * Discovery
Completed Date: 08/01/1981
Comments: Facility Identified: Phone Co Search. Records Search: 07/01/76 NPDES #477B8872, IWP #7-217. 03/19/79 EMA - chemical waste onto Logan Avenue. 04/24/79 EMA-WPC - IWDP #202. 05/11/79 County Sanitation - discharge to sewer at night.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Amendment - Order/Agreement
Completed Date: 10/12/1999
Comments: A settlement agreement was reached with Velie Circuits in which final remediation has been approved. O&M will continue until the second quarter of the year 2000.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * CEQA
Completed Date: 10/10/1996
Comments: The CEQA and RAW were completed and approved. Onsite pump and treat system (2-phase vapor extraction) to remediate 2 perched aquifers contaminated with various VOCs. Remediation is just starting - so total removed water is not projected at this time. Operating 11/96.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Certification
Completed Date: 11/20/2000
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * CEQA
Completed Date: 05/23/1995
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Imminent and/or Substantial Endangerment Order
Completed Date: 12/09/1994
Comments: DTSC issued an Imminent and/or Substantial Endangerment Order and Consent Agreement.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Amendment - Order/Agreement
Completed Date: 11/22/1993
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Final Determination of Non-Compliance
Completed Date: 11/30/1990
Comments: Not reported

METROPOLITAN CIRCUITS (Continued) **S100833316**

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Unilateral Order (I/SE, RAO, CAO, EPA AO)
Completed Date:	04/11/1988
Comments:	RAO
Future Area Name:	Not reported
Future Sub Area Name:	Not reported
Future Document Type:	Not reported
Future Due Date:	Not reported
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported

M66 **BOAT TRANSIT INC** **CA UST** **U001576786**
North **1343 LOGAN AVE** **CA HIST UST** **N/A**
1/8-1/4 **COSTA MESA, CA 92626**
0.226 mi.
1192 ft. **Site 1 of 7 in cluster M**

Relative:
Lower

Actual:
47 ft.

UST:

Facility ID:	1612
Latitude:	33.67875
Longitude:	-117.91453

HIST UST:

Region:	STATE
Facility ID:	00000065617
Facility Type:	Other
Other Type:	TRUCKING COMPANY
Total Tanks:	0001
Contact Name:	CLAUDE SHELTON
Telephone:	7145467172
Owner Name:	LOGAN AVENUE LEASING
Owner Address:	1343 LOGAN AVENUE
Owner City,St,Zip:	COSTA MESA, CA 92626
Tank Num:	001
Container Num:	1
Year Installed:	Not reported
Tank Capacity:	00010000
Tank Used for:	PRODUCT
Type of Fuel:	DIESEL
Tank Construction:	Not reported
Leak Detection:	Stock Inventor

M67 **BOAT TRANSIT CO** — **CA HIST CORTESE** **S104160818**
North **1343 LOGAN** — **CA LUST** **N/A**
1/8-1/4 **COSTA MESA, CA 92626**
0.226 mi.
1192 ft. **Site 2 of 7 in cluster M**

Relative: **Lower**

Actual: **47 ft.**

CORTESE:

Region:	CORTESE
Facility County Code:	30
Reg By:	LTNKA
Reg Id:	083001546T

LUST:

Region:	STATE
Global Id:	T0605901181
Latitude:	33.6786464
Longitude:	-117.9145499
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	02/25/1992
Lead Agency:	ORANGE COUNTY LOP
Case Worker:	DB
Local Agency:	ORANGE COUNTY LOP
RB Case Number:	083001546T
LOC Case Number:	90UT133
File Location:	Local Agency
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Diesel
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0605901181
Contact Type:	Regional Board Caseworker
Contact Name:	CARL BERNHARDT
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	cbernhardt@waterboards.ca.gov
Phone Number:	9517824495
Global Id:	T0605901181
Contact Type:	Local Agency Caseworker
Contact Name:	DENAMARIE BAKER
Organization Name:	ORANGE COUNTY LOP
Address:	1241 E. DYER ROAD, STE. 120
City:	SANTA ANA
Email:	dbaker@ochca.com
Phone Number:	7144336255

Status History:

Global Id:	T0605901181
Status:	Completed - Case Closed
Status Date:	02/25/1992
Global Id:	T0605901181
Status:	Open - Case Begin Date
Status Date:	05/15/1990

BOAT TRANSIT CO (Continued) **S104160818**

Regulatory Activities:

Global Id:	T0605901181
Action Type:	Other
Date:	01/01/1950
Action:	Leak Discovery
Global Id:	T0605901181
Action Type:	Other
Date:	01/01/1950
Action:	Leak Reported

ORANGE CO. LUST:

Region:	ORANGE
Facility Id:	90UT133
Current Status:	Certification (Case Closed)
Released Substance:	Diesel fuel oil and additives, Nos.1-D, 2-D, 2-4
Date Closed:	02/25/1992
Case Type:	Soil Only
Record ID:	RO0002574

LUST REG 8:

Region:	8
County:	Orange
Regional Board:	Santa Ana Region
Facility Status:	Case Closed
Case Number:	083001546T
Local Case Num:	90UT133
Case Type:	Soil only
Substance:	Diesel
Qty Leaked:	0
Abate Method:	Not reported
Cross Street:	Not reported
Enf Type:	Not reported
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Close Tank
Leak Cause:	Unknown
Leak Source:	Unknown
Global ID:	T0605901181
How Stopped Date:	9/9/9999
Enter Date:	Not reported
Review Date:	Not reported
Prelim Assess:	Not reported
Discover Date:	5/15/1990
Enforcement Date:	Not reported
Close Date:	2/25/1992
Workplan:	Not reported
Pollution Char:	Not reported
Remed Plan:	Not reported
Remed Action:	Not reported
Monitoring:	Not reported
Enter Date:	Not reported
GW Qualifies:	Not reported
Soil Qualifies:	Not reported
Operator:	Not reported

BOAT TRANSIT CO (Continued) **S104160818**

Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.6786464
Longitude:	-117.9145499
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	0
MTBE Tested:	Not Required to be Tested.
MTBE Class:	*
Staff:	CAB
Staff Initials:	AR
Lead Agency:	Local Agency
Local Agency:	30000L
Hydr Basin #:	Not reported
Beneficial:	MUN
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Summary:	Not reported

K68
North **1260 LOGAN AVE**
1/8-1/4 **COSTA MESA, CA 92626**
0.227 mi.
1196 ft. **Site 5 of 7 in cluster K**

EDR US Hist Auto Stat **1015194803**
N/A

Relative:
Lower

Actual:
46 ft.

EDR Historical Auto Stations:

Name:	JAMOS CUSTOM AUTOWORK
Year:	1999
Address:	1260 LOGAN AVE
Name:	JARMOS CUSTOM AUTO
Year:	2001
Address:	1260 LOGAN AVE
Name:	JARMOS CUSTOM AUTO
Year:	2002
Address:	1260 LOGAN AVE
Name:	JARMOS CUSTOM AUTO
Year:	2003
Address:	1260 LOGAN AVE
Name:	JARMOS CUSTOM AUTO
Year:	2004
Address:	1260 LOGAN AVE
Name:	JARMOS CUSTOM AUTO
Year:	2005
Address:	1260 LOGAN AVE
Name:	JARMOS CUSTOM AUTO
Year:	2006
Address:	1260 LOGAN AVE

(Continued) **1015194803**

Name:	JARMOS CUSTOM AUTO
Year:	2007
Address:	1260 LOGAN AVE
Name:	JARMOS CUSTOM AUTO
Year:	2009
Address:	1260 LOGAN AVE
Name:	JARMOS CUSTOM AUTO
Year:	2011
Address:	1260 LOGAN AVE
Name:	JARMOS CUSTOM AUTO
Year:	2012
Address:	1260 LOGAN AVE

K69 **R I CHEMICAL, INC** **RCRA NonGen / NLR** **1000106846**
North **1281 LOGAN AVE UNIT H** **FINDS** **CAD981387962**
1/8-1/4 **COSTA MESA, CA 92626** **CA HAZNET**
0.227 mi.
1199 ft. **Site 6 of 7 in cluster K**

Relative:
Lower

Actual:
47 ft.

RCRA NonGen / NLR:

Date form received by agency:	03/02/1994
Facility name:	R I CHEMICAL, INC
Facility address:	1281 LOGAN AVE UNIT H COSTA MESA, CA 92626
EPA ID:	CAD981387962
Contact:	ROBERT DAY
Contact address:	632 W ANGUS AVE ORANGE, CA 92668
Contact country:	US
Contact telephone:	(714) 540-6732
Contact email:	Not reported
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	ROBERT T DAY
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported
Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported

R I CHEMICAL, INC (Continued) **1000106846**

Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

FINDS:

Registry ID: 110002690204

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

HAZNET:

Year:	1994
Gepaid:	CAD981387962
Contact:	Not reported
Telephone:	0000000000
Mailing Name:	Not reported
Mailing Address:	1281 LOGAN AVE UNIT H
Mailing City,St,Zip:	COSTA MESA, CA 926260000
Gen County:	Not reported
TSD EPA ID:	CAT080010101
TSD County:	Not reported
Waste Category:	Laboratory waste chemicals
Disposal Method:	Not reported
Tons:	.0690
Facility County:	Orange

Year:	1994
Gepaid:	CAD981387962
Contact:	Not reported
Telephone:	0000000000
Mailing Name:	Not reported
Mailing Address:	1281 LOGAN AVE UNIT H
Mailing City,St,Zip:	COSTA MESA, CA 926260000

R I CHEMICAL, INC (Continued) **1000106846**

Gen County:	Not reported
TSD EPA ID:	CAD097030993
TSD County:	Not reported
Waste Category:	Liquids with pH <= 2
Disposal Method:	Treatment, Tank
Tons:	.7088
Facility County:	Orange

Year:	1994
Gepaid:	CAD981387962
Contact:	Not reported
Telephone:	0000000000
Mailing Name:	Not reported
Mailing Address:	1281 LOGAN AVE UNIT H
Mailing City,St,Zip:	COSTA MESA, CA 926260000
Gen County:	Not reported
TSD EPA ID:	CAD000088252
TSD County:	Not reported
Waste Category:	Oxygenated solvents (acetone, butanol, ethyl acetate, etc.)
Disposal Method:	Transfer Station
Tons:	.0625
Facility County:	Orange

Year:	1994
Gepaid:	CAD981387962
Contact:	Not reported
Telephone:	0000000000
Mailing Name:	Not reported
Mailing Address:	1281 LOGAN AVE UNIT H
Mailing City,St,Zip:	COSTA MESA, CA 926260000
Gen County:	Not reported
TSD EPA ID:	CAT080022148
TSD County:	Not reported
Waste Category:	Laboratory waste chemicals
Disposal Method:	Not reported
Tons:	.0510
Facility County:	Orange

Year:	1994
Gepaid:	CAD981387962
Contact:	Not reported
Telephone:	0000000000
Mailing Name:	Not reported
Mailing Address:	1281 LOGAN AVE UNIT H
Mailing City,St,Zip:	COSTA MESA, CA 926260000
Gen County:	Not reported
TSD EPA ID:	CAD000088252
TSD County:	Not reported
Waste Category:	Other organic solids
Disposal Method:	Transfer Station
Tons:	.0750
Facility County:	Orange

Click this hyperlink while viewing on your computer to access
13 additional CA_HAZNET: record(s) in the EDR Site Report.

K70 | **EDR US Hist Auto Stat** | **1015197932**
North | **1281 LOGAN AVE** | **N/A**
1/8-1/4 | **COSTA MESA, CA 92626**
0.227 mi.
1199 ft. | **Site 7 of 7 in cluster K**

Relative:
Lower

Actual:
47 ft.

EDR Historical Auto Stations:

Name: ORANGE COAST AUTOMOTIVE
Year: 2008
Address: 1281 LOGAN AVE

Name: NO LIMIT AUTOMOTIVE LIFESTYLES
Year: 2009
Address: 1281 LOGAN AVE

Name: NO LIMIT AUTOMOTIVE LIFESTYLES
Year: 2010
Address: 1281 LOGAN AVE

Name: ORANGE COAST AUTOMOTIVE
Year: 2011
Address: 1281 LOGAN AVE

Name: ORANGE COAST AUTOMOTIVE
Year: 2012
Address: 1281 LOGAN AVE

M71 | **EDR US Hist Cleaners** | **1014986559**
North | **1297 LOGAN AVE** | **N/A**
1/8-1/4 | **COSTA MESA, CA 92626**
0.230 mi.
1217 ft. | **Site 3 of 7 in cluster M**

Relative:
Lower

Actual:
47 ft.

EDR Historical Cleaners:

Name: COIT DRAPERY & CARPET CLEANERS
Year: 2002
Address: 1297 LOGAN AVE

Name: COIT CLEANING & RESTORATION
Year: 2010
Address: 1297 LOGAN AVE

M72 | **COIT DRAPERY & CARPET CLEANERS** | **RCRA-SQG** | **1000391848**
North | **1297 LOGAN AVE** | **FINDS** | **CAD981391931**
1/8-1/4 | **COSTA MESA, CA 92626** | **CA DRYCLEANERS**
0.230 mi. | | **CA HAZNET**
1217 ft. | **Site 4 of 7 in cluster M** | **CA EMI**

Relative:
Lower

Actual:
47 ft.

RCRA-SQG:

Date form received by agency: 09/01/1996
Facility name: COIT DRAPERY & CARPET CLEANERS
Facility address: 1297 LOGAN AVE
COSTA MESA, CA 92626
EPA ID: CAD981391931
Contact: Not reported
Contact address: Not reported
Not reported
Contact country: Not reported

COIT DRAPERY & CARPET CLEANERS (Continued) **1000391848**

Contact telephone:	Not reported
Contact email:	Not reported
EPA Region:	09
Land type:	Facility is not located on Indian land. Additional information is not known.
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	R W ROUTLEY
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Historical Generators:

Date form received by agency:	02/25/1986
Facility name:	COIT DRAPERY & CARPET CLEANERS
Classification:	Large Quantity Generator

Violation Status:	No violations found

COIT DRAPERY & CARPET CLEANERS (Continued) **1000391848**

Evaluation Action Summary:

Evaluation date:	10/25/1994
Evaluation:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation:	Not reported
Date achieved compliance:	Not reported
Evaluation lead agency:	State Contractor/Grantee

FINDS:

Registry ID: 110002691873

Environmental Interest/Information System

The NEI (National Emissions Inventory) database contains information on stationary and mobile sources that emit criteria air pollutants and their precursors, as well as hazardous air pollutants (HAPs).

California Hazardous Waste Tracking System - Datamart (HWTS-DATAMART) provides California with information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

CRITERIA AND HAZARDOUS AIR POLLUTANT INVENTORY

DRYCLEANERS:

EPA Id:	CAD981391931
NAICS Code:	81232
NAICS Description:	Drycleaning and Laundry Services (except Coin-Operated)
SIC Code:	7211
SIC Description:	Power Laundries, Family and Commercial
Create Date:	04/10/1987
Facility Active:	No
Inactive Date:	06/30/2004
Facility Addr2:	Not reported
Owner Name:	JANICE CARNEY, PRESIDENT
Owner Address:	1297 LOGAN AVE
Owner Address 2:	Not reported
Owner Telephone:	7145401366
Contact Name:	JOHN COMER
Contact Address:	1297 LOGAN AVE
Contact Address 2:	Not reported
Contact Telephone:	7145401366
EDR Link ID:	CAD981391931

HAZNET:

Year:	2007
Gepaid:	CAD981391931
Contact:	JOHN COMER
Telephone:	7145401366

COIT DRAPERY & CARPET CLEANERS (Continued) **1000391848**

Mailing Name:	Not reported
Mailing Address:	1297 LOGAN AVE
Mailing City,St,Zip:	COSTA MESA, CA 926264004
Gen County:	Not reported
TSD EPA ID:	CAD981696420
TSD County:	Not reported
Waste Category:	Waste oil and mixed oil
Disposal Method:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.2
Facility County:	Orange

Year:	2005
Gepaid:	CAD981391931
Contact:	FRANK A NOLASCO
Telephone:	7145401366
Mailing Name:	Not reported
Mailing Address:	1297 LOGAN AVE
Mailing City,St,Zip:	COSTA MESA, CA 926264004
Gen County:	Not reported
TSD EPA ID:	CAT000613893
TSD County:	Not reported
Waste Category:	Liquids with halogenated organic compounds >= 1,000 Mg./L
Disposal Method:	Transfer Station
Tons:	0.45
Facility County:	Orange

Year:	2004
Gepaid:	CAD981391931
Contact:	FRANK A NOLASCO
Telephone:	7145401366
Mailing Name:	Not reported
Mailing Address:	1297 LOGAN AVE
Mailing City,St,Zip:	COSTA MESA, CA 926264004
Gen County:	Not reported
TSD EPA ID:	CAT000613893
TSD County:	Not reported
Waste Category:	Not reported
Disposal Method:	Not reported
Tons:	Not reported
Facility County:	Orange

Year:	2004
Gepaid:	CAD981391931
Contact:	FRANK A NOLASCO
Telephone:	7145401366
Mailing Name:	Not reported
Mailing Address:	1297 LOGAN AVE
Mailing City,St,Zip:	COSTA MESA, CA 926264004
Gen County:	Not reported
TSD EPA ID:	CAT000613893
TSD County:	Not reported
Waste Category:	Liquids with halogenated organic compounds >= 1,000 Mg./L
Disposal Method:	Transfer Station
Tons:	1.3
Facility County:	Orange

COIT DRAPERY & CARPET CLEANERS (Continued) **1000391848**

Year:	2003
Gepaid:	CAD981391931
Contact:	FRANK A NOLASCO
Telephone:	7145401366
Mailing Name:	Not reported
Mailing Address:	1297 LOGAN AVE
Mailing City,St,Zip:	COSTA MESA, CA 926264004
Gen County:	Not reported
TSD EPA ID:	CAT080033681
TSD County:	Not reported
Waste Category:	Off-specification, aged or surplus inorganics
Disposal Method:	Disposal, Land Fill
Tons:	0.77
Facility County:	Orange

Click this hyperlink while viewing on your computer to access
29 additional CA_HAZNET: record(s) in the EDR Site Report.

EMI:

Year:	1987
County Code:	30
Air Basin:	SC
Facility ID:	20403
Air District Name:	SC
SIC Code:	7216
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	8
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1990
County Code:	30
Air Basin:	SC
Facility ID:	20403
Air District Name:	SC
SIC Code:	7216
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	6
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1993
County Code:	30
Air Basin:	SC
Facility ID:	20403

COIT DRAPERY & CARPET CLEANERS (Continued) **1000391848**

Air District Name:	SC
SIC Code:	7216
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	4
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1995
County Code:	30
Air Basin:	SC
Facility ID:	20403
Air District Name:	SC
SIC Code:	7216
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	4
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1996
County Code:	30
Air Basin:	SC
Facility ID:	20403
Air District Name:	SC
SIC Code:	7216
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1997
County Code:	30
Air Basin:	SC
Facility ID:	20403
Air District Name:	SC
SIC Code:	7216
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	3

COIT DRAPERY & CARPET CLEANERS (Continued) **1000391848**

Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1998
County Code:	30
Air Basin:	SC
Facility ID:	20403
Air District Name:	SC
SIC Code:	7216
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	3
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1999
County Code:	30
Air Basin:	SC
Facility ID:	20403
Air District Name:	SC
SIC Code:	7216
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	3
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	2000
County Code:	30
Air Basin:	SC
Facility ID:	20403
Air District Name:	SC
SIC Code:	7216
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	3
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

COIT DRAPERY & CARPET CLEANERS (Continued) **1000391848**

Year:	2001
County Code:	30
Air Basin:	SC
Facility ID:	20403
Air District Name:	SC
SIC Code:	7216
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	3
Reactive Organic Gases Tons/Yr:	2
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

M73 **EDR US Hist Auto Stat** **1015202900**
NNW **1304 LOGAN AVE** **N/A**
1/8-1/4 **COSTA MESA, CA 92626**
0.235 mi.
1243 ft. **Site 5 of 7 in cluster M**

Relative:
Lower

Actual:
47 ft.

EDR Historical Auto Stations:

Name:	ORANGE COAST AUTOMOTIVE
Year:	1999
Address:	1304 LOGAN AVE
Name:	ORANGE COAST AUTOMOTIVE
Year:	2001
Address:	1304 LOGAN AVE
Name:	ORANGE COAST AUTOMOTIVE
Year:	2002
Address:	1304 LOGAN AVE
Name:	ORANGE COAST AUTOMOTIVE
Year:	2005
Address:	1304 LOGAN AVE

M74 **EDR US Hist Auto Stat** **1015203444**
NNW **1306 LOGAN AVE** **N/A**
1/8-1/4 **COSTA MESA, CA 92626**
0.236 mi.
1248 ft. **Site 6 of 7 in cluster M**

Relative:
Lower

Actual:
47 ft.

EDR Historical Auto Stations:

Name:	M2 COLLISION CENTERS
Year:	1999
Address:	1306 LOGAN AVE
Name:	M2 COLLISION CENTERS
Year:	2000
Address:	1306 LOGAN AVE
Name:	M2 COLLISION CARE CENTERS

(Continued) **1015203444**

Year: 2001
Address: 1306 LOGAN AVE

Name: M2 COLLISION CARE CENTERS
Year: 2003
Address: 1306 LOGAN AVE

Name: M2 COLLISION CARE CENTERS
Year: 2004
Address: 1306 LOGAN AVE

Name: M2 COLLISION CARE CENTERS
Year: 2005
Address: 1306 LOGAN AVE

Name: ALLIANCE COLLISION BODY CRAFT
Year: 2007
Address: 1306 LOGAN AVE

Name: ALLIANCE COLLISION BODYCRAFT
Year: 2008
Address: 1306 LOGAN AVE

Name: ALLIANCE COLLISION BODYCRAFT
Year: 2009
Address: 1306 LOGAN AVE

Name: ALLIANCE COLLISION BODYCRAFT
Year: 2010
Address: 1306 LOGAN AVE

Name: ALLIANCE COLLISION BODYCRAFT
Year: 2011
Address: 1306 LOGAN AVE

Name: ALLIANCE BODYCRAFT COLLISION
Year: 2012
Address: 1306 LOGAN AVE

M75 **FREEWAY AUTO BODY** **RCRA-SQG** **1000225209**
NNW **1306 LOGAN AVE** **FINDS** **CAD982479008**
1/8-1/4 **COSTA MESA, CA**
0.236 mi.
1248 ft. **Site 7 of 7 in cluster M**

Relative:
Lower

Actual:
47 ft.

RCRA-SQG:
Date form received by agency: 06/24/1988
Facility name: FREEWAY AUTO BODY
Facility address: 1306 LOGAN AVE
COSTA MESA, CA 92626
EPA ID: CAD982479008
Mailing address: 1211 N BATAVIA
ORANGE, CA 92667
Contact: ENVIRONMENTAL MANAGER
Contact address: 1306 LOGAN AVE
COSTA MESA, CA 92626
Contact country: US
Contact telephone: (714) 744-1090

FREEWAY AUTO BODY (Continued) **1000225209**

Contact email: Not reported
EPA Region: 09
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: MACKIE BRUCE OWNER
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: (415) 555-1212
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: NOT REQUIRED
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: (415) 555-1212
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

FINDS:

Registry ID: 110002824114

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport,

FREEWAY AUTO BODY (Continued) **1000225209**

and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

76
WNW
1/8-1/4
0.245 mi.
1292 ft.

ORCHID CLEANERS
1548 ADAMS
COSTA MESA, CA

RCRA-SQG
FINDS
CA DRYCLEANERS
CA HAZNET

1000241369
CAD981669765

Relative:
Lower

Actual:
57 ft.

RCRA-SQG:

Date form received by agency:	09/01/1996
Facility name:	ORCHID CLEANERS
Facility address:	1548 ADAMS COSTA MESA, CA 92626
EPA ID:	CAD981669765
Contact:	Not reported
Contact address:	Not reported Not reported
Contact country:	Not reported
Contact telephone:	Not reported
Contact email:	Not reported
EPA Region:	09
Land type:	Facility is not located on Indian land. Additional information is not known.
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	WON Y LEE
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No

ORCHID CLEANERS (Continued) **1000241369**

Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Historical Generators:

Date form received by agency:	11/18/1986
Facility name:	ORCHID CLEANERS
Classification:	Large Quantity Generator
Violation Status:	No violations found

Evaluation Action Summary:

Evaluation date:	02/16/1994
Evaluation:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation:	Not reported
Date achieved compliance:	Not reported
Evaluation lead agency:	State Contractor/Grantee

FINDS:

Registry ID: 110002744193

Environmental Interest/Information System

California Hazardous Waste Tracking System - Datamart (HWTS-DATAMART) provides California with information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

DRYCLEANERS:

EPA Id:	CAD981669765
NAICS Code:	81232
NAICS Description:	Drycleaning and Laundry Services (except Coin-Operated)
SIC Code:	7211
SIC Description:	Power Laundries, Family and Commercial
Create Date:	04/10/1987
Facility Active:	Yes
Inactive Date:	Not reported
Facility Addr2:	Not reported
Owner Name:	YONG C KIM

ORCHID CLEANERS (Continued) **1000241369**

Owner Address:	1548 ADAMS AVE STE G
Owner Address 2:	Not reported
Owner Telephone:	7145491917
Contact Name:	YONG C KIM
Contact Address:	1548 ADAMS AVE STE G
Contact Address 2:	Not reported
Contact Telephone:	7145491917
EDR Link ID:	CAD981669765

HAZNET:

Year:	2008
Gepaid:	CAD981669765
Contact:	YONG C KIM
Telephone:	7145491917
Mailing Name:	Not reported
Mailing Address:	1548 ADAMS AVE STE G
Mailing City,St,Zip:	COSTA MESA, CA 926260000
Gen County:	Not reported
TSD EPA ID:	NVR000076158
TSD County:	Not reported
Waste Category:	Hydrocarbon solvents (benzene, hexane, Stoddard, Etc.)
Disposal Method:	Solvents Recovery
Tons:	0.15
Facility County:	Orange

Year:	2006
Gepaid:	CAD981669765
Contact:	YONG C KIM
Telephone:	7145491917
Mailing Name:	Not reported
Mailing Address:	1548 ADAMS AVE #G
Mailing City,St,Zip:	COSTA MESA, CA 926260000
Gen County:	Not reported
TSD EPA ID:	NVR000076158
TSD County:	Not reported
Waste Category:	Aqueous solution with total organic residues less than 10 percent
Disposal Method:	Not reported
Tons:	Not reported
Facility County:	Orange

Year:	2006
Gepaid:	CAD981669765
Contact:	YONG C KIM
Telephone:	7145491917
Mailing Name:	Not reported
Mailing Address:	1548 ADAMS AVE #G
Mailing City,St,Zip:	COSTA MESA, CA 926260000
Gen County:	Not reported
TSD EPA ID:	NVR000076158
TSD County:	Not reported
Waste Category:	Halogenated solvents (chloroforms, methyl chloride, perchloroethylene, etc)
Disposal Method:	Not reported
Tons:	Not reported
Facility County:	Orange

Year:	2006

ORCHID CLEANERS (Continued) **1000241369**

Gepaid:	CAD981669765
Contact:	YONG C KIM
Telephone:	7145491917
Mailing Name:	Not reported
Mailing Address:	1548 ADAMS AVE #G
Mailing City,St,Zip:	COSTA MESA, CA 926260000
Gen County:	Not reported
TSD EPA ID:	NVR000076158
TSD County:	Not reported
Waste Category:	Not reported
Disposal Method:	Not reported
Tons:	Not reported
Facility County:	Orange

Year:	2006
Gepaid:	CAD981669765
Contact:	YONG C KIM
Telephone:	7145491917
Mailing Name:	Not reported
Mailing Address:	1548 ADAMS AVE #G
Mailing City,St,Zip:	COSTA MESA, CA 926260000
Gen County:	Not reported
TSD EPA ID:	NVR000076158
TSD County:	Not reported
Waste Category:	Hydrocarbon solvents (benzene, hexane, Stoddard, Etc.)
Disposal Method:	Not reported
Tons:	0.15
Facility County:	Orange

~~Click this hyperlink~~ while viewing on your computer to access
23 additional CA_HAZNET: record(s) in the EDR Site Report.

N77 **CITY OF COSTA MESA (POLICE DP)** **CA LUST** **S101609517**
SE **99 FAIR DR** **CA FID UST** **N/A**
1/4-1/2 **COSTA MESA, CA 92626**
0.257 mi.
1359 ft. **Site 1 of 2 in cluster N**

Relative: Higher

Actual: 73 ft.

LUST:

Region:	STATE
Global Id:	T0605956166
Latitude:	33.663857
Longitude:	-117.904675
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	07/15/2005
Lead Agency:	ORANGE COUNTY LOP
Case Worker:	DB
Local Agency:	ORANGE COUNTY LOP
RB Case Number:	Not reported
LOC Case Number:	02UT027
File Location:	Local Agency Warehouse
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

CITY OF COSTA MESA (POLICE DP) (Continued) **S101609517**

Contact:

Global Id:	T0605956166
Contact Type:	Regional Board Caseworker
Contact Name:	Ken Williams
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	kwilliams@waterboards.ca.gov
Phone Number:	Not reported
Global Id:	T0605956166
Contact Type:	Local Agency Caseworker
Contact Name:	DENAMARIE BAKER
Organization Name:	ORANGE COUNTY LOP
Address:	1241 E. DYER ROAD, STE. 120
City:	SANTA ANA
Email:	dbaker@ochca.com
Phone Number:	7144336255

Status History:

Global Id:	T0605956166
Status:	Completed - Case Closed
Status Date:	07/15/2005
Global Id:	T0605956166
Status:	Open - Case Begin Date
Status Date:	10/24/2002
Global Id:	T0605956166
Status:	Open - Remediation
Status Date:	05/31/2005
Global Id:	T0605956166
Status:	Open - Site Assessment
Status Date:	10/24/2002

Regulatory Activities:

Global Id:	T0605956166
Action Type:	Other
Date:	01/01/1950
Action:	Leak Reported
Global Id:	T0605956166
Action Type:	Other
Date:	01/01/1950
Action:	Leak Began
Global Id:	T0605956166
Action Type:	ENFORCEMENT
Date:	07/15/2005
Action:	Closure/No Further Action Letter
Global Id:	T0605956166
Action Type:	ENFORCEMENT
Date:	09/21/2004
Action:	Staff Letter

CITY OF COSTA MESA (POLICE DP) (Continued) **S101609517**

Global Id:	T0605956166
Action Type:	ENFORCEMENT
Date:	10/24/2002
Action:	Notice of Responsibility

Global Id:	T0605956166
Action Type:	ENFORCEMENT
Date:	10/31/2002
Action:	Staff Letter

Global Id:	T0605956166
Action Type:	ENFORCEMENT
Date:	12/13/2002
Action:	Staff Letter

Global Id:	T0605956166
Action Type:	ENFORCEMENT
Date:	05/20/2003
Action:	Staff Letter

Global Id:	T0605956166
Action Type:	ENFORCEMENT
Date:	09/17/2004
Action:	Staff Letter

Global Id:	T0605956166
Action Type:	REMEDIATION
Date:	01/01/1950
Action:	Excavation

Global Id:	T0605956166
Action Type:	Other
Date:	01/01/1950
Action:	Leak Discovery

Region:	STATE
Global Id:	T0605954609
Latitude:	33.663857
Longitude:	-117.904675
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	10/07/1987
Lead Agency:	ORANGE COUNTY LOP
Case Worker:	DB
Local Agency:	ORANGE COUNTY LOP
RB Case Number:	Not reported
LOC Case Number:	87UT164
File Location:	Local Agency
Potential Media Affect:	Under Investigation
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0605954609
Contact Type:	Regional Board Caseworker

CITY OF COSTA MESA (POLICE DP) (Continued) **S101609517**

Contact Name:	NONE
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	Not reported
City:	RIVERSIDE
Email:	Not reported
Phone Number:	Not reported
Global Id:	T0605954609
Contact Type:	Local Agency Caseworker
Contact Name:	DENAMARIE BAKER
Organization Name:	ORANGE COUNTY LOP
Address:	1241 E. DYER ROAD, STE. 120
City:	SANTA ANA
Email:	dbaker@ochca.com
Phone Number:	7144336255

Status History:

Global Id:	T0605954609
Status:	Completed - Case Closed
Status Date:	10/07/1987
Global Id:	T0605954609
Status:	Open - Case Begin Date
Status Date:	10/07/1987

ORANGE CO. LUST:

Region:	ORANGE
Facility Id:	87UT164
Current Status:	Certification (Case Closed)
Released Substance:	Gasoline-Automotive (motor gasoline and additives), leaded & unleaded
Date Closed:	10/07/1987
Case Type:	Undetermined
Record ID:	RO0002584
Region:	ORANGE
Facility Id:	02UT027
Current Status:	Certification (Case Closed)
Released Substance:	Gasoline-Automotive (motor gasoline and additives), leaded & unleaded
Date Closed:	07/15/2005
Case Type:	Soil Only
Record ID:	RO0003115

LUST REG 8:

Region:	8
County:	Orange
Regional Board:	Santa Ana Region
Facility Status:	Case Closed
Case Number:	Not reported
Local Case Num:	87UT164
Case Type:	Undefined
Substance:	Gasoline
Qty Leaked:	0
Abate Method:	Not reported
Cross Street:	Not reported
Enf Type:	Not reported

CITY OF COSTA MESA (POLICE DP) (Continued) **S101609517**

Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Close Tank
Leak Cause:	Unknown
Leak Source:	Unknown
Global ID:	T0605954609
How Stopped Date:	9/9/9999
Enter Date:	Not reported
Review Date:	Not reported
Prelim Assess:	Not reported
Discover Date:	1/1/1965
Enforcement Date:	Not reported
Close Date:	10/7/1987
Workplan:	Not reported
Pollution Char:	Not reported
Remed Plan:	Not reported
Remed Action:	Not reported
Monitoring:	Not reported
Enter Date:	Not reported
GW Qualifies:	Not reported
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	Not reported
Longitude:	Not reported
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	1
MTBE Tested:	Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.
MTBE Class:	*
Staff:	Not reported
Staff Initials:	AR
Lead Agency:	Local Agency
Local Agency:	30000L
Hydr Basin #:	Not reported
Beneficial:	MUN
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Summary:	Not reported

CA FID UST:

Facility ID:	30003635
Regulated By:	UTNKA
Regulated ID:	Not reported
Cortese Code:	Not reported
SIC Code:	Not reported
Facility Phone:	7146427952
Mail To:	Not reported
Mailing Address:	77 FAIR DRIVE P O BOX
Mailing Address 2:	Not reported
Mailing City,St,Zip:	COSTA MESA 92626
Contact:	Not reported

CITY OF COSTA MESA (POLICE DP) (Continued) **S101609517**

Contact Phone: Not reported
DUNs Number: Not reported
NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Active

N78	**COSTA MESA POLICE DEPT**	**CA LUST**	**S102428401**
SE	**99 FAIR DR**		**N/A**
1/4-1/2	**COSTA MESA, CA 92626**		
0.257 mi.			
1359 ft.	**Site 2 of 2 in cluster N**		

Relative: Higher

Actual: 73 ft.

LUST REG 8:

Region: 8
County: Orange
Regional Board: Santa Ana Region
Facility Status: Pollution Characterization
Case Number: Not reported
Local Case Num: 02UT027
Case Type: Soil only
Substance: Gasoline
Qty Leaked: 0
Abate Method: Not reported
Cross Street: Not reported
Enf Type: EDFNL
Funding: Not reported
How Discovered: Tank Closure
How Stopped: New Tank
Leak Cause: Unknown
Leak Source: Tank
Global ID: T0605956166
How Stopped Date: 9/9/9999
Enter Date: Not reported
Review Date: Not reported
Prelim Assess: Not reported
Discover Date: 10/24/2002
Enforcement Date: Not reported
Close Date: Not reported
Workplan: Not reported
Pollution Char: 10/24/2002
Remed Plan: Not reported
Remed Action: Not reported
Monitoring: Not reported
Enter Date: Not reported
GW Qualifies: Not reported
Soil Qualifies: =
Operator: Not reported
Facility Contact: Not reported
Interim: Not reported
Oversite Program: LUST
Latitude: 0
Longitude: 0
MTBE Date: Not reported
Max MTBE GW: Not reported
MTBE Concentration: 0
Max MTBE Soil: .45
MTBE Fuel: 1

COSTA MESA POLICE DEPT (Continued) **S102428401**

MTBE Tested:	MTBE Detected. Site tested for MTBE & MTBE detected
MTBE Class:	*
Staff:	Not reported
Staff Initials:	AR
Lead Agency:	Local Agency
Local Agency:	30000L
Hydr Basin #:	Not reported
Beneficial:	MUN
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Summary:	Not reported

79
NW
1/4-1/2
0.270 mi.
1425 ft.

VILLA MARTINIQUE
1425 VILLAGE WAY
COSTA MESA, CA 92627

CA LUST **S102440937**
N/A

Relative:
Lower

Actual:
52 ft.

LUST:

Region:	STATE
Global Id:	T0605900395
Latitude:	33.6775506
Longitude:	-117.9171628
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	04/06/1987
Lead Agency:	ORANGE COUNTY LOP
Case Worker:	DB
Local Agency:	ORANGE COUNTY LOP
RB Case Number:	083000495T
LOC Case Number:	86UT094
File Location:	Local Agency
Potential Media Affect:	Under Investigation
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0605900395
Contact Type:	Regional Board Caseworker
Contact Name:	PATRICIA HANNON
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	phannon@waterboards.ca.gov
Phone Number:	Not reported

Global Id:	T0605900395
Contact Type:	Local Agency Caseworker
Contact Name:	DENAMARIE BAKER
Organization Name:	ORANGE COUNTY LOP
Address:	1241 E. DYER ROAD, STE. 120
City:	SANTA ANA
Email:	dbaker@ochca.com
Phone Number:	7144336255

VILLA MARTINIQUE (Continued) **S102440937**

Status History:

Global Id:	T0605900395
Status:	Completed - Case Closed
Status Date:	04/06/1987
Global Id:	T0605900395
Status:	Open - Case Begin Date
Status Date:	04/06/1987

ORANGE CO. LUST:

Region:	ORANGE
Facility Id:	86UT094
Current Status:	Certification (Case Closed)
Released Substance:	Gasoline-Automotive (motor gasoline and additives), leaded & unleaded
Date Closed:	04/06/1987
Case Type:	Undetermined
Record ID:	RO0003016

LUST REG 8:

Region:	8
County:	Orange
Regional Board:	Santa Ana Region
Facility Status:	Case Closed
Case Number:	083000495T
Local Case Num:	86UT094
Case Type:	Undefined
Substance:	Gasoline
Qty Leaked:	0
Abate Method:	Not reported
Cross Street:	Not reported
Enf Type:	Not reported
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Close Tank
Leak Cause:	Unknown
Leak Source:	Unknown
Global ID:	T0605900395
How Stopped Date:	9/9/9999
Enter Date:	Not reported
Review Date:	Not reported
Prelim Assess:	Not reported
Discover Date:	1/1/1965
Enforcement Date:	Not reported
Close Date:	4/6/1987
Workplan:	Not reported
Pollution Char:	Not reported
Remed Plan:	Not reported
Remed Action:	Not reported
Monitoring:	Not reported
Enter Date:	Not reported
GW Qualifies:	Not reported
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported

VILLA MARTINIQUE (Continued) **S102440937**

Oversite Program:	LUST
Latitude:	33.6774214
Longitude:	-117.917213
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	1
MTBE Tested:	Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.
MTBE Class:	*
Staff:	PAH
Staff Initials:	AR
Lead Agency:	Local Agency
Local Agency:	30000L
Hydr Basin #:	Not reported
Beneficial:	MUN
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Summary:	Not reported

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80 **EXXON SERVICE STATION** **CA LUST** **U001576798**
SSE **2490 FAIRVIEW** **CA HIST UST** **N/A**
1/4-1/2 **COSTA MESA, CA 92626**
0.295 mi.
1556 ft.

Relative:
Higher

Actual:
72 ft.

LUST:

Region:	STATE
Global Id:	T0605900108
Latitude:	33.663469
Longitude:	-117.90719
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	02/06/1996
Lead Agency:	ORANGE COUNTY LOP
Case Worker:	DB
Local Agency:	ORANGE COUNTY LOP
RB Case Number:	083000143T
LOC Case Number:	92UT064
File Location:	Local Agency
Potential Media Affect:	Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0605900108
Contact Type:	Regional Board Caseworker
Contact Name:	CARL BERNHARDT
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	cbernhardt@waterboards.ca.gov
Phone Number:	9517824495
Global Id:	T0605900108

EXXON SERVICE STATION (Continued) **U001576798**

Contact Type:	Local Agency Caseworker
Contact Name:	DENAMARIE BAKER
Organization Name:	ORANGE COUNTY LOP
Address:	1241 E. DYER ROAD, STE. 120
City:	SANTA ANA
Email:	dbaker@ochca.com
Phone Number:	7144336255

Status History:

Global Id:	T0605900108
Status:	Completed - Case Closed
Status Date:	02/06/1996
Global Id:	T0605900108
Status:	Open - Case Begin Date
Status Date:	03/26/1992

Regulatory Activities:

Global Id:	T0605900108
Action Type:	Other
Date:	01/01/1950
Action:	Leak Discovery
Global Id:	T0605900108
Action Type:	Other
Date:	01/01/1950
Action:	Leak Reported

Region:	STATE
Global Id:	T0605956876
Latitude:	33.663458
Longitude:	-117.907226
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	03/27/1987
Lead Agency:	ORANGE COUNTY LOP
Case Worker:	DB
Local Agency:	ORANGE COUNTY LOP
RB Case Number:	Not reported
LOC Case Number:	87UT064
File Location:	Local Agency
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0605956876
Contact Type:	Regional Board Caseworker
Contact Name:	CARL BERNHARDT
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	cbernhardt@waterboards.ca.gov
Phone Number:	9517824495

EXXON SERVICE STATION (Continued) **U001576798**

Global Id:	T0605956876
Contact Type:	Local Agency Caseworker
Contact Name:	DENAMARIE BAKER
Organization Name:	ORANGE COUNTY LOP
Address:	1241 E. DYER ROAD, STE. 120
City:	SANTA ANA
Email:	dbaker@ochca.com
Phone Number:	7144336255

Status History:

Global Id:	T0605956876
Status:	Completed - Case Closed
Status Date:	03/27/1987
Global Id:	T0605956876
Status:	Open - Case Begin Date
Status Date:	03/27/1987

ORANGE CO. LUST:

Region:	ORANGE
Facility Id:	87UT064
Current Status:	Certification (Case Closed)
Released Substance:	Gasoline-Automotive (motor gasoline and additives), leaded & unleaded
Date Closed:	03/27/1987
Case Type:	Soil Only
Record ID:	RO0002380
Region:	ORANGE
Facility Id:	92UT064
Current Status:	Certification (Case Closed)
Released Substance:	Gasoline-Automotive (motor gasoline and additives), leaded & unleaded
Date Closed:	02/06/1996
Case Type:	Other Ground Water
Record ID:	RO0002487

LUST REG 8:

Region:	8
County:	Orange
Regional Board:	Santa Ana Region
Facility Status:	Case Closed
Case Number:	083000143T
Local Case Num:	92UT064
Case Type:	Other ground water affected
Substance:	Gasoline
Qty Leaked:	0
Abate Method:	Not reported
Cross Street:	Not reported
Enf Type:	Not reported
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Close Tank
Leak Cause:	Unknown
Leak Source:	Unknown
Global ID:	T0605900108
How Stopped Date:	9/9/9999

EXXON SERVICE STATION (Continued) **U001576798**

Enter Date: Not reported
Review Date: Not reported
Prelim Assess: Not reported
Discover Date: 3/26/1992
Enforcement Date: Not reported
Close Date: 2/6/1996
Workplan: Not reported
Pollution Char: Not reported
Remed Plan: Not reported
Remed Action: Not reported
Monitoring: Not reported
Enter Date: Not reported
GW Qualifies: Not reported
Soil Qualifies: Not reported
Operator: Not reported
Facility Contact: Not reported
Interim: Not reported
Oversite Program: LUST
Latitude: 33.6635929
Longitude: -117.9075627
MTBE Date: Not reported
Max MTBE GW: Not reported
MTBE Concentration: 0
Max MTBE Soil: Not reported
MTBE Fuel: 1
MTBE Tested: Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.
MTBE Class: *
Staff: CAB
Staff Initials: AR
Lead Agency: Local Agency
Local Agency: 30000L
Hydr Basin #: Not reported
Beneficial: MUN
Priority: Not reported
Cleanup Fund Id: Not reported
Work Suspended: Not reported
Summary: Not reported

Region: 8
County: Orange
Regional Board: Santa Ana Region
Facility Status: Case Closed
Case Number: Not reported
Local Case Num: 87UT064
Case Type: Soil only
Substance: Gasoline
Qty Leaked: 0
Abate Method: Not reported
Cross Street: Not reported
Enf Type: Not reported
Funding: Not reported
How Discovered: Tank Closure
How Stopped: Close Tank
Leak Cause: Unknown
Leak Source: Unknown
Global ID: T0605956876
How Stopped Date: 9/9/9999

EXXON SERVICE STATION (Continued) **U001576798**

Enter Date:	Not reported
Review Date:	Not reported
Prelim Assess:	Not reported
Discover Date:	1/1/1965
Enforcement Date:	Not reported
Close Date:	3/27/1987
Workplan:	Not reported
Pollution Char:	Not reported
Remed Plan:	Not reported
Remed Action:	Not reported
Monitoring:	Not reported
Enter Date:	Not reported
GW Qualifies:	Not reported
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	Not reported
Longitude:	Not reported
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	1
MTBE Tested:	Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.
MTBE Class:	*
Staff:	CAB
Staff Initials:	AR
Lead Agency:	Local Agency
Local Agency:	30000L
Hydr Basin #:	Not reported
Beneficial:	MUN
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Summary:	Not reported

HIST UST:

Region:	STATE
Facility ID:	00000024023
Facility Type:	Gas Station
Other Type:	Not reported
Total Tanks:	0004
Contact Name:	JACK BOTTS
Telephone:	7145566281
Owner Name:	EXXON COMPANY U.S.A.
Owner Address:	16945 NORTH CHASE BLVD.
Owner City,St,Zip:	HOUSTON, TX 77210

Tank Num:	001
Container Num:	1
Year Installed:	1964
Tank Capacity:	00008000
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Tank Construction:	Not reported

EXXON SERVICE STATION (Continued) **U001576798**

Leak Detection: Stock Inventor

Tank Num: 002
Container Num: 2
Year Installed: 1964
Tank Capacity: 00008000
Tank Used for: PRODUCT
Type of Fuel: PREMIUM
Tank Construction: Not reported
Leak Detection: Stock Inventor

Tank Num: 003
Container Num: 3
Year Installed: 1964
Tank Capacity: 00008000
Tank Used for: PRODUCT
Type of Fuel: REGULAR
Tank Construction: Not reported
Leak Detection: Stock Inventor

Tank Num: 004
Container Num: 4
Year Installed: 1964
Tank Capacity: 00000550
Tank Used for: WASTE
Type of Fuel: WASTE OIL
Tank Construction: Not reported
Leak Detection: Stock Inventor

O81	**SHELL SERVICE STATION**	**RCRA-SQG**	**1000288493**
NNE	**1201 E BAKER STREET**	**CA HIST CORTESE**	**CAD981459225**
1/4-1/2	**COSTA MESA, CA 92626**	**CA LUST**	
0.297 mi.		**CA FID UST**	
1568 ft.	**Site 1 of 4 in cluster O**	**CA SWEEPS UST**	
		CA EMI	

Relative:
Lower

Actual:
43 ft.

RCRA-SQG:
Date form received by agency: 02/26/2004
Facility name: SHELL SERVICE STATION
Facility address: 1201 E BAKER STREET
SAP #135203
COSTA MESA, CA 92626
EPA ID: CAD981459225
Mailing address: SHELL OIL PRODUCTS US
12700 NORTHBOROUGH DR MFT240G
HOUSTON, TX 770672508
Contact: GARY V WING
Contact address: Not reported
Not reported
Contact country: Not reported
Contact telephone: (714) 731-8337
Contact email: GVWING@SHELLOPUS.COM
EPA Region: 09
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of

SHELL SERVICE STATION (Continued) **1000288493**

hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	SHELL OIL PRODUCTS US
Owner/operator address:	Not reported Not reported
Owner/operator country:	US
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	08/01/1998
Owner/Op end date:	Not reported

Owner/operator name:	EQUILON ENTERPRISES LLC DBA SHELL OIL PR
Owner/operator address:	PO BOX 2648 HOUSTON, TX 77252
Owner/operator country:	US
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	08/01/1998
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Historical Generators:

Date form received by agency:	02/26/2004
Facility name:	SHELL SERVICE STATION
Classification:	Large Quantity Generator

Date form received by agency:	10/12/2000
Facility name:	SHELL SERVICE STATION
Site name:	EQUILON ENTERPRISES LLC/SHELL STATION
Classification:	Large Quantity Generator

Date form received by agency:	04/08/1998
Facility name:	SHELL SERVICE STATION
Site name:	SHELL OIL CO
Classification:	Small Quantity Generator

Date form received by agency: 09/01/1996

SHELL SERVICE STATION (Continued) **1000288493**

Facility name: SHELL SERVICE STATION
Site name: SHELL OIL CO
Classification: Small Quantity Generator

Date form received by agency: 02/24/1992
Facility name: SHELL SERVICE STATION
Site name: SHELL SVC.STA. #204-1818-0806
Classification: Large Quantity Generator

Violation Status: No violations found

CORTESE:

Region: CORTESE
Facility County Code: 30
Reg By: LTNKA
Reg Id: 083002079T

Region: CORTESE
Facility County Code: 30
Reg By: LTNKA
Reg Id: 083002300T

Region: CORTESE
Facility County Code: 30
Reg By: LTNKA
Reg Id: 083002821T

Region: CORTESE
Facility County Code: 30
Reg By: LTNKA
Reg Id: 083000579T

Region: CORTESE
Facility County Code: 30
Reg By: LTNKA
Reg Id: 083000371T

Region: CORTESE
Facility County Code: 30
Reg By: LTNKA
Reg Id: 083001319T

Region: CORTESE
Facility County Code: 30
Reg By: LTNKA
Reg Id: 083001195T

Region: CORTESE
Facility County Code: 30
Reg By: LTNKA
Reg Id: 083002935T

LUST:

Region: STATE
Global Id: T0605900296
Latitude: 33.6800094
Longitude: -117.9079587

SHELL SERVICE STATION (Continued) **1000288493**

Case Type:	LUST Cleanup Site
Status:	Open - Remediation
Status Date:	10/15/2001
Lead Agency:	ORANGE COUNTY LOP
Case Worker:	DB
Local Agency:	ORANGE COUNTY LOP
RB Case Number:	083000371T
LOC Case Number:	86UT121
File Location:	Local Agency
Potential Media Affect:	Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern:	Gasoline
Site History:	Please refer to recent Site Documents or Monitoring Reports in GeoTracker for site history. Orange County is not responsible for the accuracy of any professional interpretations provided in reports submitted by consultants for the responsible party.

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0605900296
Contact Type:	Regional Board Caseworker
Contact Name:	CARL BERNHARDT
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	cbernhardt@waterboards.ca.gov
Phone Number:	9517824495
Global Id:	T0605900296
Contact Type:	Local Agency Caseworker
Contact Name:	DENAMARIE BAKER
Organization Name:	ORANGE COUNTY LOP
Address:	1241 E. DYER ROAD, STE. 120
City:	SANTA ANA
Email:	dbaker@ochca.com
Phone Number:	7144336255

Status History:

Global Id:	T0605900296
Status:	Open - Case Begin Date
Status Date:	02/19/1987
Global Id:	T0605900296
Status:	Open - Remediation
Status Date:	10/15/2001

Regulatory Activities:

Global Id:	T0605900296
Action Type:	ENFORCEMENT
Date:	02/23/2007
Action:	Staff Letter
Global Id:	T0605900296
Action Type:	ENFORCEMENT
Date:	07/05/2007
Action:	Staff Letter

SHELL SERVICE STATION (Continued) **1000288493**

Global Id: T0605900296
Action Type: ENFORCEMENT
Date: 03/26/2007
Action: Staff Letter

Global Id: T0605900296
Action Type: ENFORCEMENT
Date: 03/16/2007
Action: Staff Letter

Global Id: T0605900296
Action Type: ENFORCEMENT
Date: 02/09/2007
Action: Staff Letter

Global Id: T0605900296
Action Type: ENFORCEMENT
Date: 03/17/2003
Action: Staff Letter

Global Id: T0605900296
Action Type: ENFORCEMENT
Date: 10/31/2008
Action: Staff Letter

Global Id: T0605900296
Action Type: ENFORCEMENT
Date: 08/28/2008
Action: Staff Letter

Global Id: T0605900296
Action Type: ENFORCEMENT
Date: 07/15/2009
Action: Staff Letter

Global Id: T0605900296
Action Type: ENFORCEMENT
Date: 07/05/2013
Action: Notification - Public Notice of ROD/RAP/CAP

Global Id: T0605900296
Action Type: REMEDIATION
Date: 01/01/1950
Action: Soil Vapor Extraction (SVE)

Global Id: T0605900296
Action Type: RESPONSE
Date: 03/05/2012
Action: Clean Up Fund - 5-Year Review Summary

Global Id: T0605900296
Action Type: ENFORCEMENT
Date: 10/08/2010
Action: File review

Global Id: T0605900296
Action Type: ENFORCEMENT

SHELL SERVICE STATION (Continued) **1000288493**

Date:	10/21/2011
Action:	Staff Letter
Global Id:	T0605900296
Action Type:	ENFORCEMENT
Date:	03/20/1987
Action:	Notice of Responsibility
Global Id:	T0605900296
Action Type:	ENFORCEMENT
Date:	02/14/2003
Action:	Staff Letter
Global Id:	T0605900296
Action Type:	ENFORCEMENT
Date:	05/22/2003
Action:	Staff Letter
Global Id:	T0605900296
Action Type:	ENFORCEMENT
Date:	01/29/2008
Action:	Staff Letter
Global Id:	T0605900296
Action Type:	ENFORCEMENT
Date:	10/10/2006
Action:	Staff Letter
Global Id:	T0605900296
Action Type:	ENFORCEMENT
Date:	04/04/2013
Action:	Staff Letter
Global Id:	T0605900296
Action Type:	REMEDIATION
Date:	01/01/1950
Action:	Pump & Treat (P&T) Groundwater
Global Id:	T0605900296
Action Type:	RESPONSE
Date:	04/24/2010
Action:	Clean Up Fund - 5-Year Review Summary
Global Id:	T0605900296
Action Type:	Other
Date:	01/01/1950
Action:	Leak Discovery
Global Id:	T0605900296
Action Type:	ENFORCEMENT
Date:	10/31/2012
Action:	Staff Letter
Global Id:	T0605900296
Action Type:	ENFORCEMENT
Date:	05/12/2008
Action:	Staff Letter

SHELL SERVICE STATION (Continued) **1000288493**

Global Id: T0605900296
Action Type: RESPONSE
Date: 05/14/2013
Action: Site Investigation Workplan - Regulator Responded

Global Id: T0605900296
Action Type: ENFORCEMENT
Date: 04/06/2009
Action: Staff Letter

Global Id: T0605900296
Action Type: ENFORCEMENT
Date: 06/30/2011
Action: File review

Global Id: T0605900296
Action Type: ENFORCEMENT
Date: 01/25/2011
Action: File review

Global Id: T0605900296
Action Type: ENFORCEMENT
Date: 04/20/2011
Action: File review

Global Id: T0605900296
Action Type: Other
Date: 01/01/1950
Action: Leak Reported

ORANGE CO. LUST:
Region: ORANGE
Facility Id: 86UT121
Current Status: 5R
Released Substance: Gasoline-Automotive (motor gasoline and additives), leaded & unleaded
Date Closed: Not reported
Case Type: Other Ground Water
Record ID: RO0001212

LUST REG 8:
Region: 8
County: Orange
Regional Board: Santa Ana Region
Facility Status: Remediation Plan
Case Number: 083000371T
Local Case Num: 86UT121
Case Type: Other ground water affected
Substance: Gasoline
Qty Leaked: 0
Abate Method: Not reported
Cross Street: Not reported
Enf Type: SEL
Funding: Not reported
How Discovered: OM
How Stopped: NPP

SHELL SERVICE STATION (Continued) **1000288493**

Leak Cause: Unknown
Leak Source: Piping
Global ID: T0605900296
How Stopped Date: 9/9/9999
Enter Date: Not reported
Review Date: Not reported
Prelim Assess: Not reported
Discover Date: 2/19/1987
Enforcement Date: Not reported
Close Date: Not reported
Workplan: Not reported
Pollution Char: Not reported
Remed Plan: 10/15/2001
Remed Action: Not reported
Monitoring: Not reported
Enter Date: Not reported
GW Qualifies: =
Soil Qualifies: Not reported
Operator: Not reported
Facility Contact: Not reported
Interim: Not reported
Oversite Program: LUST
Latitude: 33.6800094
Longitude: -117.9079587
MTBE Date: 8/6/2002
Max MTBE GW: 160
MTBE Concentration: 0
Max MTBE Soil: Not reported
MTBE Fuel: 1
MTBE Tested: MTBE Detected. Site tested for MTBE & MTBE detected
MTBE Class: *
Staff: CAB
Staff Initials: AR
Lead Agency: Local Agency
Local Agency: 30000L
Hydr Basin #: Not reported
Beneficial: MUN
Priority: Not reported
Cleanup Fund Id: Not reported
Work Suspended: Not reported
Summary: Not reported

CA FID UST:
Facility ID: 30000460
Regulated By: UTNKA
Regulated ID: Not reported
Cortese Code: Not reported
SIC Code: Not reported
Facility Phone: 7145458171
Mail To: Not reported
Mailing Address: P O BOX
Mailing Address 2: Not reported
Mailing City,St,Zip: COSTA MESA 92626
Contact: Not reported
Contact Phone: Not reported
DUNs Number: Not reported
NPDES Number: Not reported

SHELL SERVICE STATION (Continued) **1000288493**

EPA ID: Not reported
Comments: Not reported
Status: Active

SWEEPS UST:

Status: Active
Comp Number: 2065
Number: 9
Board Of Equalization: 44-000074
Referral Date: 09-30-92
Action Date: 09-15-92
Created Date: 02-29-88
Tank Status: A
Owner Tank Id: Not reported
Swrcb Tank Id: 30-000-002065-000001
Actv Date: Not reported
Capacity: 12000
Tank Use: M.V. FUEL
Stg: P
Content: REG UNLEADED
Number Of Tanks: 4

Status: Active
Comp Number: 2065
Number: 9
Board Of Equalization: 44-000074
Referral Date: 09-30-92
Action Date: 09-15-92
Created Date: 02-29-88
Tank Status: A
Owner Tank Id: Not reported
Swrcb Tank Id: 30-000-002065-000007
Actv Date: Not reported
Capacity: 12000
Tank Use: M.V. FUEL
Stg: P
Content: LEADED
Number Of Tanks: Not reported

Status: Active
Comp Number: 2065
Number: 9
Board Of Equalization: 44-000074
Referral Date: 09-30-92
Action Date: 09-15-92
Created Date: 02-29-88
Tank Status: A
Owner Tank Id: Not reported
Swrcb Tank Id: 30-000-002065-000008
Actv Date: Not reported
Capacity: 12000
Tank Use: M.V. FUEL
Stg: P
Content: DIESEL
Number Of Tanks: Not reported

Status: Active

SHELL SERVICE STATION (Continued) **1000288493**

Comp Number: 2065
Number: 9
Board Of Equalization: 44-000074
Referral Date: 09-30-92
Action Date: 09-15-92
Created Date: 02-29-88
Tank Status: A
Owner Tank Id: Not reported
Swrcb Tank Id: 30-000-002065-000009
Actv Date: Not reported
Capacity: 550
Tank Use: PETROLEUM
Stg: P
Content: Not reported
Number Of Tanks: Not reported

EMI:

Year: 2006
County Code: 30
Air Basin: SC
Facility ID: 151315
Air District Name: SC
SIC Code: 8711
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: .4894163598913329659
Reactive Organic Gases Tons/Yr: .085
Carbon Monoxide Emissions Tons/Yr: .395
NOX - Oxides of Nitrogen Tons/Yr: 1.467
SOX - Oxides of Sulphur Tons/Yr: .007
Particulate Matter Tons/Yr: .085
Part. Matter 10 Micrometers & Smllr Tons/Yr: .085

Year: 2007
County Code: 30
Air Basin: SC
Facility ID: 151315
Air District Name: SC
SIC Code: 8711
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: .4894163598913329659
Reactive Organic Gases Tons/Yr: .085
Carbon Monoxide Emissions Tons/Yr: .395
NOX - Oxides of Nitrogen Tons/Yr: 1.467
SOX - Oxides of Sulphur Tons/Yr: .007
Particulate Matter Tons/Yr: .085
Part. Matter 10 Micrometers & Smllr Tons/Yr: .085

O82
NNE
1/4-1/2
0.299 mi.
1580 ft.

EXXON #7-0865
1195 BAKER ST
COSTA MESA, CA 92626

Site 2 of 4 in cluster O

CA HIST CORTESE
CA LUST
CA FID UST
CA UST
CA HIST UST
CA SWEEPS UST

U003779131
N/A

Relative:
Lower

Actual:
42 ft.

CORTESE:

Region:	CORTESE
Facility County Code:	30
Reg By:	LTNKA
Reg Id:	083002125T

LUST REG 8:

Region:	8
County:	Orange
Regional Board:	Santa Ana Region
Facility Status:	Post remedial action monitoring
Case Number:	083002125T
Local Case Num:	92UT078
Case Type:	Other ground water affected
Substance:	Gasoline
Qty Leaked:	0
Abate Method:	Not reported
Cross Street:	Not reported
Enf Type:	SEL
Funding:	Not reported
How Discovered:	SA
How Stopped:	Other Means
Leak Cause:	Unknown
Leak Source:	D
Global ID:	T0605901565
How Stopped Date:	9/9/9999
Enter Date:	Not reported
Review Date:	Not reported
Prelim Assess:	Not reported
Discover Date:	5/5/1992
Enforcement Date:	Not reported
Close Date:	Not reported
Workplan:	Not reported
Pollution Char:	Not reported
Remed Plan:	Not reported
Remed Action:	6/4/1998
Monitoring:	12/10/2003
Enter Date:	Not reported
GW Qualifies:	=
Soil Qualifies:	=
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.6800184
Longitude:	-117.9073477
MTBE Date:	8/7/2002
Max MTBE GW:	945
MTBE Concentration:	0
Max MTBE Soil:	.0138
MTBE Fuel:	1
MTBE Tested:	MTBE Detected. Site tested for MTBE & MTBE detected

EXXON #7-0865 (Continued) **U003779131**

MTBE Class: *
Staff: CAB
Staff Initials: AR
Lead Agency: Local Agency
Local Agency: 30000L
Hydr Basin #: Not reported
Beneficial: MUN
Priority: Not reported
Cleanup Fund Id: Not reported
Work Suspended: Not reported
Summary: Not reported

CA FID UST:
Facility ID: 30001317
Regulated By: UTNKA
Regulated ID: Not reported
Cortese Code: Not reported
SIC Code: Not reported
Facility Phone: 7144328161
Mail To: Not reported
Mailing Address: CONSTRUCTION & MAINT
Mailing Address 2: Not reported
Mailing City,St,Zip: COSTA MESA 92626
Contact: Not reported
Contact Phone: Not reported
DUNs Number: Not reported
NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Active

UST:
Facility ID: 6372
Latitude: 33.6801
Longitude: -117.90726

ORANGE CO. UST:
Facility ID: FA0053327

HIST UST:
Region: STATE
Facility ID: 00000024062
Facility Type: Gas Station
Other Type: Not reported
Total Tanks: 0003
Contact Name: F.C. APELES
Telephone: 7147548285
Owner Name: EXXON COMPANY U.S.A.
Owner Address: 16945 NORTHCHASE BLVD.
Owner City,St,Zip: HOUSTON, TX 77210

Tank Num: 001
Container Num: 1
Year Installed: 1982
Tank Capacity: 00010000

EXXON #7-0865 (Continued) **U003779131**

Tank Used for: PRODUCT
Type of Fuel: REGULAR
Tank Construction: Not reported
Leak Detection: Stock Inventor

Tank Num: 002
Container Num: 2
Year Installed: 1982
Tank Capacity: 00010000
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Tank Construction: Not reported
Leak Detection: Stock Inventor

Tank Num: 003
Container Num: 3
Year Installed: 1982
Tank Capacity: 00010000
Tank Used for: PRODUCT
Type of Fuel: PREMIUM
Tank Construction: Not reported
Leak Detection: Stock Inventor

SWEEPS UST:
Status: Active
Comp Number: 6372
Number: 9
Board Of Equalization: Not reported
Referral Date: 09-30-92
Action Date: 09-15-92
Created Date: 02-29-88
Tank Status: A
Owner Tank Id: Not reported
Swrcb Tank Id: 30-000-006372-000001
Actv Date: Not reported
Capacity: 10000
Tank Use: M.V. FUEL
Stg: P
Content: REG UNLEADED
Number Of Tanks: 3

Status: Active
Comp Number: 6372
Number: 9
Board Of Equalization: Not reported
Referral Date: 09-30-92
Action Date: 09-15-92
Created Date: 02-29-88
Tank Status: A
Owner Tank Id: Not reported
Swrcb Tank Id: 30-000-006372-000002
Actv Date: Not reported
Capacity: 10000
Tank Use: M.V. FUEL
Stg: P
Content: REG UNLEADED
Number Of Tanks: Not reported

EXXON #7-0865 (Continued) **U003779131**

Status:	Active
Comp Number:	6372
Number:	9
Board Of Equalization:	Not reported
Referral Date:	09-30-92
Action Date:	09-15-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	Not reported
Swrcb Tank Id:	30-000-006372-000003
Actv Date:	Not reported
Capacity:	10000
Tank Use:	M.V. FUEL
Stg:	P
Content:	DIESEL
Number Of Tanks:	Not reported

O83 **EXXON #7-0865** **CA LUST** **S103955052**
NNE **1195 BAKER ST** **N/A**
1/4-1/2 **COSTA MESA, CA 92626**
0.300 mi.
1582 ft. **Site 3 of 4 in cluster O**

Relative:
Lower

Actual:
42 ft.

LUST:

Region:	STATE
Global Id:	T0605901565
Latitude:	33.6800184
Longitude:	-117.9073477
Case Type:	LUST Cleanup Site
Status:	Open - Eligible for Closure
Status Date:	03/21/2013
Lead Agency:	ORANGE COUNTY LOP
Case Worker:	DB
Local Agency:	ORANGE COUNTY LOP
RB Case Number:	083002125T
LOC Case Number:	92UT078
File Location:	Local Agency
Potential Media Affect:	Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern:	Gasoline
Site History:	Please refer to recent Site Documents or Monitoring Reports in GeoTracker for site history. Orange County is not responsible for the accuracy of any professional interpretations provided in reports submitted by consultants for the responsible party.

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0605901565
Contact Type:	Local Agency Caseworker
Contact Name:	DENAMARIE BAKER
Organization Name:	ORANGE COUNTY LOP
Address:	1241 E. DYER ROAD, STE. 120
City:	SANTA ANA
Email:	dbaker@ochca.com
Phone Number:	7144336255
Global Id:	T0605901565
Contact Type:	Regional Board Caseworker

EXXON #7-0865 (Continued) **S103955052**

Contact Name:	CARL BERNHARDT
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	cbernhardt@waterboards.ca.gov
Phone Number:	9517824495

Status History:

Global Id:	T0605901565
Status:	Open - Case Begin Date
Status Date:	05/05/1992
Global Id:	T0605901565
Status:	Open - Eligible for Closure
Status Date:	03/21/2013
Global Id:	T0605901565
Status:	Open - Remediation
Status Date:	06/04/1998
Global Id:	T0605901565
Status:	Open - Remediation
Status Date:	05/01/2005
Global Id:	T0605901565
Status:	Open - Verification Monitoring
Status Date:	12/10/2003

Regulatory Activities:

Global Id:	T0605901565
Action Type:	ENFORCEMENT
Date:	04/15/2011
Action:	File review
Global Id:	T0605901565
Action Type:	ENFORCEMENT
Date:	05/26/2004
Action:	Staff Letter
Global Id:	T0605901565
Action Type:	ENFORCEMENT
Date:	12/21/2005
Action:	Staff Letter
Global Id:	T0605901565
Action Type:	ENFORCEMENT
Date:	10/20/2009
Action:	Staff Letter
Global Id:	T0605901565
Action Type:	Other
Date:	01/01/1950
Action:	Leak Reported
Global Id:	T0605901565
Action Type:	ENFORCEMENT

EXXON #7-0865 (Continued) **S103955052**

Date:	11/05/2012
Action:	Staff Letter
Global Id:	T0605901565
Action Type:	ENFORCEMENT
Date:	04/26/2010
Action:	Staff Letter
Global Id:	T0605901565
Action Type:	REMEDIATION
Date:	01/01/1950
Action:	Other (Use Description Field)
Global Id:	T0605901565
Action Type:	ENFORCEMENT
Date:	10/19/2010
Action:	File review
Global Id:	T0605901565
Action Type:	ENFORCEMENT
Date:	07/01/2011
Action:	File review
Global Id:	T0605901565
Action Type:	ENFORCEMENT
Date:	07/15/2010
Action:	File review
Global Id:	T0605901565
Action Type:	ENFORCEMENT
Date:	02/13/2007
Action:	Staff Letter
Global Id:	T0605901565
Action Type:	ENFORCEMENT
Date:	07/13/2009
Action:	Staff Letter
Global Id:	T0605901565
Action Type:	ENFORCEMENT
Date:	09/17/2010
Action:	Staff Letter
Global Id:	T0605901565
Action Type:	RESPONSE
Date:	03/01/2013
Action:	Request for Closure - Regulator Responded
Global Id:	T0605901565
Action Type:	ENFORCEMENT
Date:	06/16/1992
Action:	Notice of Responsibility
Global Id:	T0605901565
Action Type:	ENFORCEMENT
Date:	07/08/2003
Action:	Staff Letter

EXXON #7-0865 (Continued) **S103955052**

Global Id:	T0605901565
Action Type:	ENFORCEMENT
Date:	03/12/2004
Action:	Staff Letter
Global Id:	T0605901565
Action Type:	ENFORCEMENT
Date:	04/05/2005
Action:	Staff Letter
Global Id:	T0605901565
Action Type:	ENFORCEMENT
Date:	10/03/2005
Action:	Staff Letter
Global Id:	T0605901565
Action Type:	ENFORCEMENT
Date:	08/13/2007
Action:	Staff Letter
Global Id:	T0605901565
Action Type:	Other
Date:	01/01/1950
Action:	Leak Discovery
Global Id:	T0605901565
Action Type:	ENFORCEMENT
Date:	01/12/2011
Action:	File review
Global Id:	T0605901565
Action Type:	REMEDIATION
Date:	01/01/1950
Action:	Other (Use Description Field)
Global Id:	T0605901565
Action Type:	REMEDIATION
Date:	01/01/1950
Action:	Soil Vapor Extraction (SVE)

ORANGE CO. LUST:

Region:	ORANGE
Facility Id:	92UT078
Current Status:	Post Remedial Action
Released Substance:	Gasoline-Automotive (motor gasoline and additives), leaded & unleaded
Date Closed:	Not reported
Case Type:	Other Ground Water
Record ID:	RO0002795

O84 **CHEVRON STATION 9 9915** **RCRA-SQG** **1000820393**
NNE **3000 FAIRVIEW** **FINDS** **CAD983664285**
1/4-1/2 **COSTA MESA, CA** **CA LUST**
0.301 mi. **CA FID UST**
1588 ft. **Site 4 of 4 in cluster O** **CA UST**
CA SWEEPS UST
Relative: **Lower** **CA CHMIRS**

Actual: **42 ft.**

RCRA-SQG:

Date form received by agency:	06/17/2002
Facility name:	CHEVRON STATION NO 99915
Facility address:	3000 FAIRVIEW ST COSTA MESA, CA 92627
EPA ID:	CAD983664285
Mailing address:	P O BOX 6004 SAN RAMON, CA 94583
Contact:	KATHY NORRIS
Contact address:	P O BOX 6004 SAN RAMON, CA 94583
Contact country:	US
Contact telephone:	(925) 842-5931
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	CHEVRON PRODUCTS CO
Owner/operator address:	P O BOX 6004 SAN RAMON, CA 94583
Owner/operator country:	Not reported
Owner/operator telephone:	(925) 842-5931
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

CHEVRON STATION 9 9915 (Continued) **1000820393**

Hazardous Waste Summary:

Waste code:	D001
Waste name:	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
Waste code:	D018
Waste name:	BENZENE
Violation Status:	No violations found

FINDS:

Registry ID: 110002896313

Environmental Interest/Information System

California Hazardous Waste Tracking System - Datamart (HWTS-DATAMART) provides California with information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

LUST:

Region:	STATE
Global Id:	T0605958326
Latitude:	33.680482
Longitude:	-117.907336
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	09/17/1999
Lead Agency:	ORANGE COUNTY LOP
Case Worker:	DB
Local Agency:	ORANGE COUNTY LOP
RB Case Number:	Not reported
LOC Case Number:	98UT069
File Location:	Local Agency
Potential Media Affect:	Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0605958326
Contact Type:	Regional Board Caseworker
Contact Name:	TOM E. MBEKE-EKANEM

CHEVRON STATION 9 9915 (Continued) **1000820393**

Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	tmbeke-ekanem@waterboards.ca.gov
Phone Number:	9513202007
Global Id:	T0605958326
Contact Type:	Local Agency Caseworker
Contact Name:	DENAMARIE BAKER
Organization Name:	ORANGE COUNTY LOP
Address:	1241 E. DYER ROAD, STE. 120
City:	SANTA ANA
Email:	dbaker@ochca.com
Phone Number:	7144336255

Status History:

Global Id:	T0605958326
Status:	Completed - Case Closed
Status Date:	09/17/1999
Global Id:	T0605958326
Status:	Open - Case Begin Date
Status Date:	09/17/1998

Regulatory Activities:

Global Id:	T0605958326
Action Type:	ENFORCEMENT
Date:	08/27/1999
Action:	LOP Case Closure Summary to RB
Global Id:	T0605958326
Action Type:	Other
Date:	01/01/1950
Action:	Leak Reported
Global Id:	T0605958326
Action Type:	REMEDIATION
Date:	01/01/1950
Action:	Excavation
Global Id:	T0605958326
Action Type:	Other
Date:	01/01/1950
Action:	Leak Discovery

Region:	STATE
Global Id:	T0605900880
Latitude:	33.680467
Longitude:	-117.907353
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	01/22/1998
Lead Agency:	ORANGE COUNTY LOP
Case Worker:	DB
Local Agency:	ORANGE COUNTY LOP

CHEVRON STATION 9 9915 (Continued) **1000820393**

RB Case Number:	083001116T
LOC Case Number:	88UT172
File Location:	Local Agency
Potential Media Affect:	Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0605900880
Contact Type:	Regional Board Caseworker
Contact Name:	ROSE SCOTT
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	rscott@waterboards.ca.gov
Phone Number:	9513206375
Global Id:	T0605900880
Contact Type:	Local Agency Caseworker
Contact Name:	DENAMARIE BAKER
Organization Name:	ORANGE COUNTY LOP
Address:	1241 E. DYER ROAD, STE. 120
City:	SANTA ANA
Email:	dbaker@ochca.com
Phone Number:	7144336255

Status History:

Global Id:	T0605900880
Status:	Completed - Case Closed
Status Date:	01/22/1998
Global Id:	T0605900880
Status:	Open - Case Begin Date
Status Date:	10/18/1988

Regulatory Activities:

Global Id:	T0605900880
Action Type:	ENFORCEMENT
Date:	11/06/1997
Action:	LOP Case Closure Summary to RB
Global Id:	T0605900880
Action Type:	REMEDIATION
Date:	01/01/1950
Action:	Excavation
Global Id:	T0605900880
Action Type:	REMEDIATION
Date:	01/01/1950
Action:	Other (Use Description Field)
Global Id:	T0605900880
Action Type:	Other
Date:	01/01/1950
Action:	Leak Discovery

CHEVRON STATION 9 9915 (Continued) **1000820393**

Global Id:	T0605900880
Action Type:	Other
Date:	01/01/1950
Action:	Leak Reported

ORANGE CO. LUST:

Region:	ORANGE
Facility Id:	98UT069
Current Status:	Certification (Case Closed)
Released Substance:	Gasoline-Automotive (motor gasoline and additives), leaded & unleaded
Date Closed:	09/17/1999
Case Type:	Other Ground Water
Record ID:	RO0002739

Region:	ORANGE
Facility Id:	88UT172
Current Status:	Certification (Case Closed)
Released Substance:	Gasoline-Automotive (motor gasoline and additives), leaded & unleaded
Date Closed:	01/22/1998
Case Type:	Other Ground Water
Record ID:	RO0002968

LUST REG 8:

Region:	8
County:	Orange
Regional Board:	Santa Ana Region
Facility Status:	Case Closed
Case Number:	083001116T
Local Case Num:	88UT172
Case Type:	Other ground water affected
Substance:	Gasoline
Qty Leaked:	0
Abate Method:	Not reported
Cross Street:	Not reported
Enf Type:	Not reported
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Close Tank
Leak Cause:	Unknown
Leak Source:	Unknown
Global ID:	T0605900880
How Stopped Date:	9/9/9999
Enter Date:	Not reported
Review Date:	Not reported
Prelim Assess:	Not reported
Discover Date:	10/18/1988
Enforcement Date:	Not reported
Close Date:	1/22/1998
Workplan:	Not reported
Pollution Char:	Not reported
Remed Plan:	Not reported
Remed Action:	Not reported
Monitoring:	Not reported
Enter Date:	Not reported
GW Qualifies:	Not reported

CHEVRON STATION 9 9915 (Continued) **1000820393**

Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.6802524
Longitude:	-117.9074327
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	1
MTBE Tested:	Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.
MTBE Class:	*
Staff:	RS
Staff Initials:	AR
Lead Agency:	Local Agency
Local Agency:	30000L
Hydr Basin #:	Not reported
Beneficial:	MUN
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Summary:	Not reported

Region:	8
County:	Orange
Regional Board:	Santa Ana Region
Facility Status:	Case Closed
Case Number:	Not reported
Local Case Num:	98UT069
Case Type:	Other ground water affected
Substance:	Gasoline
Qty Leaked:	0
Abate Method:	Not reported
Cross Street:	Not reported
Enf Type:	Not reported
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Close Tank
Leak Cause:	Unknown
Leak Source:	Unknown
Global ID:	T0605958326
How Stopped Date:	9/9/9999
Enter Date:	Not reported
Review Date:	Not reported
Prelim Assess:	Not reported
Discover Date:	9/17/1998
Enforcement Date:	Not reported
Close Date:	9/17/1999
Workplan:	Not reported
Pollution Char:	Not reported
Remed Plan:	Not reported
Remed Action:	Not reported
Monitoring:	Not reported
Enter Date:	Not reported
GW Qualifies:	Not reported

CHEVRON STATION 9 9915 (Continued) **1000820393**

Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	Not reported
Longitude:	Not reported
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	1
MTBE Tested:	Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.
MTBE Class:	*
Staff:	TME
Staff Initials:	AR
Lead Agency:	Local Agency
Local Agency:	30000L
Hydr Basin #:	Not reported
Beneficial:	MUN
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Summary:	Not reported

CA FID UST:

Facility ID:	30000883
Regulated By:	UTNKA
Regulated ID:	Not reported
Cortese Code:	Not reported
SIC Code:	Not reported
Facility Phone:	7145467000
Mail To:	Not reported
Mailing Address:	1300 S BCH BLVD / P O BOX 2
Mailing Address 2:	Not reported
Mailing City,St,Zip:	COSTA MESA 92626
Contact:	Not reported
Contact Phone:	Not reported
DUNs Number:	Not reported
NPDES Number:	Not reported
EPA ID:	Not reported
Comments:	Not reported
Status:	Active

UST:

Facility ID:	2076
Latitude:	33.68014
Longitude:	-117.90769

ORANGE CO. UST:

Facility ID:	FA0025153

SWEEPS UST:

Status:	Active
Comp Number:	2076

CHEVRON STATION 9 9915 (Continued) **1000820393**

Number: 9
Board Of Equalization: 44-015896
Referral Date: 09-30-92
Action Date: 09-15-92
Created Date: 02-29-88
Tank Status: A
Owner Tank Id: Not reported
Swrcb Tank Id: 30-000-002076-000001
Actv Date: Not reported
Capacity: 1000
Tank Use: PETROLEUM
Stg: P
Content: Not reported
Number Of Tanks: 4

Status: Active
Comp Number: 2076
Number: 9
Board Of Equalization: 44-015896
Referral Date: 09-30-92
Action Date: 09-15-92
Created Date: 02-29-88
Tank Status: A
Owner Tank Id: Not reported
Swrcb Tank Id: 30-000-002076-000004
Actv Date: Not reported
Capacity: 10000
Tank Use: M.V. FUEL
Stg: P
Content: REG UNLEADED
Number Of Tanks: Not reported

Status: Active
Comp Number: 2076
Number: 9
Board Of Equalization: 44-015896
Referral Date: 09-30-92
Action Date: 09-15-92
Created Date: 02-29-88
Tank Status: A
Owner Tank Id: Not reported
Swrcb Tank Id: 30-000-002076-000005
Actv Date: Not reported
Capacity: 10000
Tank Use: M.V. FUEL
Stg: P
Content: REG UNLEADED
Number Of Tanks: Not reported

Status: Active
Comp Number: 2076
Number: 9
Board Of Equalization: 44-015896
Referral Date: 09-30-92
Action Date: 09-15-92
Created Date: 02-29-88
Tank Status: A

CHEVRON STATION 9 9915 (Continued) **1000820393**

Owner Tank Id:	Not reported
Swrcb Tank Id:	30-000-002076-000006
Actv Date:	Not reported
Capacity:	10000
Tank Use:	M.V. FUEL
Stg:	P
Content:	DIESEL
Number Of Tanks:	Not reported

CHMIRS:

OES Incident Number:	11-7094
OES notification:	11/30/2011
OES Date:	Not reported
OES Time:	Not reported
Incident Date:	Not reported
Date Completed:	**Not reported**
Property Use:	Not reported
Agency Id Number:	Not reported
Agency Incident Number:	Not reported
Time Notified:	Not reported
Time Completed:	Not reported
Surrounding Area:	Not reported
Estimated Temperature:	Not reported
Property Management:	Not reported
Special Studies 1:	Not reported
Special Studies 2:	Not reported
Special Studies 3:	Not reported
Special Studies 4:	Not reported
Special Studies 5:	Not reported
Special Studies 6:	Not reported
More Than Two Substances Involved?:	Not reported
Resp Agncy Personel # Of Decontaminated:	Not reported
Responding Agency Personel # Of Injuries:	Not reported
Responding Agency Personel # Of Fatalities:	Not reported
Others Number Of Decontaminated:	Not reported
Others Number Of Injuries:	Not reported
Others Number Of Fatalities:	Not reported
Vehicle Make/year:	Not reported
Vehicle License Number:	Not reported
Vehicle State:	Not reported
Vehicle Id Number:	Not reported
CA/DOT/PUC/ICC Number:	Not reported
Company Name:	Not reported
Reporting Officer Name/ID:	Not reported
Report Date:	Not reported
Comments:	Not reported
Facility Telephone:	Not reported
Waterway Involved:	No
Waterway:	Not reported
Spill Site:	Service Station
Cleanup By:	Reporting Party
Containment:	Not reported
What Happened:	Not reported
Type:	Not reported
Measure:	Pt.(s)
Other:	Not reported
Date/Time:	1058

CHEVRON STATION 9 9915 (Continued) **1000820393**

Year:	2011
Agency:	Chevron
Incident Date:	11/29/2000
Admin Agency:	Orange County Emergency Management Division - HazMat Div.
Amount:	Not reported
Contained:	Yes
Site Type:	Not reported
E Date:	Not reported
Substance:	Gasoline
Quantity Released:	1.5
BBLS:	Not reported
Cups:	Not reported
CUFT:	Not reported
Gallons:	Not reported
Grams:	Not reported
Pounds:	Not reported
Liters:	Not reported
Ounces:	Not reported
Pints:	Not reported
Quarts:	Not reported
Sheen:	Not reported
Tons:	Not reported
Unknown:	Not reported
Evacuations:	Not reported
Number of Injuries:	Not reported
Number of Fatalities:	Not reported
Description:	CALLER STATED THAT THERE WAS A RELEASE OF ONE AND A HALF PINTS OF GASOLINE FROM A GASOLINE NOZZLE AT A GAS STATION. CALLER ALSO STATED THAT THE RELEASE HAS BEEN SECURED AND THE GAS NOZZLE HAS BEEN TAKEN OUT OF SERVICE.

OES Incident Number:	11-4905
OES notification:	08/18/2011
OES Date:	Not reported
OES Time:	Not reported
Incident Date:	Not reported
Date Completed:	**Not reported**
Property Use:	Not reported
Agency Id Number:	Not reported
Agency Incident Number:	Not reported
Time Notified:	Not reported
Time Completed:	Not reported
Surrounding Area:	Not reported
Estimated Temperature:	Not reported
Property Management:	Not reported
Special Studies 1:	Not reported
Special Studies 2:	Not reported
Special Studies 3:	Not reported
Special Studies 4:	Not reported
Special Studies 5:	Not reported
Special Studies 6:	Not reported
More Than Two Substances Involved?:	Not reported
Resp Agncy Personel # Of Decontaminated:	Not reported
Responding Agency Personel # Of Injuries:	Not reported
Responding Agency Personel # Of Fatalities:	Not reported
Others Number Of Decontaminated:	Not reported
Others Number Of Injuries:	Not reported

CHEVRON STATION 9 9915 (Continued) **1000820393**

Others Number Of Fatalities:	Not reported
Vehicle Make/year:	Not reported
Vehicle License Number:	Not reported
Vehicle State:	Not reported
Vehicle Id Number:	Not reported
CA/DOT/PUC/ICC Number:	Not reported
Company Name:	Not reported
Reporting Officer Name/ID:	Not reported
Report Date:	Not reported
Comments:	Not reported
Facility Telephone:	Not reported
Waterway Involved:	No
Waterway:	Not reported
Spill Site:	Service Station
Cleanup By:	Unknown
Containment:	Not reported
What Happened:	Not reported
Type:	Not reported
Measure:	Pt.(s)
Other:	Not reported
Date/Time:	1030
Year:	2011
Agency:	Chevron
Incident Date:	8/17/2011
Admin Agency:	Orange County Emergency Management Division - HazMat Div.
Amount:	Not reported
Contained:	Yes
Site Type:	Not reported
E Date:	Not reported
Substance:	Gasoline
Quantity Released:	1.5
BBLS:	Not reported
Cups:	Not reported
CUFT:	Not reported
Gallons:	Not reported
Grams:	Not reported
Pounds:	Not reported
Liters:	Not reported
Ounces:	Not reported
Pints:	Not reported
Quarts:	Not reported
Sheen:	Not reported
Tons:	Not reported
Unknown:	Not reported
Evacuations:	Not reported
Number of Injuries:	Not reported
Number of Fatalities:	Not reported
Description:	A customer spilled gasoline on the ground.

OES Incident Number:	'12-2156
OES notification:	04/12/2012
OES Date:	Not reported
OES Time:	Not reported
Incident Date:	Not reported
Date Completed:	**Not reported**
Property Use:	Not reported
Agency Id Number:	Not reported

CHEVRON STATION 9 9915 (Continued) **1000820393**

Agency Incident Number:	Not reported
Time Notified:	Not reported
Time Completed:	Not reported
Surrounding Area:	Not reported
Estimated Temperature:	Not reported
Property Management:	Not reported
Special Studies 1:	Not reported
Special Studies 2:	Not reported
Special Studies 3:	Not reported
Special Studies 4:	Not reported
Special Studies 5:	Not reported
Special Studies 6:	Not reported
More Than Two Substances Involved?:	Not reported
Resp Agncy Personel # Of Decontaminated:	Not reported
Responding Agency Personel # Of Injuries:	Not reported
Responding Agency Personel # Of Fatalities:	Not reported
Others Number Of Decontaminated:	Not reported
Others Number Of Injuries:	Not reported
Others Number Of Fatalities:	Not reported
Vehicle Make/year:	Not reported
Vehicle License Number:	Not reported
Vehicle State:	Not reported
Vehicle Id Number:	Not reported
CA/DOT/PUC/ICC Number:	Not reported
Company Name:	Not reported
Reporting Officer Name/ID:	Not reported
Report Date:	Not reported
Comments:	Not reported
Facility Telephone:	Not reported
Waterway Involved:	No
Waterway:	Not reported
Spill Site:	Service Station
Cleanup By:	Person on-site
Containment:	Not reported
What Happened:	Not reported
Type:	Not reported
Measure:	Gal(s)
Other:	Not reported
Date/Time:	2200
Year:	2012
Agency:	Chevron
Incident Date:	4/10/2012
Admin Agency:	Orange County Emergency Management Division - HazMat Div.
Amount:	Not reported
Contained:	Yes
Site Type:	Not reported
E Date:	Not reported
Substance:	Gasoline
Quantity Released:	. 5
BBLS:	Not reported
Cups:	Not reported
CUFT:	Not reported
Gallons:	Not reported
Grams:	Not reported
Pounds:	Not reported
Liters:	Not reported
Ounces:	Not reported

CHEVRON STATION 9 9915 (Continued) **1000820393**

Pints:	Not reported
Quarts:	Not reported
Sheen:	Not reported
Tons:	Not reported
Unknown:	Not reported
Evacuations:	Not reported
Number of Injuries:	Not reported
Number of Fatalities:	Not reported
Description:	Per the Caller: "Caller is reporting a release of gasoline at a gas station. Approximately . 5 gallon spilled on to the ground." REMEDIAL ACTIONS: Cleaned up by employee.

P85
NW
1/4-1/2
0.306 mi.
1614 ft.

Relative:
Lower

Actual:
53 ft.

COSTA MESA HONDA
2888 HARBOR BLVD
COSTA MESA, CA 92626

Site 1 of 4 in cluster P

RCRA-SQG
CA HIST CORTESE
CA LUST
CA UST
CA HIST UST
CA HAZNET
CA EMI

1000405638
CAD981968050

RCRA-SQG:

Date form received by agency:	11/23/1992
Facility name:	COSTA MESA HONDA
Facility address:	2888 HARBOR BLVD COSTA MESA, CA 92626
EPA ID:	CAD981968050
Contact:	DAVID COPE
Contact address:	2888 HARBOR BLVD COSTA MESA, CA 92626
Contact country:	US
Contact telephone:	(714) 436-5050
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	ED WEST CO
Owner/operator address:	2888 HARBOR BLVD COSTA MESA, CA 92626
Owner/operator country:	Not reported
Owner/operator telephone:	(714) 436-5050
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported
Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private

COSTA MESA HONDA (Continued) **1000405638**

Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

CORTESE:

Region:	CORTESE
Facility County Code:	30
Reg By:	LTNKA
Reg Id:	083000379T

LUST:

Region:	STATE
Global Id:	T0605900302
Latitude:	33.676842
Longitude:	-117.917988
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	01/21/1992
Lead Agency:	ORANGE COUNTY LOP
Case Worker:	DB
Local Agency:	ORANGE COUNTY LOP
RB Case Number:	083000379T
LOC Case Number:	86UT229
File Location:	Local Agency
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0605900302
Contact Type:	Regional Board Caseworker
Contact Name:	ROSE SCOTT
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	rscott@waterboards.ca.gov

COSTA MESA HONDA (Continued) **1000405638**

Phone Number: 9513206375

Global Id: T0605900302
Contact Type: Local Agency Caseworker
Contact Name: DENAMARIE BAKER
Organization Name: ORANGE COUNTY LOP
Address: 1241 E. DYER ROAD, STE. 120
City: SANTA ANA
Email: dbaker@ochca.com
Phone Number: 7144336255

Status History:
Global Id: T0605900302
Status: Completed - Case Closed
Status Date: 01/21/1992

Global Id: T0605900302
Status: Open - Case Begin Date
Status Date: 12/11/1986

Regulatory Activities:
Global Id: T0605900302
Action Type: Other
Date: 01/01/1950
Action: Leak Discovery

Global Id: T0605900302
Action Type: Other
Date: 01/01/1950
Action: Leak Reported

ORANGE CO. LUST:
Region: ORANGE
Facility Id: 86UT229
Current Status: Certification (Case Closed)
Released Substance: Gasoline-Automotive (motor gasoline and additives), leaded & unleaded
Date Closed: 01/21/1992
Case Type: Soil Only
Record ID: RO0001416

LUST REG 8:
Region: 8
County: Orange
Regional Board: Santa Ana Region
Facility Status: Case Closed
Case Number: 083000379T
Local Case Num: 86UT229
Case Type: Soil only
Substance: Gasoline
Qty Leaked: 0
Abate Method: Not reported
Cross Street: Not reported
Enf Type: Not reported
Funding: Not reported

COSTA MESA HONDA (Continued) **1000405638**

How Discovered:	Tank Closure
How Stopped:	Close Tank
Leak Cause:	Unknown
Leak Source:	Unknown
Global ID:	T0605900302
How Stopped Date:	9/9/9999
Enter Date:	Not reported
Review Date:	Not reported
Prelim Assess:	Not reported
Discover Date:	12/11/1986
Enforcement Date:	Not reported
Close Date:	1/21/1992
Workplan:	Not reported
Pollution Char:	Not reported
Remed Plan:	Not reported
Remed Action:	Not reported
Monitoring:	Not reported
Enter Date:	Not reported
GW Qualifies:	Not reported
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.6757194
Longitude:	-117.919086
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	1
MTBE Tested:	Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.
MTBE Class:	*
Staff:	RS
Staff Initials:	AR
Lead Agency:	Local Agency
Local Agency:	30000L
Hydr Basin #:	Not reported
Beneficial:	MUN
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Summary:	Not reported

UST:

Facility ID:	1900
Latitude:	33.67707
Longitude:	-117.9192

HIST UST:

Region:	STATE
Facility ID:	00000005679
Facility Type:	Other
Other Type:	NEW CAR DEALER
Total Tanks:	0003
Contact Name:	TOM SIMONS

COSTA MESA HONDA (Continued) **1000405638**

Telephone: 7145400330
Owner Name: SOUTH COAST DODGE INC.
Owner Address: 2888 HARBOR BL.
Owner City,St,Zip: COSTA MESA, CA 92626

Tank Num: 001
Container Num: 2
Year Installed: Not reported
Tank Capacity: 00000250
Tank Used for: WASTE
Type of Fuel: WASTE OIL
Tank Construction: Not reported
Leak Detection: Visual, Stock Inventor

Tank Num: 002
Container Num: 1
Year Installed: Not reported
Tank Capacity: 00001000
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Tank Construction: Not reported
Leak Detection: Visual, Stock Inventor

Tank Num: 003
Container Num: 3
Year Installed: Not reported
Tank Capacity: 00000250
Tank Used for: WASTE
Type of Fuel: WASTE OIL
Tank Construction: Not reported
Leak Detection: Visual

HAZNET:
Year: 2012
Gepaid: CAD981968050
Contact: JON MARTIN/SERVICE MGR.
Telephone: 7144365050
Mailing Name: Not reported
Mailing Address: 2888 HARBOR BLVD
Mailing City,St,Zip: COSTA MESA, CA 926263911
Gen County: Orange
TSD EPA ID: CAT000613893
TSD County: Los Angeles
Waste Category: Not reported
Disposal Method: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.15
Facility County: Orange

Year: 2012
Gepaid: CAD981968050
Contact: JON MARTIN/SERVICE MGR.
Telephone: 7144365050
Mailing Name: Not reported
Mailing Address: 2888 HARBOR BLVD
Mailing City,St,Zip: COSTA MESA, CA 926263911
Gen County: Orange

COSTA MESA HONDA (Continued) **1000405638**

TSD EPA ID: CAT000613893
TSD County: Los Angeles
Waste Category: Not reported
Disposal Method: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.15
Facility County: Orange

Year: 2012
Gepaid: CAD981968050
Contact: JON MARTIN/SERVICE MGR.
Telephone: 7144365050
Mailing Name: Not reported
Mailing Address: 2888 HARBOR BLVD
Mailing City,St,Zip: COSTA MESA, CA 926263911
Gen County: Orange
TSD EPA ID: CAT000613893
TSD County: Los Angeles
Waste Category: Not reported
Disposal Method: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.175
Facility County: Orange

Year: 2012
Gepaid: CAD981968050
Contact: JON MARTIN/SERVICE MGR.
Telephone: 7144365050
Mailing Name: Not reported
Mailing Address: 2888 HARBOR BLVD
Mailing City,St,Zip: COSTA MESA, CA 926263911
Gen County: Orange
TSD EPA ID: CAT000613893
TSD County: Los Angeles
Waste Category: Not reported
Disposal Method: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.175
Facility County: Orange

Year: 2012
Gepaid: CAD981968050
Contact: JON MARTIN/SERVICE MGR.
Telephone: 7144365050
Mailing Name: Not reported
Mailing Address: 2888 HARBOR BLVD
Mailing City,St,Zip: COSTA MESA, CA 926263911
Gen County: Orange
TSD EPA ID: CAT080013352
TSD County: Los Angeles
Waste Category: Not reported
Disposal Method: Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons: 8.34
Facility County: Orange

COSTA MESA HONDA (Continued) **1000405638**

Click this hyperlink while viewing on your computer to access
81 additional CA_HAZNET: record(s) in the EDR Site Report.

EMI:

Year:	1987
County Code:	30
Air Basin:	SC
Facility ID:	26008
Air District Name:	SC
SIC Code:	7538
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Q86 **BAKER EQUIP RENTALS & SALES** **CA HIST CORTESE** **U003981969**
NNE **1151 BAKER ST** **CA LUST** **N/A**
1/4-1/2 **COSTA MESA, CA 92626** **CA UST**
0.307 mi. **CA HIST UST**
1622 ft. **Site 1 of 2 in cluster Q** **CA WDS**

Relative:
Lower

Actual:
41 ft.

CORTESE:

Region:	CORTESE
Facility County Code:	30
Reg By:	LTNKA
Reg Id:	083001490T
Region:	CORTESE
Facility County Code:	30
Reg By:	LTNKA
Reg Id:	083002674T

LUST:

Region:	STATE
Global Id:	T0605901135
Latitude:	33.6800304
Longitude:	-117.9057937
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	11/03/2006
Lead Agency:	ORANGE COUNTY LOP
Case Worker:	DB
Local Agency:	ORANGE COUNTY LOP
RB Case Number:	083001490T
LOC Case Number:	90UT068
File Location:	Local Agency Warehouse
Potential Media Affect:	Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

BAKER EQUIP RENTALS & SALES (Continued) **U003981969**

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0605901135
Contact Type:	Regional Board Caseworker
Contact Name:	CARL BERNHARDT
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	cbernhardt@waterboards.ca.gov
Phone Number:	9517824495
Global Id:	T0605901135
Contact Type:	Local Agency Caseworker
Contact Name:	DENAMARIE BAKER
Organization Name:	ORANGE COUNTY LOP
Address:	1241 E. DYER ROAD, STE. 120
City:	SANTA ANA
Email:	dbaker@ochca.com
Phone Number:	7144336255

Status History:

Global Id:	T0605901135
Status:	Completed - Case Closed
Status Date:	11/03/2006
Global Id:	T0605901135
Status:	Open - Case Begin Date
Status Date:	03/12/1990
Global Id:	T0605901135
Status:	Open - Remediation
Status Date:	02/25/2002
Global Id:	T0605901135
Status:	Open - Verification Monitoring
Status Date:	03/30/2005

Regulatory Activities:

Global Id:	T0605901135
Action Type:	ENFORCEMENT
Date:	11/03/2006
Action:	Closure/No Further Action Letter
Global Id:	T0605901135
Action Type:	ENFORCEMENT
Date:	05/27/2004
Action:	Staff Letter
Global Id:	T0605901135
Action Type:	ENFORCEMENT
Date:	04/18/2005
Action:	Staff Letter
Global Id:	T0605901135
Action Type:	ENFORCEMENT

BAKER EQUIP RENTALS & SALES (Continued) **U003981969**

Date:	09/22/2006
Action:	Staff Letter
Global Id:	T0605901135
Action Type:	ENFORCEMENT
Date:	04/09/1990
Action:	Notice of Responsibility
Global Id:	T0605901135
Action Type:	ENFORCEMENT
Date:	08/04/2003
Action:	Staff Letter
Global Id:	T0605901135
Action Type:	ENFORCEMENT
Date:	08/09/2004
Action:	Staff Letter
Global Id:	T0605901135
Action Type:	ENFORCEMENT
Date:	11/04/2004
Action:	Staff Letter
Global Id:	T0605901135
Action Type:	ENFORCEMENT
Date:	08/18/2005
Action:	Staff Letter
Global Id:	T0605901135
Action Type:	ENFORCEMENT
Date:	10/26/2005
Action:	Staff Letter
Global Id:	T0605901135
Action Type:	REMEDIATION
Date:	01/01/1950
Action:	Pump & Treat (P&T) Groundwater
Global Id:	T0605901135
Action Type:	REMEDIATION
Date:	01/01/1950
Action:	Soil Vapor Extraction (SVE)
Global Id:	T0605901135
Action Type:	Other
Date:	01/01/1950
Action:	Leak Discovery
Global Id:	T0605901135
Action Type:	Other
Date:	01/01/1950
Action:	Leak Reported

ORANGE CO. LUST:

Region:	ORANGE
Facility Id:	90UT068

BAKER EQUIP RENTALS & SALES (Continued) **U003981969**

Current Status:	Certification (Case Closed)
Released Substance:	Gasoline-Automotive (motor gasoline and additives), leaded & unleaded
Date Closed:	11/03/2006
Case Type:	Other Ground Water
Record ID:	RO0002542

LUST REG 8:

Region:	8
County:	Orange
Regional Board:	Santa Ana Region
Facility Status:	Remedial action (cleanup) Underway
Case Number:	083001490T
Local Case Num:	90UT068
Case Type:	Other ground water affected
Substance:	Gasoline
Qty Leaked:	0
Abate Method:	Not reported
Cross Street:	Not reported
Enf Type:	SEL
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Close Tank
Leak Cause:	Unknown
Leak Source:	Tank
Global ID:	T0605901135
How Stopped Date:	9/9/9999
Enter Date:	Not reported
Review Date:	Not reported
Prelim Assess:	Not reported
Discover Date:	3/12/1990
Enforcement Date:	Not reported
Close Date:	Not reported
Workplan:	Not reported
Pollution Char:	Not reported
Remed Plan:	Not reported
Remed Action:	2/25/2002
Monitoring:	Not reported
Enter Date:	Not reported
GW Qualifies:	=
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.6800304
Longitude:	-117.9057937
MTBE Date:	9/5/2001
Max MTBE GW:	17100
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	1
MTBE Tested:	MTBE Detected. Site tested for MTBE & MTBE detected
MTBE Class:	*
Staff:	CAB
Staff Initials:	AR
Lead Agency:	Local Agency
Local Agency:	30000L

BAKER EQUIP RENTALS & SALES (Continued) **U003981969**

Hydr Basin #: Not reported
Beneficial: MUN
Priority: Not reported
Cleanup Fund Id: Not reported
Work Suspended: Not reported
Summary: Not reported

UST:
Facility ID: 2830
Latitude: 33.6801
Longitude: -117.90555

HIST UST:
Region: STATE
Facility ID: 00000016463
Facility Type: Other
Other Type: Not reported
Total Tanks: 0002
Contact Name: Not reported
Telephone: 7145455521
Owner Name: ANTHONY M BERINGER
Owner Address: 3055 CAPRILANE
Owner City,St,Zip: COSTA MESA, CA 92626

Tank Num: 001
Container Num: 11960
Year Installed: 1961
Tank Capacity: 00000500
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Tank Construction: Not reported
Leak Detection: None

Tank Num: 002
Container Num: 2
Year Installed: 1960
Tank Capacity: 00007000
Tank Used for: PRODUCT
Type of Fuel: DIESEL
Tank Construction: Not reported
Leak Detection: None

CA WDS:
Facility ID: Santa Ana River 303367001
Facility Type: Industrial - Facility that treats and/or disposes of liquid or semisolid wastes from any servicing, producing, manufacturing or processing operation of whatever nature, including mining, gravel washing, geothermal operations, air conditioning, ship building and repairing, oil production, storage and disposal operations, water pumping.
Facility Status: Active - Any facility with a continuous or seasonal discharge that is under Waste Discharge Requirements.
NPDES Number: CAG918001 The 1st 2 characters designate the state. The remaining 7 are assigned by the Regional Board
Subregion: 8
Facility Telephone: 7145455521

BAKER EQUIP RENTALS & SALES (Continued) **U003981969**

Facility Contact:	ANTHONY BERINGER
Agency Name:	BAKER RENTALS AND SALES INC.
Agency Address:	1151 BAKER STREET
Agency City,St,Zip:	COSTA MESA 92626
Agency Contact:	ANTHONY BERINGER
Agency Telephone:	7145455521
Agency Type:	Private
SIC Code:	4959
SIC Code 2:	Not reported
Primary Waste:	Contaminated Ground Water
Primary Waste Type:	Hazardous/Influent or Solid Wastes that contain toxic, corrosive, ignitable or reactive substances and must be managed according to applicable DOHS standards.
Secondary Waste:	Not reported
Secondary Waste Type:	Not reported
Design Flow:	0
Baseline Flow:	0
Reclamation:	No reclamation requirements associated with this facility.
POTW:	The facility is not a POTW.
Treat To Water:	Moderate Threat to Water Quality. A violation could have a major adverse impact on receiving biota, can cause aesthetic impairment to a significant human population, or render unusable a potential domestic or municipal water supply. Awsthetic impairment would include nuisance from a waste treatment facility.
Complexity:	Category B - Any facility having a physical, chemical, or biological waste treatment system (except for septic systems with subsurface disposal), or any Class II or III disposal site, or facilities without treatment systems that are complex, such as marinas with petroleum products, solid wastes, and sewage pump out facilities.

87
SW
1/4-1/2
0.309 mi.
1629 ft.

ORANGE COAST JEEP EAGLE
2524 HARBOR BLVD
COSTA MESA, CA 92626

RCRA-SQG **1000315108**
FINDS **CAD070306766**
CA HIST CORTESE
CA LUST
CA UST
CA HIST UST

Relative:
Higher

Actual:
71 ft.

RCRA-SQG:

Date form received by agency:	09/01/1996
Facility name:	ORANGE COAST JEEP EAGLE
Facility address:	2524 HARBOR BLVD COSTA MESA, CA 92626
EPA ID:	CAD070306766
Contact:	Not reported
Contact address:	Not reported Not reported
Contact country:	Not reported
Contact telephone:	Not reported
Contact email:	Not reported
EPA Region:	09
Land type:	Private
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

ORANGE COAST JEEP EAGLE (Continued) **1000315108**

Owner/Operator Summary:

Owner/operator name:	GARY GRAY
Owner/operator address:	2524 HARBOR BLVD COSTA MESA, CA 92626
Owner/operator country:	Not reported
Owner/operator telephone:	(714) 549-8023
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Historical Generators:

Date form received by agency:	10/19/1993
Facility name:	ORANGE COAST JEEP EAGLE
Classification:	Large Quantity Generator

Violation Status:	No violations found

Evaluation Action Summary:

Evaluation date:	06/22/1994
Evaluation:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation:	Not reported
Date achieved compliance:	Not reported
Evaluation lead agency:	State Contractor/Grantee

FINDS:

Registry ID: 110002656135

Environmental Interest/Information System

California Hazardous Waste Tracking System - Datamart (HWTS-DATAMART) provides California with information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA

ORANGE COAST JEEP EAGLE (Continued) **1000315108**

program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

ICIS (Integrated Compliance Information System) is the Integrated Compliance Information System and provides a database that, when complete, will contain integrated Enforcement and Compliance information across most of EPA's programs. The vision for ICIS is to replace EPA's independent databases that contain Enforcement data with a single repository for that information. Currently, ICIS contains all Federal Administrative and Judicial enforcement actions. This information is maintained in ICIS by EPA in the Regional offices and it Headquarters. A future release of ICIS will replace the Permit Compliance System (PCS) which supports the NPDES and will integrate that information with Federal actions already in the system. ICIS also has the capability to track other activities occurring in the Region that support Compliance and Enforcement programs. These include; Incident Tracking, Compliance Assistance, and Compliance Monitoring.

CORTESE:

Region:	CORTESE
Facility County Code:	30
Reg By:	LTNKA
Reg Id:	083001399T

LUST:

Region:	STATE
Global Id:	T0605901055
Latitude:	33.66433
Longitude:	-117.918371
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	08/27/1990
Lead Agency:	ORANGE COUNTY LOP
Case Worker:	DB
Local Agency:	ORANGE COUNTY LOP
RB Case Number:	083001399T
LOC Case Number:	90UT004
File Location:	Local Agency
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Waste Oil / Motor / Hydraulic / Lubricating
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0605901055
Contact Type:	Local Agency Caseworker
Contact Name:	DENAMARIE BAKER
Organization Name:	ORANGE COUNTY LOP
Address:	1241 E. DYER ROAD, STE. 120
City:	SANTA ANA
Email:	dbaker@ochca.com
Phone Number:	7144336255

Global Id:	T0605901055
Contact Type:	Regional Board Caseworker

ORANGE COAST JEEP EAGLE (Continued) **1000315108**

Contact Name: PATRICIA HANNON
Organization Name: SANTA ANA RWQCB (REGION 8)
Address: 3737 MAIN STREET, SUITE 500
City: RIVERSIDE
Email: phannon@waterboards.ca.gov
Phone Number: Not reported

Status History:
Global Id: T0605901055
Status: Completed - Case Closed
Status Date: 08/27/1990

Global Id: T0605901055
Status: Open - Case Begin Date
Status Date: 09/07/1989

Regulatory Activities:
Global Id: T0605901055
Action Type: Other
Date: 01/01/1950
Action: Leak Discovery

Global Id: T0605901055
Action Type: Other
Date: 01/01/1950
Action: Leak Reported

ORANGE CO. LUST:
Region: ORANGE
Facility Id: 90UT004
Current Status: Certification (Case Closed)
Released Substance: Waste oil/Used oil
Date Closed: 08/27/1990
Case Type: Soil Only
Record ID: RO0002615

LUST REG 8:
Region: 8
County: Orange
Regional Board: Santa Ana Region
Facility Status: Case Closed
Case Number: 083001399T
Local Case Num: 90UT004
Case Type: Soil only
Substance: Waste Oil
Qty Leaked: 0
Abate Method: Not reported
Cross Street: Not reported
Enf Type: Not reported
Funding: Not reported
How Discovered: Tank Closure
How Stopped: Close Tank
Leak Cause: Unknown
Leak Source: Unknown

ORANGE COAST JEEP EAGLE (Continued) **1000315108**

Global ID:	T0605901055
How Stopped Date:	9/9/9999
Enter Date:	Not reported
Review Date:	Not reported
Prelim Assess:	Not reported
Discover Date:	9/7/1989
Enforcement Date:	Not reported
Close Date:	8/27/1990
Workplan:	Not reported
Pollution Char:	Not reported
Remed Plan:	Not reported
Remed Action:	Not reported
Monitoring:	Not reported
Enter Date:	Not reported
GW Qualifies:	Not reported
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.6637978
Longitude:	-117.91915
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	0
MTBE Tested:	Not Required to be Tested.
MTBE Class:	*
Staff:	PAH
Staff Initials:	AR
Lead Agency:	Local Agency
Local Agency:	30000L
Hydr Basin #:	Not reported
Beneficial:	MUN
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Summary:	Not reported

UST:

Facility ID:	1838
Latitude:	33.6645
Longitude:	-117.9191

HIST UST:

Region:	STATE
Facility ID:	00000004672
Facility Type:	Other
Other Type:	AUTO DEALERSHIP
Total Tanks:	0001
Contact Name:	GARY C. GRAY
Telephone:	7145498023
Owner Name:	ORANGE COAST AMC/JEEP, INC
Owner Address:	2524 HARBOR BLVD
Owner City,St,Zip:	COSTA MESA, CA 92626

ORANGE COAST JEEP EAGLE (Continued) **1000315108**

Tank Num: 001
Container Num: 1
Year Installed: Not reported
Tank Capacity: 00000000
Tank Used for: WASTE
Type of Fuel: WASTE OIL
Tank Construction: Not reported
Leak Detection: Visual

R88
ESE
1/4-1/2
0.320 mi.
1691 ft.

SANTA ANA ARMY AIR BASE **FUDS** **1009484289**
N/A

COSTA MESA, CA

Site 1 of 2 in cluster R

Relative:
Higher

Actual:
62 ft.

FUDS:
Federal Facility ID: CA9799F5616
FUDS #: J09CA0614
INST ID: 53886
Facility Name: SANTA ANA ARMY AIR BASE
City: COSTA MESA
State: CA
EPA Region: 09
County: ORANGE
Congressional District: 46
US Army District: Los Angeles District (SPL)
Fiscal Year: 2011
Telephone: 213-452-3920
NPL Status: Not Listed
RAB: Not reported
CTC: 914.9
Current Owner: FEDERAL; PRIVATE
Current Prog: Not reported
Future Prog: Not reported
Description: The Santa Ana Army Air Base consisted of 1336.102 acres. This was made up of 909.453 acres acquired in fee, by condemnation and purchase, 420.74 acres acquired by lease, 5.771 acres acquired by easement, and 0.138 acres. The site is located In the City of Costa Mesa, Orange County, California. The site, at present, contains the Orange County Fairgrounds, Costa Mesa City Hall, Orange Coast College, Pacific Amphitheater, Southern California Bible College, Air National Guard Station, and several residential and retail tracts. Some of the original buildings were renovated and are being used by the present owners. The lease was terminated when the fee land was conveyed to the College.
The Army Air Corps used the site as a pilot training facility between March 1942 and October 1944. It then became a redistribution center and convalescent hospital and later was a discharge station for returning soldiers.The base was built to serve 20,000 personnel. Finally, before it closed in March 1946, it was a discharge station for soldiers returning from the Pacific. The former site was sold to various entities - Orange Coast College, 32nd Agricultural, and Southern California Bible College. The site currently consists of many residential and retail tracts with approximately 2,800 owners

89 **West** **1/4-1/2** **0.323 mi.** **1706 ft.**	**COSTA MESA FIRE STATION #1** **2803 ROYAL PALM** **COSTA MESA, CA 92626**	**CA LUST**	**S103956864** **N/A**

Relative:
Lower

Actual:
58 ft.

LUST:

Region:	STATE
Global Id:	T0605938376
Latitude:	33.673955
Longitude:	-117.922348
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	06/28/2011
Lead Agency:	ORANGE COUNTY LOP
Case Worker:	DB
Local Agency:	ORANGE COUNTY LOP
RB Case Number:	Not reported
LOC Case Number:	02UT026
File Location:	Local Agency
Potential Media Affect:	Other Groundwater (uses other than drinking water), Soil
Potential Contaminants of Concern:	Gasoline
Site History:	Please refer to recent Site Documents or Monitoring Reports in GeoTracker for site history. Orange County is not responsible for the accuracy of any professional interpretations provided in reports submitted by consultants for the responsible party.

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0605938376
Contact Type:	Regional Board Caseworker
Contact Name:	VALERIE JAHN-BULL
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	vjahn-bull@waterboards.ca.gov
Phone Number:	9517824903
Global Id:	T0605938376
Contact Type:	Local Agency Caseworker
Contact Name:	DENAMARIE BAKER
Organization Name:	ORANGE COUNTY LOP
Address:	1241 E. DYER ROAD, STE. 120
City:	SANTA ANA
Email:	dbaker@ochca.com
Phone Number:	7144336255

Status History:

Global Id:	T0605938376
Status:	Completed - Case Closed
Status Date:	06/28/2011
Global Id:	T0605938376
Status:	Open - Case Begin Date
Status Date:	10/16/2002
Global Id:	T0605938376
Status:	Open - Remediation

COSTA MESA FIRE STATION #1 (Continued) **S103956864**

Status Date:	10/31/2008
Global Id:	T0605938376
Status:	Open - Site Assessment
Status Date:	11/05/2002
Global Id:	T0605938376
Status:	Open - Verification Monitoring
Status Date:	06/14/2010

Regulatory Activities:

Global Id:	T0605938376
Action Type:	ENFORCEMENT
Date:	04/13/2009
Action:	Staff Letter
Global Id:	T0605938376
Action Type:	ENFORCEMENT
Date:	04/06/2005
Action:	Staff Letter - #2
Global Id:	T0605938376
Action Type:	ENFORCEMENT
Date:	07/03/2007
Action:	Staff Letter
Global Id:	T0605938376
Action Type:	ENFORCEMENT
Date:	12/02/2002
Action:	Staff Letter
Global Id:	T0605938376
Action Type:	Other
Date:	01/01/1950
Action:	Leak Reported
Global Id:	T0605938376
Action Type:	ENFORCEMENT
Date:	12/30/2009
Action:	Staff Letter
Global Id:	T0605938376
Action Type:	ENFORCEMENT
Date:	04/26/2010
Action:	Staff Letter
Global Id:	T0605938376
Action Type:	ENFORCEMENT
Date:	07/03/2009
Action:	Staff Letter
Global Id:	T0605938376
Action Type:	ENFORCEMENT
Date:	03/07/2005
Action:	Staff Letter
Global Id:	T0605938376

COSTA MESA FIRE STATION #1 (Continued) **S103956864**

Action Type:	ENFORCEMENT
Date:	03/23/2005
Action:	Staff Letter
Global Id:	T0605938376
Action Type:	ENFORCEMENT
Date:	04/06/2005
Action:	Staff Letter - #1
Global Id:	T0605938376
Action Type:	ENFORCEMENT
Date:	06/13/2005
Action:	Staff Letter
Global Id:	T0605938376
Action Type:	ENFORCEMENT
Date:	09/26/2005
Action:	Staff Letter
Global Id:	T0605938376
Action Type:	ENFORCEMENT
Date:	11/28/2006
Action:	Staff Letter
Global Id:	T0605938376
Action Type:	ENFORCEMENT
Date:	05/21/2007
Action:	Staff Letter
Global Id:	T0605938376
Action Type:	ENFORCEMENT
Date:	09/24/2007
Action:	Staff Letter
Global Id:	T0605938376
Action Type:	ENFORCEMENT
Date:	09/21/2004
Action:	Staff Letter
Global Id:	T0605938376
Action Type:	ENFORCEMENT
Date:	06/28/2011
Action:	Staff Letter
Global Id:	T0605938376
Action Type:	ENFORCEMENT
Date:	10/21/2002
Action:	Notice of Responsibility
Global Id:	T0605938376
Action Type:	ENFORCEMENT
Date:	10/31/2002
Action:	Staff Letter
Global Id:	T0605938376
Action Type:	ENFORCEMENT
Date:	05/16/2003

COSTA MESA FIRE STATION #1 (Continued) **S103956864**

Action:	Staff Letter
Global Id:	T0605938376
Action Type:	ENFORCEMENT
Date:	09/17/2004
Action:	Staff Letter
Global Id:	T0605938376
Action Type:	ENFORCEMENT
Date:	12/13/2004
Action:	Staff Letter
Global Id:	T0605938376
Action Type:	ENFORCEMENT
Date:	01/22/2009
Action:	Staff Letter
Global Id:	T0605938376
Action Type:	ENFORCEMENT
Date:	05/02/2011
Action:	Staff Letter
Global Id:	T0605938376
Action Type:	Other
Date:	01/01/1950
Action:	Leak Discovery
Global Id:	T0605938376
Action Type:	REMEDIATION
Date:	01/01/1950
Action:	Other (Use Description Field)
Global Id:	T0605938376
Action Type:	REMEDIATION
Date:	01/01/1950
Action:	Soil Vapor Extraction (SVE)

Region:	STATE
Global Id:	T0605952190
Latitude:	33.673955
Longitude:	-117.922348
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	10/07/1987
Lead Agency:	ORANGE COUNTY LOP
Case Worker:	DB
Local Agency:	ORANGE COUNTY LOP
RB Case Number:	Not reported
LOC Case Number:	87UT162
File Location:	Local Agency
Potential Media Affect:	Under Investigation
Potential Contaminants of Concern:	Diesel
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

COSTA MESA FIRE STATION #1 (Continued) **S103956864**

Contact:

Global Id:	T0605952190
Contact Type:	Local Agency Caseworker
Contact Name:	DENAMARIE BAKER
Organization Name:	ORANGE COUNTY LOP
Address:	1241 E. DYER ROAD, STE. 120
City:	SANTA ANA
Email:	dbaker@ochca.com
Phone Number:	7144336255
Global Id:	T0605952190
Contact Type:	Regional Board Caseworker
Contact Name:	NONE
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	Not reported
City:	RIVERSIDE
Email:	Not reported
Phone Number:	Not reported

Status History:

Global Id:	T0605952190
Status:	Completed - Case Closed
Status Date:	10/07/1987
Global Id:	T0605952190
Status:	Open - Case Begin Date
Status Date:	10/07/1987

ORANGE CO. LUST:

Region:	ORANGE
Facility Id:	87UT162
Current Status:	Certification (Case Closed)
Released Substance:	Diesel fuel oil and additives, Nos.1-D, 2-D, 2-4
Date Closed:	10/07/1987
Case Type:	Undetermined
Record ID:	RO0002538

LUST REG 8:

Region:	8
County:	Orange
Regional Board:	Santa Ana Region
Facility Status:	Pollution Characterization
Case Number:	Not reported
Local Case Num:	02UT026
Case Type:	Soil only
Substance:	Gasoline
Qty Leaked:	0
Abate Method:	Not reported
Cross Street:	Not reported
Enf Type:	EDFNL
Funding:	Not reported
How Discovered:	UM
How Stopped:	Other Means
Leak Cause:	Unknown

COSTA MESA FIRE STATION #1 (Continued) **S103956864**

Leak Source:	Unknown
Global ID:	T0605938376
How Stopped Date:	9/9/9999
Enter Date:	Not reported
Review Date:	Not reported
Prelim Assess:	Not reported
Discover Date:	10/16/2002
Enforcement Date:	Not reported
Close Date:	Not reported
Workplan:	Not reported
Pollution Char:	11/5/2002
Remed Plan:	Not reported
Remed Action:	Not reported
Monitoring:	Not reported
Enter Date:	Not reported
GW Qualifies:	Not reported
Soil Qualifies:	=
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	0
Longitude:	0
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	350
MTBE Fuel:	1
MTBE Tested:	MTBE Detected. Site tested for MTBE & MTBE detected
MTBE Class:	*
Staff:	VJJ
Staff Initials:	AR
Lead Agency:	Local Agency
Local Agency:	30000L
Hydr Basin #:	Not reported
Beneficial:	MUN
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Summary:	Not reported

Region:	8
County:	Orange
Regional Board:	Santa Ana Region
Facility Status:	Case Closed
Case Number:	Not reported
Local Case Num:	87UT162
Case Type:	Undefined
Substance:	Diesel
Qty Leaked:	0
Abate Method:	Not reported
Cross Street:	Not reported
Enf Type:	Not reported
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Close Tank
Leak Cause:	Unknown

COSTA MESA FIRE STATION #1 (Continued) **S103956864**

Leak Source: Unknown
Global ID: T0605952190
How Stopped Date: 9/9/9999
Enter Date: Not reported
Review Date: Not reported
Prelim Assess: Not reported
Discover Date: 1/1/1965
Enforcement Date: Not reported
Close Date: 10/7/1987
Workplan: Not reported
Pollution Char: Not reported
Remed Plan: Not reported
Remed Action: Not reported
Monitoring: Not reported
Enter Date: Not reported
GW Qualifies: Not reported
Soil Qualifies: Not reported
Operator: Not reported
Facility Contact: Not reported
Interim: Not reported
Oversite Program: LUST
Latitude: Not reported
Longitude: Not reported
MTBE Date: Not reported
Max MTBE GW: Not reported
MTBE Concentration: 0
Max MTBE Soil: Not reported
MTBE Fuel: 0
MTBE Tested: Not Required to be Tested.
MTBE Class: *
Staff: Not reported
Staff Initials: AR
Lead Agency: Local Agency
Local Agency: 30000L
Hydr Basin #: Not reported
Beneficial: MUN
Priority: Not reported
Cleanup Fund Id: Not reported
Work Suspended: Not reported
Summary: Not reported

R90 **SANTA ANA AAB** **CA ENVIROSTOR** **S107737267**
ESE **N/A**
1/4-1/2 **COSTA MESA, CA**
0.323 mi.
1708 ft. **Site 2 of 2 in cluster R**

Relative:
Higher

Actual:
62 ft.

ENVIROSTOR:
Site Type: Military Evaluation
Site Type Detailed: FUDS
Acres: Not reported
NPL: NO
Regulatory Agencies: SMBRP
Lead Agency: SMBRP
Program Manager: Not reported
Supervisor: Douglas Bautista
Division Branch: Cleanup Cypress
Facility ID: 80000467

SANTA ANA AAB (Continued) **S107737267**

Site Code: Not reported
Assembly: 74
Senate: 37
Special Program: Not reported
Status: Inactive - Needs Evaluation
Status Date: 07/01/2005
Restricted Use: NO
Site Mgmt. Req.: NONE SPECIFIED
Funding: DERA
Latitude: 33.66694
Longitude: -117.9002
APN: NONE SPECIFIED
Past Use: NONE SPECIFIED
Potential COC: NONE SPECIFIED
Confirmed COC: NONE SPECIFIED, NONE SPECIFIED
Potential Description: NONE SPECIFIED
Alias Name: CA99799F561600
Alias Type: Federal Facility ID
Alias Name: J09CA0614
Alias Type: INPR
Alias Name: 80000467
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: Not reported
Completed Sub Area Name: Not reported
Completed Document Type: Not reported
Completed Date: Not reported
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

P91 **NW** **1/4-1/2** **0.338 mi.** **1784 ft.**	**SOUTH COAST ACURA** **2925 HARBOR BLVD** **COSTA MESA, CA** **Site 2 of 4 in cluster P**	**RCRA NonGen / NLR** **FINDS** **CA HIST CORTESE** **CA LUST** **CA HAZNET**	**1000818803** **CAD983647165**

Relative:
Lower

Actual:
53 ft.

RCRA NonGen / NLR:
Date form received by agency: 06/21/2006
Facility name: SOUTH COAST ACURA
Facility address: 2925 HARBOR BLVD
COSTA MESA, CA 92626
EPA ID: CAD983647165
Contact: STEPHANIE BARRETT
Contact address: 2925 HARBOR BLVD
COSTA MESA, CA 92626
Contact country: US
Contact telephone: 714-979-2500
Contact email: Not reported

SOUTH COAST ACURA (Continued) **1000818803**

EPA Region: 09
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: HUNTINGTON BEACH IMPORTS
Owner/operator address: 2925 HARBOR BLVD
COSTA MESA, CA 92626
Owner/operator country: Not reported
Owner/operator telephone: (714) 979-2500
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 03/18/1994
Facility name: SOUTH COAST ACURA
Classification: Small Quantity Generator

Violation Status: No violations found

FINDS:

Registry ID: 110002883808

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

CORTESE:
Region: CORTESE
Facility County Code: 30
Reg By: LTNKA

SOUTH COAST ACURA (Continued) **1000818803**

Reg Id:	083001590T

LUST:

Region:	STATE
Global Id:	T0605901209
Latitude:	33.6780283
Longitude:	-117.919504
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	03/27/1991
Lead Agency:	ORANGE COUNTY LOP
Case Worker:	DB
Local Agency:	ORANGE COUNTY LOP
RB Case Number:	083001590T
LOC Case Number:	89UT180
File Location:	Local Agency
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Waste Oil / Motor / Hydraulic / Lubricating, Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0605901209
Contact Type:	Regional Board Caseworker
Contact Name:	PATRICIA HANNON
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	phannon@waterboards.ca.gov
Phone Number:	Not reported

Global Id:	T0605901209
Contact Type:	Local Agency Caseworker
Contact Name:	DENAMARIE BAKER
Organization Name:	ORANGE COUNTY LOP
Address:	1241 E. DYER ROAD, STE. 120
City:	SANTA ANA
Email:	dbaker@ochca.com
Phone Number:	7144336255

Status History:

Global Id:	T0605901209
Status:	Completed - Case Closed
Status Date:	03/27/1991

Global Id:	T0605901209
Status:	Open - Case Begin Date
Status Date:	10/03/1989

Regulatory Activities:

Global Id:	T0605901209
Action Type:	Other
Date:	01/01/1950
Action:	Leak Discovery

SOUTH COAST ACURA (Continued) **1000818803**

Global Id:	T0605901209
Action Type:	Other
Date:	01/01/1950
Action:	Leak Reported

ORANGE CO. LUST:

Region:	ORANGE
Facility Id:	89UT180
Current Status:	Certification (Case Closed)
Released Substance:	Waste oil/Used oil
Date Closed:	03/27/1991
Case Type:	Soil Only
Record ID:	RO0000987

Region:	ORANGE
Facility Id:	89UT180
Current Status:	Not reported
Released Substance:	Gasoline-Automotive (motor gasoline and additives), leaded & unleaded
Date Closed:	03/27/1991
Case Type:	Not reported
Record ID:	RO0000987

LUST REG 8:

Region:	8
County:	Orange
Regional Board:	Santa Ana Region
Facility Status:	Case Closed
Case Number:	083001590T
Local Case Num:	89UT180
Case Type:	Soil only
Substance:	12035,800661
Qty Leaked:	0
Abate Method:	Not reported
Cross Street:	Not reported
Enf Type:	Not reported
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Close Tank
Leak Cause:	Unknown
Leak Source:	Unknown
Global ID:	T0605901209
How Stopped Date:	9/9/9999
Enter Date:	Not reported
Review Date:	Not reported
Prelim Assess:	Not reported
Discover Date:	10/3/1989
Enforcement Date:	Not reported
Close Date:	3/27/1991
Workplan:	Not reported
Pollution Char:	Not reported
Remed Plan:	Not reported
Remed Action:	Not reported
Monitoring:	Not reported
Enter Date:	Not reported
GW Qualifies:	Not reported

SOUTH COAST ACURA (Continued) **1000818803**

Soil Qualifies: Not reported
Operator: Not reported
Facility Contact: Not reported
Interim: Not reported
Oversite Program: LUST
Latitude: 33.6780283
Longitude: -117.919504
MTBE Date: Not reported
Max MTBE GW: Not reported
MTBE Concentration: 0
Max MTBE Soil: Not reported
MTBE Fuel: 0
MTBE Tested: Not Required to be Tested.
MTBE Class: *
Staff: PAH
Staff Initials: AR
Lead Agency: Local Agency
Local Agency: 30000L
Hydr Basin #: Not reported
Beneficial: MUN
Priority: Not reported
Cleanup Fund Id: Not reported
Work Suspended: Not reported
Summary: Not reported

HAZNET:

Year: 2007
Gepaid: CAD983647165
Contact: EDDIE RASHID
Telephone: 8009622872
Mailing Name: Not reported
Mailing Address: 2925 HARBOR BLVD
Mailing City,St,Zip: COSTA MESA, CA 926260000
Gen County: Not reported
TSD EPA ID: CAT000613893
TSD County: Not reported
Waste Category: Aqueous solution with total organic residues less than 10 percent
Disposal Method: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.29
Facility County: Orange

Year: 2006
Gepaid: CAD983647165
Contact: UNDELIVERABLE 1996 FEES FORM
Telephone: 7149792500
Mailing Name: Not reported
Mailing Address: 2925 HARBOR BLVD
Mailing City,St,Zip: COSTA MESA, CA 926260000
Gen County: Not reported
TSD EPA ID: CAD028409019
TSD County: Not reported
Waste Category: Unspecified solvent mixture
Disposal Method: Transfer Station
Tons: 0.06
Facility County: Orange

SOUTH COAST ACURA (Continued) **1000818803**

Year: 2005
Gepaid: CAD983647165
Contact: UNDELIVERABLE 1996 FEES FORM
Telephone: 7149792500
Mailing Name: Not reported
Mailing Address: 2925 HARBOR BLVD
Mailing City,St,Zip: COSTA MESA, CA 926260000
Gen County: Not reported
TSD EPA ID: CAT080013352
TSD County: Not reported
Waste Category: Oil/water separation sludge
Disposal Method: Recycler
Tons: 2.37
Facility County: Orange

Year: 2005
Gepaid: CAD983647165
Contact: UNDELIVERABLE 1996 FEES FORM
Telephone: 7149792500
Mailing Name: Not reported
Mailing Address: 2925 HARBOR BLVD
Mailing City,St,Zip: COSTA MESA, CA 926260000
Gen County: Not reported
TSD EPA ID: CAT000613893
TSD County: Not reported
Waste Category: Aqueous solution with total organic residues less than 10 percent
Disposal Method: Transfer Station
Tons: 0.09
Facility County: Orange

Year: 2005
Gepaid: CAD983647165
Contact: UNDELIVERABLE 1996 FEES FORM
Telephone: 7149792500
Mailing Name: Not reported
Mailing Address: 2925 HARBOR BLVD
Mailing City,St,Zip: COSTA MESA, CA 926260000
Gen County: Not reported
TSD EPA ID: CAD981696420
TSD County: Not reported
Waste Category: Other organic solids
Disposal Method: Not reported
Tons: 0.2
Facility County: Orange

Click this hyperlink while viewing on your computer to access
31 additional CA_HAZNET: record(s) in the EDR Site Report.

Q92 **OLYMPIAN OIL CO** — **CA HIST CORTESE** — **S103623834**
NE **1139 BAKER** — **N/A**
1/4-1/2 **COSTA MESA, CA 92626**
0.347 mi.
1831 ft. **Site 2 of 2 in cluster Q**

Relative: Lower

Actual: 42 ft.

CORTESE:

Region:	CORTESE
Facility County Code:	30
Reg By:	LTNKA
Reg Id:	2429

S93 **HARBOR FAIR EXXON CORNER MKT** — **CA HIST CORTESE** — **S101619628**
SW **2502 HARBOR BLVD** — **CA LUST** — **N/A**
1/4-1/2 **COSTA MESA, CA 92626** — **CA FID UST**
0.349 mi. — **CA SWEEPS UST**
1843 ft. **Site 1 of 3 in cluster S**

Relative: Higher

Actual: 72 ft.

CORTESE:

Region:	CORTESE
Facility County Code:	30
Reg By:	LTNKA
Reg Id:	083000145T

LUST:

Region:	STATE
Global Id:	T0605900110
Latitude:	33.6632898
Longitude:	-117.919136
Case Type:	LUST Cleanup Site
Status:	Open - Eligible for Closure
Status Date:	10/21/2012
Lead Agency:	ORANGE COUNTY LOP
Case Worker:	DB
Local Agency:	ORANGE COUNTY LOP
RB Case Number:	083000145T
LOC Case Number:	91UT156
File Location:	Local Agency
Potential Media Affect:	Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern:	Diesel, Waste Oil / Motor / Hydraulic / Lubricating
Site History:	Please refer to recent Site Documents or Monitoring Reports in GeoTracker for site history. Orange County is not responsible for the accuracy of any professional interpretations provided in reports submitted by consultants for the responsible party.

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0605900110
Contact Type:	Regional Board Caseworker
Contact Name:	CARL BERNHARDT
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	cbernhardt@waterboards.ca.gov
Phone Number:	9517824495
Global Id:	T0605900110
Contact Type:	Local Agency Caseworker
Contact Name:	DENAMARIE BAKER

HARBOR FAIR EXXON CORNER MKT (Continued) **S101619628**

Organization Name:	ORANGE COUNTY LOP
Address:	1241 E. DYER ROAD, STE. 120
City:	SANTA ANA
Email:	dbaker@ochca.com
Phone Number:	7144336255

Status History:

Global Id:	T0605900110
Status:	Open - Case Begin Date
Status Date:	12/17/1991
Global Id:	T0605900110
Status:	Open - Eligible for Closure
Status Date:	05/25/2004
Global Id:	T0605900110
Status:	Open - Eligible for Closure
Status Date:	10/21/2012
Global Id:	T0605900110
Status:	Open - Remediation
Status Date:	05/25/2004
Global Id:	T0605900110
Status:	Open - Site Assessment
Status Date:	09/28/1995

Regulatory Activities:

Global Id:	T0605900110
Action Type:	ENFORCEMENT
Date:	02/08/2012
Action:	File review
Global Id:	T0605900110
Action Type:	ENFORCEMENT
Date:	04/18/2003
Action:	Staff Letter
Global Id:	T0605900110
Action Type:	ENFORCEMENT
Date:	01/27/2005
Action:	Staff Letter
Global Id:	T0605900110
Action Type:	ENFORCEMENT
Date:	09/12/2005
Action:	Staff Letter
Global Id:	T0605900110
Action Type:	ENFORCEMENT
Date:	08/01/2006
Action:	Staff Letter
Global Id:	T0605900110
Action Type:	RESPONSE
Date:	01/04/2011

HARBOR FAIR EXXON CORNER MKT (Continued) **S101619628**

Action:	Clean Up Fund - 5-Year Review Summary
Global Id:	T0605900110
Action Type:	RESPONSE
Date:	01/07/2013
Action:	Clean Up Fund - 5-Year Review Summary
Global Id:	T0605900110
Action Type:	ENFORCEMENT
Date:	03/22/2011
Action:	Staff Letter
Global Id:	T0605900110
Action Type:	ENFORCEMENT
Date:	05/14/2010
Action:	Staff Letter
Global Id:	T0605900110
Action Type:	ENFORCEMENT
Date:	08/09/2011
Action:	File review
Global Id:	T0605900110
Action Type:	ENFORCEMENT
Date:	07/13/2009
Action:	Staff Letter
Global Id:	T0605900110
Action Type:	ENFORCEMENT
Date:	07/22/2010
Action:	File review
Global Id:	T0605900110
Action Type:	RESPONSE
Date:	12/27/2011
Action:	Clean Up Fund - 5-Year Review Summary
Global Id:	T0605900110
Action Type:	RESPONSE
Date:	12/27/2011
Action:	Clean Up Fund - 5-Year Review Summary
Global Id:	T0605900110
Action Type:	ENFORCEMENT
Date:	12/24/1991
Action:	Notice of Responsibility
Global Id:	T0605900110
Action Type:	ENFORCEMENT
Date:	08/22/2003
Action:	Staff Letter
Global Id:	T0605900110
Action Type:	ENFORCEMENT
Date:	04/15/2004
Action:	Staff Letter

HARBOR FAIR EXXON CORNER MKT (Continued) **S101619628**

Global Id: T0605900110
Action Type: ENFORCEMENT
Date: 08/23/2004
Action: Staff Letter

Global Id: T0605900110
Action Type: ENFORCEMENT
Date: 04/15/2005
Action: Staff Letter

Global Id: T0605900110
Action Type: ENFORCEMENT
Date: 08/12/2005
Action: Staff Letter

Global Id: T0605900110
Action Type: ENFORCEMENT
Date: 10/24/2005
Action: Staff Letter

Global Id: T0605900110
Action Type: ENFORCEMENT
Date: 01/23/2007
Action: Staff Letter

Global Id: T0605900110
Action Type: ENFORCEMENT
Date: 10/15/2007
Action: Staff Letter

Global Id: T0605900110
Action Type: ENFORCEMENT
Date: 04/14/2008
Action: Staff Letter

Global Id: T0605900110
Action Type: ENFORCEMENT
Date: 03/19/2007
Action: Staff Letter

Global Id: T0605900110
Action Type: ENFORCEMENT
Date: 01/07/2011
Action: File review

Global Id: T0605900110
Action Type: ENFORCEMENT
Date: 01/11/2011
Action: Staff Letter

Global Id: T0605900110
Action Type: ENFORCEMENT
Date: 03/03/2009
Action: Staff Letter

Global Id: T0605900110
Action Type: ENFORCEMENT

HARBOR FAIR EXXON CORNER MKT (Continued) **S101619628**

Date: 07/24/2013
Action: Notification - Public Notice of Case Closure

Global Id: T0605900110
Action Type: ENFORCEMENT
Date: 07/24/2013
Action: Notification - Public Notice of Case Closure

Global Id: T0605900110
Action Type: RESPONSE
Date: 04/08/2010
Action: Clean Up Fund - 5-Year Review Summary

Global Id: T0605900110
Action Type: RESPONSE
Date: 06/28/2013
Action: Other Workplan - Regulator Responded

Global Id: T0605900110
Action Type: ENFORCEMENT
Date: 08/22/2008
Action: Staff Letter

Global Id: T0605900110
Action Type: Other
Date: 01/01/1950
Action: Leak Discovery

Global Id: T0605900110
Action Type: ENFORCEMENT
Date: 07/24/2013
Action: Notification - Public Notice of Case Closure

Global Id: T0605900110
Action Type: ENFORCEMENT
Date: 10/06/2009
Action: Staff Letter

Global Id: T0605900110
Action Type: ENFORCEMENT
Date: 05/09/2013
Action: Staff Letter

Global Id: T0605900110
Action Type: ENFORCEMENT
Date: 04/15/2011
Action: File review

Global Id: T0605900110
Action Type: ENFORCEMENT
Date: 05/17/2011
Action: File review

Global Id: T0605900110
Action Type: REMEDIATION
Date: 01/01/1950
Action: Soil Vapor Extraction (SVE)

HARBOR FAIR EXXON CORNER MKT (Continued) **S101619628**

Global Id:	T0605900110
Action Type:	REMEDIATION
Date:	01/01/1950
Action:	Excavation
Global Id:	T0605900110
Action Type:	Other
Date:	01/01/1950
Action:	Leak Reported

ORANGE CO. LUST:

Region:	ORANGE
Facility Id:	91UT156
Current Status:	Remedial Action
Released Substance:	Diesel fuel oil and additives, Nos.1-D, 2-D, 2-4
Date Closed:	Not reported
Case Type:	Other Ground Water
Record ID:	RO0000938
Region:	ORANGE
Facility Id:	91UT156
Current Status:	Not reported
Released Substance:	Waste oil/Used oil
Date Closed:	Not reported
Case Type:	Not reported
Record ID:	RO0000938

LUST REG 8:

Region:	8
County:	Orange
Regional Board:	Santa Ana Region
Facility Status:	Remedial action (cleanup) Underway
Case Number:	083000145T
Local Case Num:	91UT156
Case Type:	Other ground water affected
Substance:	12034,12035
Qty Leaked:	0
Abate Method:	Not reported
Cross Street:	Not reported
Enf Type:	SEL
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Close Tank
Leak Cause:	Unknown
Leak Source:	Tank
Global ID:	T0605900110
How Stopped Date:	9/9/9999
Enter Date:	Not reported
Review Date:	Not reported
Prelim Assess:	Not reported
Discover Date:	12/17/1991
Enforcement Date:	Not reported
Close Date:	Not reported
Workplan:	Not reported
Pollution Char:	9/28/1995

HARBOR FAIR EXXON CORNER MKT (Continued) **S101619628**

Remed Plan: Not reported
Remed Action: 5/25/2004
Monitoring: Not reported
Enter Date: Not reported
GW Qualifies: =
Soil Qualifies: =
Operator: Not reported
Facility Contact: Not reported
Interim: Not reported
Oversite Program: LUST
Latitude: 33.6632898
Longitude: -117.919136
MTBE Date: 12/16/2003
Max MTBE GW: 30000
MTBE Concentration: 0
Max MTBE Soil: 560
MTBE Fuel: 0
MTBE Tested: MTBE Detected. Site tested for MTBE & MTBE detected
MTBE Class: *
Staff: CAB
Staff Initials: AR
Lead Agency: Local Agency
Local Agency: 30000L
Hydr Basin #: Not reported
Beneficial: MUN
Priority: Not reported
Cleanup Fund Id: Not reported
Work Suspended: Not reported
Summary: Not reported

CA FID UST:
Facility ID: 30001246
Regulated By: UTNKA
Regulated ID: Not reported
Cortese Code: Not reported
SIC Code: Not reported
Facility Phone: 7145465337
Mail To: Not reported
Mailing Address: HBR FAIR EXXON COR M
Mailing Address 2: Not reported
Mailing City,St,Zip: COSTA MESA 92626
Contact: Not reported
Contact Phone: Not reported
DUNs Number: Not reported
NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Active

SWEEPS UST:
Status: Not reported
Comp Number: 6436
Number: Not reported
Board Of Equalization: Not reported
Referral Date: Not reported
Action Date: Not reported

HARBOR FAIR EXXON CORNER MKT (Continued) **S101619628**

Created Date:	Not reported
Tank Status:	Not reported
Owner Tank Id:	Not reported
Swrcb Tank Id:	30-000-006436-000004
Actv Date:	Not reported
Capacity:	4000
Tank Use:	UNKNOWN
Stg:	PRODUCT
Content:	Not reported
Number Of Tanks:	2

Status:	Not reported
Comp Number:	6436
Number:	Not reported
Board Of Equalization:	Not reported
Referral Date:	Not reported
Action Date:	Not reported
Created Date:	Not reported
Tank Status:	Not reported
Owner Tank Id:	Not reported
Swrcb Tank Id:	30-000-006436-000005
Actv Date:	Not reported
Capacity:	500
Tank Use:	UNKNOWN
Stg:	PRODUCT
Content:	Not reported
Number Of Tanks:	Not reported

Status:	Active
Comp Number:	6436
Number:	9
Board Of Equalization:	Not reported
Referral Date:	09-30-92
Action Date:	09-15-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	Not reported
Swrcb Tank Id:	30-000-006436-000001
Actv Date:	Not reported
Capacity:	8000
Tank Use:	M.V. FUEL
Stg:	P
Content:	REG UNLEADED
Number Of Tanks:	3

Status:	Active
Comp Number:	6436
Number:	9
Board Of Equalization:	Not reported
Referral Date:	09-30-92
Action Date:	09-15-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	Not reported
Swrcb Tank Id:	30-000-006436-000002
Actv Date:	Not reported
Capacity:	6000

HARBOR FAIR EXXON CORNER MKT (Continued) **S101619628**

Tank Use:	M.V. FUEL
Stg:	P
Content:	REG UNLEADED
Number Of Tanks:	Not reported
Status:	Active
Comp Number:	6436
Number:	9
Board Of Equalization:	Not reported
Referral Date:	09-30-92
Action Date:	09-15-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	Not reported
Swrcb Tank Id:	30-000-006436-000003
Actv Date:	Not reported
Capacity:	8000
Tank Use:	M.V. FUEL
Stg:	P
Content:	DIESEL
Number Of Tanks:	Not reported

P94
NW
1/4-1/2
0.350 mi.
1848 ft.

ATLAS CHRYSLER PLYMOUTH
2929 HARBOR BLVD
COSTA MESA, CA 92626

CA HIST CORTESE
CA LUST
CA HIST UST
CA EMI

1000156820
N/A

Site 3 of 4 in cluster P

Relative:
Lower

Actual:
52 ft.

CORTESE:

Region:	CORTESE
Facility County Code:	30
Reg By:	LTNKA
Reg Id:	083000055T
Region:	CORTESE
Facility County Code:	30
Reg By:	LTNKA
Reg Id:	083003553T

LUST REG 8:

Region:	8
County:	Orange
Regional Board:	Santa Ana Region
Facility Status:	Case Closed
Case Number:	083000055T
Local Case Num:	87UT003
Case Type:	Soil only
Substance:	12035,800661
Qty Leaked:	0
Abate Method:	Not reported
Cross Street:	Not reported
Enf Type:	Not reported
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Close Tank
Leak Cause:	Unknown
Leak Source:	Unknown

ATLAS CHRYSLER PLYMOUTH (Continued) **1000156820**

Global ID:	T0605900044
How Stopped Date:	9/9/9999
Enter Date:	Not reported
Review Date:	Not reported
Prelim Assess:	Not reported
Discover Date:	1/9/1987
Enforcement Date:	Not reported
Close Date:	10/29/1987
Workplan:	Not reported
Pollution Char:	Not reported
Remed Plan:	Not reported
Remed Action:	Not reported
Monitoring:	Not reported
Enter Date:	Not reported
GW Qualifies:	Not reported
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.6781113
Longitude:	-117.919504
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	0
MTBE Tested:	Not Required to be Tested.
MTBE Class:	*
Staff:	PAH
Staff Initials:	AR
Lead Agency:	Local Agency
Local Agency:	30000L
Hydr Basin #:	Not reported
Beneficial:	MUN
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Summary:	Not reported

Region:	8
County:	Orange
Regional Board:	Santa Ana Region
Facility Status:	Remedial action (cleanup) Underway
Case Number:	083003553T
Local Case Num:	99UT041
Case Type:	Other ground water affected
Substance:	Gasoline
Qty Leaked:	0
Abate Method:	Not reported
Cross Street:	Not reported
Enf Type:	SEL
Funding:	Not reported
How Discovered:	SA
How Stopped:	Other Means
Leak Cause:	Unknown
Leak Source:	Tank

ATLAS CHRYSLER PLYMOUTH (Continued) **1000156820**

Global ID:	T0605902325
How Stopped Date:	9/9/9999
Enter Date:	Not reported
Review Date:	Not reported
Prelim Assess:	Not reported
Discover Date:	4/29/1999
Enforcement Date:	Not reported
Close Date:	Not reported
Workplan:	Not reported
Pollution Char:	Not reported
Remed Plan:	Not reported
Remed Action:	6/26/2002
Monitoring:	Not reported
Enter Date:	Not reported
GW Qualifies:	=
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.6781113
Longitude:	-117.919504
MTBE Date:	3/14/2004
Max MTBE GW:	32
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	1
MTBE Tested:	MTBE Detected. Site tested for MTBE & MTBE detected
MTBE Class:	*
Staff:	TME
Staff Initials:	AR
Lead Agency:	Local Agency
Local Agency:	30000L
Hydr Basin #:	Not reported
Beneficial:	MUN
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Summary:	Not reported

HIST UST:

Region:	STATE
Facility ID:	00000064406
Facility Type:	Other
Other Type:	AUTO DEALER
Total Tanks:	0001
Contact Name:	Not reported
Telephone:	7145461934
Owner Name:	ATLAS CHRYSLER PLYMOUTH
Owner Address:	2929 HARBOR BLVD.
Owner City,St,Zip:	COSTA MESA, CA 92626

Tank Num:	001
Container Num:	OIL 1
Year Installed:	Not reported
Tank Capacity:	00000280
Tank Used for:	PRODUCT

ATLAS CHRYSLER PLYMOUTH (Continued) **1000156820**

Type of Fuel:	Not reported
Tank Construction:	Not reported
Leak Detection:	None
Tank Num:	001
Container Num:	21010
Year Installed:	Not reported
Tank Capacity:	00001000
Tank Used for:	WASTE
Type of Fuel:	2
Tank Construction:	Unkown centimeters
Leak Detection:	None
Tank Num:	001
Container Num:	GAS 1
Year Installed:	1983
Tank Capacity:	00002000
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Tank Construction:	Not reported
Leak Detection:	None
Tank Num:	002
Container Num:	210101
Year Installed:	Not reported
Tank Capacity:	00001000
Tank Used for:	PRODUCT
Type of Fuel:	REGULAR
Tank Construction:	Not reported
Leak Detection:	None
Tank Num:	002
Container Num:	00043741
Year Installed:	Not reported
Tank Capacity:	00000350
Tank Used for:	WASTE
Type of Fuel:	WASTE OIL
Tank Construction:	Not reported
Leak Detection:	None
Tank Num:	003
Container Num:	TRANS 1
Year Installed:	Not reported
Tank Capacity:	00000280
Tank Used for:	PRODUCT
Type of Fuel:	Not reported
Tank Construction:	Not reported
Leak Detection:	None

EMI:

Year:	1987
County Code:	30
Air Basin:	SC
Facility ID:	21925
Air District Name:	SC
SIC Code:	5511
Air District Name:	SOUTH COAST AQMD

ATLAS CHRYSLER PLYMOUTH (Continued) **1000156820**

Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	1
Reactive Organic Gases Tons/Yr:	1
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1990
County Code:	30
Air Basin:	SC
Facility ID:	21925
Air District Name:	SC
SIC Code:	5510
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	1
Reactive Organic Gases Tons/Yr:	1
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1993
County Code:	30
Air Basin:	SC
Facility ID:	21925
Air District Name:	SC
SIC Code:	5511
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	3
Reactive Organic Gases Tons/Yr:	3
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1995
County Code:	30
Air Basin:	SC
Facility ID:	21925
Air District Name:	SC
SIC Code:	5511
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	3
Reactive Organic Gases Tons/Yr:	3
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0

ATLAS CHRYSLER PLYMOUTH (Continued) **1000156820**

SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

P95
NW
1/4-1/2
0.350 mi.
1850 ft.

ATLAS DODGE CHRYSLER PLYMOUTH
2929 HARBOR BLVD
COSTA MESA, CA 92626

CA LUST
CA Orange Co. Industrial Site

S111711328
N/A

Site 4 of 4 in cluster P

Relative:
Lower

Actual:
52 ft.

LUST:

Region:	STATE
Global Id:	T0605902325
Latitude:	33.6781113
Longitude:	-117.919504
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	09/12/2005
Lead Agency:	ORANGE COUNTY LOP
Case Worker:	DB
Local Agency:	ORANGE COUNTY LOP
RB Case Number:	083003553T
LOC Case Number:	99UT041
File Location:	Local Agency Warehouse
Potential Media Affect:	Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0605902325
Contact Type:	Regional Board Caseworker
Contact Name:	TOM E. MBEKE-EKANEM
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	tmbeke-ekanem@waterboards.ca.gov
Phone Number:	9513202007
Global Id:	T0605902325
Contact Type:	Local Agency Caseworker
Contact Name:	DENAMARIE BAKER
Organization Name:	ORANGE COUNTY LOP
Address:	1241 E. DYER ROAD, STE. 120
City:	SANTA ANA
Email:	dbaker@ochca.com
Phone Number:	7144336255

Status History:

Global Id:	T0605902325
Status:	Completed - Case Closed
Status Date:	09/12/2005
Global Id:	T0605902325
Status:	Open - Case Begin Date
Status Date:	04/29/1999

ATLAS DODGE CHRYSLER PLYMOUTH (Continued) **S111711328**

Global Id: T0605902325
Status: Open - Remediation
Status Date: 06/26/2002

Global Id: T0605902325
Status: Open - Verification Monitoring
Status Date: 03/01/2005

Regulatory Activities:

Global Id: T0605902325
Action Type: Other
Date: 01/01/1950
Action: Leak Reported

Global Id: T0605902325
Action Type: ENFORCEMENT
Date: 09/12/2005
Action: Closure/No Further Action Letter

Global Id: T0605902325
Action Type: ENFORCEMENT
Date: 01/22/2003
Action: Staff Letter

Global Id: T0605902325
Action Type: ENFORCEMENT
Date: 06/14/1999
Action: Notice of Responsibility

Global Id: T0605902325
Action Type: ENFORCEMENT
Date: 08/20/2003
Action: Staff Letter

Global Id: T0605902325
Action Type: ENFORCEMENT
Date: 12/27/2004
Action: Staff Letter

Global Id: T0605902325
Action Type: ENFORCEMENT
Date: 03/01/2005
Action: Staff Letter

Global Id: T0605902325
Action Type: ENFORCEMENT
Date: 05/06/2005
Action: Staff Letter

Global Id: T0605902325
Action Type: REMEDIATION
Date: 01/01/1950
Action: Soil Vapor Extraction (SVE)

Global Id: T0605902325
Action Type: Other
Date: 01/01/1950

ATLAS DODGE CHRYSLER PLYMOUTH (Continued) **S111711328**

Action:	Leak Discovery
Global Id:	T0605902325
Action Type:	ENFORCEMENT
Date:	07/14/2005
Action:	LOP Case Closure Summary to RB

Region:	STATE
Global Id:	T0605900044
Latitude:	33.6781113
Longitude:	-117.919504
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	10/29/1987
Lead Agency:	ORANGE COUNTY LOP
Case Worker:	DB
Local Agency:	ORANGE COUNTY LOP
RB Case Number:	083000055T
LOC Case Number:	87UT003
File Location:	Local Agency
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Waste Oil / Motor / Hydraulic / Lubricating, Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0605900044
Contact Type:	Local Agency Caseworker
Contact Name:	DENAMARIE BAKER
Organization Name:	ORANGE COUNTY LOP
Address:	1241 E. DYER ROAD, STE. 120
City:	SANTA ANA
Email:	dbaker@ochca.com
Phone Number:	7144336255

Status History:

Global Id:	T0605900044
Status:	Completed - Case Closed
Status Date:	10/29/1987
Global Id:	T0605900044
Status:	Open - Case Begin Date
Status Date:	01/09/1987

Regulatory Activities:

Global Id:	T0605900044
Action Type:	Other
Date:	01/01/1950
Action:	Leak Discovery
Global Id:	T0605900044
Action Type:	Other
Date:	01/01/1950
Action:	Leak Reported

ATLAS DODGE CHRYSLER PLYMOUTH (Continued) **S111711328**

ORANGE CO. LUST:

Region:	ORANGE
Facility Id:	87UT003
Current Status:	Certification (Case Closed)
Released Substance:	Waste oil/Used oil
Date Closed:	10/29/1987
Case Type:	Soil Only
Record ID:	RO0000909
Region:	ORANGE
Facility Id:	87UT003
Current Status:	Not reported
Released Substance:	Gasoline-Automotive (motor gasoline and additives), leaded & unleaded
Date Closed:	10/29/1987
Case Type:	Not reported
Record ID:	RO0000909
Region:	ORANGE
Facility Id:	99UT041
Current Status:	Certification (Case Closed)
Released Substance:	Gasoline-Automotive (motor gasoline and additives), leaded & unleaded
Date Closed:	09/12/2005
Case Type:	Other Ground Water
Record ID:	RO0002105

Orange Co. Industrial Site:

Case ID:	01IC033
Region:	ORANGE
Record ID:	RO0000054
Current Status:	CLOSED 7/19/2002
Closure Type:	Closure certification issued
Released Chemical:	FUEL WASTE

T96
NE
1/4-1/2
0.365 mi.
1926 ft.

GALLACHER INVESTMENT CO
1127 BAKER ST
COSTA MESA, CA 92626

Site 1 of 2 in cluster T

CA HIST CORTESE
CA LUST

S104160821
N/A

Relative:
Lower

Actual:
42 ft.

CORTESE:

Region:	CORTESE
Facility County Code:	30
Reg By:	LTNKA
Reg Id:	083001388T

LUST:

Region:	STATE
Global Id:	T0605901048
Latitude:	33.678006
Longitude:	-117.90449
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	04/30/1990
Lead Agency:	ORANGE COUNTY LOP
Case Worker:	DB
Local Agency:	ORANGE COUNTY LOP

GALLACHER INVESTMENT CO (Continued) **S104160821**

RB Case Number:	083001388T
LOC Case Number:	89UT217
File Location:	Local Agency
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Diesel, Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0605901048
Contact Type:	Local Agency Caseworker
Contact Name:	DENAMARIE BAKER
Organization Name:	ORANGE COUNTY LOP
Address:	1241 E. DYER ROAD, STE. 120
City:	SANTA ANA
Email:	dbaker@ochca.com
Phone Number:	7144336255
Global Id:	T0605901048
Contact Type:	Regional Board Caseworker
Contact Name:	PATRICIA HANNON
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	phannon@waterboards.ca.gov
Phone Number:	Not reported

Status History:

Global Id:	T0605901048
Status:	Completed - Case Closed
Status Date:	04/30/1990
Global Id:	T0605901048
Status:	Open - Case Begin Date
Status Date:	11/28/1989

Regulatory Activities:

Global Id:	T0605901048
Action Type:	Other
Date:	01/01/1950
Action:	Leak Discovery
Global Id:	T0605901048
Action Type:	Other
Date:	01/01/1950
Action:	Leak Reported

ORANGE CO. LUST:

Region:	ORANGE
Facility Id:	89UT217
Current Status:	Certification (Case Closed)
Released Substance:	Diesel fuel oil and additives, Nos.1-D, 2-D, 2-4
Date Closed:	04/30/1990
Case Type:	Soil Only

GALLACHER INVESTMENT CO (Continued) **S104160821**

Record ID:	RO0001887
Region:	ORANGE
Facility Id:	89UT217
Current Status:	Not reported
Released Substance:	Gasoline-Automotive (motor gasoline and additives), leaded & unleaded
Date Closed:	04/30/1990
Case Type:	Not reported
Record ID:	RO0001887

LUST REG 8:

Region:	8
County:	Orange
Regional Board:	Santa Ana Region
Facility Status:	Case Closed
Case Number:	083001388T
Local Case Num:	89UT217
Case Type:	Soil only
Substance:	12034,800661
Qty Leaked:	0
Abate Method:	Not reported
Cross Street:	Not reported
Enf Type:	Not reported
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Close Tank
Leak Cause:	Unknown
Leak Source:	Unknown
Global ID:	T0605901048
How Stopped Date:	9/9/9999
Enter Date:	Not reported
Review Date:	Not reported
Prelim Assess:	Not reported
Discover Date:	11/28/1989
Enforcement Date:	Not reported
Close Date:	4/30/1990
Workplan:	Not reported
Pollution Char:	Not reported
Remed Plan:	Not reported
Remed Action:	Not reported
Monitoring:	Not reported
Enter Date:	Not reported
GW Qualifies:	Not reported
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.6800374
Longitude:	-117.9049466
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	0
MTBE Tested:	Not Required to be Tested.
MTBE Class:	*

GALLACHER INVESTMENT CO (Continued) **S104160821**

Staff: PAH
Staff Initials: AR
Lead Agency: Local Agency
Local Agency: 30000L
Hydr Basin #: Not reported
Beneficial: MUN
Priority: Not reported
Cleanup Fund Id: Not reported
Work Suspended: Not reported
Summary: Not reported

S97
SW
1/4-1/2
0.380 mi.
2005 ft.

FAIRVIEW DEVELOPMENT CENTER
2501 HARBOR BL
COSTA MESA, CA 92626

Site 2 of 3 in cluster S

RCRA-SQG
CA HIST CORTESE
CA LUST
CA HIST UST
US AIRS

1000370593
CAD072513146

Relative:
Higher

Actual:
73 ft.

RCRA-SQG:
Date form received by agency: 09/01/1996
Facility name: FAIRVIEW ST HOSP
Facility address: 2501 HARBOR BLVD
COSTA MESA, CA 92626
EPA ID: CAD072513146
Mailing address: 2501 HARBOR BOVD
COSTA MESA, CA 92626
Contact: Not reported
Contact address: Not reported
Not reported
Contact country: Not reported
Contact telephone: Not reported
Contact email: Not reported
EPA Region: 09
Land type: Facility is not located on Indian land. Additional information is not known.
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: NOT REQUIRED
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: (415) 555-1212
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: CALIFORNIA STATE
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: (415) 555-1212
Legal status: Private

FAIRVIEW DEVELOPMENT CENTER (Continued) **1000370593**

Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 09/30/1985
Facility name: FAIRVIEW ST HOSP
Classification: Large Quantity Generator

Facility Has Received Notices of Violations:
Regulation violated: FR - 262.10-12.A
Area of violation: Generators - General
Date violation determined: 03/05/1993
Date achieved compliance: 07/26/1994
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:
Evaluation date: 07/26/1994
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State Contractor/Grantee

Evaluation date: 03/05/1993
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 07/26/1994
Evaluation lead agency: State Contractor/Grantee

CORTESE:
Region: CORTESE

FAIRVIEW DEVELOPMENT CENTER (Continued) **1000370593**

Facility County Code:	30
Reg By:	LTNKA
Reg Id:	083000514T

LUST:

Region:	STATE
Global Id:	T0605900409
Latitude:	33.6632703
Longitude:	-117.9192731
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	05/24/1993
Lead Agency:	ORANGE COUNTY LOP
Case Worker:	DB
Local Agency:	ORANGE COUNTY LOP
RB Case Number:	083000514T
LOC Case Number:	92UT059
File Location:	Local Agency
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Heating Oil / Fuel Oil
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0605900409
Contact Type:	Regional Board Caseworker
Contact Name:	CARL BERNHARDT
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	cbernhardt@waterboards.ca.gov
Phone Number:	9517824495
Global Id:	T0605900409
Contact Type:	Local Agency Caseworker
Contact Name:	DENAMARIE BAKER
Organization Name:	ORANGE COUNTY LOP
Address:	1241 E. DYER ROAD, STE. 120
City:	SANTA ANA
Email:	dbaker@ochca.com
Phone Number:	7144336255

Status History:

Global Id:	T0605900409
Status:	Completed - Case Closed
Status Date:	05/24/1993
Global Id:	T0605900409
Status:	Open - Case Begin Date
Status Date:	05/05/1992

Regulatory Activities:

Global Id:	T0605900409
Action Type:	Other
Date:	01/01/1950

FAIRVIEW DEVELOPMENT CENTER (Continued) **1000370593**

Action: Leak Discovery

Global Id: T0605900409
Action Type: Other
Date: 01/01/1950
Action: Leak Reported

Region: STATE
Global Id: T0605902333
Latitude: 33.6632703
Longitude: -117.9192731
Case Type: LUST Cleanup Site
Status: Completed - Case Closed
Status Date: 12/11/2000
Lead Agency: ORANGE COUNTY LOP
Case Worker: DB
Local Agency: ORANGE COUNTY LOP
RB Case Number: 083003572T
LOC Case Number: 99UT052
File Location: Local Agency
Potential Media Affect: Soil
Potential Contaminants of Concern: Diesel
Site History: Not reported

Click here to access the California GeoTracker records for this facility:

Contact:
Global Id: T0605902333
Contact Type: Regional Board Caseworker
Contact Name: CARL BERNHARDT
Organization Name: SANTA ANA RWQCB (REGION 8)
Address: 3737 MAIN STREET, SUITE 500
City: RIVERSIDE
Email: cbernhardt@waterboards.ca.gov
Phone Number: 9517824495

Global Id: T0605902333
Contact Type: Local Agency Caseworker
Contact Name: DENAMARIE BAKER
Organization Name: ORANGE COUNTY LOP
Address: 1241 E. DYER ROAD, STE. 120
City: SANTA ANA
Email: dbaker@ochca.com
Phone Number: 7144336255

Status History:
Global Id: T0605902333
Status: Completed - Case Closed
Status Date: 12/11/2000

Global Id: T0605902333
Status: Open - Case Begin Date
Status Date: 06/30/1999

Regulatory Activities:
Global Id: T0605902333

FAIRVIEW DEVELOPMENT CENTER (Continued) **1000370593**

Action Type:	Other
Date:	01/01/1950
Action:	Leak Reported
Global Id:	T0605902333
Action Type:	Other
Date:	01/01/1950
Action:	Leak Discovery

ORANGE CO. LUST:

Region:	ORANGE
Facility Id:	99UT052
Current Status:	Certification (Case Closed)
Released Substance:	Diesel fuel oil and additives, Nos.1-D, 2-D, 2-4
Date Closed:	12/11/2000
Case Type:	Soil Only
Record ID:	RO0002385
Region:	ORANGE
Facility Id:	92UT059
Current Status:	Certification (Case Closed)
Released Substance:	Bunker fuel oil
Date Closed:	05/24/1993
Case Type:	Soil Only
Record ID:	RO0002387

LUST REG 8:

Region:	8
County:	Orange
Regional Board:	Santa Ana Region
Facility Status:	Case Closed
Case Number:	083000514T
Local Case Num:	92UT059
Case Type:	Soil only
Substance:	Bunker Fuel Oil
Qty Leaked:	0
Abate Method:	Not reported
Cross Street:	Not reported
Enf Type:	Not reported
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Close Tank
Leak Cause:	Unknown
Leak Source:	Unknown
Global ID:	T0605900409
How Stopped Date:	9/9/9999
Enter Date:	Not reported
Review Date:	Not reported
Prelim Assess:	Not reported
Discover Date:	5/5/1992
Enforcement Date:	Not reported
Close Date:	5/24/1993
Workplan:	Not reported
Pollution Char:	Not reported
Remed Plan:	Not reported

FAIRVIEW DEVELOPMENT CENTER (Continued) **1000370593**

Remed Action:	Not reported
Monitoring:	Not reported
Enter Date:	Not reported
GW Qualifies:	Not reported
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.6632378
Longitude:	-117.919398
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	0
MTBE Tested:	Not Required to be Tested.
MTBE Class:	*
Staff:	CAB
Staff Initials:	AR
Lead Agency:	Local Agency
Local Agency:	30000L
Hydr Basin #:	Not reported
Beneficial:	MUN
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Summary:	Not reported

Region:	8
County:	Orange
Regional Board:	Santa Ana Region
Facility Status:	Case Closed
Case Number:	083003572T
Local Case Num:	99UT052
Case Type:	Soil only
Substance:	Diesel
Qty Leaked:	0
Abate Method:	Not reported
Cross Street:	Not reported
Enf Type:	Not reported
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Close Tank
Leak Cause:	Unknown
Leak Source:	Unknown
Global ID:	T0605902333
How Stopped Date:	9/9/9999
Enter Date:	Not reported
Review Date:	Not reported
Prelim Assess:	Not reported
Discover Date:	6/30/1999
Enforcement Date:	Not reported
Close Date:	12/11/2000
Workplan:	Not reported
Pollution Char:	Not reported
Remed Plan:	Not reported

FAIRVIEW DEVELOPMENT CENTER (Continued) **1000370593**

Remed Action: Not reported
Monitoring: Not reported
Enter Date: Not reported
GW Qualifies: Not reported
Soil Qualifies: Not reported
Operator: Not reported
Facility Contact: Not reported
Interim: Not reported
Oversite Program: LUST
Latitude: 33.663494
Longitude: -117.919464
MTBE Date: Not reported
Max MTBE GW: Not reported
MTBE Concentration: 0
Max MTBE Soil: Not reported
MTBE Fuel: 0
MTBE Tested: Not Required to be Tested.
MTBE Class: *
Staff: CAB
Staff Initials: AR
Lead Agency: Local Agency
Local Agency: 30000L
Hydr Basin #: Not reported
Beneficial: MUN
Priority: Not reported
Cleanup Fund Id: Not reported
Work Suspended: Not reported
Summary: Not reported

HIST UST:
Region: STATE
Facility ID: 00000000915
Facility Type: Other
Other Type: HOSPITAL
Total Tanks: 0005
Contact Name: GEORGE MCGHEE
Telephone: 7149575218
Owner Name: STATE DEPT. OF DEVELOPMENTAL S
Owner Address: 2501 HARBOR BLVD.
Owner City,St,Zip: COSTA MESA, CA 92626

Tank Num: 001
Container Num: FSH 01
Year Installed: 1955
Tank Capacity: 00018000
Tank Used for: PRODUCT
Type of Fuel: Not reported
Tank Construction: 5/16 inches
Leak Detection: Visual

Tank Num: 002
Container Num: FSH 02
Year Installed: 1955
Tank Capacity: 00018000
Tank Used for: PRODUCT
Type of Fuel: Not reported
Tank Construction: 5/16 inches

FAIRVIEW DEVELOPMENT CENTER (Continued) **1000370593**

Leak Detection: Visual

Tank Num: 003
Container Num: FSH 03
Year Installed: 1984
Tank Capacity: 00003600
Tank Used for: WASTE
Type of Fuel: Not reported
Tank Construction: 4 inches
Leak Detection: Visual, Stock Inventor

Tank Num: 004
Container Num: FSH 04
Year Installed: 1957
Tank Capacity: 00002000
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Tank Construction: 3/16 inches
Leak Detection: Visual

Tank Num: 005
Container Num: FSH 05
Year Installed: 1975
Tank Capacity: 00012000
Tank Used for: PRODUCT
Type of Fuel: DIESEL
Tank Construction: 1/4 inches
Leak Detection: Visual, Stock Inventor

AIRS (AFS):

Compliance and Violation Data Major Sources:
EPA plant ID: 110017405887
Plant name: FAIRVIEW DEVELOPMENT CENTER
Plant address: 2501 HARBOR BL
COSTA MESA, CA 926266143
County: ORANGE
Region code: 09
Dunn & Bradst #: Not reported
Air quality cntrl region: 024
Sic code: 8060
Sic code desc: Not reported
North Am. industrial classf: 623311
NAIC code description: Continuing Care Retirement Communities
Default compliance status: IN COMPLIANCE - INSPECTION
Default classification: ACTUAL OR POTENTIAL EMISSIONS ARE ABOVE THE APPLICABLE MAJOR SOURCE THRESHOLDS
Govt facility: ALL OTHER FACILITIES NOT OWNED OR OPERATED BY A FEDERAL, STATE, OR LOCAL GOVERNMENT
Current HPV: Not reported

Compliance and Enforcement Major Issues:
Air program: TITLE V PERMITS
National action type: MULTI MEDIA INSPECTION - LEVEL 2 OR GREATER
Date achieved: 000309
Penalty amount: 000000000

FAIRVIEW DEVELOPMENT CENTER (Continued) **1000370593**

Air program:	TITLE V PERMITS
National action type:	STATE CONDUCTED FCE / ON-SITE
Date achieved:	020906
Penalty amount:	Not reported
Air program:	SIP SOURCE
National action type:	NXXXXX
Date achieved:	020906
Penalty amount:	Not reported
Air program:	TITLE V PERMITS
National action type:	STATE CONDUCTED FCE / ON-SITE
Date achieved:	020930
Penalty amount:	Not reported
Air program:	TITLE V PERMITS
National action type:	COMPLIANCE CERTIFICATION STATE REVIEW
Date achieved:	020930
Penalty amount:	Not reported
Air program:	SIP SOURCE
National action type:	NXXXXX
Date achieved:	021115
Penalty amount:	000002000
Air program:	SIP SOURCE
National action type:	STATE DAY 0
Date achieved:	021223
Penalty amount:	Not reported
Air program:	SIP SOURCE
National action type:	SV RESOLVED
Date achieved:	030407
Penalty amount:	Not reported
Air program:	TITLE V PERMITS
National action type:	STATE CONDUCTED FCE / ON-SITE
Date achieved:	030930
Penalty amount:	Not reported
Air program:	TITLE V PERMITS
National action type:	COMPLIANCE CERTIFICATION STATE REVIEW
Date achieved:	030930
Penalty amount:	Not reported
Air program:	TITLE V PERMITS
National action type:	STATE CONDUCTED PCE/ ON-SITE
Date achieved:	031009
Penalty amount:	Not reported
Air program:	TITLE V PERMITS
National action type:	NXXXXX
Date achieved:	031014
Penalty amount:	Not reported
Air program:	TITLE V PERMITS
National action type:	STATE DAY 0

FAIRVIEW DEVELOPMENT CENTER (Continued) **1000370593**

Date achieved: 040203
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: NXXXXX
Date achieved: 040213
Penalty amount: 000000125

Air program: TITLE V PERMITS
National action type: SV RESOLVED
Date achieved: 040506
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: STATE DAY 0
Date achieved: 040923
Penalty amount: Not reported

Air program: SIP SOURCE
National action type: S/L REQ (O/O COND) STACK TEST/NOT OBSV BUT REVWD
Date achieved: 040923
Penalty amount: Not reported

Air program: SIP SOURCE
National action type: COMPLIANCE CERTIFICATION STATE REVIEW
Date achieved: 040923
Penalty amount: Not reported

Air program: SIP SOURCE
National action type: STATE CONDUCTED PCE/ ON-SITE
Date achieved: 040923
Penalty amount: Not reported

Air program: SIP SOURCE
National action type: STATE CONDUCTED FCE / ON-SITE
Date achieved: 040923
Penalty amount: Not reported

Air program: SIP SOURCE
National action type: STATE DAY 0
Date achieved: 040923
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: S/L REQ (O/O COND) STACK TEST/NOT OBSV BUT REVWD
Date achieved: 040923
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: STATE CONDUCTED FCE / ON-SITE
Date achieved: 040923
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: STATE CONDUCTED PCE/ ON-SITE
Date achieved: 040923
Penalty amount: Not reported

FAIRVIEW DEVELOPMENT CENTER (Continued) **1000370593**

Air program: TITLE V PERMITS
National action type: COMPLIANCE CERTIFICATION STATE REVIEW
Date achieved: 040923
Penalty amount: Not reported

Air program: SIP SOURCE
National action type: NXXXXX
Date achieved: 041201
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: NXXXXX
Date achieved: 041201
Penalty amount: Not reported

Air program: SIP SOURCE
National action type: NXXXXX
Date achieved: 050105
Penalty amount: 000000650

Air program: TITLE V PERMITS
National action type: NXXXXX
Date achieved: 050105
Penalty amount: 000000650

Air program: TITLE V PERMITS
National action type: SV RESOLVED
Date achieved: 050207
Penalty amount: Not reported

Air program: SIP SOURCE
National action type: SV RESOLVED
Date achieved: 050207
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: COMPLIANCE CERTIFICATION STATE REVIEW
Date achieved: 050222
Penalty amount: Not reported

Air program: SIP SOURCE
National action type: COMPLIANCE CERTIFICATION STATE REVIEW
Date achieved: 050222
Penalty amount: Not reported

Air program: SIP SOURCE
National action type: S/L REQ (O/O COND) STACK TEST/NOT OBSV BUT REVWD
Date achieved: 050422
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: S/L REQ (O/O COND) STACK TEST/NOT OBSV BUT REVWD
Date achieved: 050422
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: STATE CONDUCTED FCE / ON-SITE

FAIRVIEW DEVELOPMENT CENTER (Continued) **1000370593**

Date achieved: 050928
Penalty amount: Not reported

Air program: SIP SOURCE
National action type: STATE CONDUCTED PCE/ ON-SITE
Date achieved: 050928
Penalty amount: Not reported

Air program: SIP SOURCE
National action type: STATE CONDUCTED FCE / ON-SITE
Date achieved: 050928
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: STATE CONDUCTED PCE/ ON-SITE
Date achieved: 050928
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: COMPLIANCE CERTIFICATION STATE REVIEW
Date achieved: 060224
Penalty amount: Not reported

Air program: SIP SOURCE
National action type: COMPLIANCE CERTIFICATION STATE REVIEW
Date achieved: 060224
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: TITLE V COMPLIANCE CERT DUE/RECEIVED BY
Date achieved: 060303
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: STATE CONDUCTED FCE / ON-SITE
Date achieved: 061003
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: STATE CONDUCTED PCE/ ON-SITE
Date achieved: 061003
Penalty amount: Not reported

Air program: SIP SOURCE
National action type: STATE CONDUCTED PCE/ ON-SITE
Date achieved: 061003
Penalty amount: Not reported

Air program: SIP SOURCE
National action type: STATE CONDUCTED FCE / ON-SITE
Date achieved: 061003
Penalty amount: Not reported

Air program: SIP SOURCE
National action type: NXXXXX
Date achieved: 061006
Penalty amount: Not reported

FAIRVIEW DEVELOPMENT CENTER (Continued) **1000370593**

Air program: TITLE V PERMITS
National action type: NXXXXX
Date achieved: 061006
Penalty amount: Not reported

Air program: SIP SOURCE
National action type: STATE DAY 0
Date achieved: 061213
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: STATE DAY 0
Date achieved: 061213
Penalty amount: Not reported

Air program: SIP SOURCE
National action type: NXXXXX
Date achieved: 061220
Penalty amount: 000001800

Air program: TITLE V PERMITS
National action type: NXXXXX
Date achieved: 061220
Penalty amount: 000001800

Air program: TITLE V PERMITS
National action type: TITLE V COMPLIANCE CERT DUE/RECEIVED BY
Date achieved: 070212
Penalty amount: Not reported

Air program: SIP SOURCE
National action type: NXXXXX
Date achieved: 070316
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: NXXXXX
Date achieved: 070316
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: SV RESOLVED
Date achieved: 070511
Penalty amount: Not reported

Air program: SIP SOURCE
National action type: SV RESOLVED
Date achieved: 070511
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: S/L REQ (O/O COND) STACK TEST/NOT OBSV BUT REVWD
Date achieved: 070727
Penalty amount: Not reported

Air program: SIP SOURCE
National action type: S/L REQ (O/O COND) STACK TEST/NOT OBSV BUT REVWD

FAIRVIEW DEVELOPMENT CENTER (Continued) **1000370593**

Date achieved:	070727
Penalty amount:	Not reported
Air program:	TITLE V PERMITS
National action type:	STATE DAY 0
Date achieved:	071012
Penalty amount:	Not reported
Air program:	SIP SOURCE
National action type:	STATE DAY 0
Date achieved:	071012
Penalty amount:	Not reported
Air program:	TITLE V PERMITS
National action type:	NXXXXX
Date achieved:	071016
Penalty amount:	000002500
Air program:	SIP SOURCE
National action type:	NXXXXX
Date achieved:	071016
Penalty amount:	000002500
Air program:	SIP SOURCE
National action type:	COMPLIANCE CERTIFICATION STATE REVIEW
Date achieved:	080130
Penalty amount:	Not reported
Air program:	TITLE V PERMITS
National action type:	COMPLIANCE CERTIFICATION STATE REVIEW
Date achieved:	080130
Penalty amount:	Not reported
Air program:	TITLE V PERMITS
National action type:	TITLE V COMPLIANCE CERT DUE/RECEIVED BY
Date achieved:	080131
Penalty amount:	Not reported
Air program:	TITLE V PERMITS
National action type:	SV RESOLVED
Date achieved:	080506
Penalty amount:	Not reported
Air program:	SIP SOURCE
National action type:	SV RESOLVED
Date achieved:	080506
Penalty amount:	Not reported
Air program:	SIP SOURCE
National action type:	STATE CONDUCTED PCE/ ON-SITE
Date achieved:	080523
Penalty amount:	Not reported
Air program:	TITLE V PERMITS
National action type:	STATE CONDUCTED FCE / ON-SITE
Date achieved:	080523
Penalty amount:	Not reported

FAIRVIEW DEVELOPMENT CENTER (Continued) **1000370593**

Air program:	SIP SOURCE
National action type:	STATE CONDUCTED FCE / ON-SITE
Date achieved:	080523
Penalty amount:	Not reported
Air program:	TITLE V PERMITS
National action type:	STATE CONDUCTED PCE/ ON-SITE
Date achieved:	080523
Penalty amount:	Not reported
Air program:	TITLE V PERMITS
National action type:	S/L REQ (O/O COND) STACK TEST/NOT OBSV BUT REVWD
Date achieved:	080611
Penalty amount:	Not reported
Air program:	SIP SOURCE
National action type:	S/L REQ (O/O COND) STACK TEST/NOT OBSV BUT REVWD
Date achieved:	080611
Penalty amount:	Not reported
Air program:	SIP SOURCE
National action type:	TITLE V ANN COMPL CERT DUE/RCV BY PERMIT AUTHORITY
Date achieved:	090113
Penalty amount:	Not reported
Air program:	TITLE V PERMITS
National action type:	TITLE V ANN COMPL CERT DUE/RCV BY PERMIT AUTHORITY
Date achieved:	090113
Penalty amount:	Not reported
Air program:	TITLE V PERMITS
National action type:	STATE CONDUCTED PCE/ ON-SITE
Date achieved:	090723
Penalty amount:	Not reported
Air program:	SIP SOURCE
National action type:	STATE CONDUCTED PCE/ ON-SITE
Date achieved:	090723
Penalty amount:	Not reported
Air program:	TITLE V PERMITS
National action type:	STATE CONDUCTED FCE / ON-SITE
Date achieved:	090730
Penalty amount:	Not reported
Air program:	TITLE V PERMITS
National action type:	COMPLIANCE CERTIFICATION STATE REVIEW
Date achieved:	090730
Penalty amount:	Not reported
Air program:	SIP SOURCE
National action type:	STATE CONDUCTED FCE / ON-SITE
Date achieved:	090730
Penalty amount:	Not reported
Air program:	SIP SOURCE
National action type:	COMPLIANCE CERTIFICATION STATE REVIEW

FAIRVIEW DEVELOPMENT CENTER (Continued) **1000370593**

Date achieved: 090730
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: TITLE V ANN COMPL CERT DUE/RCV BY PERMIT AUTHORITY
Date achieved: 100107
Penalty amount: Not reported

Air program: SIP SOURCE
National action type: TITLE V ANN COMPL CERT DUE/RCV BY PERMIT AUTHORITY
Date achieved: 100107
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: STATE CONDUCTED PCE/ ON-SITE
Date achieved: 100812
Penalty amount: Not reported

Air program: SIP SOURCE
National action type: STATE CONDUCTED PCE/ ON-SITE
Date achieved: 100812
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: COMPLIANCE CERTIFICATION STATE REVIEW
Date achieved: 100825
Penalty amount: Not reported

Air program: SIP SOURCE
National action type: STATE CONDUCTED FCE / ON-SITE
Date achieved: 100825
Penalty amount: Not reported

Air program: SIP SOURCE
National action type: COMPLIANCE CERTIFICATION STATE REVIEW
Date achieved: 100825
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: STATE CONDUCTED FCE / ON-SITE
Date achieved: 100825
Penalty amount: Not reported

Air program: SIP SOURCE
National action type: TITLE V ANN COMPL CERT DUE/RCV BY PERMIT AUTHORITY
Date achieved: 110114
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: TITLE V ANN COMPL CERT DUE/RCV BY PERMIT AUTHORITY
Date achieved: 110114
Penalty amount: Not reported

Air program: SIP SOURCE
National action type: COMPLIANCE CERTIFICATION STATE REVIEW
Date achieved: 110719
Penalty amount: Not reported

FAIRVIEW DEVELOPMENT CENTER (Continued) **1000370593**

Air program:	SIP SOURCE
National action type:	STATE CONDUCTED PCE/ ON-SITE
Date achieved:	110719
Penalty amount:	Not reported
Air program:	SIP SOURCE
National action type:	STATE CONDUCTED FCE / ON-SITE
Date achieved:	110719
Penalty amount:	Not reported
Air program:	TITLE V PERMITS
National action type:	STATE CONDUCTED PCE/ ON-SITE
Date achieved:	110719
Penalty amount:	Not reported
Air program:	TITLE V PERMITS
National action type:	STATE CONDUCTED FCE / ON-SITE
Date achieved:	110719
Penalty amount:	Not reported
Air program:	TITLE V PERMITS
National action type:	COMPLIANCE CERTIFICATION STATE REVIEW
Date achieved:	110719
Penalty amount:	Not reported
Air program:	SIP SOURCE
National action type:	TITLE V ANN COMPL CERT DUE/RCV BY PERMIT AUTHORITY
Date achieved:	120209
Penalty amount:	Not reported
Air program:	TITLE V PERMITS
National action type:	TITLE V ANN COMPL CERT DUE/RCV BY PERMIT AUTHORITY
Date achieved:	120209
Penalty amount:	Not reported
Air program:	TITLE V PERMITS
National action type:	COMPLIANCE CERTIFICATION STATE REVIEW
Date achieved:	120816
Penalty amount:	Not reported
Air program:	SIP SOURCE
National action type:	COMPLIANCE CERTIFICATION STATE REVIEW
Date achieved:	120816
Penalty amount:	Not reported
Air program:	TITLE V PERMITS
National action type:	STATE CONDUCTED FCE / ON-SITE
Date achieved:	120821
Penalty amount:	Not reported
Air program:	SIP SOURCE
National action type:	STATE CONDUCTED FCE / ON-SITE
Date achieved:	120821
Penalty amount:	Not reported
Air program:	TITLE V PERMITS
National action type:	STATE CONDUCTED PCE/ ON-SITE

FAIRVIEW DEVELOPMENT CENTER (Continued) **1000370593**

Date achieved: 120821
Penalty amount: Not reported

Air program: SIP SOURCE
National action type: STATE CONDUCTED PCE/ ON-SITE
Date achieved: 120821
Penalty amount: Not reported

Air program: SIP SOURCE
National action type: MULTI MEDIA INSPECTION - LEVEL 2 OR GREATER
Date achieved: 970918
Penalty amount: 000000000

Air program: TITLE V PERMITS
National action type: MULTI MEDIA INSPECTION - LEVEL 2 OR GREATER
Date achieved: 980923
Penalty amount: 000000000

Air program: SIP SOURCE
National action type: MULTI MEDIA INSPECTION - LEVEL 2 OR GREATER
Date achieved: 980923
Penalty amount: 000000000

Historical Compliance Minor Sources:
State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1001
Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1001
Air prog code hist file: TITLE V PERMITS

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1002
Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1002
Air prog code hist file: TITLE V PERMITS

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1003
Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1003
Air prog code hist file: TITLE V PERMITS

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1004
Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1004
Air prog code hist file: TITLE V PERMITS

State compliance status: IN COMPLIANCE - INSPECTION

FAIRVIEW DEVELOPMENT CENTER (Continued) **1000370593**

Hist compliance date: 1101
Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1101
Air prog code hist file: TITLE V PERMITS

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1102
Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1102
Air prog code hist file: TITLE V PERMITS

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1103
Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1103
Air prog code hist file: TITLE V PERMITS

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1104
Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1104
Air prog code hist file: TITLE V PERMITS

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1201
Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1201
Air prog code hist file: TITLE V PERMITS

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1202
Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1203
Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1204
Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1204
Air prog code hist file: TITLE V PERMITS

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1202

FAIRVIEW DEVELOPMENT CENTER (Continued) **1000370593**

Air prog code hist file: TITLE V PERMITS

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1203
Air prog code hist file: TITLE V PERMITS

Permit Information:
Compliance plant ID: CB069
Permit number: 3496
Permit category: V
Permit category desc: TITLE V PERMIT - PLANT SP

Permit Source:
Compliance plant ID: CB069
Plant name: FAIRVIEW DEVELOPMENT CENTER
Plant address: 2501 HARBOR BL
COSTA MESA, CA 926266143

Event Information:
Compliance permit ID: CB069
Permit number: 3496
Event action type: IF
Event description: *PERMIT AUTHORITY ISSUES FINAL PERMIT
Event action #: 001
Event date: 20020906

S98 **FAIRVIEW DEVELOPMENTAL CENTER** **CA UST** **U003432980**
SW **2501 HARBOR BLVD** **CA SWEEPS UST** **N/A**
1/4-1/2 **COSTA MESA, CA 92626** **CA EMI**
0.380 mi. **CA HWP**
2005 ft. **Site 3 of 3 in cluster S**

Relative:
Higher

Actual:
73 ft.

UST:
Facility ID: 6732
Latitude: 33.66331
Longitude: -117.91931

SWEEPS UST:
Status: Not reported
Comp Number: 6732
Number: Not reported
Board Of Equalization: Not reported
Referral Date: Not reported
Action Date: Not reported
Created Date: Not reported
Tank Status: Not reported
Owner Tank Id: Not reported
Swrcb Tank Id: 30-000-006732-000004
Actv Date: Not reported
Capacity: 18000
Tank Use: UNKNOWN
Stg: PRODUCT
Content: Not reported
Number Of Tanks: 2

FAIRVIEW DEVELOPMENTAL CENTER (Continued) **U003432980**

Status:	Not reported
Comp Number:	6732
Number:	Not reported
Board Of Equalization:	Not reported
Referral Date:	Not reported
Action Date:	Not reported
Created Date:	Not reported
Tank Status:	Not reported
Owner Tank Id:	Not reported
Swrcb Tank Id:	30-000-006732-000005
Actv Date:	Not reported
Capacity:	18000
Tank Use:	UNKNOWN
Stg:	PRODUCT
Content:	Not reported
Number Of Tanks:	Not reported

Status:	Active
Comp Number:	6732
Number:	9
Board Of Equalization:	Not reported
Referral Date:	09-30-92
Action Date:	09-15-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	Not reported
Swrcb Tank Id:	30-000-006732-000006
Actv Date:	Not reported
Capacity:	2000
Tank Use:	M.V. FUEL
Stg:	P
Content:	REG UNLEADED
Number Of Tanks:	3

Status:	Active
Comp Number:	6732
Number:	9
Board Of Equalization:	Not reported
Referral Date:	09-30-92
Action Date:	09-15-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	Not reported
Swrcb Tank Id:	30-000-006732-000007
Actv Date:	Not reported
Capacity:	12000
Tank Use:	M.V. FUEL
Stg:	P
Content:	DIESEL
Number Of Tanks:	Not reported

Status:	Active
Comp Number:	6732
Number:	9
Board Of Equalization:	Not reported
Referral Date:	09-30-92
Action Date:	09-15-92

FAIRVIEW DEVELOPMENTAL CENTER (Continued) **U003432980**

Created Date: 02-29-88
Tank Status: A
Owner Tank Id: Not reported
Swrcb Tank Id: 30-000-006732-000010
Actv Date: Not reported
Capacity: 1000
Tank Use: M.V. FUEL
Stg: P
Content: OTHER
Number Of Tanks: Not reported

EMI:

Year: 1987
County Code: 30
Air Basin: SC
Facility ID: 3496
Air District Name: SC
SIC Code: 8062
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 0
Reactive Organic Gases Tons/Yr: 0
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 4
SOX - Oxides of Sulphur Tons/Yr: 2
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers & Smllr Tons/Yr: 0

Year: 1990
County Code: 30
Air Basin: SC
Facility ID: 3496
Air District Name: SC
SIC Code: 8069
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 8
Reactive Organic Gases Tons/Yr: 6
Carbon Monoxide Emissions Tons/Yr: 66
NOX - Oxides of Nitrogen Tons/Yr: 11
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 1
Part. Matter 10 Micrometers & Smllr Tons/Yr: 1

Year: 1993
County Code: 30
Air Basin: SC
Facility ID: 3496
Air District Name: SC
SIC Code: 8069
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 6
Reactive Organic Gases Tons/Yr: 4

FAIRVIEW DEVELOPMENTAL CENTER (Continued) **U003432980**

Carbon Monoxide Emissions Tons/Yr:	3
NOX - Oxides of Nitrogen Tons/Yr:	11
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	1
Part. Matter 10 Micrometers & Smllr Tons/Yr:	1

Year:	1995
County Code:	30
Air Basin:	SC
Facility ID:	3496
Air District Name:	SC
SIC Code:	8069
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	6
Reactive Organic Gases Tons/Yr:	4
Carbon Monoxide Emissions Tons/Yr:	3
NOX - Oxides of Nitrogen Tons/Yr:	11
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	1
Part. Matter 10 Micrometers & Smllr Tons/Yr:	1

Year:	1996
County Code:	30
Air Basin:	SC
Facility ID:	3496
Air District Name:	SC
SIC Code:	8069
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	5
Reactive Organic Gases Tons/Yr:	2
Carbon Monoxide Emissions Tons/Yr:	5
NOX - Oxides of Nitrogen Tons/Yr:	8
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	1
Part. Matter 10 Micrometers & Smllr Tons/Yr:	1

Year:	1997
County Code:	30
Air Basin:	SC
Facility ID:	3496
Air District Name:	SC
SIC Code:	8069
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	3
Reactive Organic Gases Tons/Yr:	2
Carbon Monoxide Emissions Tons/Yr:	2
NOX - Oxides of Nitrogen Tons/Yr:	7
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

FAIRVIEW DEVELOPMENTAL CENTER (Continued) **U003432980**

Year:	1998
County Code:	30
Air Basin:	SC
Facility ID:	3496
Air District Name:	SC
SIC Code:	8069
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	3
Reactive Organic Gases Tons/Yr:	2
Carbon Monoxide Emissions Tons/Yr:	2
NOX - Oxides of Nitrogen Tons/Yr:	7
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1999
County Code:	30
Air Basin:	SC
Facility ID:	3496
Air District Name:	SC
SIC Code:	8069
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	3
Reactive Organic Gases Tons/Yr:	2
Carbon Monoxide Emissions Tons/Yr:	2
NOX - Oxides of Nitrogen Tons/Yr:	7
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	2000
County Code:	30
Air Basin:	SC
Facility ID:	3496
Air District Name:	SC
SIC Code:	8069
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	3
Reactive Organic Gases Tons/Yr:	2
Carbon Monoxide Emissions Tons/Yr:	2
NOX - Oxides of Nitrogen Tons/Yr:	7
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	2001
County Code:	30
Air Basin:	SC
Facility ID:	3496
Air District Name:	SC
SIC Code:	8069

FAIRVIEW DEVELOPMENTAL CENTER (Continued) **U003432980**

Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2
Reactive Organic Gases Tons/Yr:	1
Carbon Monoxide Emissions Tons/Yr:	6
NOX - Oxides of Nitrogen Tons/Yr:	6
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	1
Part. Matter 10 Micrometers & Smllr Tons/Yr:	1

Year:	2002
County Code:	30
Air Basin:	SC
Facility ID:	3496
Air District Name:	SC
SIC Code:	8051
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	1
Reactive Organic Gases Tons/Yr:	1
Carbon Monoxide Emissions Tons/Yr:	4
NOX - Oxides of Nitrogen Tons/Yr:	6
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	1
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	2003
County Code:	30
Air Basin:	SC
Facility ID:	3496
Air District Name:	SC
SIC Code:	8051
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	1
Reactive Organic Gases Tons/Yr:	1
Carbon Monoxide Emissions Tons/Yr:	4
NOX - Oxides of Nitrogen Tons/Yr:	6
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	1
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	2004
County Code:	30
Air Basin:	SC
Facility ID:	3496
Air District Name:	SC
SIC Code:	8051
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	1.4314004
Reactive Organic Gases Tons/Yr:	1.03
Carbon Monoxide Emissions Tons/Yr:	4.3819

FAIRVIEW DEVELOPMENTAL CENTER (Continued) **U003432980**

NOX - Oxides of Nitrogen Tons/Yr:	5.802
SOX - Oxides of Sulphur Tons/Yr:	0.040846
Particulate Matter Tons/Yr:	0.5172044
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0.5
Year:	2005
County Code:	30
Air Basin:	SC
Facility ID:	3496
Air District Name:	SC
SIC Code:	8051
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	.63504
Reactive Organic Gases Tons/Yr:	.449895054
Carbon Monoxide Emissions Tons/Yr:	4.71928
NOX - Oxides of Nitrogen Tons/Yr:	2.90512
SOX - Oxides of Sulphur Tons/Yr:	.042765
Particulate Matter Tons/Yr:	.460095
Part. Matter 10 Micrometers & Smllr Tons/Yr:	.45894045
Year:	2006
County Code:	30
Air Basin:	SC
Facility ID:	3496
Air District Name:	SC
SIC Code:	8051
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	1.153118100016011875
Reactive Organic Gases Tons/Yr:	.663
Carbon Monoxide Emissions Tons/Yr:	.267
NOX - Oxides of Nitrogen Tons/Yr:	2.232
SOX - Oxides of Sulphur Tons/Yr:	.043
Particulate Matter Tons/Yr:	.479
Part. Matter 10 Micrometers & Smllr Tons/Yr:	.47788
Year:	2007
County Code:	30
Air Basin:	SC
Facility ID:	3496
Air District Name:	SC
SIC Code:	8051
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	1.096053982850030067
Reactive Organic Gases Tons/Yr:	.663
Carbon Monoxide Emissions Tons/Yr:	.267
NOX - Oxides of Nitrogen Tons/Yr:	2.232
SOX - Oxides of Sulphur Tons/Yr:	.043
Particulate Matter Tons/Yr:	.479
Part. Matter 10 Micrometers & Smllr Tons/Yr:	.47788
Year:	2008

FAIRVIEW DEVELOPMENTAL CENTER (Continued) **U003432980**

County Code:	30
Air Basin:	SC
Facility ID:	3496
Air District Name:	SC
SIC Code:	8063
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	.8881087109595239453
Reactive Organic Gases Tons/Yr:	.463588308
Carbon Monoxide Emissions Tons/Yr:	.45561
NOX - Oxides of Nitrogen Tons/Yr:	.75153
SOX - Oxides of Sulphur Tons/Yr:	.0394245
Particulate Matter Tons/Yr:	.45486875
Part. Matter 10 Micrometers & Smllr Tons/Yr:	.454844015

Year:	2009
County Code:	30
Air Basin:	SC
Facility ID:	3496
Air District Name:	SC
SIC Code:	8063
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0.57433391876683804
Reactive Organic Gases Tons/Yr:	0.33700140000000001
Carbon Monoxide Emissions Tons/Yr:	0.90561000000000003
NOX - Oxides of Nitrogen Tons/Yr:	1.8515299999999999
SOX - Oxides of Sulphur Tons/Yr:	2.0414499999999999E-2
Particulate Matter Tons/Yr:	0.26697149999999997
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0.265942595

Year:	2010
County Code:	30
Air Basin:	SC
Facility ID:	3496
Air District Name:	SC
SIC Code:	8063
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0.87765890147301595
Reactive Organic Gases Tons/Yr:	0.48020000000000002
Carbon Monoxide Emissions Tons/Yr:	0.38718999999999998
NOX - Oxides of Nitrogen Tons/Yr:	1.1500999999999999
SOX - Oxides of Sulphur Tons/Yr:	4.2009999999999999E-2
Particulate Matter Tons/Yr:	0.43049999999999999
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0.42903192000000001

HWP:

EPA Id:	CAX000225151
Cleanup Status:	UNKNOWN
Latitude:	33.66327
Longitude:	-117.9192
Facility Type:	Historical - Non-Operating
Facility Size:	Not reported

FAIRVIEW DEVELOPMENTAL CENTER (Continued) **U003432980**

Team:	Not reported
Supervisor:	Not reported
Site Code:	Not reported
Assembly District:	74
Senate District:	37
Public Information Officer:	Not reported

T99
NE
1/4-1/2
0.390 mi.
2060 ft.

SULLIVAN CONCRETE TEXTURES
1111 BAKER ST
COSTA MESA, CA 92626

Site 2 of 2 in cluster T

CA HIST CORTESE
CA LUST
CA FID UST
CA EMI

S101619631
N/A

Relative:
Lower

Actual:
42 ft.

CORTESE:

Region:	CORTESE
Facility County Code:	30
Reg By:	LTNKA
Reg Id:	083003123T

Region:	CORTESE
Facility County Code:	30
Reg By:	LTNKA
Reg Id:	083000696T

LUST:

Region:	STATE
Global Id:	T0605902128
Latitude:	33.6800414
Longitude:	-117.9043816
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	11/16/2012
Lead Agency:	ORANGE COUNTY LOP
Case Worker:	DB
Local Agency:	ORANGE COUNTY LOP
RB Case Number:	083003123T
LOC Case Number:	98UT004
File Location:	Local Agency
Potential Media Affect:	Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern:	Gasoline
Site History:	Please refer to recent Site Documents or Monitoring Reports in GeoTracker for site history. Orange County is not responsible for the accuracy of any professional interpretations provided in reports submitted by consultants for the responsible party.

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0605902128
Contact Type:	Local Agency Caseworker
Contact Name:	DENAMARIE BAKER
Organization Name:	ORANGE COUNTY LOP
Address:	1241 E. DYER ROAD, STE. 120
City:	SANTA ANA
Email:	dbaker@ochca.com
Phone Number:	7144336255

Global Id:	T0605902128

SULLIVAN CONCRETE TEXTURES (Continued) **S101619631**

Contact Type:	Regional Board Caseworker
Contact Name:	CARL BERNHARDT
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	cbernhardt@waterboards.ca.gov
Phone Number:	9517824495

Status History:

Global Id:	T0605902128
Status:	Completed - Case Closed
Status Date:	11/16/2012
Global Id:	T0605902128
Status:	Open - Case Begin Date
Status Date:	01/05/1998
Global Id:	T0605902128
Status:	Open - Remediation
Status Date:	10/31/2008
Global Id:	T0605902128
Status:	Open - Site Assessment
Status Date:	10/02/1998
Global Id:	T0605902128
Status:	Open - Verification Monitoring
Status Date:	11/24/2010

Regulatory Activities:

Global Id:	T0605902128
Action Type:	ENFORCEMENT
Date:	06/10/2010
Action:	Staff Letter
Global Id:	T0605902128
Action Type:	RESPONSE
Date:	04/18/2012
Action:	Clean Up Fund - 5-Year Review Summary
Global Id:	T0605902128
Action Type:	Other
Date:	01/01/1950
Action:	Leak Reported
Global Id:	T0605902128
Action Type:	REMEDIATION
Date:	01/01/1950
Action:	Pump & Treat (P&T) Groundwater
Global Id:	T0605902128
Action Type:	REMEDIATION
Date:	01/01/1950
Action:	Soil Vapor Extraction (SVE)
Global Id:	T0605902128

SULLIVAN CONCRETE TEXTURES (Continued) **S101619631**

Action Type:	REMEDIATION
Date:	01/01/1950
Action:	Pump & Treat (P&T) Groundwater
Global Id:	T0605902128
Action Type:	ENFORCEMENT
Date:	11/23/2009
Action:	Staff Letter
Global Id:	T0605902128
Action Type:	ENFORCEMENT
Date:	05/27/2011
Action:	File review
Global Id:	T0605902128
Action Type:	ENFORCEMENT
Date:	06/21/2010
Action:	Staff Letter
Global Id:	T0605902128
Action Type:	ENFORCEMENT
Date:	07/13/2009
Action:	Staff Letter
Global Id:	T0605902128
Action Type:	ENFORCEMENT
Date:	12/08/2010
Action:	Staff Letter
Global Id:	T0605902128
Action Type:	ENFORCEMENT
Date:	10/31/2008
Action:	Staff Letter
Global Id:	T0605902128
Action Type:	ENFORCEMENT
Date:	08/31/2012
Action:	Notification - Preclosure
Global Id:	T0605902128
Action Type:	ENFORCEMENT
Date:	10/02/2012
Action:	Staff Letter
Global Id:	T0605902128
Action Type:	ENFORCEMENT
Date:	01/29/1998
Action:	Notice of Responsibility
Global Id:	T0605902128
Action Type:	ENFORCEMENT
Date:	05/07/2003
Action:	Staff Letter
Global Id:	T0605902128
Action Type:	ENFORCEMENT
Date:	05/23/2007

SULLIVAN CONCRETE TEXTURES (Continued) **S101619631**

Action:	Staff Letter
Global Id:	T0605902128
Action Type:	ENFORCEMENT
Date:	04/21/2009
Action:	Staff Letter
Global Id:	T0605902128
Action Type:	ENFORCEMENT
Date:	02/15/2011
Action:	Staff Letter
Global Id:	T0605902128
Action Type:	ENFORCEMENT
Date:	01/09/2009
Action:	Staff Letter
Global Id:	T0605902128
Action Type:	ENFORCEMENT
Date:	11/16/2012
Action:	Closure/No Further Action Letter
Global Id:	T0605902128
Action Type:	ENFORCEMENT
Date:	08/31/2012
Action:	Notification - Preclosure
Global Id:	T0605902128
Action Type:	ENFORCEMENT
Date:	08/31/2012
Action:	Notification - Preclosure
Global Id:	T0605902128
Action Type:	ENFORCEMENT
Date:	08/31/2012
Action:	Notification - Preclosure
Global Id:	T0605902128
Action Type:	ENFORCEMENT
Date:	06/01/2011
Action:	Staff Letter
Global Id:	T0605902128
Action Type:	RESPONSE
Date:	05/14/2010
Action:	Clean Up Fund - 5-Year Review Summary
Global Id:	T0605902128
Action Type:	Other
Date:	01/01/1950
Action:	Leak Discovery

ORANGE CO. LUST:

Region:	ORANGE
Facility Id:	98UT004
Current Status:	Certification (Case Closed)

SULLIVAN CONCRETE TEXTURES (Continued) **S101619631**

Released Substance:	Gasoline-Automotive (motor gasoline and additives), leaded & unleaded
Date Closed:	11/16/2012
Case Type:	Other Ground Water
Record ID:	RO0000771

LUST REG 8:

Region:	8
County:	Orange
Regional Board:	Santa Ana Region
Facility Status:	Pollution Characterization
Case Number:	083003123T
Local Case Num:	98UT004
Case Type:	Other ground water affected
Substance:	Gasoline
Qty Leaked:	0
Abate Method:	Not reported
Cross Street:	Not reported
Enf Type:	SEL
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Close Tank
Leak Cause:	Unknown
Leak Source:	Tank
Global ID:	T0605902128
How Stopped Date:	9/9/9999
Enter Date:	Not reported
Review Date:	Not reported
Prelim Assess:	Not reported
Discover Date:	1/5/1998
Enforcement Date:	Not reported
Close Date:	Not reported
Workplan:	Not reported
Pollution Char:	10/2/1998
Remed Plan:	Not reported
Remed Action:	Not reported
Monitoring:	Not reported
Enter Date:	Not reported
GW Qualifies:	=
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.6800414
Longitude:	-117.9043816
MTBE Date:	7/19/2004
Max MTBE GW:	37000
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	1
MTBE Tested:	MTBE Detected. Site tested for MTBE & MTBE detected
MTBE Class:	*
Staff:	CAB
Staff Initials:	AR
Lead Agency:	Local Agency
Local Agency:	30000L
Hydr Basin #:	Not reported

SULLIVAN CONCRETE TEXTURES (Continued) **S101619631**

Beneficial: MUN
Priority: Not reported
Cleanup Fund Id: Not reported
Work Suspended: Not reported
Summary: Not reported

CA FID UST:
Facility ID: 30017596
Regulated By: UTNKA
Regulated ID: Not reported
Cortese Code: Not reported
SIC Code: Not reported
Facility Phone: 7145567633
Mail To: Not reported
Mailing Address: 1111 BAKER
Mailing Address 2: Not reported
Mailing City,St,Zip: COSTA MESA 92626
Contact: Not reported
Contact Phone: Not reported
DUNs Number: Not reported
NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Active

EMI:
Year: 1990
County Code: 30
Air Basin: SC
Facility ID: 77865
Air District Name: SC
SIC Code: 7699
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 0
Reactive Organic Gases Tons/Yr: 0
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers & Smllr Tons/Yr: 0

100
SSW
1/4-1/2
0.402 mi.
2121 ft.

HIX PONTIAC
2480 HARBOR BLVD,
COSTA MESA, CA 92626

CA HIST CORTESE
CA LUST
CA Orange Co. Industrial Site
CA EMI

S102431403
N/A

Relative:
Higher

Actual:
73 ft.

CORTESE:
Region: CORTESE
Facility County Code: 30
Reg By: LTNKA
Reg Id: 083001609T

LUST:

HIX PONTIAC (Continued) **S102431403**

Region:	STATE
Global Id:	T0605901219
Latitude:	33.662913
Longitude:	-117.918269
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	10/25/1991
Lead Agency:	ORANGE COUNTY LOP
Case Worker:	DB
Local Agency:	ORANGE COUNTY LOP
RB Case Number:	083001609T
LOC Case Number:	90UT173
File Location:	Local Agency
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0605901219
Contact Type:	Regional Board Caseworker
Contact Name:	PATRICIA HANNON
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	phannon@waterboards.ca.gov
Phone Number:	Not reported

Global Id:	T0605901219
Contact Type:	Local Agency Caseworker
Contact Name:	DENAMARIE BAKER
Organization Name:	ORANGE COUNTY LOP
Address:	1241 E. DYER ROAD, STE. 120
City:	SANTA ANA
Email:	dbaker@ochca.com
Phone Number:	7144336255

Status History:

Global Id:	T0605901219
Status:	Completed - Case Closed
Status Date:	10/25/1991

Global Id:	T0605901219
Status:	Open - Case Begin Date
Status Date:	06/26/1990

Regulatory Activities:

Global Id:	T0605901219
Action Type:	Other
Date:	01/01/1950
Action:	Leak Reported

ORANGE CO. LUST:

Region:	ORANGE

HIX PONTIAC (Continued) **S102431403**

Facility Id:	90UT173
Current Status:	Certification (Case Closed)
Released Substance:	Gasoline-Automotive (motor gasoline and additives), leaded & unleaded
Date Closed:	10/25/1991
Case Type:	Soil Only
Record ID:	RO0001035

LUST REG 8:

Region:	8
County:	Orange
Regional Board:	Santa Ana Region
Facility Status:	Case Closed
Case Number:	083001609T
Local Case Num:	90UT173
Case Type:	Soil only
Substance:	Gasoline
Qty Leaked:	0
Abate Method:	Not reported
Cross Street:	Not reported
Enf Type:	Not reported
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Close Tank
Leak Cause:	Unknown
Leak Source:	Unknown
Global ID:	T0605901219
How Stopped Date:	9/9/9999
Enter Date:	Not reported
Review Date:	Not reported
Prelim Assess:	Not reported
Discover Date:	1/1/1965
Enforcement Date:	Not reported
Close Date:	10/25/1991
Workplan:	Not reported
Pollution Char:	Not reported
Remed Plan:	Not reported
Remed Action:	Not reported
Monitoring:	Not reported
Enter Date:	Not reported
GW Qualifies:	Not reported
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.656674
Longitude:	-117.918871
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	1
MTBE Tested:	Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.
MTBE Class:	*
Staff:	PAH
Staff Initials:	AR
Lead Agency:	Local Agency

HIX PONTIAC (Continued) **S102431403**

Local Agency: 30000L
Hydr Basin #: Not reported
Beneficial: MUN
Priority: Not reported
Cleanup Fund Id: Not reported
Work Suspended: Not reported
Summary: Not reported

Orange Co. Industrial Site:
Case ID: 99IC009
Region: ORANGE
Record ID: RO0000727
Current Status: CLOSED 5/24/1999
Closure Type: Closure certification issued
Released Chemical: WASTE (OR SLOP) OIL

EMI:
Year: 1987
County Code: 30
Air Basin: SC
Facility ID: 56494
Air District Name: SC
SIC Code: 5511
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 2
Reactive Organic Gases Tons/Yr: 2
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers & Smllr Tons/Yr: 0

Year: 1990
County Code: 30
Air Basin: SC
Facility ID: 62677
Air District Name: SC
SIC Code: 5511
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 2
Reactive Organic Gases Tons/Yr: 2
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers & Smllr Tons/Yr: 0

U101	**METRO CAR WASH**	**CA LUST**	**U001576821**
NW	**2950 HARBOR BLVD**	**CA UST**	**N/A**
1/4-1/2	**COSTA MESA, CA 92626**	**CA HIST UST**	
0.402 mi.		**CA SWEEPS UST**	
2125 ft.	**Site 1 of 2 in cluster U**	**CA CHMIRS**	

Relative:
Lower

Actual:
50 ft.

LUST:

Region:	STATE
Global Id:	T0605902129
Latitude:	33.6785743
Longitude:	-117.919119
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	06/15/2006
Lead Agency:	ORANGE COUNTY LOP
Case Worker:	DB
Local Agency:	ORANGE COUNTY LOP
RB Case Number:	083003124T
LOC Case Number:	98UT006
File Location:	Local Agency
Potential Media Affect:	Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern:	Diesel, Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0605902129
Contact Type:	Local Agency Caseworker
Contact Name:	DENAMARIE BAKER
Organization Name:	ORANGE COUNTY LOP
Address:	1241 E. DYER ROAD, STE. 120
City:	SANTA ANA
Email:	dbaker@ochca.com
Phone Number:	7144336255
Global Id:	T0605902129
Contact Type:	Regional Board Caseworker
Contact Name:	NANCY OLSON-MARTIN
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	nolson-martin@waterboards.ca.gov
Phone Number:	Not reported

Status History:

Global Id:	T0605902129
Status:	Completed - Case Closed
Status Date:	06/15/2006
Global Id:	T0605902129
Status:	Open - Case Begin Date
Status Date:	01/22/1998
Global Id:	T0605902129
Status:	Open - Remediation
Status Date:	04/24/2001

METRO CAR WASH (Continued) **U001576821**

Regulatory Activities:

Global Id:	T0605902129
Action Type:	Other
Date:	01/01/1950
Action:	Leak Reported
Global Id:	T0605902129
Action Type:	ENFORCEMENT
Date:	09/21/2005
Action:	Staff Letter
Global Id:	T0605902129
Action Type:	ENFORCEMENT
Date:	01/26/1998
Action:	Notice of Responsibility
Global Id:	T0605902129
Action Type:	ENFORCEMENT
Date:	04/14/2003
Action:	Staff Letter
Global Id:	T0605902129
Action Type:	ENFORCEMENT
Date:	05/27/2004
Action:	Staff Letter
Global Id:	T0605902129
Action Type:	ENFORCEMENT
Date:	12/13/2004
Action:	Staff Letter
Global Id:	T0605902129
Action Type:	ENFORCEMENT
Date:	05/16/2005
Action:	Staff Letter
Global Id:	T0605902129
Action Type:	ENFORCEMENT
Date:	06/21/2005
Action:	Staff Letter
Global Id:	T0605902129
Action Type:	ENFORCEMENT
Date:	09/23/2005
Action:	Staff Letter
Global Id:	T0605902129
Action Type:	ENFORCEMENT
Date:	02/02/2006
Action:	Staff Letter
Global Id:	T0605902129
Action Type:	ENFORCEMENT
Date:	02/16/2006
Action:	Staff Letter
Global Id:	T0605902129

METRO CAR WASH (Continued) **U001576821**

Action Type:	ENFORCEMENT
Date:	06/15/2006
Action:	Closure/No Further Action Letter
Global Id:	T0605902129
Action Type:	ENFORCEMENT
Date:	12/23/2005
Action:	Staff Letter
Global Id:	T0605902129
Action Type:	REMEDIATION
Date:	01/01/1950
Action:	Free Product Removal
Global Id:	T0605902129
Action Type:	REMEDIATION
Date:	01/01/1950
Action:	Soil Vapor Extraction (SVE)
Global Id:	T0605902129
Action Type:	Other
Date:	01/01/1950
Action:	Leak Discovery

ORANGE CO. LUST:

Region:	ORANGE
Facility Id:	98UT006
Current Status:	Certification (Case Closed)
Released Substance:	Diesel fuel oil and additives, Nos.1-D, 2-D, 2-4
Date Closed:	06/15/2006
Case Type:	Other Ground Water
Record ID:	RO0000812
Region:	ORANGE
Facility Id:	98UT006
Current Status:	Not reported
Released Substance:	Gasoline-Automotive (motor gasoline and additives), leaded & unleaded
Date Closed:	06/15/2006
Case Type:	Not reported
Record ID:	RO0000812

LUST REG 8:

Region:	8
County:	Orange
Regional Board:	Santa Ana Region
Facility Status:	Remedial action (cleanup) Underway
Case Number:	083003124T
Local Case Num:	98UT006
Case Type:	Other ground water affected
Substance:	12034,800661
Qty Leaked:	0
Abate Method:	Not reported
Cross Street:	Not reported
Enf Type:	SEL
Funding:	Not reported

METRO CAR WASH (Continued) **U001576821**

How Discovered: Tank Closure
How Stopped: Close Tank
Leak Cause: Unknown
Leak Source: Tank
Global ID: T0605902129
How Stopped Date: 9/9/9999
Enter Date: Not reported
Review Date: Not reported
Prelim Assess: Not reported
Discover Date: 1/22/1998
Enforcement Date: Not reported
Close Date: Not reported
Workplan: Not reported
Pollution Char: Not reported
Remed Plan: Not reported
Remed Action: 4/24/2001
Monitoring: Not reported
Enter Date: Not reported
GW Qualifies: =
Soil Qualifies: Not reported
Operator: Not reported
Facility Contact: Not reported
Interim: Not reported
Oversite Program: LUST
Latitude: 33.6785743
Longitude: -117.919119
MTBE Date: 3/16/2004
Max MTBE GW: 14
MTBE Concentration: 0
Max MTBE Soil: Not reported
MTBE Fuel: 0
MTBE Tested: MTBE Detected. Site tested for MTBE & MTBE detected
MTBE Class: *
Staff: NOM
Staff Initials: AR
Lead Agency: Local Agency
Local Agency: 30000L
Hydr Basin #: Not reported
Beneficial: MUN
Priority: Not reported
Cleanup Fund Id: Not reported
Work Suspended: Not reported
Summary: Not reported

UST:
Facility ID: 6371
Latitude: 33.67864
Longitude: -117.91921

HIST UST:
Region: STATE
Facility ID: 00000052755
Facility Type: Gas Station
Other Type: Not reported
Total Tanks: 0005
Contact Name: BOB WILDER

METRO CAR WASH (Continued) **U001576821**

Telephone:	7145468191
Owner Name:	METRO CALIF. BUS. ENT.
Owner Address:	387 N. TUSTIN AVE.
Owner City,St,Zip:	ORANGE, CA 92667

Tank Num:	001
Container Num:	1
Year Installed:	1964
Tank Capacity:	00010000
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Tank Construction:	1/4 inches
Leak Detection:	10

Tank Num:	002
Container Num:	2
Year Installed:	1964
Tank Capacity:	00010000
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Tank Construction:	1/4 inches
Leak Detection:	None

Tank Num:	003
Container Num:	3
Year Installed:	1964
Tank Capacity:	00010000
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Tank Construction:	1/4 inches
Leak Detection:	None

Tank Num:	004
Container Num:	4
Year Installed:	1964
Tank Capacity:	00010000
Tank Used for:	PRODUCT
Type of Fuel:	DIESEL
Tank Construction:	1/4 inches
Leak Detection:	None

Tank Num:	005
Container Num:	5
Year Installed:	1964
Tank Capacity:	00010000
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Tank Construction:	1/4 inches
Leak Detection:	None

SWEEPS UST:

Status:	Active
Comp Number:	6371
Number:	9
Board Of Equalization:	44-016466
Referral Date:	09-30-92
Action Date:	09-15-92

METRO CAR WASH (Continued) **U001576821**

Created Date: 02-29-88
Tank Status: A
Owner Tank Id: Not reported
Swrcb Tank Id: 30-000-006371-000001
Actv Date: Not reported
Capacity: 10000
Tank Use: M.V. FUEL
Stg: P
Content: DIESEL
Number Of Tanks: 5

Status: Active
Comp Number: 6371
Number: 9
Board Of Equalization: 44-016466
Referral Date: 09-30-92
Action Date: 09-15-92
Created Date: 02-29-88
Tank Status: A
Owner Tank Id: Not reported
Swrcb Tank Id: 30-000-006371-000002
Actv Date: Not reported
Capacity: 10000
Tank Use: M.V. FUEL
Stg: P
Content: REG UNLEADED
Number Of Tanks: Not reported

Status: Active
Comp Number: 6371
Number: 9
Board Of Equalization: 44-016466
Referral Date: 09-30-92
Action Date: 09-15-92
Created Date: 02-29-88
Tank Status: A
Owner Tank Id: Not reported
Swrcb Tank Id: 30-000-006371-000003
Actv Date: Not reported
Capacity: 10000
Tank Use: M.V. FUEL
Stg: P
Content: REG UNLEADED
Number Of Tanks: Not reported

Status: Active
Comp Number: 6371
Number: 9
Board Of Equalization: 44-016466
Referral Date: 09-30-92
Action Date: 09-15-92
Created Date: 02-29-88
Tank Status: A
Owner Tank Id: Not reported
Swrcb Tank Id: 30-000-006371-000004
Actv Date: Not reported
Capacity: 10000

METRO CAR WASH (Continued) **U001576821**

Tank Use: M.V. FUEL
Stg: P
Content: DIESEL
Number Of Tanks: Not reported

Status: Active
Comp Number: 6371
Number: 9
Board Of Equalization: 44-016466
Referral Date: 09-30-92
Action Date: 09-15-92
Created Date: 02-29-88
Tank Status: A
Owner Tank Id: Not reported
Swrcb Tank Id: 30-000-006371-000005
Actv Date: Not reported
Capacity: 10000
Tank Use: M.V. FUEL
Stg: P
Content: DIESEL
Number Of Tanks: Not reported

CHMIRS:
OES Incident Number: 07-6667
OES notification: 10/30/2007
OES Date: Not reported
OES Time: Not reported
Incident Date: Not reported
Date Completed: Not reported
Property Use: Not reported
Agency Id Number: Not reported
Agency Incident Number: Not reported
Time Notified: Not reported
Time Completed: Not reported
Surrounding Area: Not reported
Estimated Temperature: Not reported
Property Management: Not reported
Special Studies 1: Not reported
Special Studies 2: Not reported
Special Studies 3: Not reported
Special Studies 4: Not reported
Special Studies 5: Not reported
Special Studies 6: Not reported
More Than Two Substances Involved?: Not reported
Resp Agncy Personel # Of Decontaminated: Not reported
Responding Agency Personel # Of Injuries: Not reported
Responding Agency Personel # Of Fatalities: Not reported
Others Number Of Decontaminated: Not reported
Others Number Of Injuries: Not reported
Others Number Of Fatalities: Not reported
Vehicle Make/year: Not reported
Vehicle License Number: Not reported
Vehicle State: Not reported
Vehicle Id Number: Not reported
CA/DOT/PUC/ICC Number: Not reported
Company Name: Not reported
Reporting Officer Name/ID: Not reported

METRO CAR WASH (Continued) **U001576821**

Report Date:	Not reported
Comments:	Not reported
Facility Telephone:	Not reported
Waterway Involved:	Not reported
Waterway:	Not reported
Spill Site:	Not reported
Cleanup By:	Contractor
Containment:	Not reported
What Happened:	Not reported
Type:	Not reported
Measure:	Not reported
Other:	Not reported
Date/Time:	Not reported
Year:	2007
Agency:	Costa Mesa Sanitary Dist
Incident Date:	10/29/2007 12:00:00 AM
Admin Agency:	Orange Cnty Management Div - HazMat Div.
Amount:	Not reported
Contained:	Yes
Site Type:	Merchant/Business
E Date:	Not reported
Substance:	sewage
Quantity Released:	Not reported
BBLS:	0
Cups:	0
CUFT:	0
Gallons:	14
Grams:	0
Pounds:	0
Liters:	0
Ounces:	0
Pints:	0
Quarts:	0
Sheen:	0
Tons:	0
Unknown:	0
Evacuations:	0
Number of Injuries:	0
Number of Fatalities:	0
Description:	RP Sate: Grease blockage in a private lateral. Release came out a private manhole and went towards a storm drain but did not enter the storm drain.

OES Incident Number:	97-4279
OES notification:	10/27/1997
OES Date:	Not reported
OES Time:	Not reported
Incident Date:	Not reported
Date Completed:	**Not reported**
Property Use:	Not reported
Agency Id Number:	Not reported
Agency Incident Number:	Not reported
Time Notified:	Not reported
Time Completed:	Not reported
Surrounding Area:	Not reported
Estimated Temperature:	Not reported
Property Management:	Not reported

METRO CAR WASH (Continued) **U001576821**

Special Studies 1:	Not reported
Special Studies 2:	Not reported
Special Studies 3:	Not reported
Special Studies 4:	Not reported
Special Studies 5:	Not reported
Special Studies 6:	Not reported
More Than Two Substances Involved?:	Not reported
Resp Agncy Personel # Of Decontaminated:	Not reported
Responding Agency Personel # Of Injuries:	Not reported
Responding Agency Personel # Of Fatalities:	Not reported
Others Number Of Decontaminated:	Not reported
Others Number Of Injuries:	Not reported
Others Number Of Fatalities:	Not reported
Vehicle Make/year:	Not reported
Vehicle License Number:	Not reported
Vehicle State:	Not reported
Vehicle Id Number:	Not reported
CA/DOT/PUC/ICC Number:	Not reported
Company Name:	Not reported
Reporting Officer Name/ID:	Not reported
Report Date:	Not reported
Comments:	Not reported
Facility Telephone:	Not reported
Waterway Involved:	Yes
Waterway:	STORM DRAIN
Spill Site:	Not reported
Cleanup By:	Reporting Party
Containment:	Not reported
What Happened:	Not reported
Type:	Not reported
Measure:	Not reported
Other:	Not reported
Date/Time:	Not reported
Year:	1997
Agency:	SANITARY DISTRICT
Incident Date:	10/25/199712:00:00 AM
Admin Agency:	Orange Cnty Management Div - HazMat Div.
Amount:	Not reported
Contained:	Yes
Site Type:	Road
E Date:	Not reported
Substance:	SEWAGE
Quantity Released:	Not reported
BBLS:	0
Cups:	0
CUFT:	0
Gallons:	900
Grams:	0
Pounds:	0
Liters:	0
Ounces:	0
Pints:	0
Quarts:	0
Sheen:	0
Tons:	0
Unknown:	0
Evacuations:	0

METRO CAR WASH (Continued) **U001576821**

Number of Injuries:	0
Number of Fatalities:	0
Description:	PRIVATE LATERAL OVERFLOWED FOR 7.5 HOURS INTO PUBLIC RIGHT OF WAY AND INTO A STORM DRAIN.

U102 **NW** **1/4-1/2** **0.423 mi.** **2231 ft.**	**ITT / JABSCO FACILITY** **1485 DALE WAY** **COSTA MESA, CA** **Site 2 of 2 in cluster U**	**CA NPDES** **CA SLIC**	**S108542997** **N/A**

Relative: **Lower**

Actual: **49 ft.**

NPDES:

Npdes Number:	CAS000001
Facility Status:	Active
Agency Id:	0
Region:	8
Regulatory Measure Id:	365881
Order No:	97-03-DWQ
Regulatory Measure Type:	Enrollee
Place Id:	Not reported
WDID:	8 30I022162
Program Type:	Industrial
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	05/28/2009
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	ABC Bus Inc
Discharge Address:	1506 30th St NW
Discharge City:	Faribault
Discharge State:	Minnesota
Discharge Zip:	55021

SLIC:

Region:	STATE
Facility Status:	**Completed - Case Closed**
Status Date:	08/21/2013
Global Id:	SL0605976946
Lead Agency:	SANTA ANA RWQCB (REGION 8)
Lead Agency Case Number:	Not reported
Latitude:	33.6780327375074
Longitude:	-117.91823387146
Case Type:	Cleanup Program Site
Case Worker:	WDM
Local Agency:	Not reported
RB Case Number:	Not reported
File Location:	Not reported
Potential Media Affected:	Under Investigation
Potential Contaminants of Concern:	* Chlorinated Solvents - PCE, * Chlorinated Solvents - TCE, * Volatile Organic Compounds (VOC)
Site History:	The SIte has contamination with TCE as a result of the past pump manufacturing operation. The TCE plume is aged and has migrated out of the current property boundaries for the most part. Two RPs are conducting environmental work at this SIte: ITT Corporation and the current property owner. ITT is currently conducting groundwater investigation at the downgradient areas of the Site. Obtaining access to the downgradient properties has been very challenging. The property owner has completed the on-site investigation. A focused FS

ITT / JABSCO FACILITY (Continued) **S108542997**

report has been submitted and ISCO has been approved as the technology for remediating the groundwater. A bench scale test was conducted for this remedy. No specific source of contamiantion was found in the on-Site soil. An NFA letter for the on-Site soil was issued on August 5, 2011. On-Site monitoring wells ITT-4, ITT-5 and INJ-1 were abandoned in December 2011. An off-Site downgradient investigation for groundwater was completed in September 2011 and based on the low detections of VOCs in those areas, no further investigation of the off-Site downgradient area is necessary. The monitring frequency for all the on- and off-Site remaining wells has been redcued to semi-annual. An NFA letter for on-Site groundwater was issued on August 1, 2013. An NFA letter for off-Site groundwater was issued on August 21, 2013.

Click here to access the California GeoTracker records for this facility:

SLIC REG 8:

Type:	Soil and Groundwater
Facility Status:	6
Region:	8
Staff:	WDM
Substance:	WDM
Lead Agency:	WDM
Location Code:	WDM
Thomas Bros Code:	WDM

V103 **PAULINA GAS STATION** **CA LUST** **S101589044**
ENE **1045 EL CAMINO** **CA FID UST** **N/A**
1/4-1/2 **COSTA MESA, CA 92626** **CA SWEEPS UST**
0.423 mi.
2231 ft. **Site 1 of 3 in cluster V**

Relative:
Lower

Actual:
44 ft.

LUST REG 8:

Region:	8
County:	Orange
Regional Board:	Santa Ana Region
Facility Status:	Case Closed
Case Number:	083001685T
Local Case Num:	90UT229
Case Type:	Other ground water affected
Substance:	12035,800661
Qty Leaked:	0
Abate Method:	Not reported
Cross Street:	Not reported
Enf Type:	Not reported
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Close Tank
Leak Cause:	Unknown
Leak Source:	Unknown
Global ID:	T0605901271
How Stopped Date:	9/9/9999
Enter Date:	Not reported
Review Date:	Not reported
Prelim Assess:	Not reported
Discover Date:	10/10/1990
Enforcement Date:	Not reported

PAULINA GAS STATION (Continued) **S101589044**

Close Date:	6/27/1996
Workplan:	Not reported
Pollution Char:	Not reported
Remed Plan:	Not reported
Remed Action:	Not reported
Monitoring:	Not reported
Enter Date:	Not reported
GW Qualifies:	Not reported
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.6756876
Longitude:	-117.9009085
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	0
MTBE Tested:	Not Required to be Tested.
MTBE Class:	*
Staff:	VJJ
Staff Initials:	AR
Lead Agency:	Local Agency
Local Agency:	30000L
Hydr Basin #:	Not reported
Beneficial:	MUN
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Summary:	Not reported

CA FID UST:

Facility ID:	30001091
Regulated By:	UTNKA
Regulated ID:	Not reported
Cortese Code:	Not reported
SIC Code:	Not reported
Facility Phone:	7146625904
Mail To:	Not reported
Mailing Address:	2140 S MAIN ST
Mailing Address 2:	Not reported
Mailing City,St,Zip:	COSTA MESA 92626
Contact:	Not reported
Contact Phone:	Not reported
DUNs Number:	Not reported
NPDES Number:	Not reported
EPA ID:	Not reported
Comments:	Not reported
Status:	Active

SWEEPS UST:

Status:	Active
Comp Number:	13478
Number:	9

PAULINA GAS STATION (Continued) **S101589044**

Board Of Equalization:	Not reported
Referral Date:	09-30-92
Action Date:	09-15-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	Not reported
Swrcb Tank Id:	30-000-013478-000001
Actv Date:	Not reported
Capacity:	Not reported
Tank Use:	M.V. FUEL
Stg:	P
Content:	REG UNLEADED
Number Of Tanks:	4

Status:	Active
Comp Number:	13478
Number:	9
Board Of Equalization:	Not reported
Referral Date:	09-30-92
Action Date:	09-15-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	Not reported
Swrcb Tank Id:	30-000-013478-000003
Actv Date:	Not reported
Capacity:	10000
Tank Use:	M.V. FUEL
Stg:	P
Content:	REG UNLEADED
Number Of Tanks:	Not reported

Status:	Active
Comp Number:	13478
Number:	9
Board Of Equalization:	Not reported
Referral Date:	09-30-92
Action Date:	09-15-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	Not reported
Swrcb Tank Id:	30-000-013478-000004
Actv Date:	Not reported
Capacity:	5000
Tank Use:	M.V. FUEL
Stg:	P
Content:	REG UNLEADED
Number Of Tanks:	Not reported

Status:	Active
Comp Number:	13478
Number:	9
Board Of Equalization:	Not reported
Referral Date:	09-30-92
Action Date:	09-15-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	Not reported

PAULINA GAS STATION (Continued) **S101589044**

Swrcb Tank Id:	30-000-013478-000005
Actv Date:	Not reported
Capacity:	5000
Tank Use:	M.V. FUEL
Stg:	P
Content:	DIESEL
Number Of Tanks:	Not reported

104
NE
1/4-1/2
0.423 mi.
2236 ft.

ADEPT MFG
2990 GRACE LN
COSTA MESA, CA 92626

CA LUST **S106447499**
N/A

Relative:
Lower

Actual:
42 ft.

LUST:

Region:	STATE
Global Id:	T0605900016
Latitude:	33.6799904
Longitude:	-117.9024996
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	08/24/2005
Lead Agency:	ORANGE COUNTY LOP
Case Worker:	DB
Local Agency:	ORANGE COUNTY LOP
RB Case Number:	083000019T
LOC Case Number:	87UT004
File Location:	Local Agency Warehouse
Potential Media Affect:	Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0605900016
Contact Type:	Regional Board Caseworker
Contact Name:	VALERIE JAHN-BULL
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	vjahn-bull@waterboards.ca.gov
Phone Number:	9517824903

Global Id:	T0605900016
Contact Type:	Local Agency Caseworker
Contact Name:	DENAMARIE BAKER
Organization Name:	ORANGE COUNTY LOP
Address:	1241 E. DYER ROAD, STE. 120
City:	SANTA ANA
Email:	dbaker@ochca.com
Phone Number:	7144336255

Status History:

Global Id:	T0605900016
Status:	Completed - Case Closed
Status Date:	08/24/2005

ADEPT MFG (Continued) **S106447499**

Global Id:	T0605900016
Status:	Open - Case Begin Date
Status Date:	01/12/1987
Global Id:	T0605900016
Status:	Open - Remediation
Status Date:	09/18/1987
Global Id:	T0605900016
Status:	Open - Verification Monitoring
Status Date:	03/31/2005

Regulatory Activities:

Global Id:	T0605900016
Action Type:	ENFORCEMENT
Date:	03/09/2005
Action:	Staff Letter
Global Id:	T0605900016
Action Type:	ENFORCEMENT
Date:	08/24/2005
Action:	Closure/No Further Action Letter
Global Id:	T0605900016
Action Type:	ENFORCEMENT
Date:	01/14/1987
Action:	Notice of Responsibility
Global Id:	T0605900016
Action Type:	ENFORCEMENT
Date:	02/05/2003
Action:	Staff Letter
Global Id:	T0605900016
Action Type:	ENFORCEMENT
Date:	04/07/2005
Action:	Staff Letter
Global Id:	T0605900016
Action Type:	Other
Date:	01/01/1950
Action:	Leak Discovery
Global Id:	T0605900016
Action Type:	REMEDIATION
Date:	01/01/1950
Action:	Soil Vapor Extraction (SVE)
Global Id:	T0605900016
Action Type:	REMEDIATION
Date:	01/01/1950
Action:	Pump & Treat (P&T) Groundwater
Global Id:	T0605900016
Action Type:	REMEDIATION
Date:	01/01/1950
Action:	Excavation

ADEPT MFG (Continued) **S106447499**

Global Id:	T0605900016
Action Type:	REMEDIATION
Date:	01/01/1950
Action:	Other (Use Description Field)

Global Id:	T0605900016
Action Type:	Other
Date:	01/01/1950
Action:	Leak Reported

ORANGE CO. LUST:

Region:	ORANGE
Facility Id:	87UT004
Current Status:	Certification (Case Closed)
Released Substance:	Gasoline-Automotive (motor gasoline and additives), leaded & unleaded
Date Closed:	08/24/2005
Case Type:	Other Ground Water
Record ID:	RO0000924

LUST REG 8:

Region:	8
County:	Orange
Regional Board:	Santa Ana Region
Facility Status:	Remedial action (cleanup) Underway
Case Number:	083000019T
Local Case Num:	87UT004
Case Type:	Other ground water affected
Substance:	Gasoline
Qty Leaked:	0
Abate Method:	Not reported
Cross Street:	Not reported
Enf Type:	SEL
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Close Tank
Leak Cause:	Unknown
Leak Source:	Tank
Global ID:	T0605900016
How Stopped Date:	9/9/9999
Enter Date:	Not reported
Review Date:	Not reported
Prelim Assess:	Not reported
Discover Date:	1/12/1987
Enforcement Date:	Not reported
Close Date:	Not reported
Workplan:	Not reported
Pollution Char:	Not reported
Remed Plan:	Not reported
Remed Action:	9/18/1987
Monitoring:	Not reported
Enter Date:	Not reported
GW Qualifies:	=
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported

ADEPT MFG (Continued) **S106447499**

Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.6799904
Longitude:	-117.9024996
MTBE Date:	4/14/2004
Max MTBE GW:	31
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	1
MTBE Tested:	MTBE Detected. Site tested for MTBE & MTBE detected
MTBE Class:	*
Staff:	VJJ
Staff Initials:	AR
Lead Agency:	Local Agency
Local Agency:	30000L
Hydr Basin #:	Not reported
Beneficial:	MUN
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Summary:	Not reported

V105 **YOUR NEIGHBORHOOD GAS STATION** **CA HIST CORTESE** **S101299436**
ENE **1045 EL CAMINO** **CA LUST** **N/A**
1/4-1/2 **COSTA MESA, CA 92692** **CA Orange Co. Industrial Site**
0.427 mi.
2252 ft. **Site 2 of 3 in cluster V**

Relative:
Lower

Actual:
44 ft.

CORTESE:

Region:	CORTESE
Facility County Code:	30
Reg By:	LTNKA
Reg Id:	083001685T

LUST:

Region:	STATE
Global Id:	T0605901271
Latitude:	33.675474
Longitude:	-117.900577
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	06/27/1996
Lead Agency:	ORANGE COUNTY LOP
Case Worker:	DB
Local Agency:	ORANGE COUNTY LOP
RB Case Number:	083001685T
LOC Case Number:	90UT229
File Location:	Local Agency
Potential Media Affect:	Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern:	Waste Oil / Motor / Hydraulic / Lubricating, Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0605901271
Contact Type:	Local Agency Caseworker
Contact Name:	DENAMARIE BAKER

YOUR NEIGHBORHOOD GAS STATION (Continued) **S101299436**

Organization Name:	ORANGE COUNTY LOP
Address:	1241 E. DYER ROAD, STE. 120
City:	SANTA ANA
Email:	dbaker@ochca.com
Phone Number:	7144336255
Global Id:	T0605901271
Contact Type:	Regional Board Caseworker
Contact Name:	VALERIE JAHN-BULL
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	vjahn-bull@waterboards.ca.gov
Phone Number:	9517824903

Status History:

Global Id:	T0605901271
Status:	Completed - Case Closed
Status Date:	06/27/1996
Global Id:	T0605901271
Status:	Open - Case Begin Date
Status Date:	10/10/1990

Regulatory Activities:

Global Id:	T0605901271
Action Type:	Other
Date:	01/01/1950
Action:	Leak Reported
Global Id:	T0605901271
Action Type:	REMEDIATION
Date:	01/01/1950
Action:	Other (Use Description Field)
Global Id:	T0605901271
Action Type:	Other
Date:	01/01/1950
Action:	Leak Discovery
Global Id:	T0605901271
Action Type:	ENFORCEMENT
Date:	06/27/1996
Action:	Closure/No Further Action Letter

Region:	STATE
Global Id:	T0605964289
Latitude:	33.675525
Longitude:	-117.900639
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	07/07/2004
Lead Agency:	ORANGE COUNTY LOP
Case Worker:	DB
Local Agency:	ORANGE COUNTY LOP

YOUR NEIGHBORHOOD GAS STATION (Continued) **S101299436**

RB Case Number: Not reported
LOC Case Number: 04UT009
File Location: Local Agency
Potential Media Affect: Soil
Potential Contaminants of Concern: Gasoline
Site History: Not reported

Click here to access the California GeoTracker records for this facility:

Contact:
Global Id: T0605964289
Contact Type: Regional Board Caseworker
Contact Name: Ken Williams
Organization Name: SANTA ANA RWQCB (REGION 8)
Address: 3737 MAIN STREET, SUITE 500
City: RIVERSIDE
Email: kwilliams@waterboards.ca.gov
Phone Number: Not reported

Global Id: T0605964289
Contact Type: Local Agency Caseworker
Contact Name: DENAMARIE BAKER
Organization Name: ORANGE COUNTY LOP
Address: 1241 E. DYER ROAD, STE. 120
City: SANTA ANA
Email: dbaker@ochca.com
Phone Number: 7144336255

Status History:
Global Id: T0605964289
Status: Completed - Case Closed
Status Date: 07/07/2004

Global Id: T0605964289
Status: Open - Case Begin Date
Status Date: 01/21/2004

Global Id: T0605964289
Status: Open - Site Assessment
Status Date: 01/21/2004

Global Id: T0605964289
Status: Open - Site Assessment
Status Date: 05/06/2004

Global Id: T0605964289
Status: Open - Site Assessment
Status Date: 06/10/2004

Regulatory Activities:
Global Id: T0605964289
Action Type: Other
Date: 01/01/1950
Action: Leak Reported

Global Id: T0605964289
Action Type: ENFORCEMENT

YOUR NEIGHBORHOOD GAS STATION (Continued) **S101299436**

Date:	08/27/2004
Action:	Closure/No Further Action Letter
Global Id:	T0605964289
Action Type:	ENFORCEMENT
Date:	03/05/2004
Action:	Notice of Responsibility
Global Id:	T0605964289
Action Type:	ENFORCEMENT
Date:	05/14/2004
Action:	Staff Letter
Global Id:	T0605964289
Action Type:	ENFORCEMENT
Date:	07/08/2004
Action:	Staff Letter
Global Id:	T0605964289
Action Type:	Other
Date:	01/01/1950
Action:	Leak Discovery

ORANGE CO. LUST:

Region:	ORANGE
Facility Id:	90UT229
Current Status:	Certification (Case Closed)
Released Substance:	Waste oil/Used oil
Date Closed:	06/27/1996
Case Type:	Other Ground Water
Record ID:	RO0002463
Region:	ORANGE
Facility Id:	90UT229
Current Status:	Not reported
Released Substance:	Gasoline-Automotive (motor gasoline and additives), leaded & unleaded
Date Closed:	06/27/1996
Case Type:	Not reported
Record ID:	RO0002463
Region:	ORANGE
Facility Id:	04UT009
Current Status:	Certification (Case Closed)
Released Substance:	Gasoline-Automotive (motor gasoline and additives), leaded & unleaded
Date Closed:	08/27/2004
Case Type:	Soil Only
Record ID:	RO0003287

Orange Co. Industrial Site:

Case ID:	05IC017
Region:	ORANGE
Record ID:	RO0003356
Current Status:	CLOSED 11/17/2005
Closure Type:	Closure certification issued
Released Chemical:	GASOLINE

V106 **ENE** **1/4-1/2** **0.427 mi.** **2252 ft.**	**YOUR NEIGHBORHOOD GAS STATION** **1045 EL CAMINO DRIVE** **COSTA MESA, CA 92692** **Site 3 of 3 in cluster V**	**CA LUST**	**S106387353** **N/A**

Relative: **Lower**

Actual: **44 ft.**

LUST REG 8:

Region:	8
County:	Orange
Regional Board:	Santa Ana Region
Facility Status:	Case Closed
Case Number:	Not reported
Local Case Num:	04UT009
Case Type:	Soil only
Substance:	Gasoline
Qty Leaked:	0
Abate Method:	Not reported
Cross Street:	Not reported
Enf Type:	CLOS
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Close Tank
Leak Cause:	Unknown
Leak Source:	Tank
Global ID:	T0605964289
How Stopped Date:	9/9/9999
Enter Date:	Not reported
Review Date:	1/21/2004
Prelim Assess:	Not reported
Discover Date:	1/21/2004
Enforcement Date:	Not reported
Close Date:	7/7/2004
Workplan:	5/6/2004
Pollution Char:	6/10/2004
Remed Plan:	Not reported
Remed Action:	Not reported
Monitoring:	Not reported
Enter Date:	Not reported
GW Qualifies:	Not reported
Soil Qualifies:	=
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	0
Longitude:	0
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	54000
MTBE Fuel:	1
MTBE Tested:	MTBE Detected. Site tested for MTBE & MTBE detected
MTBE Class:	*
Staff:	Not reported
Staff Initials:	AR
Lead Agency:	Local Agency
Local Agency:	30000L
Hydr Basin #:	Not reported
Beneficial:	MUN

YOUR NEIGHBORHOOD GAS STATION (Continued) **S106387353**

Priority: Not reported
Cleanup Fund Id: Not reported
Work Suspended: Not reported
Summary: Not reported

107
NNW
1/4-1/2
0.434 mi.
2290 ft.

PRESTIGE STN #673 (ARCO #5185)
1450 BAKER ST
COSTA MESA, CA 92626

CA LUST **U001559145**
CA FID UST **N/A**

Relative:
Lower

Actual:
47 ft.

LUST:

Region:	STATE
Global Id:	T0605901168
Latitude:	33.6801553
Longitude:	-117.918192
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	01/26/2004
Lead Agency:	ORANGE COUNTY LOP
Case Worker:	DB
Local Agency:	ORANGE COUNTY LOP
RB Case Number:	083001528T
LOC Case Number:	90UT121
File Location:	Local Agency
Potential Media Affect:	Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0605901168
Contact Type:	Local Agency Caseworker
Contact Name:	DENAMARIE BAKER
Organization Name:	ORANGE COUNTY LOP
Address:	1241 E. DYER ROAD, STE. 120
City:	SANTA ANA
Email:	dbaker@ochca.com
Phone Number:	7144336255

Global Id:	T0605901168
Contact Type:	Regional Board Caseworker
Contact Name:	VALERIE JAHN-BULL
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	vjahn-bull@waterboards.ca.gov
Phone Number:	9517824903

Status History:

Global Id:	T0605901168
Status:	Completed - Case Closed
Status Date:	01/26/2004

Global Id:	T0605901168
Status:	Open - Case Begin Date
Status Date:	01/31/1990

PRESTIGE STN #673 (ARCO #5185) (Continued) **U001559145**

Regulatory Activities:

Global Id:	T0605901168
Action Type:	ENFORCEMENT
Date:	05/10/1990
Action:	Notice of Responsibility
Global Id:	T0605901168
Action Type:	ENFORCEMENT
Date:	06/12/2003
Action:	Staff Letter
Global Id:	T0605901168
Action Type:	ENFORCEMENT
Date:	01/26/2004
Action:	Closure/No Further Action Letter
Global Id:	T0605901168
Action Type:	REMEDIATION
Date:	01/01/1950
Action:	Soil Vapor Extraction (SVE)
Global Id:	T0605901168
Action Type:	REMEDIATION
Date:	01/01/1950
Action:	Excavation
Global Id:	T0605901168
Action Type:	Other
Date:	01/01/1950
Action:	Leak Discovery
Global Id:	T0605901168
Action Type:	Other
Date:	01/01/1950
Action:	Leak Reported

ORANGE CO. LUST:

Region:	ORANGE
Facility Id:	90UT121
Current Status:	Certification (Case Closed)
Released Substance:	Gasoline-Automotive (motor gasoline and additives), leaded & unleaded
Date Closed:	01/26/2004
Case Type:	Other Ground Water
Record ID:	RO0002281

LUST REG 8:

Region:	8
County:	Orange
Regional Board:	Santa Ana Region
Facility Status:	Case Closed
Case Number:	083001528T
Local Case Num:	90UT121
Case Type:	Other ground water affected
Substance:	Gasoline
Qty Leaked:	0

PRESTIGE STN #673 (ARCO #5185) (Continued) **U001559145**

Abate Method:	Not reported
Cross Street:	Not reported
Enf Type:	CLOS
Funding:	Not reported
How Discovered:	LT
How Stopped:	NPP
Leak Cause:	Unknown
Leak Source:	Piping
Global ID:	T0605901168
How Stopped Date:	9/9/9999
Enter Date:	Not reported
Review Date:	Not reported
Prelim Assess:	Not reported
Discover Date:	1/31/1990
Enforcement Date:	Not reported
Close Date:	1/26/2004
Workplan:	Not reported
Pollution Char:	Not reported
Remed Plan:	Not reported
Remed Action:	Not reported
Monitoring:	Not reported
Enter Date:	Not reported
GW Qualifies:	=
Soil Qualifies:	=
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.6801553
Longitude:	-117.918192
MTBE Date:	12/13/2001
Max MTBE GW:	120
MTBE Concentration:	0
Max MTBE Soil:	.077
MTBE Fuel:	1
MTBE Tested:	MTBE Detected. Site tested for MTBE & MTBE detected
MTBE Class:	*
Staff:	VJJ
Staff Initials:	AR
Lead Agency:	Local Agency
Local Agency:	30000L
Hydr Basin #:	Not reported
Beneficial:	MUN
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Summary:	Not reported

CA FID UST:

Facility ID:	30001032
Regulated By:	UTNKA
Regulated ID:	Not reported
Cortese Code:	Not reported
SIC Code:	Not reported
Facility Phone:	7144320147
Mail To:	Not reported
Mailing Address:	17315 STUDEBAKER RD

PRESTIGE STN #673 (ARCO #5185) (Continued) **U001559145**

Mailing Address 2:	Not reported
Mailing City,St,Zip:	COSTA MESA 92626
Contact:	Not reported
Contact Phone:	Not reported
DUNs Number:	Not reported
NPDES Number:	Not reported
EPA ID:	Not reported
Comments:	Not reported
Status:	Active

W108
NW
1/4-1/2
0.485 mi.
2560 ft.

TEXACO SERVICE STATION 121876
3001 HARBOR BLVD
COSTA MESA, CA

Site 1 of 2 in cluster W

RCRA-SQG
FINDS
CA LUST
CA FID UST
CA UST
CA SWEEPS UST

1004678032
CAR000104182

Relative:
Lower

Actual:
48 ft.

RCRA-SQG:

Date form received by agency:	02/28/2002
Facility name:	TEXACO SERVICE STATION 121876
Facility address:	3001 HARBOR COSTA MESA, CA 92627
EPA ID:	CAR000104182
Mailing address:	PO BOX 2648 HOUSTON, TX 77252
Contact:	SONDRA E BIENVENU
Contact address:	Not reported Not reported
Contact country:	Not reported
Contact telephone:	(713) 241-5036
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	EQUILON ENTERPRISES L L C
Owner/operator address:	P O BOX 2648 HOUSTON, TX 77252
Owner/operator country:	Not reported
Owner/operator telephone:	(713) 241-5036
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No

TEXACO SERVICE STATION 121876 (Continued) **1004678032**

On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 02/28/2002
Facility name: TEXACO SERVICE STATION 121876
Classification: Large Quantity Generator

Date form received by agency: 08/22/2001
Facility name: TEXACO SERVICE STATION 121876
Site name: TEXACO SERVICE STATION
Classification: Small Quantity Generator

Hazardous Waste Summary:
Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Violation Status: No violations found

FINDS:

Registry ID: 110012220907

Environmental Interest/Information System
California Hazardous Waste Tracking System - Datamart (HWTS-DATAMART) provides California with information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

HAZARDOUS WASTE BIENNIAL REPORTER

LUST:
Region: STATE
Global Id: T0605901482
Latitude: 33.680375

TEXACO SERVICE STATION 121876 (Continued) **1004678032**

Longitude:	-117.919758
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	01/04/2002
Lead Agency:	ORANGE COUNTY LOP
Case Worker:	DB
Local Agency:	ORANGE COUNTY LOP
RB Case Number:	083001981T
LOC Case Number:	01UT022
File Location:	Local Agency
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0605901482
Contact Type:	Regional Board Caseworker
Contact Name:	TOM E. MBEKE-EKANEM
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	tmbeke-ekanem@waterboards.ca.gov
Phone Number:	9513202007

Global Id:	T0605901482
Contact Type:	Local Agency Caseworker
Contact Name:	DENAMARIE BAKER
Organization Name:	ORANGE COUNTY LOP
Address:	1241 E. DYER ROAD, STE. 120
City:	SANTA ANA
Email:	dbaker@ochca.com
Phone Number:	7144336255

Status History:

Global Id:	T0605901482
Status:	Completed - Case Closed
Status Date:	01/04/2002

Global Id:	T0605901482
Status:	Open - Case Begin Date
Status Date:	10/02/2001

Regulatory Activities:

Global Id:	T0605901482
Action Type:	Other
Date:	01/01/1950
Action:	Leak Reported

Global Id:	T0605901482
Action Type:	REMEDIATION
Date:	01/01/1950
Action:	Excavation

Global Id:	T0605901482
Action Type:	Other

TEXACO SERVICE STATION 121876 (Continued) **1004678032**

Date:	01/01/1950
Action:	Leak Discovery

ORANGE CO. LUST:

Region:	ORANGE
Facility Id:	01UT022
Current Status:	Certification (Case Closed)
Released Substance:	Gasoline-Automotive (motor gasoline and additives), leaded & unleaded
Date Closed:	01/04/2002
Case Type:	Soil Only
Record ID:	RO0001673

LUST REG 8:

Region:	8
County:	Orange
Regional Board:	Santa Ana Region
Facility Status:	Case Closed
Case Number:	083001981T
Local Case Num:	01UT022
Case Type:	Soil only
Substance:	Gasoline
Qty Leaked:	0
Abate Method:	Not reported
Cross Street:	Not reported
Enf Type:	Not reported
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Close Tank
Leak Cause:	Unknown
Leak Source:	Unknown
Global ID:	T0605901482
How Stopped Date:	9/9/9999
Enter Date:	Not reported
Review Date:	Not reported
Prelim Assess:	Not reported
Discover Date:	10/2/2001
Enforcement Date:	Not reported
Close Date:	1/4/2002
Workplan:	Not reported
Pollution Char:	Not reported
Remed Plan:	Not reported
Remed Action:	Not reported
Monitoring:	Not reported
Enter Date:	Not reported
GW Qualifies:	Not reported
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.6801413
Longitude:	-117.919517
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0

TEXACO SERVICE STATION 121876 (Continued) **1004678032**

Max MTBE Soil: Not reported
MTBE Fuel: 1
MTBE Tested: Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.
MTBE Class: *
Staff: TME
Staff Initials: AR
Lead Agency: Local Agency
Local Agency: 30000L
Hydr Basin #: Not reported
Beneficial: MUN
Priority: Not reported
Cleanup Fund Id: Not reported
Work Suspended: Not reported
Summary: Not reported

CA FID UST:
Facility ID: 30001231
Regulated By: UTNKA
Regulated ID: Not reported
Cortese Code: Not reported
SIC Code: Not reported
Facility Phone: 7145570285
Mail To: Not reported
Mailing Address: 3631 HBR BLVD STE 225 PAU
Mailing Address 2: Not reported
Mailing City,St,Zip: COSTA MESA 92627
Contact: Not reported
Contact Phone: Not reported
DUNs Number: Not reported
NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Active

UST:
Facility ID: 6373
Latitude: 33.68014
Longitude: -117.91944

SWEEPS UST:
Status: Active
Comp Number: 6373
Number: 9
Board Of Equalization: 44-000217
Referral Date: 09-30-92
Action Date: 09-15-92
Created Date: 02-29-88
Tank Status: A
Owner Tank Id: Not reported
Swrcb Tank Id: 30-000-006373-000001
Actv Date: Not reported
Capacity: 10000
Tank Use: M.V. FUEL
Stg: P
Content: REG UNLEADED
Number Of Tanks: 4

TEXACO SERVICE STATION 121876 (Continued) **1004678032**

Status:	Active
Comp Number:	6373
Number:	9
Board Of Equalization:	44-000217
Referral Date:	09-30-92
Action Date:	09-15-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	Not reported
Swrcb Tank Id:	30-000-006373-000002
Actv Date:	Not reported
Capacity:	10000
Tank Use:	M.V. FUEL
Stg:	P
Content:	REG UNLEADED
Number Of Tanks:	Not reported

Status:	Active
Comp Number:	6373
Number:	9
Board Of Equalization:	44-000217
Referral Date:	09-30-92
Action Date:	09-15-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	Not reported
Swrcb Tank Id:	30-000-006373-000003
Actv Date:	Not reported
Capacity:	10000
Tank Use:	M.V. FUEL
Stg:	P
Content:	DIESEL
Number Of Tanks:	Not reported

Status:	Active
Comp Number:	6373
Number:	9
Board Of Equalization:	44-000217
Referral Date:	09-30-92
Action Date:	09-15-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	Not reported
Swrcb Tank Id:	30-000-006373-000004
Actv Date:	Not reported
Capacity:	10000
Tank Use:	M.V. FUEL
Stg:	P
Content:	DIESEL
Number Of Tanks:	Not reported

109 West 1/4-1/2 0.488 mi. 2578 ft.	**UNOCAL #5436 1645 ADAMS AVE COSTA MESA, CA 92626**	**CA HIST CORTESE CA LUST CA FID UST CA SWEEPS UST**	**S101589108 N/A**

Relative: Higher

Actual: 61 ft.

CORTESE:

Region:	CORTESE
Facility County Code:	30
Reg By:	LTNKA
Reg Id:	083002070T

LUST:

Region:	STATE
Global Id:	T0605901538
Latitude:	33.6727175
Longitude:	-117.9248622
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	08/08/1992
Lead Agency:	ORANGE COUNTY LOP
Case Worker:	DB
Local Agency:	ORANGE COUNTY LOP
RB Case Number:	083002070T
LOC Case Number:	92UT090
File Location:	Local Agency
Potential Media Affect:	Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0605901538
Contact Type:	Regional Board Caseworker
Contact Name:	NANCY OLSON-MARTIN
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	nolson-martin@waterboards.ca.gov
Phone Number:	Not reported
Global Id:	T0605901538
Contact Type:	Local Agency Caseworker
Contact Name:	DENAMARIE BAKER
Organization Name:	ORANGE COUNTY LOP
Address:	1241 E. DYER ROAD, STE. 120
City:	SANTA ANA
Email:	dbaker@ochca.com
Phone Number:	7144336255

Status History:

Global Id:	T0605901538
Status:	Completed - Case Closed
Status Date:	08/08/1992
Global Id:	T0605901538
Status:	Open - Case Begin Date
Status Date:	07/14/1992

UNOCAL #5436 (Continued) **S101589108**

Regulatory Activities:

Global Id:	T0605901538
Action Type:	Other
Date:	01/01/1950
Action:	Leak Reported
Global Id:	T0605901538
Action Type:	REMEDIATION
Date:	01/01/1950
Action:	Excavation
Global Id:	T0605901538
Action Type:	Other
Date:	01/01/1950
Action:	Leak Discovery

ORANGE CO. LUST:

Region:	ORANGE
Facility Id:	92UT090
Current Status:	Certification (Case Closed)
Released Substance:	Gasoline-Automotive (motor gasoline and additives), leaded & unleaded
Date Closed:	08/08/1997
Case Type:	Other Ground Water
Record ID:	RO0000754

LUST REG 8:

Region:	8
County:	Orange
Regional Board:	Santa Ana Region
Facility Status:	Case Closed
Case Number:	083002070T
Local Case Num:	92UT090
Case Type:	Other ground water affected
Substance:	Gasoline
Qty Leaked:	0
Abate Method:	Not reported
Cross Street:	Not reported
Enf Type:	Not reported
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Close Tank
Leak Cause:	Unknown
Leak Source:	Unknown
Global ID:	T0605901538
How Stopped Date:	9/9/9999
Enter Date:	Not reported
Review Date:	Not reported
Prelim Assess:	Not reported
Discover Date:	7/14/1992
Enforcement Date:	Not reported
Close Date:	8/8/1992
Workplan:	Not reported
Pollution Char:	Not reported
Remed Plan:	Not reported
Remed Action:	Not reported

UNOCAL #5436 (Continued) **S101589108**

Monitoring: Not reported
Enter Date: Not reported
GW Qualifies: Not reported
Soil Qualifies: Not reported
Operator: Not reported
Facility Contact: Not reported
Interim: Not reported
Oversite Program: LUST
Latitude: 33.6727175
Longitude: -117.9248622
MTBE Date: Not reported
Max MTBE GW: Not reported
MTBE Concentration: 0
Max MTBE Soil: Not reported
MTBE Fuel: 1
MTBE Tested: Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.
MTBE Class: *
Staff: NOM
Staff Initials: AR
Lead Agency: Local Agency
Local Agency: 30000L
Hydr Basin #: Not reported
Beneficial: MUN
Priority: Not reported
Cleanup Fund Id: Not reported
Work Suspended: Not reported
Summary: Not reported

CA FID UST:
Facility ID: 30001316
Regulated By: UTNKA
Regulated ID: Not reported
Cortese Code: Not reported
SIC Code: Not reported
Facility Phone: 7145401206
Mail To: Not reported
Mailing Address: 911 WILSHIRE BLVD STE 10
Mailing Address 2: Not reported
Mailing City,St,Zip: COSTA MESA 92626
Contact: Not reported
Contact Phone: Not reported
DUNs Number: Not reported
NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Active

SWEEPS UST:
Status: Active
Comp Number: 2072
Number: 9
Board Of Equalization: 44-001057
Referral Date: 09-30-92
Action Date: 06-18-92
Created Date: 02-29-88
Tank Status: A

UNOCAL #5436 (Continued) **S101589108**

Owner Tank Id: Not reported
Swrcb Tank Id: 30-000-002072-000001
Actv Date: Not reported
Capacity: 280
Tank Use: PETROLEUM
Stg: P
Content: Not reported
Number Of Tanks: 3

Status: Active
Comp Number: 2072
Number: 9
Board Of Equalization: 44-001057
Referral Date: 09-30-92
Action Date: 06-18-92
Created Date: 02-29-88
Tank Status: A
Owner Tank Id: Not reported
Swrcb Tank Id: 30-000-002072-000005
Actv Date: Not reported
Capacity: 10000
Tank Use: M.V. FUEL
Stg: P
Content: REG UNLEADED
Number Of Tanks: Not reported

Status: Active
Comp Number: 2072
Number: 9
Board Of Equalization: 44-001057
Referral Date: 09-30-92
Action Date: 06-18-92
Created Date: 02-29-88
Tank Status: A
Owner Tank Id: Not reported
Swrcb Tank Id: 30-000-002072-000006
Actv Date: Not reported
Capacity: 10000
Tank Use: M.V. FUEL
Stg: P
Content: REG UNLEADED
Number Of Tanks: Not reported

W110 **MOBIL STATION (18-HNR)** **CA LUST** **U003433240**
NW **3006 HARBOR BLVD** **CA FID UST** **N/A**
1/4-1/2 **COSTA MESA, CA 92626** **CA SWEEPS UST**
0.497 mi. **CA CHMIRS**
2625 ft. **Site 2 of 2 in cluster W**

Relative:
Lower

Actual:
47 ft.

LUST:
Region: STATE
Global Id: T060592778
Latitude: 33.680473
Longitude: -117.919134
Case Type: LUST Cleanup Site
Status: Open - Eligible for Closure
Status Date: 03/27/2013
Lead Agency: ORANGE COUNTY LOP

MOBIL STATION (18-HNR) (Continued) **U003433240**

Case Worker:	DB
Local Agency:	ORANGE COUNTY LOP
RB Case Number:	083003863T
LOC Case Number:	00UT029
File Location:	Local Agency
Potential Media Affect:	Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern:	Gasoline
Site History:	Please refer to recent Site Documents or Monitoring Reports in GeoTracker for site history. Orange County is not responsible for the accuracy of any professional interpretations provided in reports submitted by consultants for the responsible party.

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T060592778
Contact Type:	Local Agency Caseworker
Contact Name:	DENAMARIE BAKER
Organization Name:	ORANGE COUNTY LOP
Address:	1241 E. DYER ROAD, STE. 120
City:	SANTA ANA
Email:	dbaker@ochca.com
Phone Number:	7144336255
Global Id:	T060592778
Contact Type:	Regional Board Caseworker
Contact Name:	ROSE SCOTT
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	rscott@waterboards.ca.gov
Phone Number:	9513206375

Status History:

Global Id:	T060592778
Status:	Open - Case Begin Date
Status Date:	08/14/2000
Global Id:	T060592778
Status:	Open - Eligible for Closure
Status Date:	03/27/2013
Global Id:	T060592778
Status:	Open - Remediation
Status Date:	08/15/2007
Global Id:	T060592778
Status:	Open - Site Assessment
Status Date:	03/05/2001
Global Id:	T060592778
Status:	Open - Verification Monitoring
Status Date:	11/03/2011

Regulatory Activities:

Global Id:	T060592778
Action Type:	ENFORCEMENT

MOBIL STATION (18-HNR) (Continued) **U003433240**

Date:	11/14/2011
Action:	Notice of Responsibility
Global Id:	T060592778
Action Type:	ENFORCEMENT
Date:	01/04/2005
Action:	Staff Letter
Global Id:	T060592778
Action Type:	ENFORCEMENT
Date:	12/20/2007
Action:	Staff Letter
Global Id:	T060592778
Action Type:	ENFORCEMENT
Date:	08/11/2009
Action:	Staff Letter
Global Id:	T060592778
Action Type:	Other
Date:	01/01/1950
Action:	Leak Reported
Global Id:	T060592778
Action Type:	ENFORCEMENT
Date:	08/01/2011
Action:	Staff Letter
Global Id:	T060592778
Action Type:	ENFORCEMENT
Date:	07/13/2009
Action:	Staff Letter
Global Id:	T060592778
Action Type:	REMEDIATION
Date:	01/01/1950
Action:	In Situ Physical/Chemical Treatment (other than SVE)
Global Id:	T060592778
Action Type:	ENFORCEMENT
Date:	03/02/2011
Action:	Staff Letter
Global Id:	T060592778
Action Type:	ENFORCEMENT
Date:	04/16/2003
Action:	Staff Letter
Global Id:	T060592778
Action Type:	ENFORCEMENT
Date:	12/31/2003
Action:	Staff Letter
Global Id:	T060592778
Action Type:	ENFORCEMENT
Date:	07/09/2004
Action:	Staff Letter

MOBIL STATION (18-HNR) (Continued) **U003433240**

Global Id:	T060592778
Action Type:	ENFORCEMENT
Date:	08/31/2004
Action:	Staff Letter
Global Id:	T060592778
Action Type:	ENFORCEMENT
Date:	08/26/2005
Action:	Staff Letter
Global Id:	T060592778
Action Type:	ENFORCEMENT
Date:	11/21/2005
Action:	Staff Letter
Global Id:	T060592778
Action Type:	ENFORCEMENT
Date:	09/25/2007
Action:	Staff Letter
Global Id:	T060592778
Action Type:	ENFORCEMENT
Date:	03/03/2008
Action:	Staff Letter
Global Id:	T060592778
Action Type:	ENFORCEMENT
Date:	03/04/2008
Action:	Staff Letter
Global Id:	T060592778
Action Type:	REMEDIATION
Date:	01/01/1950
Action:	Excavation
Global Id:	T060592778
Action Type:	RESPONSE
Date:	04/04/2013
Action:	Request for Closure - Regulator Responded
Global Id:	T060592778
Action Type:	Other
Date:	01/01/1950
Action:	Leak Discovery
Global Id:	T060592778
Action Type:	ENFORCEMENT
Date:	03/27/2009
Action:	Staff Letter
Global Id:	T060592778
Action Type:	REMEDIATION
Date:	01/01/1950
Action:	Soil Vapor Extraction (SVE)

MOBIL STATION (18-HNR) (Continued) **U003433240**

ORANGE CO. LUST:

Region:	ORANGE
Facility Id:	00UT029
Current Status:	Remedial Action
Released Substance:	Gasoline-Automotive (motor gasoline and additives), leaded & unleaded
Date Closed:	Not reported
Case Type:	Other Ground Water
Record ID:	RO0001834

LUST REG 8:

Region:	8
County:	Orange
Regional Board:	Santa Ana Region
Facility Status:	Pollution Characterization
Case Number:	083003863T
Local Case Num:	00UT029
Case Type:	Other ground water affected
Substance:	Gasoline
Qty Leaked:	0
Abate Method:	Not reported
Cross Street:	Not reported
Enf Type:	SEL
Funding:	Not reported
How Discovered:	SA
How Stopped:	New Tank
Leak Cause:	Unknown
Leak Source:	Tank
Global ID:	T060592778
How Stopped Date:	9/9/9999
Enter Date:	Not reported
Review Date:	Not reported
Prelim Assess:	Not reported
Discover Date:	8/14/2000
Enforcement Date:	Not reported
Close Date:	Not reported
Workplan:	Not reported
Pollution Char:	3/5/2001
Remed Plan:	Not reported
Remed Action:	Not reported
Monitoring:	Not reported
Enter Date:	Not reported
GW Qualifies:	=
Soil Qualifies:	=
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.680473
Longitude:	-117.919134
MTBE Date:	2/6/2004
Max MTBE GW:	775
MTBE Concentration:	0
Max MTBE Soil:	7850
MTBE Fuel:	1
MTBE Tested:	MTBE Detected. Site tested for MTBE & MTBE detected
MTBE Class:	*

MOBIL STATION (18-HNR) (Continued) **U003433240**

Staff:	RS
Staff Initials:	AR
Lead Agency:	Local Agency
Local Agency:	30000L
Hydr Basin #:	Not reported
Beneficial:	MUN
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Summary:	Not reported

CA FID UST:

Facility ID:	30016853
Regulated By:	UTNKA
Regulated ID:	Not reported
Cortese Code:	Not reported
SIC Code:	Not reported
Facility Phone:	7145402445
Mail To:	Not reported
Mailing Address:	3225 GALLOWS RD ATTN: EAR
Mailing Address 2:	Not reported
Mailing City,St,Zip:	COSTA MESA 92626
Contact:	Not reported
Contact Phone:	Not reported
DUNs Number:	Not reported
NPDES Number:	Not reported
EPA ID:	Not reported
Comments:	Not reported
Status:	Active

SWEEPS UST:

Status:	Active
Comp Number:	3432
Number:	9
Board Of Equalization:	44-000400
Referral Date:	09-30-92
Action Date:	09-15-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	Not reported
Swrcb Tank Id:	30-000-003432-000001
Actv Date:	Not reported
Capacity:	8000
Tank Use:	M.V. FUEL
Stg:	P
Content:	REG UNLEADED
Number Of Tanks:	4

Status:	Active
Comp Number:	3432
Number:	9
Board Of Equalization:	44-000400
Referral Date:	09-30-92
Action Date:	09-15-92
Created Date:	02-29-88
Tank Status:	A

MOBIL STATION (18-HNR) (Continued) **U003433240**

Owner Tank Id: Not reported
Swrcb Tank Id: 30-000-003432-000002
Actv Date: Not reported
Capacity: 8000
Tank Use: M.V. FUEL
Stg: P
Content: REG UNLEADED
Number Of Tanks: Not reported

Status: Active
Comp Number: 3432
Number: 9
Board Of Equalization: 44-000400
Referral Date: 09-30-92
Action Date: 09-15-92
Created Date: 02-29-88
Tank Status: A
Owner Tank Id: Not reported
Swrcb Tank Id: 30-000-003432-000003
Actv Date: Not reported
Capacity: 12000
Tank Use: M.V. FUEL
Stg: P
Content: DIESEL
Number Of Tanks: Not reported

Status: Active
Comp Number: 3432
Number: 9
Board Of Equalization: 44-000400
Referral Date: 09-30-92
Action Date: 09-15-92
Created Date: 02-29-88
Tank Status: A
Owner Tank Id: Not reported
Swrcb Tank Id: 30-000-003432-000004
Actv Date: Not reported
Capacity: 6000
Tank Use: M.V. FUEL
Stg: P
Content: REG UNLEADED
Number Of Tanks: Not reported

CHMIRS:
OES Incident Number: 05-4776
OES notification: 08/14/2005
OES Date: Not reported
OES Time: Not reported
Incident Date: Not reported
Date Completed: Not reported
Property Use: Not reported
Agency Id Number: Not reported
Agency Incident Number: Not reported
Time Notified: Not reported
Time Completed: Not reported
Surrounding Area: Not reported
Estimated Temperature: Not reported

MOBIL STATION (18-HNR) (Continued) **U003433240**

Property Management: Not reported
Special Studies 1: Not reported
Special Studies 2: Not reported
Special Studies 3: Not reported
Special Studies 4: Not reported
Special Studies 5: Not reported
Special Studies 6: Not reported
More Than Two Substances Involved?: Not reported
Resp Agncy Personel # Of Decontaminated: Not reported
Responding Agency Personel # Of Injuries: Not reported
Responding Agency Personel # Of Fatalities: Not reported
Others Number Of Decontaminated: Not reported
Others Number Of Injuries: Not reported
Others Number Of Fatalities: Not reported
Vehicle Make/year: Not reported
Vehicle License Number: Not reported
Vehicle State: Not reported
Vehicle Id Number: Not reported
CA/DOT/PUC/ICC Number: Not reported
Company Name: Not reported
Reporting Officer Name/ID: Not reported
Report Date: Not reported
Comments: Not reported
Facility Telephone: Not reported
Waterway Involved: Not reported
Waterway: Not reported
Spill Site: Not reported
Cleanup By: Unknown
Containment: Not reported
What Happened: Not reported
Type: Not reported
Measure: Not reported
Other: Not reported
Date/Time: Not reported
Year: 2005
Agency: Veeder Root
Incident Date: 8/14/200512:00:00 AM
Admin Agency: Orange Cnty Management Div - HazMat Div.
Amount: Not reported
Contained: Unknown
Site Type: Service Station
E Date: Not reported
Substance: Gasoline
Quantity Released: Not reported
BBLS: 0
Cups: 0
CUFT: 0
Gallons: 2
Grams: 0
Pounds: 0
Liters: 0
Ounces: 0
Pints: 0
Quarts: 0
Sheen: 0
Tons: 0
Unknown: 0

MOBIL STATION (18-HNR) (Continued) **U003433240**

Evacuations:	0
Number of Injuries:	0
Number of Fatalities:	0
Description:	Unknown cause for the spill. An unknown amount of gasoline possible spilled into a storm drain.
OES Incident Number:	03-4884
OES notification:	09/20/2003
OES Date:	Not reported
OES Time:	Not reported
Incident Date:	Not reported
Date Completed:	**Not reported**
Property Use:	Not reported
Agency Id Number:	Not reported
Agency Incident Number:	Not reported
Time Notified:	Not reported
Time Completed:	Not reported
Surrounding Area:	Not reported
Estimated Temperature:	Not reported
Property Management:	Not reported
Special Studies 1:	Not reported
Special Studies 2:	Not reported
Special Studies 3:	Not reported
Special Studies 4:	Not reported
Special Studies 5:	Not reported
Special Studies 6:	Not reported
More Than Two Substances Involved?:	Not reported
Resp Agncy Personel # Of Decontaminated:	Not reported
Responding Agency Personel # Of Injuries:	Not reported
Responding Agency Personel # Of Fatalities:	Not reported
Others Number Of Decontaminated:	Not reported
Others Number Of Injuries:	Not reported
Others Number Of Fatalities:	Not reported
Vehicle Make/year:	Not reported
Vehicle License Number:	Not reported
Vehicle State:	Not reported
Vehicle Id Number:	Not reported
CA/DOT/PUC/ICC Number:	Not reported
Company Name:	Not reported
Reporting Officer Name/ID:	Not reported
Report Date:	Not reported
Comments:	Not reported
Facility Telephone:	Not reported
Waterway Involved:	No
Waterway:	Not reported
Spill Site:	Not reported
Cleanup By:	Responsible Party
Containment:	Not reported
What Happened:	Not reported
Type:	Not reported
Measure:	Not reported
Other:	Not reported
Date/Time:	Not reported
Year:	2003
Agency:	Veeder Root
Incident Date:	9/20/200312:00:00 AM
Admin Agency:	Orange Cnty Management Div - HazMat Div.

MOBIL STATION (18-HNR) (Continued) **U003433240**

Amount:	Not reported
Contained:	Yes
Site Type:	Service Station
E Date:	Not reported
Substance:	Gasoline
Quantity Released:	Not reported
BBLS:	0
Cups:	0
CUFT:	0
Gallons:	0.000000
Grams:	0
Pounds:	0
Liters:	0
Ounces:	3
Pints:	0
Quarts:	0
Sheen:	0
Tons:	0
Unknown:	0
Evacuations:	0
Number of Injuries:	0
Number of Fatalities:	0
Description:	Substance was released due to substance leaking from dispenser where nozzle and hose connect.

111
SE
1/2-1
0.517 mi.
2731 ft.

COSTA MESA AIR NATIONAL GUARD - COSTA MESA AIR NATIONAL GUAR
2651 NEWPORT BOULEVARD
COSTA MESA, CA 92626

CA NPDES
CA LUST
CA MCS
CA Notify 65

S100179551
N/A

Relative:
Higher

Actual:
69 ft.

NPDES:

Npdes Number:	CAS000001
Facility Status:	Active
Agency Id:	0
Region:	8
Regulatory Measure Id:	351161
Order No:	97-03-DWQ
Regulatory Measure Type:	Enrollee
Place Id:	Not reported
WDID:	8 30I021756
Program Type:	Industrial
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	08/25/2008
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	US Army Reserve Center 63rd RSC
Discharge Address:	230 R T Jones Road
Discharge City:	Mountain View
Discharge State:	California
Discharge Zip:	94043

LUST:

Region:	STATE
Global Id:	T0605901234
Latitude:	33.6716369
Longitude:	-117.890061

COSTA MESA AIR NATIONAL GUARD - COSTA MESA AIR NATIONAL GUAR (Continued) **S100179551**

Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	06/17/1993
Lead Agency:	ORANGE COUNTY LOP
Case Worker:	DB
Local Agency:	ORANGE COUNTY LOP
RB Case Number:	083001626T
LOC Case Number:	92UT101
File Location:	Local Agency
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Diesel, Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0605901234
Contact Type:	Regional Board Caseworker
Contact Name:	CARL BERNHARDT
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	cbernhardt@waterboards.ca.gov
Phone Number:	9517824495

Global Id:	T0605901234
Contact Type:	Local Agency Caseworker
Contact Name:	DENAMARIE BAKER
Organization Name:	ORANGE COUNTY LOP
Address:	1241 E. DYER ROAD, STE. 120
City:	SANTA ANA
Email:	dbaker@ochca.com
Phone Number:	7144336255

Status History:

Global Id:	T0605901234
Status:	Completed - Case Closed
Status Date:	06/17/1993

Global Id:	T0605901234
Status:	Open - Case Begin Date
Status Date:	08/21/1992

Regulatory Activities:

Global Id:	T0605901234
Action Type:	REMEDIATION
Date:	01/01/1950
Action:	Excavation

Global Id:	T0605901234
Action Type:	Other
Date:	01/01/1950
Action:	Leak Discovery

Global Id:	T0605901234
Action Type:	Other
Date:	01/01/1950

COSTA MESA AIR NATIONAL GUARD - COSTA MESA AIR NATIONAL GUAR (Continued) **S100179551**

Action: Leak Reported

ORANGE CO. LUST:

Region: ORANGE
Facility Id: 92UT101
Current Status: Certification (Case Closed)
Released Substance: Diesel fuel oil and additives, Nos.1-D, 2-D, 2-4
Date Closed: 06/17/1993
Case Type: Soil Only
Record ID: RO0002284

Region: ORANGE
Facility Id: 92UT101
Current Status: Not reported
Released Substance: Gasoline-Automotive (motor gasoline and additives), leaded & unleaded
Date Closed: 06/17/1993
Case Type: Not reported
Record ID: RO0002284

LUST REG 8:

Region: 8
County: Orange
Regional Board: Santa Ana Region
Facility Status: Case Closed
Case Number: 083001626T
Local Case Num: 92UT101
Case Type: Soil only
Substance: 12034,800661
Qty Leaked: 0
Abate Method: Not reported
Cross Street: Not reported
Enf Type: Not reported
Funding: Not reported
How Discovered: Tank Closure
How Stopped: Close Tank
Leak Cause: Unknown
Leak Source: Unknown
Global ID: T0605901234
How Stopped Date: 9/9/9999
Enter Date: Not reported
Review Date: Not reported
Prelim Assess: Not reported
Discover Date: 8/21/1992
Enforcement Date: Not reported
Close Date: 6/17/1993
Workplan: Not reported
Pollution Char: Not reported
Remed Plan: Not reported
Remed Action: Not reported
Monitoring: Not reported
Enter Date: Not reported
GW Qualifies: Not reported
Soil Qualifies: Not reported
Operator: Not reported
Facility Contact: Not reported

COSTA MESA AIR NATIONAL GUARD - COSTA MESA AIR NATIONAL GUAR (Continued) **S100179551**

Interim: Not reported
Oversite Program: LUST
Latitude: 33.67068943
Longitude: -117.8914304
MTBE Date: Not reported
Max MTBE GW: Not reported
MTBE Concentration: 0
Max MTBE Soil: Not reported
MTBE Fuel: 0
MTBE Tested: Not Required to be Tested.
MTBE Class: *
Staff: CAB
Staff Initials: AR
Lead Agency: Local Agency
Local Agency: 30000L
Hydr Basin #: Not reported
Beneficial: MUN
Priority: Not reported
Cleanup Fund Id: Not reported
Work Suspended: Not reported
Summary: Not reported

MCS:
Global Id: T0605959838
Latitude: 33.67107
Longitude: -117.8912
Case Type: Military Cleanup Site
Status: Open - Site Assessment
Status Date: 05/15/2012
Lead Agency: SANTA ANA RWQCB (REGION 8)
Caseworker: PAH
Local Agency: ORANGE COUNTY
RB Case Number: Not reported
LOC Case Number: 30970004
File Location: DTSC
Potential Media Affect: Soil
EDR Link ID: T0605959838
Potential Contaminants of Concern: Waste Oil / Motor / Hydraulic / Lubricating, Diesel
Site History: not on Appendix A list.

Click here to access the California GeoTracker records for this facility:

Notify 65:
Date Reported: Not reported
Staff Initials: Not reported
Board File Number: Not reported
Facility Type: Not reported
Discharge Date: Not reported
Incident Description: 90220

112 **(CMAFP) SANTA ANA AIRUG** **CA ENVIROSTOR** **S107735759**
ESE **N/A**
1/2-1 **SANTA ANA, CA**
0.818 mi.
4320 ft.

Relative:
Lower

Actual:
47 ft.

ENVIROSTOR:

Site Type:	Military Evaluation
Site Type Detailed:	FUDS
Acres:	Not reported
NPL:	NO
Regulatory Agencies:	SMBRP
Lead Agency:	SMBRP
Program Manager:	Not reported
Supervisor:	Douglas Bautista
Division Branch:	Cleanup Cypress
Facility ID:	80000028
Site Code:	Not reported
Assembly:	74
Senate:	37
Special Program:	Not reported
Status:	Inactive - Needs Evaluation
Status Date:	07/01/2005
Restricted Use:	NO
Site Mgmt. Req.:	NONE SPECIFIED
Funding:	DERA
Latitude:	33.66861
Longitude:	-117.8916
APN:	NONE SPECIFIED
Past Use:	NONE SPECIFIED
Potential COC:	NONE SPECIFIED
Confirmed COC:	NONE SPECIFIED, NONE SPECIFIED
Potential Description:	NONE SPECIFIED
Alias Name:	CA99799F693800
Alias Type:	Federal Facility ID
Alias Name:	J09CA0042
Alias Type:	INPR
Alias Name:	80000028
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	Not reported
Completed Sub Area Name:	Not reported
Completed Document Type:	Not reported
Completed Date:	Not reported
Comments:	Not reported

Future Area Name:	Not reported
Future Sub Area Name:	Not reported
Future Document Type:	Not reported
Future Due Date:	Not reported
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported

113	**COSTA MESA AIR NATIONAL GUARD**	**CA HIST Cal-Sites**	**S101481491**
East	**S OF PRESIDIO DR & WEST OF NEWPORT BLVD**	**CA Cortese**	**N/A**
1/2-1	**COSTA MESA, CA 92626**	**CA RESPONSE**	
0.940 mi.		**CA ENVIROSTOR**	
4964 ft.			

Relative:
Lower

Actual:
46 ft.

Calsite:

Facility ID:	30970004
Region:	3
Region Name:	GLENDALE
Branch:	SO
Branch Name:	OMF-SOUTHERN CALIF
File Name:	Not reported
State Senate District:	01011995
Status:	ANNUAL WORKPLAN (AWP) - ACTIVE SITE
Status Name:	ANNUAL WORKPLAN - ACTIVE SITE
Lead Agency:	DTSC
Lead Agency:	DEPT OF TOXIC SUBSTANCES CONTROL
Facility Type:	OPEN
Type Name:	OPEN MILITARY BASE
NPL:	Not Listed
SIC Code:	97
SIC Name:	NATIONAL SECURITY/INTERNATIONAL AFFAIRS
Access:	Not reported
Cortese:	Not reported
Hazardous Ranking Score:	Not reported
Date Site Hazard Ranked:	Not reported
Groundwater Contamination:	Not reported
Staff Member Responsible for Site:	Not reported
Supervisor Responsible for Site:	Not reported
Region Water Control Board:	Not reported
Region Water Control Board Name:	Not reported
Lat/Long Direction:	Not reported
Lat/Long (dms):	0 0 0 / 0 0 0
Lat/long Method:	Not reported
Lat/Long Description:	Not reported
State Assembly District Code:	68
State Senate District Code:	35
Facility ID:	30970004
Activity:	BWEBS
Activity Name:	BASEWIDE ENVIRONMENTAL BASELINE SURVEY
AWP Code:	SITE1
Proposed Budget:	0
AWP Completion Date:	12162002
Revised Due Date:	Not reported
Comments Date:	12162002
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0

COSTA MESA AIR NATIONAL GUARD (Continued) **S101481491**

For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	30970004
Activity:	SS
Activity Name:	SITE SCREENING
AWP Code:	Not reported
Proposed Budget:	0
AWP Completion Date:	08081991
Revised Due Date:	Not reported
Comments Date:	08081991
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Alternate Address:	S OF PRESIDIO DR & WEST OF NEWPORT BLVD
Alternate City,St,Zip:	COSTA MESA, CA 92626
Background Info:	The Costa Mesa ANG station is an 8.5 acre facility that has been active since 1964. The facility is located on former Santa Ana A rmy Air Base property. Activities include routine maintenance of vehicles, generators, and various ground equipment. Hazardous w astes resulting from these activities include varying amounts of waste fuels, oils, paints, thinners, and solvents. A preliminary assessment was submitted in December 1990 where a recommendation for NFA was concluded.
Comments Date:	08081991
Comments:	Letter sent to Air National Guard (ANG) stating no concurr- ance
Comments Date:	08081991
Comments:	with nfa recommendation & explaining pea process and funding opti
Comments Date:	08081991
Comments:	on for DTSC oversight.
Comments Date:	12162002
Comments:	BWEBS - SITE 1: In June 2002, the Phase II EBS was submitted pres
Comments Date:	12162002
Comments:	enting the results of the soil and groundwater field investigatio
Comments Date:	12162002
Comments:	ns. A total of nine areas of concern (AOCs) were identified wher
Comments Date:	12162002
Comments:	e potential risks to human health and the environment may exist.
Comments Date:	12162002
Comments:	These include a battery room floor drain, motor vehicle lift are
Comments Date:	12162002
Comments:	a, fuel storage area, grease rack, oil and water sparator, diesel
Comments Date:	12162002
Comments:	refueller spill, groundwater sampling, lead-based paint sampling

COSTA MESA AIR NATIONAL GUARD (Continued) **S101481491**

Comments Date:	12162002
Comments:	, and hydraulic fluid spill area. Contaminants detected include p
Comments Date:	12162002
Comments:	etroleum hydrocarbons, volatile organic compounds, and lead-based
Comments Date:	12162002
Comments:	paint. Also, the extent of contamination was not determined. D
Comments Date:	12162002
Comments:	TSC submitted comments on August 26, 2002 not concurring with the
Comments Date:	12162002
Comments:	No Further Action recommendations by the Air Force, and requeste
Comments Date:	12162002
Comments:	d additional sampling to be conducted to determine the extent of
Comments Date:	12162002
Comments:	contamination. The Air Force responded with a final letter on Oc
Comments Date:	12162002
Comments:	tober 8, 2002 finalizing the EBS report and deferring any future
Comments Date:	12162002
Comments:	actions until a relocation date for the CMANG is known.
ID Name:	Not reported
ID Value:	Not reported
Alternate Name:	SANTA ANA ARMY BASE (1940S & 50S)COSTA MESA AIR NATIONAL GUARD
Special Programs Code:	DSMOA
Special Programs Name:	DEFENSE MEMORANDUM OF AGREEMENT

CORTESE:

Region:	CORTESE
Envirostor Id:	30970004
Site/Facility Type:	STATE RESPONSE
Cleanup Status:	ACTIVE
Status Date:	06/28/2011
Site Code:	400498
Latitude:	33.671666
Longitude:	-117.88888
Owner:	Not reported
Enf Type:	Not reported
Swat R:	Not reported
Flag:	export
Order No:	Not reported
Waste Discharge System No:	Not reported
Effective Date:	Not reported
Region 2:	Not reported
WID Id:	Not reported
Solid Waste Id No:	Not reported
Waste Management Uit Name:	Not reported

AWP:

AWP Facility ID:	30970004
Region Code:	3
Region:	GLENDALE
SMBR Branch Code:	SO
SMBR Branch Unit:	OMF-SOUTHERN CALIF
Site Name.:	Not reported
Current Status Date:	01011995
Current Status:	ANNUAL WORKPLAN - ACTIVE SITE
Lead Agency Code:	DTSC
Lead Agency:	DEPT OF TOXIC SUBSTANCES CONTROL

COSTA MESA AIR NATIONAL GUARD (Continued) **S101481491**

Facility Type:	Open military facility
Awp Site Type:	OPEN MILITARY BASE
NPL:	Not Listed
Tier Of AWP Site:	Not reported
Source Of Funding:	Not reported
Responsible Staff Member:	Not reported
Supervisor Responsible:	Not reported
SIC Code:	97
Facility SIC:	NATIONAL SECURITY/INTERNATIONAL AFFAIRS
RWQCB Code:	Not reported
RWQCB Associated With Site:	Not reported
Site Access Controlled:	Not reported
Site Listed HWS List:	Not reported
Hazard Ranking Score:	Not reported
Date Site Hazard Ranked:	Not reported
Groundwater Contamination:	Not reported
# Of Contamination Sources:	0
Lat/Long:	Not reported
Lat/Long (dms):	0 0 0 / 0 0 0
Lat/long Method:	Not reported
Description Of Entity:	Not reported
State Assembly Distt Code:	68
State Senate District:	35

RESPONSE:

Facility ID:	30970004
Site Type:	State Response
Site Type Detail:	Open Base
Acres:	8.5
National Priorities List:	NO
Cleanup Oversight Agencies:	DTSC
Lead Agency:	DTSC
Lead Agency Description:	* DTSC
Project Manager:	Isaac Hirbawi
Supervisor:	Manny Alonzo
Division Branch:	Cleanup Cypress
Site Code:	400498
Site Mgmt. Req.:	NONE SPECIFIED
Assembly:	74
Senate:	37
Special Program Status:	DSMOA
Status:	Active
Status Date:	06/28/2011
Restricted Use:	NO
Funding:	DERA
Latitude:	33.67166
Longitude:	-117.8888
APN:	NONE SPECIFIED
Past Use:	NONE SPECIFIED
Potential COC:	NONE SPECIFIED
Confirmed COC:	NONE SPECIFIED, NONE SPECIFIED
Potential Description:	NONE SPECIFIED
Alias Name:	SANTA ANA ARMY BASE (1940S & 50S)
Alias Type:	Alternate Name
Alias Name:	T0605959838
Alias Type:	GeoTracker Global ID
Alias Name:	400498

COSTA MESA AIR NATIONAL GUARD (Continued) **S101481491**

Alias Type: Project Code (Site Code)
Alias Name: 30970004
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * Discovery
Completed Date: 07/24/1991
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Environmental Baseline Survey
Completed Date: 12/16/2002
Comments: BWEBS - SITE 1: In June 2002, the Phase II EBS was submitted presenting the results of the soil and groundwater field investigations. A total of nine areas of concern (AOCs) were identified where potential risks to human health and the environment may exist. These include a battery room floor drain, motor vehicle lift area, fuel storage area, grease rack, oil and water sparator, diesel refueller spill, groundwater sampling, lead-based paint sampling, and hydraulic fluid spill area. Contaminants detected include petroleum hydrocarbons, volatile organic compounds, and lead-based paint. Also, the extent of contamination was not determined. DTSC submitted comments on August 26, 2002 not concurring with the No Further Action recommendations by the Air Force, and requested additional sampling to be conducted to determine the extent of contamination. The Air Force responded with a final letter on October 8, 2002 finalizing the EBS report and deferring any future actions until a relocation date for the CMANG is known.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Screening
Completed Date: 08/08/1991
Comments: Letter sent to Air National Guard (ANG) stating no concurr- ance with nfa recommendation & explaining pea process and funding option for DTSC oversight.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Inventory Project Report (INPR)
Completed Date: 03/04/1993
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Assessment/Site Inspection Report (PA/SI)
Completed Date: 08/25/2012
Comments: Final work plan was submitted in August 2012 and field activities are scheduled for September 2012.

Future Area Name: PROJECT WIDE
Future Sub Area Name: Not reported
Future Document Type: Remedial Action Plan
Future Due Date: 2014
Schedule Area Name: PROJECT WIDE

COSTA MESA AIR NATIONAL GUARD (Continued) **S101481491**

Schedule Sub Area Name: Not reported
Schedule Document Type: Removal Action Completion Report
Schedule Due Date: 04/13/2014
Schedule Revised Date: 01/06/2015
Schedule Area Name: PROJECT WIDE
Schedule Sub Area Name: Not reported
Schedule Document Type: Fact Sheets
Schedule Due Date: 02/28/2014
Schedule Revised Date: 11/23/2014
Schedule Area Name: PROJECT WIDE
Schedule Sub Area Name: Not reported
Schedule Document Type: Feasibility Study Report
Schedule Due Date: 11/24/2013
Schedule Revised Date: 08/19/2014
Schedule Area Name: PROJECT WIDE
Schedule Sub Area Name: Not reported
Schedule Document Type: Removal Action Workplan
Schedule Due Date: 02/17/2014
Schedule Revised Date: 11/12/2014
Schedule Area Name: PROJECT WIDE
Schedule Sub Area Name: Not reported
Schedule Document Type: Preliminary Assessment/Site Inspection Report (PA/SI)
Schedule Due Date: 11/21/2013
Schedule Revised Date: Not reported
Schedule Area Name: PROJECT WIDE
Schedule Sub Area Name: Not reported
Schedule Document Type: Remedial Investigation Report
Schedule Due Date: 04/29/2014
Schedule Revised Date: Not reported

ENVIROSTOR:
Site Type: State Response
Site Type Detailed: Open Base
Acres: 8.5
NPL: NO
Regulatory Agencies: DTSC
Lead Agency: DTSC
Program Manager: Isaac Hirbawi
Supervisor: Manny Alonzo
Division Branch: Cleanup Cypress
Facility ID: 30970004
Site Code: 400498
Assembly: 74
Senate: 37
Special Program: DSMOA
Status: Active
Status Date: 06/28/2011
Restricted Use: NO
Site Mgmt. Req.: NONE SPECIFIED
Funding: DERA
Latitude: 33.67166
Longitude: -117.8888
APN: NONE SPECIFIED
Past Use: NONE SPECIFIED
Potential COC: NONE SPECIFIED
Confirmed COC: NONE SPECIFIED, NONE SPECIFIED
Potential Description: NONE SPECIFIED

COSTA MESA AIR NATIONAL GUARD (Continued) **S101481491**

Alias Name: SANTA ANA ARMY BASE (1940S & 50S)
Alias Type: Alternate Name
Alias Name: T0605959838
Alias Type: GeoTracker Global ID
Alias Name: 400498
Alias Type: Project Code (Site Code)
Alias Name: 30970004
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * Discovery
Completed Date: 07/24/1991
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Environmental Baseline Survey
Completed Date: 12/16/2002
Comments: BWEBS - SITE 1: In June 2002, the Phase II EBS was submitted presenting the results of the soil and groundwater field investigations. A total of nine areas of concern (AOCs) were identified where potential risks to human health and the environment may exist. These include a battery room floor drain, motor vehicle lift area, fuel storage area, grease rack, oil and water sparator, diesel refueller spill, groundwater sampling, lead-based paint sampling, and hydraulic fluid spill area. Contaminants detected include petroleum hydrocarbons, volatile organic compounds, and lead-based paint. Also, the extent of contamination was not determined. DTSC submitted comments on August 26, 2002 not concurring with the No Further Action recommendations by the Air Force, and requested additional sampling to be conducted to determine the extent of contamination. The Air Force responded with a final letter on October 8, 2002 finalizing the EBS report and deferring any future actions until a relocation date for the CMANG is known.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Screening
Completed Date: 08/08/1991
Comments: Letter sent to Air National Guard (ANG) stating no concurr- ance with nfa recommendation & explaining pea process and funding option for DTSC oversight.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Inventory Project Report (INPR)
Completed Date: 03/04/1993
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Assessment/Site Inspection Report (PA/SI)
Completed Date: 08/25/2012
Comments: Final work plan was submitted in August 2012 and field activities are scheduled for September 2012.

COSTA MESA AIR NATIONAL GUARD (Continued) **S101481491**

Future Area Name:	PROJECT WIDE
Future Sub Area Name:	Not reported
Future Document Type:	Remedial Action Plan
Future Due Date:	2014
Schedule Area Name:	PROJECT WIDE
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Removal Action Completion Report
Schedule Due Date:	04/13/2014
Schedule Revised Date:	01/06/2015
Schedule Area Name:	PROJECT WIDE
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Fact Sheets
Schedule Due Date:	02/28/2014
Schedule Revised Date:	11/23/2014
Schedule Area Name:	PROJECT WIDE
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Feasibility Study Report
Schedule Due Date:	11/24/2013
Schedule Revised Date:	08/19/2014
Schedule Area Name:	PROJECT WIDE
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Removal Action Workplan
Schedule Due Date:	02/17/2014
Schedule Revised Date:	11/12/2014
Schedule Area Name:	PROJECT WIDE
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Preliminary Assessment/Site Inspection Report (PA/SI)
Schedule Due Date:	11/21/2013
Schedule Revised Date:	Not reported
Schedule Area Name:	PROJECT WIDE
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Remedial Investigation Report
Schedule Due Date:	04/29/2014
Schedule Revised Date:	Not reported

Count: 12 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
COSTA MESA	S106839729	SOUTH COAST CENTER ASSOCIATES	3070, 3080 & 3090 BRISTOL ST	92626	CA EMI
COSTA MESA	S113117688	BP WEST COAST PRODUCTS LLC 07009	799 19TH	92626	CA HAZNET
COSTA MESA	S113165847	ORANGE COUNTY MOTORSPORT	3198-H AIRPORT LOOP	92626	CA HAZNET
COSTA MESA	S113044921	SOUTH COAST AUTO CLINIC	3191 "B" AIRPORT LOOP	92626	CA HAZNET
COSTA MESA	S113072382	SOUTH COAST PLAZA	611 ATON BLVD #710	92626	CA HAZNET
COSTA MESA	S113072381	SOUTH COAST PLAZA	600 ATON BLVD	92626	CA HAZNET
COSTA MESA	1014671178	4579 ORANGE COUNTY ENVIRONMENTAL H	1201 BAKER E		FINDS
COSTA MESA	1014671905	17662 ORANGE COUNTY ENVIRONMENTAL	300 BRISTOL ST S/E		FINDS
COSTA MESA	S106927785	JIFFY LUBE	375 S BRISTOL 110	92626	CA SWEEPS UST
COSTA MESA	1007199132	PACIFIC BELL	2280 FAIRVIEW AVE	92626	RCRA-LQG
COSTA MESA	S105023431	COSTA MESA AIR NATIONAL G	S. OF PRESIDIO DR & W. OF	92626	CA HIST CORTESE
COSTA MESA	1014674744	SOUTH COAST METRO CENTER	UNKNOWN		FINDS

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 04/26/2013
Date Data Arrived at EDR: 05/09/2013
Date Made Active in Reports: 07/10/2013
Number of Days to Update: 62

Source: EPA
Telephone: N/A
Last EDR Contact: 10/11/2013
Next Scheduled EDR Contact: 01/20/2014
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 3
Telephone 215-814-5418

EPA Region 4
Telephone 404-562-8033

EPA Region 5
Telephone 312-886-6686

EPA Region 10
Telephone 206-553-8665

EPA Region 6
Telephone: 214-655-6659

EPA Region 7
Telephone: 913-551-7247

EPA Region 8
Telephone: 303-312-6774

EPA Region 9
Telephone: 415-947-4246

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 04/26/2013
Date Data Arrived at EDR: 05/09/2013
Date Made Active in Reports: 07/10/2013
Number of Days to Update: 62

Source: EPA
Telephone: N/A
Last EDR Contact: 10/11/2013
Next Scheduled EDR Contact: 01/20/2014
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal Delisted NPL site list

DELISTED NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 04/26/2013
Date Data Arrived at EDR: 05/09/2013
Date Made Active in Reports: 07/10/2013
Number of Days to Update: 62

Source: EPA
Telephone: N/A
Last EDR Contact: 10/11/2013
Next Scheduled EDR Contact: 01/20/2014
Data Release Frequency: Quarterly

Federal CERCLIS list

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 04/26/2013
Date Data Arrived at EDR: 05/29/2013
Date Made Active in Reports: 08/09/2013
Number of Days to Update: 72

Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 10/18/2013
Next Scheduled EDR Contact: 12/09/2013
Data Release Frequency: Quarterly

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 07/31/2012
Date Data Arrived at EDR: 10/09/2012
Date Made Active in Reports: 12/20/2012
Number of Days to Update: 72

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 10/11/2013
Next Scheduled EDR Contact: 01/20/2014
Data Release Frequency: Varies

Federal CERCLIS NFRAP site List

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Date of Government Version: 04/26/2013
Date Data Arrived at EDR: 05/29/2013
Date Made Active in Reports: 08/09/2013
Number of Days to Update: 72

Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 10/18/2013
Next Scheduled EDR Contact: 12/09/2013
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 07/11/2013
Date Data Arrived at EDR: 08/08/2013
Date Made Active in Reports: 09/13/2013
Number of Days to Update: 36

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 10/02/2013
Next Scheduled EDR Contact: 01/13/2014
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 07/11/2013
Date Data Arrived at EDR: 08/08/2013
Date Made Active in Reports: 09/13/2013
Number of Days to Update: 36

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 10/02/2013
Next Scheduled EDR Contact: 01/13/2014
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 07/11/2013
Date Data Arrived at EDR: 08/08/2013
Date Made Active in Reports: 09/13/2013
Number of Days to Update: 36

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 10/02/2013
Next Scheduled EDR Contact: 01/13/2014
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 07/11/2013
Date Data Arrived at EDR: 08/08/2013
Date Made Active in Reports: 09/13/2013
Number of Days to Update: 36

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 10/02/2013
Next Scheduled EDR Contact: 01/13/2014
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 07/11/2013
Date Data Arrived at EDR: 08/08/2013
Date Made Active in Reports: 09/13/2013
Number of Days to Update: 36

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 10/02/2013
Next Scheduled EDR Contact: 01/13/2014
Data Release Frequency: Varies

Federal institutional controls / engineering controls registries

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 06/17/2013
Date Data Arrived at EDR: 06/21/2013
Date Made Active in Reports: 10/03/2013
Number of Days to Update: 104

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 09/10/2013
Next Scheduled EDR Contact: 12/23/2013
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 06/17/2013
Date Data Arrived at EDR: 06/21/2013
Date Made Active in Reports: 10/03/2013
Number of Days to Update: 104

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 09/10/2013
Next Scheduled EDR Contact: 12/23/2013
Data Release Frequency: Varies

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 12/09/2005
Date Data Arrived at EDR: 12/11/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 31

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 08/15/2013
Next Scheduled EDR Contact: 09/02/2013
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 01/17/2013
Date Made Active in Reports: 02/15/2013
Number of Days to Update: 29

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 10/01/2013
Next Scheduled EDR Contact: 01/13/2014
Data Release Frequency: Annually

State- and tribal - equivalent NPL

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 09/05/2013
Date Data Arrived at EDR: 09/05/2013
Date Made Active in Reports: 10/10/2013
Number of Days to Update: 35

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 09/05/2013
Next Scheduled EDR Contact: 11/18/2013
Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 09/05/2013
Date Data Arrived at EDR: 09/05/2013
Date Made Active in Reports: 10/10/2013
Number of Days to Update: 35

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 09/05/2013
Next Scheduled EDR Contact: 11/18/2013
Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 08/19/2013
Date Data Arrived at EDR: 08/19/2013
Date Made Active in Reports: 10/08/2013
Number of Days to Update: 50

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 08/19/2013
Next Scheduled EDR Contact: 12/02/2013
Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

LUST REG 8: Leaking Underground Storage Tanks

California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Varies

LUST REG 7: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 6V: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 6L: Leaking Underground Storage Tank Case Listing

For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

LUST REG 4: Underground Storage Tank Leak List

Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

LUST REG 3: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List

Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-622-2433
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

LUST REG 1: Active Toxic Site Investigation

Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-570-3769
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

LUST: Geotracker's Leaking Underground Fuel Tank Report

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state. For more information on a particular leaking underground storage tank sites, please contact the appropriate regulatory agency.

Date of Government Version: 09/16/2013	Source: State Water Resources Control Board
Date Data Arrived at EDR: 09/17/2013	Telephone: see region list
Date Made Active in Reports: 10/16/2013	Last EDR Contact: 10/17/2013
Number of Days to Update: 29	Next Scheduled EDR Contact: 12/30/2013
	Data Release Frequency: Quarterly

LUST REG 9: Leaking Underground Storage Tank Report

Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001	Source: California Regional Water Quality Control Board San Diego Region (9)
Date Data Arrived at EDR: 04/23/2001	Telephone: 858-637-5595
Date Made Active in Reports: 05/21/2001	Last EDR Contact: 09/26/2011
Number of Days to Update: 28	Next Scheduled EDR Contact: 01/09/2012
	Data Release Frequency: No Update Planned

SLIC: Statewide SLIC Cases

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/16/2013	Source: State Water Resources Control Board
Date Data Arrived at EDR: 09/17/2013	Telephone: 866-480-1028
Date Made Active in Reports: 10/17/2013	Last EDR Contact: 10/17/2013
Number of Days to Update: 30	Next Scheduled EDR Contact: 12/30/2013
	Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003	Source: California Regional Water Quality Control Board, North Coast Region (1)
Date Data Arrived at EDR: 04/07/2003	Telephone: 707-576-2220
Date Made Active in Reports: 04/25/2003	Last EDR Contact: 08/01/2011
Number of Days to Update: 18	Next Scheduled EDR Contact: 11/14/2011
	Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004	Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Date Data Arrived at EDR: 10/20/2004	Telephone: 510-286-0457
Date Made Active in Reports: 11/19/2004	Last EDR Contact: 09/19/2011
Number of Days to Update: 30	Next Scheduled EDR Contact: 01/02/2012
	Data Release Frequency: Quarterly

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006	Source: California Regional Water Quality Control Board Central Coast Region (3)
Date Data Arrived at EDR: 05/18/2006	Telephone: 805-549-3147
Date Made Active in Reports: 06/15/2006	Last EDR Contact: 07/18/2011
Number of Days to Update: 28	Next Scheduled EDR Contact: 10/31/2011
	Data Release Frequency: Semi-Annually

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: Varies

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Semi-Annually

SLIC REG 6L: SLIC Sites
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36

Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11

Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: Annually

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 02/05/2013
Date Data Arrived at EDR: 02/06/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 65

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 10/28/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Quarterly

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 09/28/2012
Date Data Arrived at EDR: 11/01/2012
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 162

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 08/02/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 08/27/2012
Date Data Arrived at EDR: 08/28/2012
Date Made Active in Reports: 10/16/2012
Number of Days to Update: 49

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 10/28/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Quarterly

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 09/12/2011
Date Data Arrived at EDR: 09/13/2011
Date Made Active in Reports: 11/11/2011
Number of Days to Update: 59

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 10/28/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 02/06/2013
Date Data Arrived at EDR: 02/08/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 63

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 10/28/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Semi-Annually

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 02/28/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 43

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 10/28/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 03/01/2013
Date Data Arrived at EDR: 03/01/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 42

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 10/28/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Quarterly

State and tribal registered storage tank lists

UST: Active UST Facilities
Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 09/16/2013
Date Data Arrived at EDR: 09/17/2013
Date Made Active in Reports: 10/16/2013
Number of Days to Update: 29

Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 10/17/2013
Next Scheduled EDR Contact: 12/30/2013
Data Release Frequency: Semi-Annually

AST: Aboveground Petroleum Storage Tank Facilities
A listing of aboveground storage tank petroleum storage tank locations.

Date of Government Version: 08/01/2009
Date Data Arrived at EDR: 09/10/2009
Date Made Active in Reports: 10/01/2009
Number of Days to Update: 21

Source: California Environmental Protection Agency
Telephone: 916-327-5092
Last EDR Contact: 10/07/2013
Next Scheduled EDR Contact: 01/20/2014
Data Release Frequency: Quarterly

INDIAN UST R10: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 02/05/2013
Date Data Arrived at EDR: 02/06/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 65

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 10/28/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Quarterly

INDIAN UST R9: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 02/21/2013
Date Data Arrived at EDR: 02/26/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 45

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 10/28/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Quarterly

INDIAN UST R8: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 08/27/2012
Date Data Arrived at EDR: 08/28/2012
Date Made Active in Reports: 10/16/2012
Number of Days to Update: 49

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 10/28/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Quarterly

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 02/28/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 43

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 10/28/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 05/10/2011
Date Data Arrived at EDR: 05/11/2011
Date Made Active in Reports: 06/14/2011
Number of Days to Update: 34

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 10/28/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Semi-Annually

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 08/02/2012
Date Data Arrived at EDR: 08/03/2012
Date Made Active in Reports: 11/05/2012
Number of Days to Update: 94

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 10/28/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 02/06/2013
Date Data Arrived at EDR: 02/08/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 63

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 10/28/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Semi-Annually

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 09/28/2012
Date Data Arrived at EDR: 11/07/2012
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 156

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 08/02/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: Varies

FEMA UST: Underground Storage Tank Listing

A listing of all FEMA owned underground storage tanks.

Date of Government Version: 01/01/2010
Date Data Arrived at EDR: 02/16/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 55

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 10/17/2013
Next Scheduled EDR Contact: 01/27/2014
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

VCP: Voluntary Cleanup Program Properties

Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 09/05/2013
Date Data Arrived at EDR: 09/05/2013
Date Made Active in Reports: 10/10/2013
Number of Days to Update: 35

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 09/05/2013
Next Scheduled EDR Contact: 11/18/2013
Data Release Frequency: Quarterly

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 09/28/2012
Date Data Arrived at EDR: 10/02/2012
Date Made Active in Reports: 10/16/2012
Number of Days to Update: 14

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 10/01/2013
Next Scheduled EDR Contact: 01/13/2014
Data Release Frequency: Varies

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 06/24/2013
Date Data Arrived at EDR: 06/25/2013
Date Made Active in Reports: 08/09/2013
Number of Days to Update: 45

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 09/24/2013
Next Scheduled EDR Contact: 01/08/2014
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 10/28/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: No Update Planned

WMUDS/SWAT: Waste Management Unit Database

Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 08/07/2013
Next Scheduled EDR Contact: 11/25/2013
Data Release Frequency: No Update Planned

SWRCY: Recycler Database

A listing of recycling facilities in California.

Date of Government Version: 09/16/2013
Date Data Arrived at EDR: 09/19/2013
Date Made Active in Reports: 10/17/2013
Number of Days to Update: 28

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 09/16/2013
Next Scheduled EDR Contact: 12/30/2013
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing

A listing of registered waste tire haulers.

Date of Government Version: 04/26/2013
Date Data Arrived at EDR: 04/26/2013
Date Made Active in Reports: 05/16/2013
Number of Days to Update: 20

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 10/01/2013
Next Scheduled EDR Contact: 12/02/2013
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 07/31/2013
Next Scheduled EDR Contact: 11/18/2013
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 08/06/2013
Date Data Arrived at EDR: 09/11/2013
Date Made Active in Reports: 10/03/2013
Number of Days to Update: 22

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 09/04/2013
Next Scheduled EDR Contact: 12/16/2013
Data Release Frequency: Quarterly

HIST CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21

Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 09/05/2013
Date Data Arrived at EDR: 09/05/2013
Date Made Active in Reports: 10/10/2013
Number of Days to Update: 35

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 09/05/2013
Next Scheduled EDR Contact: 11/18/2013
Data Release Frequency: Quarterly

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: No Update Planned

CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 06/30/2013
Date Data Arrived at EDR: 09/03/2013
Date Made Active in Reports: 10/10/2013
Number of Days to Update: 37

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 09/03/2013
Next Scheduled EDR Contact: 01/13/2014
Data Release Frequency: Varies

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 09/01/2007
Date Data Arrived at EDR: 11/19/2008
Date Made Active in Reports: 03/30/2009
Number of Days to Update: 131

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

Local Lists of Registered Storage Tanks

CA FID UST: Facility Inventory Database

The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24

Source: California Environmental Protection Agency
Telephone: 916-341-5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

UST MENDOCINO: Mendocino County UST Database

A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 09/23/2009
Date Data Arrived at EDR: 09/23/2009
Date Made Active in Reports: 10/01/2009
Number of Days to Update: 8

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 09/03/2013
Next Scheduled EDR Contact: 12/16/2013
Data Release Frequency: Annually

HIST UST: Hazardous Substance Storage Container Database

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Local Land Records

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 02/06/2013
Date Data Arrived at EDR: 04/25/2013
Date Made Active in Reports: 05/10/2013
Number of Days to Update: 15

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 07/24/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: Varies

LIENS: Environmental Liens Listing

A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 06/14/2013
Date Data Arrived at EDR: 06/17/2013
Date Made Active in Reports: 08/21/2013
Number of Days to Update: 65

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 09/23/2013
Next Scheduled EDR Contact: 12/23/2013
Data Release Frequency: Varies

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 09/11/2013
Date Data Arrived at EDR: 09/11/2013
Date Made Active in Reports: 10/14/2013
Number of Days to Update: 33

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 09/11/2013
Next Scheduled EDR Contact: 12/23/2013
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/27/2013
Number of Days to Update: 55

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 10/01/2013
Next Scheduled EDR Contact: 01/13/2014
Data Release Frequency: Annually

CHMIRS: California Hazardous Material Incident Report System

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 03/12/2013
Date Data Arrived at EDR: 05/01/2013
Date Made Active in Reports: 06/25/2013
Number of Days to Update: 55

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 10/30/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Varies

LDS: Land Disposal Sites Listing

The Land Disposal program regulates of waste discharge to land for treatment, storage and disposal in waste management units.

Date of Government Version: 09/16/2013
Date Data Arrived at EDR: 09/17/2013
Date Made Active in Reports: 10/16/2013
Number of Days to Update: 29

Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 10/17/2013
Next Scheduled EDR Contact: 12/30/2013
Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing

The State Water Resources Control Board and nine Regional Water Quality Control Boards partner with the Department of Defense (DoD) through the Defense and State Memorandum of Agreement (DSMOA) to oversee the investigation and remediation of water quality issues at military facilities.

Date of Government Version: 09/16/2013
Date Data Arrived at EDR: 09/17/2013
Date Made Active in Reports: 10/16/2013
Number of Days to Update: 29

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 10/17/2013
Next Scheduled EDR Contact: 12/30/2013
Data Release Frequency: Quarterly

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 06/06/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/22/2013
Number of Days to Update: 50

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 07/11/2013
Date Data Arrived at EDR: 08/08/2013
Date Made Active in Reports: 09/13/2013
Number of Days to Update: 36

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 10/02/2013
Next Scheduled EDR Contact: 01/13/2014
Data Release Frequency: Varies

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/31/2012
Date Data Arrived at EDR: 08/07/2012
Date Made Active in Reports: 09/18/2012
Number of Days to Update: 42

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 08/05/2013
Next Scheduled EDR Contact: 11/18/2013
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 10/18/2013
Next Scheduled EDR Contact: 01/27/2014
Data Release Frequency: Semi-Annually

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 02/26/2013
Date Made Active in Reports: 03/13/2013
Number of Days to Update: 15

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 09/10/2013
Next Scheduled EDR Contact: 12/23/2013
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 06/30/2013
Date Data Arrived at EDR: 08/07/2013
Date Made Active in Reports: 10/03/2013
Number of Days to Update: 57

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 09/30/2013
Next Scheduled EDR Contact: 01/13/2014
Data Release Frequency: Varies

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 12/18/2012
Date Data Arrived at EDR: 03/13/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 30

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 09/13/2013
Next Scheduled EDR Contact: 12/23/2013
Data Release Frequency: Annually

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 09/14/2010
Date Data Arrived at EDR: 10/07/2011
Date Made Active in Reports: 03/01/2012
Number of Days to Update: 146

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 05/28/2013
Next Scheduled EDR Contact: 09/09/2013
Data Release Frequency: Varies

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 08/01/2013
Date Data Arrived at EDR: 09/05/2013
Date Made Active in Reports: 10/03/2013
Number of Days to Update: 28

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 09/05/2013
Next Scheduled EDR Contact: 12/16/2013
Data Release Frequency: Semi-Annually

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 07/31/2013
Date Made Active in Reports: 09/13/2013
Number of Days to Update: 44

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 08/30/2013
Next Scheduled EDR Contact: 12/09/2013
Data Release Frequency: Annually

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2006
Date Data Arrived at EDR: 09/29/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 64

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 09/24/2013
Next Scheduled EDR Contact: 01/08/2014
Data Release Frequency: Every 4 Years

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009	Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Date Data Arrived at EDR: 04/16/2009	Telephone: 202-566-1667
Date Made Active in Reports: 05/11/2009	Last EDR Contact: 08/22/2013
Number of Days to Update: 25	Next Scheduled EDR Contact: 12/09/2013
	Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009	Source: EPA
Date Data Arrived at EDR: 04/16/2009	Telephone: 202-566-1667
Date Made Active in Reports: 05/11/2009	Last EDR Contact: 08/22/2013
Number of Days to Update: 25	Next Scheduled EDR Contact: 12/09/2013
	Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/01/2007	Telephone: 202-564-2501
Date Made Active in Reports: 04/10/2007	Last EDR Contact: 12/17/2007
Number of Days to Update: 40	Next Scheduled EDR Contact: 03/17/2008
	Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/01/2007	Telephone: 202-564-2501
Date Made Active in Reports: 04/10/2007	Last EDR Contact: 12/17/2008
Number of Days to Update: 40	Next Scheduled EDR Contact: 03/17/2008
	Data Release Frequency: No Update Planned

SSTS: Section 7 Tracking Systems
Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009	Source: EPA
Date Data Arrived at EDR: 12/10/2010	Telephone: 202-564-4203
Date Made Active in Reports: 02/25/2011	Last EDR Contact: 10/28/2013
Number of Days to Update: 77	Next Scheduled EDR Contact: 02/11/2014
	Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 07/20/2011
Date Data Arrived at EDR: 11/10/2011
Date Made Active in Reports: 01/10/2012
Number of Days to Update: 61

Source: Environmental Protection Agency
Telephone: 202-564-5088
Last EDR Contact: 10/09/2014
Next Scheduled EDR Contact: 01/27/2014
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 11/01/2012
Date Data Arrived at EDR: 01/16/2013
Date Made Active in Reports: 05/10/2013
Number of Days to Update: 114

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 10/18/2013
Next Scheduled EDR Contact: 01/27/2014
Data Release Frequency: Annually

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 03/14/2013
Date Data Arrived at EDR: 03/20/2013
Date Made Active in Reports: 07/10/2013
Number of Days to Update: 112

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 09/10/2013
Next Scheduled EDR Contact: 12/23/2013
Data Release Frequency: Quarterly

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 04/09/2013
Date Data Arrived at EDR: 04/11/2013
Date Made Active in Reports: 05/10/2013
Number of Days to Update: 29

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 10/09/2013
Next Scheduled EDR Contact: 01/20/2014
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 03/08/2013
Date Data Arrived at EDR: 03/21/2013
Date Made Active in Reports: 07/10/2013
Number of Days to Update: 111

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 09/11/2013
Next Scheduled EDR Contact: 12/23/2013
Data Release Frequency: Quarterly

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 05/08/2012
Date Data Arrived at EDR: 05/25/2012
Date Made Active in Reports: 07/10/2012
Number of Days to Update: 46

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 10/28/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 02/26/2013
Date Made Active in Reports: 04/19/2013
Number of Days to Update: 52

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 08/26/2013
Next Scheduled EDR Contact: 12/09/2013
Data Release Frequency: Biennially

CA BOND EXP. PLAN: Bond Expenditure Plan

Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6

Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

NPDES: NPDES Permits Listing

A listing of NPDES permits, including stormwater.

Date of Government Version: 08/19/2013
Date Data Arrived at EDR: 08/19/2013
Date Made Active in Reports: 10/08/2013
Number of Days to Update: 50

Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 08/19/2013
Next Scheduled EDR Contact: 12/02/2013
Data Release Frequency: Quarterly

UIC: UIC Listing

A listing of underground control injection wells.

Date of Government Version: 08/21/2013
Date Data Arrived at EDR: 09/17/2013
Date Made Active in Reports: 10/17/2013
Number of Days to Update: 30

Source: Deaprtment of Conservation
Telephone: 916-445-2408
Last EDR Contact: 09/17/2013
Next Scheduled EDR Contact: 12/30/2013
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CORTESE: "Cortese" Hazardous Waste & Substances Sites List

The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 07/05/2013
Date Data Arrived at EDR: 07/05/2013
Date Made Active in Reports: 08/26/2013
Number of Days to Update: 52

Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 10/01/2013
Next Scheduled EDR Contact: 01/13/2014
Data Release Frequency: Quarterly

HIST CORTESE: Hazardous Waste & Substance Site List

The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

Date of Government Version: 04/01/2001
Date Data Arrived at EDR: 01/22/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/22/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

NOTIFY 65: Proposition 65 Records

Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 10/21/1993
Date Data Arrived at EDR: 11/01/1993
Date Made Active in Reports: 11/19/1993
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 09/23/2013
Next Scheduled EDR Contact: 01/08/2014
Data Release Frequency: No Update Planned

DRYCLEANERS: Cleaner Facilities

A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 09/10/2013
Date Data Arrived at EDR: 09/11/2013
Date Made Active in Reports: 10/16/2013
Number of Days to Update: 35

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 09/10/2013
Next Scheduled EDR Contact: 12/24/2012
Data Release Frequency: Annually

WIP: Well Investigation Program Case List

Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009
Date Data Arrived at EDR: 07/21/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 13

Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 09/30/2013
Next Scheduled EDR Contact: 01/13/2014
Data Release Frequency: Varies

ENF: Enforcement Action Listing

A listing of Water Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Violation, Expedited Payment Letter, and Staff Enforcement Letter.

Date of Government Version: 08/09/2013
Date Data Arrived at EDR: 08/13/2013
Date Made Active in Reports: 10/08/2013
Number of Days to Update: 56

Source: State Water Resoruces Control Board
Telephone: 916-445-9379
Last EDR Contact: 10/28/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method.

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 07/16/2013
Date Made Active in Reports: 08/26/2013
Number of Days to Update: 41

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 10/15/2013
Next Scheduled EDR Contact: 01/27/2014
Data Release Frequency: Annually

EMI: Emissions Inventory Data

Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2010
Date Data Arrived at EDR: 06/25/2013
Date Made Active in Reports: 08/22/2013
Number of Days to Update: 58

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 09/27/2013
Next Scheduled EDR Contact: 01/08/2014
Data Release Frequency: Varies

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 12/08/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 34

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 10/18/2013
Next Scheduled EDR Contact: 01/27/2014
Data Release Frequency: Semi-Annually

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 03/07/2011
Date Data Arrived at EDR: 03/09/2011
Date Made Active in Reports: 05/02/2011
Number of Days to Update: 54

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 10/21/2013
Next Scheduled EDR Contact: 02/03/2014
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 03/04/2013
Date Data Arrived at EDR: 03/15/2013
Date Made Active in Reports: 05/10/2013
Number of Days to Update: 56

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 09/27/2013
Next Scheduled EDR Contact: 12/02/2013
Data Release Frequency: Quarterly

PCB TRANSFORMER: PCB Transformer Registration Database

The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 02/01/2011
Date Data Arrived at EDR: 10/19/2011
Date Made Active in Reports: 01/10/2012
Number of Days to Update: 83

Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 08/02/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

PROC: Certified Processors Database
A listing of certified processors.

Date of Government Version: 09/16/2013
Date Data Arrived at EDR: 09/19/2013
Date Made Active in Reports: 10/17/2013
Number of Days to Update: 28

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 09/16/2013
Next Scheduled EDR Contact: 12/30/2013
Data Release Frequency: Quarterly

MWMP: Medical Waste Management Program Listing
The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

Date of Government Version: 08/29/2013
Date Data Arrived at EDR: 09/13/2013
Date Made Active in Reports: 10/14/2013
Number of Days to Update: 31

Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 09/11/2013
Next Scheduled EDR Contact: 12/23/2013
Data Release Frequency: Varies

COAL ASH DOE: Sleam-Electric Plan Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76

Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 10/15/2013
Next Scheduled EDR Contact: 01/27/2014
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 08/17/2010
Date Data Arrived at EDR: 01/03/2011
Date Made Active in Reports: 03/21/2011
Number of Days to Update: 77

Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 09/13/2013
Next Scheduled EDR Contact: 12/23/2013
Data Release Frequency: Varies

HWT: Registered Hazardous Waste Transporter Database
A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 07/15/2013
Date Data Arrived at EDR: 07/16/2013
Date Made Active in Reports: 08/12/2013
Number of Days to Update: 27

Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 10/15/2013
Next Scheduled EDR Contact: 01/27/2014
Data Release Frequency: Quarterly

HWP: EnviroStor Permitted Facilities Listing
Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 08/28/2013
Date Data Arrived at EDR: 08/27/2013
Date Made Active in Reports: 10/10/2013
Number of Days to Update: 44

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 08/27/2013
Next Scheduled EDR Contact: 12/09/2013
Data Release Frequency: Quarterly

Financial Assurance 2: Financial Assurance Information Listing
A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 08/12/2013
Date Data Arrived at EDR: 08/20/2013
Date Made Active in Reports: 10/08/2013
Number of Days to Update: 49

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 08/15/2013
Next Scheduled EDR Contact: 12/02/2013
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing
Financial Assurance information

Date of Government Version: 06/30/2013
Date Data Arrived at EDR: 08/08/2013
Date Made Active in Reports: 08/27/2013
Number of Days to Update: 19

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 10/25/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites
A listing of former lead smelter site locations.

Date of Government Version: 01/29/2013
Date Data Arrived at EDR: 02/14/2013
Date Made Active in Reports: 02/27/2013
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 09/24/2013
Next Scheduled EDR Contact: 01/20/2014
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites
A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

2020 COR ACTION: 2020 Corrective Action Program List
The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 11/11/2011
Date Data Arrived at EDR: 05/18/2012
Date Made Active in Reports: 05/25/2012
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 08/16/2013
Next Scheduled EDR Contact: 11/25/2013
Data Release Frequency: Varies

FEDLAND: Federal and Indian Lands
Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 10/18/2013
Next Scheduled EDR Contact: 01/27/2014
Data Release Frequency: N/A

PRP: Potentially Responsible Parties
A listing of verified Potentially Responsible Parties

Date of Government Version: 04/15/2013
Date Data Arrived at EDR: 07/03/2013
Date Made Active in Reports: 09/13/2013
Number of Days to Update: 72

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 10/04/2013
Next Scheduled EDR Contact: 01/13/2014
Data Release Frequency: Quarterly

WDS: Waste Discharge System
Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9

Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 08/22/2013
Next Scheduled EDR Contact: 12/09/2013
Data Release Frequency: Quarterly

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)
The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 01/23/2013
Date Data Arrived at EDR: 01/30/2013
Date Made Active in Reports: 05/10/2013
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-5962
Last EDR Contact: 09/30/2013
Next Scheduled EDR Contact: 01/13/2014
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data
A listing of minor source facilities.

Date of Government Version: 01/23/2013
Date Data Arrived at EDR: 01/30/2013
Date Made Active in Reports: 05/10/2013
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-5962
Last EDR Contact: 09/30/2013
Next Scheduled EDR Contact: 01/13/2014
Data Release Frequency: Annually

EPA WATCH LIST: EPA WATCH LIST
EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 06/30/2013
Date Data Arrived at EDR: 08/13/2013
Date Made Active in Reports: 09/13/2013
Number of Days to Update: 31

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 08/07/2013
Next Scheduled EDR Contact: 11/25/2013
Data Release Frequency: Quarterly

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR US Hist Auto Stat: EDR Exclusive Historic Gas Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR US Hist Cleaners: EDR Exclusive Historic Dry Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR US Hist Cleaners: EDR Proprietary Historic Dry Cleaners - Cole

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: N/A
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR US Hist Auto Stat: EDR Proprietary Historic Gas Stations - Cole

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: N/A
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

COUNTY RECORDS

ALAMEDA COUNTY:

Contaminated Sites

A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 07/25/2013
Date Data Arrived at EDR: 07/26/2013
Date Made Active in Reports: 08/09/2013
Number of Days to Update: 14

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 09/30/2013
Next Scheduled EDR Contact: 01/13/2014
Data Release Frequency: Semi-Annually

Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 07/25/2013
Date Data Arrived at EDR: 07/26/2013
Date Made Active in Reports: 08/20/2013
Number of Days to Update: 25

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 09/30/2013
Next Scheduled EDR Contact: 01/13/2014
Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA Facility List

Cupa Facility List

Date of Government Version: 06/20/2013
Date Data Arrived at EDR: 06/21/2013
Date Made Active in Reports: 08/21/2013
Number of Days to Update: 61

Source: Amador County Environmental Health
Telephone: 209-223-6439
Last EDR Contact: 09/10/2013
Next Scheduled EDR Contact: 12/23/2013
Data Release Frequency: Varies

BUTTE COUNTY:

CUPA Facility Listing

Cupa facility list.

Date of Government Version: 08/01/2013
Date Data Arrived at EDR: 08/02/2013
Date Made Active in Reports: 08/22/2013
Number of Days to Update: 20

Source: Public Health Department
Telephone: 530-538-7149
Last EDR Contact: 10/09/2013
Next Scheduled EDR Contact: 01/27/2014
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA Facility Listing

Cupa Facility Listing

Date of Government Version: 06/30/2013
Date Data Arrived at EDR: 07/24/2013
Date Made Active in Reports: 08/09/2013
Number of Days to Update: 16

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 09/30/2013
Next Scheduled EDR Contact: 01/13/2014
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 06/20/2013
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 08/09/2013
Number of Days to Update: 39

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 10/04/2013
Next Scheduled EDR Contact: 11/25/2013
Data Release Frequency: Varies

CONTRA COSTA COUNTY:

Site List
List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 08/20/2013
Date Data Arrived at EDR: 08/23/2013
Date Made Active in Reports: 10/08/2013
Number of Days to Update: 46

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 08/05/2013
Next Scheduled EDR Contact: 11/18/2013
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA Facility List
Cupa Facility list

Date of Government Version: 01/09/2013
Date Data Arrived at EDR: 01/10/2013
Date Made Active in Reports: 02/25/2013
Number of Days to Update: 46

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 09/20/2013
Next Scheduled EDR Contact: 08/19/2013
Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 08/20/2013
Date Data Arrived at EDR: 08/23/2013
Date Made Active in Reports: 10/08/2013
Number of Days to Update: 46

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 08/05/2013
Next Scheduled EDR Contact: 11/18/2013
Data Release Frequency: Varies

FRESNO COUNTY:

CUPA Resources List
Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 06/30/2013
Date Data Arrived at EDR: 07/16/2013
Date Made Active in Reports: 07/24/2013
Number of Days to Update: 8

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 10/09/2013
Next Scheduled EDR Contact: 01/27/2014
Data Release Frequency: Semi-Annually

HUMBOLDT COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 08/09/2013
Date Data Arrived at EDR: 08/09/2013
Date Made Active in Reports: 08/22/2013
Number of Days to Update: 13

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 08/09/2013
Next Scheduled EDR Contact: 12/09/2013
Data Release Frequency: Varies

IMPERIAL COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 07/26/2013
Date Data Arrived at EDR: 08/09/2013
Date Made Active in Reports: 08/22/2013
Number of Days to Update: 13

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 10/28/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Varies

INYO COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 09/10/2013
Date Data Arrived at EDR: 09/11/2013
Date Made Active in Reports: 10/14/2013
Number of Days to Update: 33

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 09/10/2013
Next Scheduled EDR Contact: 12/09/2013
Data Release Frequency: Varies

KERN COUNTY:

Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 08/31/2010
Date Data Arrived at EDR: 09/01/2010
Date Made Active in Reports: 09/30/2010
Number of Days to Update: 29

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 08/07/2013
Next Scheduled EDR Contact: 11/25/2013
Data Release Frequency: Quarterly

KINGS COUNTY:

CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 08/22/2013
Date Data Arrived at EDR: 08/27/2013
Date Made Active in Reports: 10/08/2013
Number of Days to Update: 42

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 08/22/2013
Next Scheduled EDR Contact: 12/09/2013
Data Release Frequency: Varies

LAKE COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 01/23/2013
Date Data Arrived at EDR: 01/25/2013
Date Made Active in Reports: 02/27/2013
Number of Days to Update: 33

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 10/21/2013
Next Scheduled EDR Contact: 02/03/2014
Data Release Frequency: Varies

LOS ANGELES COUNTY:

San Gabriel Valley Areas of Concern
San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office.

Date of Government Version: 03/30/2009
Date Data Arrived at EDR: 03/31/2009
Date Made Active in Reports: 10/23/2009
Number of Days to Update: 206

Source: EPA Region 9
Telephone: 415-972-3178
Last EDR Contact: 09/23/2013
Next Scheduled EDR Contact: 01/08/2014
Data Release Frequency: No Update Planned

HMS: Street Number List
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 03/28/2013
Date Data Arrived at EDR: 06/17/2013
Date Made Active in Reports: 08/21/2013
Number of Days to Update: 65

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 10/09/2013
Next Scheduled EDR Contact: 01/27/2014
Data Release Frequency: Semi-Annually

List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 07/22/2013
Date Data Arrived at EDR: 07/22/2013
Date Made Active in Reports: 08/26/2013
Number of Days to Update: 35

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 10/22/2013
Next Scheduled EDR Contact: 02/03/2014
Data Release Frequency: Varies

City of Los Angeles Landfills
Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 03/05/2009
Date Data Arrived at EDR: 03/10/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 29

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 07/17/2013
Next Scheduled EDR Contact: 11/04/2013
Data Release Frequency: Varies

Site Mitigation List
Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 01/30/2013
Date Data Arrived at EDR: 02/21/2013
Date Made Active in Reports: 03/25/2013
Number of Days to Update: 32

Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 10/21/2013
Next Scheduled EDR Contact: 02/03/2014
Data Release Frequency: Annually

City of El Segundo Underground Storage Tank
Underground storage tank sites located in El Segundo city.

Date of Government Version: 07/31/2013
Date Data Arrived at EDR: 08/01/2013
Date Made Active in Reports: 08/27/2013
Number of Days to Update: 26

Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 10/21/2013
Next Scheduled EDR Contact: 02/03/2014
Data Release Frequency: Semi-Annually

City of Long Beach Underground Storage Tank
Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 03/28/2003
Date Data Arrived at EDR: 10/23/2003
Date Made Active in Reports: 11/26/2003
Number of Days to Update: 34

Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 10/28/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Annually

City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 07/15/2013
Date Data Arrived at EDR: 07/18/2013
Date Made Active in Reports: 08/20/2013
Number of Days to Update: 33

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 10/09/2013
Next Scheduled EDR Contact: 01/27/2014
Data Release Frequency: Semi-Annually

MADERA COUNTY:

CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 09/20/2013
Date Data Arrived at EDR: 09/24/2013
Date Made Active in Reports: 10/18/2013
Number of Days to Update: 24

Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 08/22/2013
Next Scheduled EDR Contact: 12/09/2013
Data Release Frequency: Varies

MARIN COUNTY:

Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 11/26/2012
Date Data Arrived at EDR: 11/28/2012
Date Made Active in Reports: 01/21/2013
Number of Days to Update: 54

Source: Public Works Department Waste Management
Telephone: 415-499-6647
Last EDR Contact: 10/07/2013
Next Scheduled EDR Contact: 01/20/2014
Data Release Frequency: Semi-Annually

MERCED COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 08/23/2013
Date Data Arrived at EDR: 08/27/2013
Date Made Active in Reports: 10/08/2013
Number of Days to Update: 42

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 08/22/2013
Next Scheduled EDR Contact: 12/09/2013
Data Release Frequency: Varies

MONO COUNTY:

CUPA Facility List
CUPA Facility List

Date of Government Version: 09/04/2013
Date Data Arrived at EDR: 09/05/2013
Date Made Active in Reports: 10/14/2013
Number of Days to Update: 39

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 09/03/2013
Next Scheduled EDR Contact: 12/16/2013
Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA Facility Listing
CUPA Program listing from the Environmental Health Division.

Date of Government Version: 09/11/2013
Date Data Arrived at EDR: 09/12/2013
Date Made Active in Reports: 10/14/2013
Number of Days to Update: 32

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 08/22/2013
Next Scheduled EDR Contact: 12/09/2013
Data Release Frequency: Varies

NAPA COUNTY:

Sites With Reported Contamination
A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 12/05/2011
Date Data Arrived at EDR: 12/06/2011
Date Made Active in Reports: 02/07/2012
Number of Days to Update: 63

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 09/03/2013
Next Scheduled EDR Contact: 12/16/2013
Data Release Frequency: No Update Planned

Closed and Operating Underground Storage Tank Sites
Underground storage tank sites located in Napa county.

Date of Government Version: 01/15/2008
Date Data Arrived at EDR: 01/16/2008
Date Made Active in Reports: 02/08/2008
Number of Days to Update: 23

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 09/03/2013
Next Scheduled EDR Contact: 12/16/2013
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 05/29/2013
Date Data Arrived at EDR: 05/30/2013
Date Made Active in Reports: 07/15/2013
Number of Days to Update: 46

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 08/15/2013
Next Scheduled EDR Contact: 11/18/2013
Data Release Frequency: Varies

ORANGE COUNTY:

List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 08/01/2013
Date Data Arrived at EDR: 08/13/2013
Date Made Active in Reports: 10/08/2013
Number of Days to Update: 56

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 08/07/2013
Next Scheduled EDR Contact: 11/25/2013
Data Release Frequency: Annually

List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 08/01/2013
Date Data Arrived at EDR: 08/13/2013
Date Made Active in Reports: 10/08/2013
Number of Days to Update: 56

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 08/07/2013
Next Scheduled EDR Contact: 11/25/2013
Data Release Frequency: Quarterly

List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 08/01/2013
Date Data Arrived at EDR: 08/13/2013
Date Made Active in Reports: 10/08/2013
Number of Days to Update: 56

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 08/07/2013
Next Scheduled EDR Contact: 11/25/2013
Data Release Frequency: Quarterly

PLACER COUNTY:

Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 08/22/2013
Date Data Arrived at EDR: 08/22/2013
Date Made Active in Reports: 10/10/2013
Number of Days to Update: 49

Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 08/20/2013
Next Scheduled EDR Contact: 12/23/2013
Data Release Frequency: Semi-Annually

RIVERSIDE COUNTY:

Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 07/18/2013
Date Data Arrived at EDR: 07/18/2013
Date Made Active in Reports: 07/24/2013
Number of Days to Update: 6

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 09/23/2013
Next Scheduled EDR Contact: 01/08/2014
Data Release Frequency: Quarterly

Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 07/18/2013
Date Data Arrived at EDR: 07/18/2013
Date Made Active in Reports: 08/20/2013
Number of Days to Update: 33

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 09/23/2013
Next Scheduled EDR Contact: 01/08/2014
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

Toxic Site Clean-Up List

List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 05/03/2013
Date Data Arrived at EDR: 07/08/2013
Date Made Active in Reports: 07/24/2013
Number of Days to Update: 16

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 10/07/2013
Next Scheduled EDR Contact: 01/20/2014
Data Release Frequency: Quarterly

Master Hazardous Materials Facility List

Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 05/03/2013
Date Data Arrived at EDR: 07/08/2013
Date Made Active in Reports: 08/23/2013
Number of Days to Update: 46

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 10/07/2013
Next Scheduled EDR Contact: 01/20/2014
Data Release Frequency: Quarterly

SAN BERNARDINO COUNTY:

Hazardous Material Permits

This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 09/03/2013
Date Data Arrived at EDR: 09/03/2013
Date Made Active in Reports: 10/10/2013
Number of Days to Update: 37

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 08/08/2013
Next Scheduled EDR Contact: 11/25/2013
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

Hazardous Materials Management Division Database

The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 09/23/2013
Date Data Arrived at EDR: 09/24/2013
Date Made Active in Reports: 10/17/2013
Number of Days to Update: 23

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 09/23/2013
Next Scheduled EDR Contact: 12/23/2013
Data Release Frequency: Quarterly

Solid Waste Facilities

San Diego County Solid Waste Facilities.

Date of Government Version: 10/31/2012
Date Data Arrived at EDR: 11/06/2012
Date Made Active in Reports: 11/30/2012
Number of Days to Update: 24

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 10/28/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Environmental Case Listing

The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010
Date Data Arrived at EDR: 06/15/2010
Date Made Active in Reports: 07/09/2010
Number of Days to Update: 24

Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 09/10/2013
Next Scheduled EDR Contact: 12/23/2013
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

Local Oversite Facilities

A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10

Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 08/07/2013
Next Scheduled EDR Contact: 11/25/2013
Data Release Frequency: Quarterly

Underground Storage Tank Information

Underground storage tank sites located in San Francisco county.

Date of Government Version: 11/29/2010
Date Data Arrived at EDR: 03/10/2011
Date Made Active in Reports: 03/15/2011
Number of Days to Update: 5

Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 08/07/2013
Next Scheduled EDR Contact: 11/25/2013
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

San Joaquin Co. UST

A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 09/25/2013
Date Data Arrived at EDR: 09/27/2013
Date Made Active in Reports: 10/18/2013
Number of Days to Update: 21

Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 09/23/2013
Next Scheduled EDR Contact: 01/08/2014
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA Facility List

Cupa Facility List.

Date of Government Version: 08/26/2013
Date Data Arrived at EDR: 08/27/2013
Date Made Active in Reports: 10/10/2013
Number of Days to Update: 44

Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 08/22/2013
Next Scheduled EDR Contact: 12/09/2013
Data Release Frequency: Varies

SAN MATEO COUNTY:

Business Inventory

List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 07/02/2013
Date Data Arrived at EDR: 07/05/2013
Date Made Active in Reports: 08/23/2013
Number of Days to Update: 49

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 06/13/2013
Next Scheduled EDR Contact: 09/30/2013
Data Release Frequency: Annually

Fuel Leak List

A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 09/16/2013
Date Data Arrived at EDR: 09/17/2013
Date Made Active in Reports: 10/16/2013
Number of Days to Update: 29

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 09/16/2013
Next Scheduled EDR Contact: 12/30/2013
Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

CUPA Facility Listing

CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 09/08/2011
Date Data Arrived at EDR: 09/09/2011
Date Made Active in Reports: 10/07/2011
Number of Days to Update: 28

Source: Santa Barbara County Public Health Department
Telephone: 805-686-8167
Last EDR Contact: 09/23/2013
Next Scheduled EDR Contact: 12/09/2013
Data Release Frequency: Varies

SANTA CLARA COUNTY:

Cupa Facility List

Cupa facility list

Date of Government Version: 09/03/2013
Date Data Arrived at EDR: 09/04/2013
Date Made Active in Reports: 10/10/2013
Number of Days to Update: 36

Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 09/03/2013
Next Scheduled EDR Contact: 12/16/2013
Data Release Frequency: Varies

HIST LUST - Fuel Leak Site Activity Report

A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22

Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LOP Listing

A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 09/03/2013
Date Data Arrived at EDR: 09/06/2013
Date Made Active in Reports: 10/14/2013
Number of Days to Update: 38

Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 09/03/2013
Next Scheduled EDR Contact: 12/16/2013
Data Release Frequency: Annually

Hazardous Material Facilities

Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 08/14/2013
Date Data Arrived at EDR: 08/16/2013
Date Made Active in Reports: 10/08/2013
Number of Days to Update: 53

Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 08/08/2013
Next Scheduled EDR Contact: 11/25/2013
Data Release Frequency: Annually

SANTA CRUZ COUNTY:

CUPA Facility List
CUPA facility listing.

Date of Government Version: 08/22/2013
Date Data Arrived at EDR: 08/27/2013
Date Made Active in Reports: 10/10/2013
Number of Days to Update: 44

Source: Santa Cruz County Environmental Health
Telephone: 831-464-2761
Last EDR Contact: 08/22/2013
Next Scheduled EDR Contact: 12/09/2013
Data Release Frequency: Varies

SHASTA COUNTY:

CUPA Facility List
Cupa Facility List.

Date of Government Version: 09/09/2013
Date Data Arrived at EDR: 09/10/2013
Date Made Active in Reports: 10/14/2013
Number of Days to Update: 34

Source: Shasta County Department of Resource Management
Telephone: 530-225-5789
Last EDR Contact: 08/22/2013
Next Scheduled EDR Contact: 12/09/2013
Data Release Frequency: Varies

SOLANO COUNTY:

Leaking Underground Storage Tanks
A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 09/18/2013
Date Data Arrived at EDR: 09/20/2013
Date Made Active in Reports: 10/17/2013
Number of Days to Update: 27

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 09/16/2013
Next Scheduled EDR Contact: 12/30/2013
Data Release Frequency: Quarterly

Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 09/18/2013
Date Data Arrived at EDR: 09/24/2013
Date Made Active in Reports: 10/18/2013
Number of Days to Update: 24

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 09/16/2013
Next Scheduled EDR Contact: 12/30/2013
Data Release Frequency: Quarterly

SONOMA COUNTY:

Cupa Facility List
Cupa Facility list

Date of Government Version: 07/05/2013
Date Data Arrived at EDR: 07/05/2013
Date Made Active in Reports: 08/21/2013
Number of Days to Update: 47

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 09/30/2013
Next Scheduled EDR Contact: 01/13/2014
Data Release Frequency: Varies

Leaking Underground Storage Tank Sites
A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 07/02/2013
Date Data Arrived at EDR: 07/05/2013
Date Made Active in Reports: 08/12/2013
Number of Days to Update: 38

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 09/30/2013
Next Scheduled EDR Contact: 01/13/2014
Data Release Frequency: Quarterly

SUTTER COUNTY:

Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 09/10/2013
Date Data Arrived at EDR: 09/11/2013
Date Made Active in Reports: 10/14/2013
Number of Days to Update: 33

Source: Sutter County Department of Agriculture
Telephone: 530-822-7500
Last EDR Contact: 09/10/2013
Next Scheduled EDR Contact: 12/23/2013
Data Release Frequency: Semi-Annually

TUOLUMNE COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 01/14/2013
Date Data Arrived at EDR: 01/16/2013
Date Made Active in Reports: 02/27/2013
Number of Days to Update: 42

Source: Divison of Environmental Health
Telephone: 209-533-5633
Last EDR Contact: 10/28/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Varies

VENTURA COUNTY:

Business Plan, Hazardous Waste Producers, and Operating Underground Tanks
The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 08/19/2013
Date Data Arrived at EDR: 08/27/2013
Date Made Active in Reports: 10/10/2013
Number of Days to Update: 44

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 08/19/2013
Next Scheduled EDR Contact: 12/02/2013
Data Release Frequency: Quarterly

Inventory of Illegal Abandoned and Inactive Sites
Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 12/01/2011
Date Data Arrived at EDR: 12/01/2011
Date Made Active in Reports: 01/19/2012
Number of Days to Update: 49

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 10/07/2013
Next Scheduled EDR Contact: 01/20/2014
Data Release Frequency: Annually

Listing of Underground Tank Cleanup Sites
Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008
Date Data Arrived at EDR: 06/24/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 37

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 08/19/2013
Next Scheduled EDR Contact: 12/02/2013
Data Release Frequency: Quarterly

Medical Waste Program List

To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 05/28/2013
Date Data Arrived at EDR: 06/24/2013
Date Made Active in Reports: 08/12/2013
Number of Days to Update: 49

Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 10/28/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Quarterly

Underground Tank Closed Sites List

Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 08/29/2013
Date Data Arrived at EDR: 09/18/2013
Date Made Active in Reports: 10/16/2013
Number of Days to Update: 28

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 09/16/2013
Next Scheduled EDR Contact: 12/30/2013
Data Release Frequency: Quarterly

YOLO COUNTY:

Underground Storage Tank Comprehensive Facility Report

Underground storage tank sites located in Yolo county.

Date of Government Version: 06/24/2013
Date Data Arrived at EDR: 06/26/2013
Date Made Active in Reports: 08/20/2013
Number of Days to Update: 55

Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 09/23/2013
Next Scheduled EDR Contact: 01/08/2014
Data Release Frequency: Annually

YUBA COUNTY:

CUPA Facility List

CUPA facility listing for Yuba County.

Date of Government Version: 08/01/2013
Date Data Arrived at EDR: 08/05/2013
Date Made Active in Reports: 08/22/2013
Number of Days to Update: 17

Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 07/31/2013
Next Scheduled EDR Contact: 11/18/2013
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 07/30/2013
Date Data Arrived at EDR: 08/19/2013
Date Made Active in Reports: 10/03/2013
Number of Days to Update: 45

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 08/19/2013
Next Scheduled EDR Contact: 12/02/2013
Data Release Frequency: Annually

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 07/19/2012
Date Made Active in Reports: 08/28/2012
Number of Days to Update: 40

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 10/18/2013
Next Scheduled EDR Contact: 01/27/2014
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 08/01/2013
Date Data Arrived at EDR: 08/07/2013
Date Made Active in Reports: 09/10/2013
Number of Days to Update: 34

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 08/07/2013
Next Scheduled EDR Contact: 11/18/2013
Data Release Frequency: Annually

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 07/24/2013
Date Made Active in Reports: 08/19/2013
Number of Days to Update: 26

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 10/21/2013
Next Scheduled EDR Contact: 02/03/2014
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 06/21/2013
Date Made Active in Reports: 08/05/2013
Number of Days to Update: 45

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 08/23/2013
Next Scheduled EDR Contact: 12/09/2013
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 08/09/2013
Date Made Active in Reports: 09/27/2013
Number of Days to Update: 49

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 09/16/2013
Next Scheduled EDR Contact: 12/30/2013
Data Release Frequency: Annually

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Electric Power Transmission Line Data
Source: Rextag Strategies Corp.
Telephone: (281) 769-2247
U.S. Electric Transmission and Power Plants Systems Digital GIS Data

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association’s annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

STREET AND ADDRESS INFORMATION

GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

ORANGE COAST COLLEGE
2701 FAIRVIEW ROAD
COSTA MESA, CA 92626

TARGET PROPERTY COORDINATES

Latitude (North):	33.672 - 33˚ 40’ 19.20’’
Longitude (West):	117.9116 - 117˚ 54’ 41.76’’
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	415490.2
UTM Y (Meters):	3725968.2
Elevation:	61 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	33117-F8 NEWPORT BEACH (DIGITAL), CA
Most Recent Revision:	0

EDR’s GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principal investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

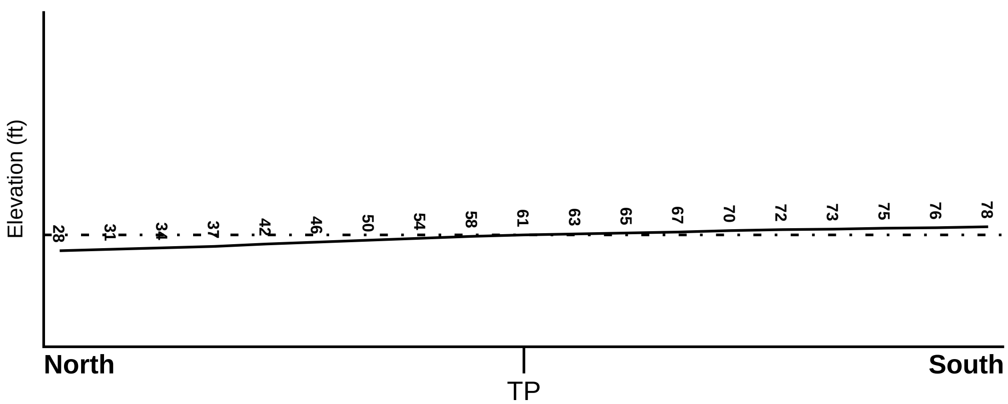
TOPOGRAPHIC INFORMATION

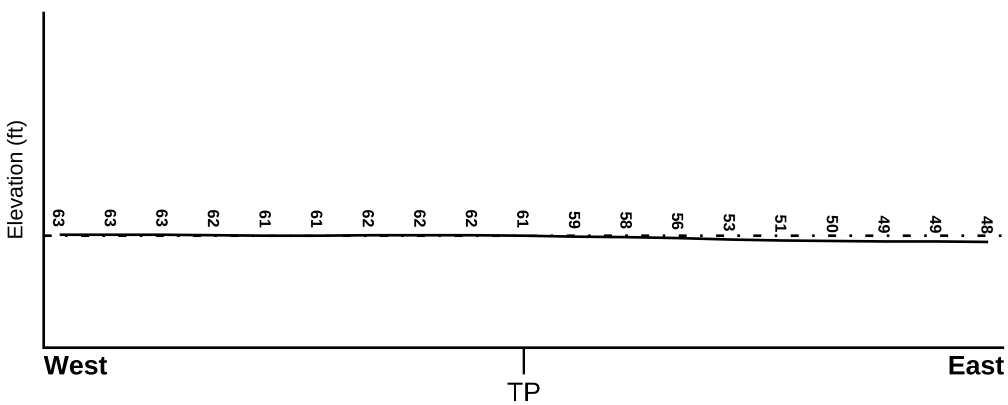
Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General NNE

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES





Target Property Elevation: 61 ft.

0 1/2 1 Miles

Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Target Property County	FEMA Flood Electronic Data
ORANGE, CA	YES - refer to the Overview Map and Detail Map

Flood Plain Panel at Target Property: 06059C - FEMA DFIRM Flood data

Additional Panels in search area: Not Reported

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
COSTA MESA	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius: 1.25 miles
Status: Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
A1	1/4 - 1/2 Mile WNW	SSW
A2	1/4 - 1/2 Mile WNW	SSW
A3	1/4 - 1/2 Mile WNW	N
A4	1/4 - 1/2 Mile WNW	Not Reported
7	1/4 - 1/2 Mile WNW	SE
C10	1/2 - 1 Mile NNE	SSW
D11	1/2 - 1 Mile SSE	Not Reported
D12	1/2 - 1 Mile SSE	Not Reported
13	1/2 - 1 Mile NW	Not Reported

* ©1996 Site−specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
14	1/2 - 1 Mile NNE	SSW
15	1/2 - 1 Mile ENE	Not Reported
E16	1/2 - 1 Mile NE	NNW
E17	1/2 - 1 Mile NE	NNW
F18	1/2 - 1 Mile West	Not Reported

For additional site information, refer to Physical Setting Source Map Findings.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

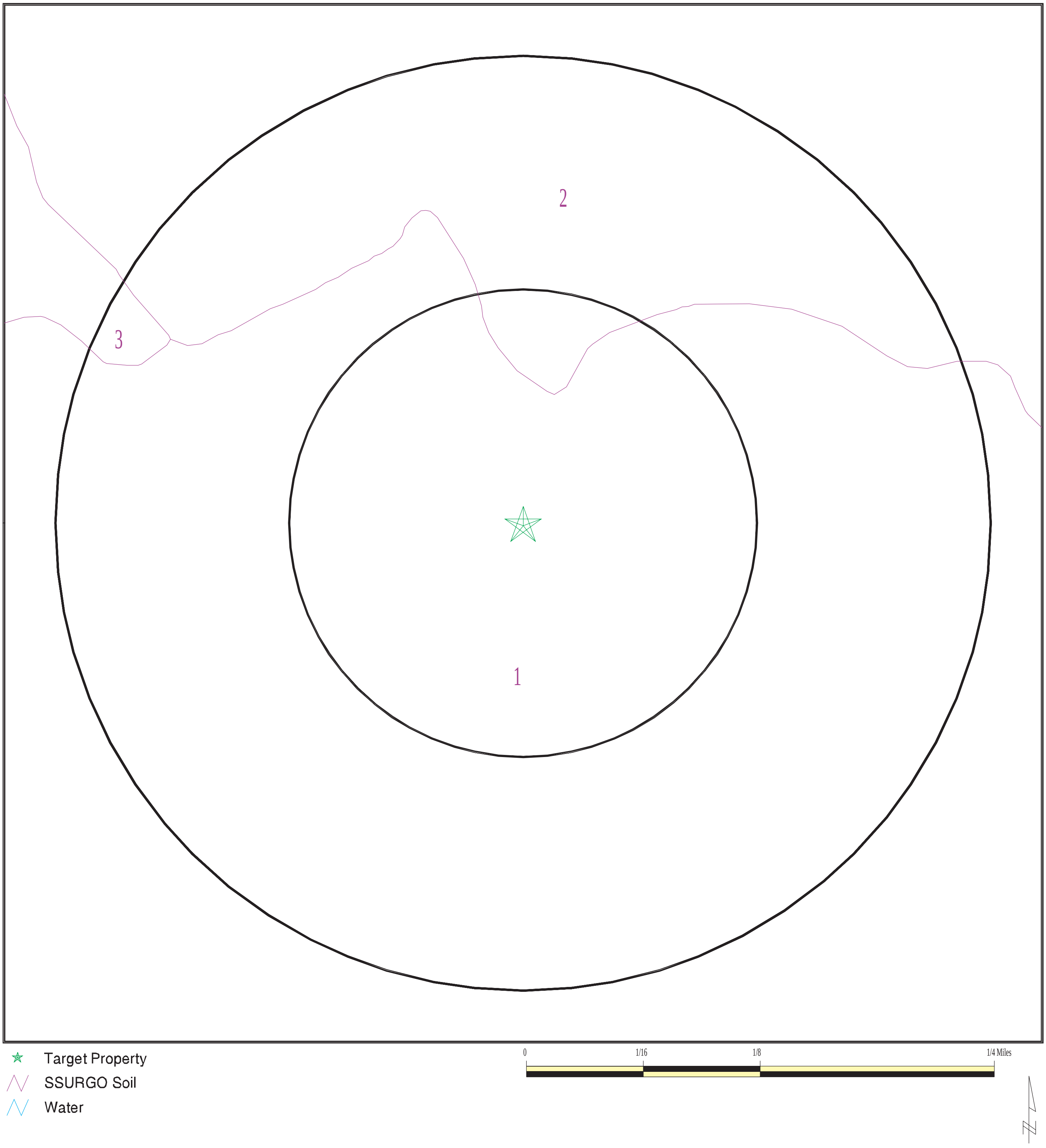
Era: Cenozoic
System: Quaternary
Series: Quaternary
Code: Q *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratifed Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 3772737.2s



SITE NAME: Orange Coast College ADDRESS: 2701 Fairview Road Costa Mesa CA 92626 LAT/LONG: 33.672 / 117.9116	CLIENT: Dudek & Associates CONTACT: Laura Roll INQUIRY #: 3772737.2s DATE: October 30, 2013 7:40 pm

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: CROPLEY

Soil Surface Texture: clay

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		Soil Reaction (pH)
1	0 inches	29 inches	clay	Not reported	Not reported	Max: 1.4 Min: 0.42	Max: 8.4 Min: 6.6
2	29 inches	59 inches	clay	Not reported	Not reported	Max: 1.4 Min: 0.42	Max: 8.4 Min: 6.6

Soil Map ID: 2

Soil Component Name: MYFORD

Soil Surface Texture: sandy loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Moderately well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information

	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	
Layer	**Upper**	**Lower**	**Soil Texture Class**	**AASHTO Group**	**Unified Soil**		**Soil Reaction (pH)**
1	0 inches	22 inches	sandy loam	Not reported	Not reported	Max: 42 Min: 14	Max: 6 Min: 5.1
2	22 inches	27 inches	sandy clay	Not reported	Not reported	Max: 0.42 Min: 0.01	Max: 8.4 Min: 5.6
3	27 inches	38 inches	sandy clay loam	Not reported	Not reported	Max: 0.42 Min: 0.01	Max: 8.4 Min: 5.6
4	38 inches	70 inches	sandy clay loam	Not reported	Not reported	Max: 0.42 Min: 0.01	Max: 8.4 Min: 6.1
5	70 inches	79 inches	sandy loam	Not reported	Not reported	Max: 14 Min: 4	Max: 6.5 Min: 6.1

Soil Map ID: 3

Soil Component Name: MYFORD

Soil Surface Texture: sandy loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Moderately well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		Soil Reaction (pH)
1	0 inches	11 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 42 Min: 14	Max: 6 Min: 5.1
2	11 inches	18 inches	sandy clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 0.42 Min: 0.01	Max: 8.4 Min: 5.6
3	18 inches	27 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 0.42 Min: 0.01	Max: 8.4 Min: 5.6
4	27 inches	70 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 0.42 Min: 0.01	Max: 8.4 Min: 6.1
5	70 inches	79 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 6.5 Min: 6.1

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
B6	USGS40000136637	1/4 - 1/2 Mile NNW
B8	USGS40000136645	1/2 - 1 Mile NW
F19	USGS40000136552	1/2 - 1 Mile West
23	USGS40000136700	1/2 - 1 Mile NW

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
20	CADW50000002537	1/2 - 1 Mile West
22	6291	1/2 - 1 Mile NE

OTHER STATE DATABASE INFORMATION

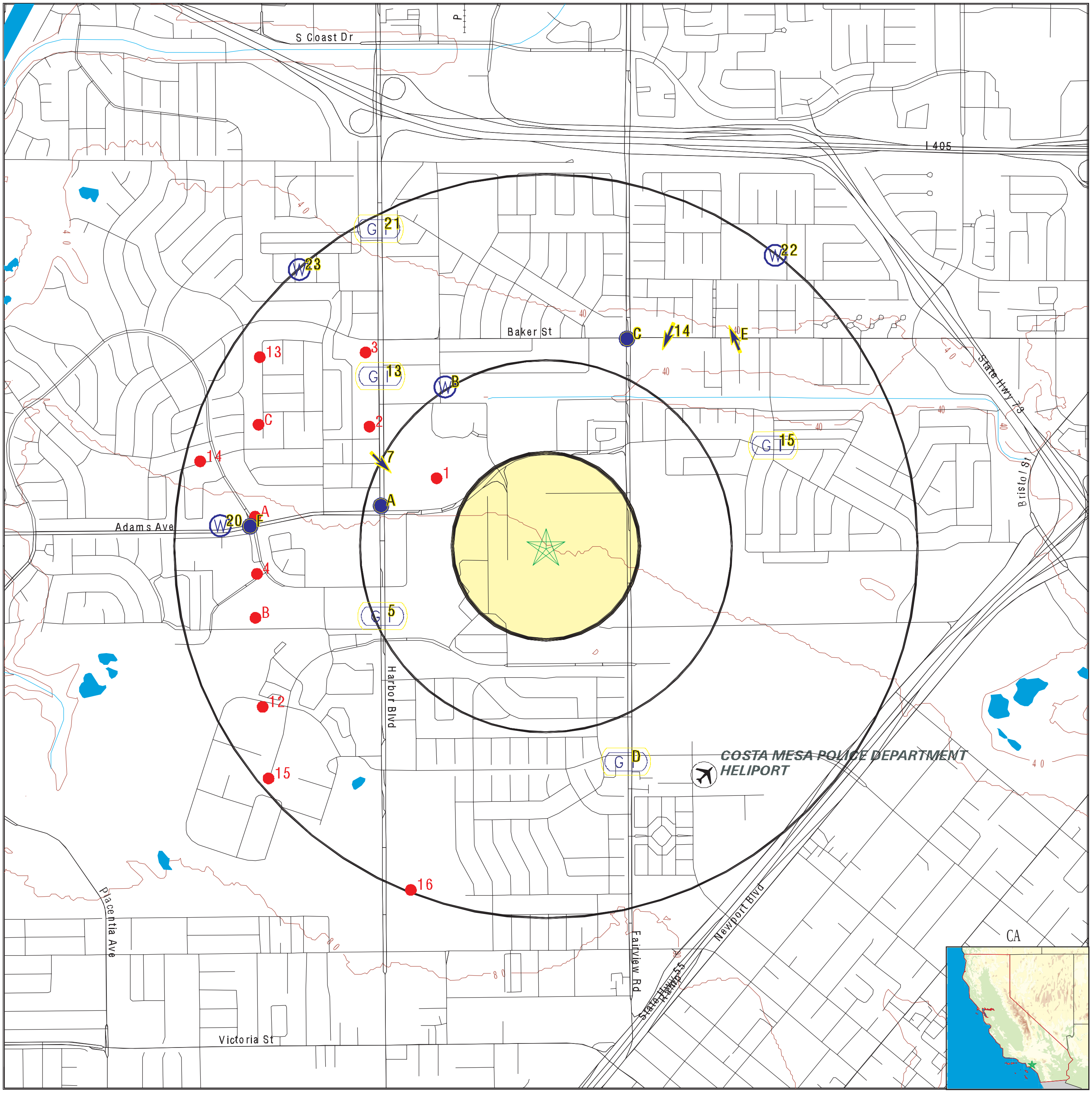
STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	CAOG9A000005937	1/4 - 1/2 Mile WNW
2	CAOG9A000006177	1/2 - 1 Mile NW
3	CAOG9A000006433	1/2 - 1 Mile NW
4	CAOG9A000005370	1/2 - 1 Mile West
A5	CAOG9A000005635	1/2 - 1 Mile West
B6	CAOG9A000005102	1/2 - 1 Mile WSW
A7	CAOG9A000005784	1/2 - 1 Mile West
B8	CAOG9A000004929	1/2 - 1 Mile WSW
B9	CAOG9A000005108	1/2 - 1 Mile WSW
C10	CAOG9A000006142	1/2 - 1 Mile WNW
C11	CAOG9A000006231	1/2 - 1 Mile WNW
12	CAOG9A000004581	1/2 - 1 Mile WSW
13	CAOG9A000006419	1/2 - 1 Mile WNW
14	CAOG9A000006012	1/2 - 1 Mile WNW
15	CAOG9A000004438	1/2 - 1 Mile SW

STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
16	CAOG9A000004099	1/2 - 1 Mile SSW

PHYSICAL SETTING SOURCE MAP - 3772737.2s



County Boundary
Major Roads
Contour Lines
Earthquake Fault Lines
Airports
Earthquake epicenter, Richter 5 or greater
Water Wells
Public Water Supply Wells
Cluster of Multiple Icons

0 | 1/4 | 1/2 | 1 Miles

Groundwater Flow Direction
GI Indeterminate Groundwater Flow at Location
GV Groundwater Flow Varies at Location
HD Closest Hydrogeological Data
Oil, gas or related wells

SITE NAME: Orange Coast College ADDRESS: 2701 Fairview Road Costa Mesa CA 92626 LAT/LONG: 33.672 / 117.9116	CLIENT: Dudek & Associates CONTACT: Laura Roll INQUIRY #: 3772737.2s DATE: October 30, 2013 7:40 pm

Map ID / Direction / Distance / Elevation			Database	EDR ID Number
A1 **WNW** **1/4 - 1/2 Mile** **Lower**	Site ID:	083000278T	**AQUIFLOW**	**54977**
	Groundwater Flow:	SSW		
	Shallow Water Depth:	Not Reported		
	Deep Water Depth:	Not Reported		
	Average Water Depth:	81.52		
	Date:	01/13/1998		
A2 **WNW** **1/4 - 1/2 Mile** **Lower**	Site ID:	083000278T	**AQUIFLOW**	**54978**
	Groundwater Flow:	SSW		
	Shallow Water Depth:	Not Reported		
	Deep Water Depth:	Not Reported		
	Average Water Depth:	81.52		
	Date:	01/13/1998		
A3 **WNW** **1/4 - 1/2 Mile** **Lower**	Site ID:	083000344T	**AQUIFLOW**	**65361**
	Groundwater Flow:	N		
	Shallow Water Depth:	Not Reported		
	Deep Water Depth:	Not Reported		
	Average Water Depth:	100		
	Date:	08/23/1993		
A4 **WNW** **1/4 - 1/2 Mile** **Lower**	Site ID:	083002420T	**AQUIFLOW**	**38666**
	Groundwater Flow:	Not Reported		
	Shallow Water Depth:	Not Reported		
	Deep Water Depth:	Not Reported		
	Average Water Depth:	75		
	Date:	05/24/1996		
5 **WSW** **1/4 - 1/2 Mile** **Higher**	Site ID:	083000307T	**AQUIFLOW**	**64505**
	Groundwater Flow:	Not Reported		
	Shallow Water Depth:	83		
	Deep Water Depth:	88		
	Average Water Depth:	Not Reported		
	Date:	12/09/1997		
B6 **NNW** **1/4 - 1/2 Mile** **Lower**			**FED USGS**	**USGS40000136637**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-334041117545401		
Monloc name:	006S010W03L001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070203	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.6780749
Longitude:	-117.9158909	Sourcemap scale:	Not Reported

Horiz Acc measure:	Unknown	Horiz Acc measure units:	Unknown
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	Not Reported
Vert measure units:	Not Reported	Vertacc measure val:	Not Reported
Vert accmeasure units:	Not Reported		
Vertcollection method:	Not Reported		
Vert coord refsys:	Not Reported	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	Not Reported
Welldepth units:	Not Reported	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

7
WNW
1/4 - 1/2 Mile
Lower

AQUIFLOW 67208

Site ID:	083001503T
Groundwater Flow:	SE
Shallow Water Depth:	63.33
Deep Water Depth:	77.8
Average Water Depth:	Not Reported
Date:	07/31/1998

B8
NW
1/2 - 1 Mile
Lower

FED USGS USGS40000136645

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-334042117545701		
Monloc name:	006S010W03M002S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070203	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.6783527
Longitude:	-117.9167243	Sourcemap scale:	Not Reported
Horiz Acc measure:	Unknown	Horiz Acc measure units:	Unknown
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	Not Reported
Vert measure units:	Not Reported	Vertacc measure val:	Not Reported
Vert accmeasure units:	Not Reported		
Vertcollection method:	Not Reported		
Vert coord refsys:	Not Reported	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	Not Reported
Welldepth units:	Not Reported	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

C9
NNE
1/2 - 1 Mile
Lower

AQUIFLOW 38849

Site ID:	083002125T
Groundwater Flow:	Not Reported
Shallow Water Depth:	Not Reported
Deep Water Depth:	Not Reported
Average Water Depth:	41
Date:	09/30/1997

Map ID Direction Distance Elevation			Database	EDR ID Number
C10 **NNE** **1/2 - 1 Mile** **Lower**	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	083000371T SSW Not Reported Not Reported 51 08/23/1989	**AQUIFLOW**	**65351**
D11 **SSE** **1/2 - 1 Mile** **Higher**	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	083000143T Not Reported 78 86 Not Reported 04/01/1996	**AQUIFLOW**	**38853**
D12 **SSE** **1/2 - 1 Mile** **Higher**	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	083000143T Not Reported 78 86 Not Reported 04/01/1996	**AQUIFLOW**	**38852**
13 **NW** **1/2 - 1 Mile** **Lower**	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	083003124T Not Reported Not Reported Not Reported 45 02/17/1998	**AQUIFLOW**	**55028**
14 **NNE** **1/2 - 1 Mile** **Lower**	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	083001490T SSW 35.60 40.46 Not Reported 04/27/1998	**AQUIFLOW**	**34280**
15 **ENE** **1/2 - 1 Mile** **Lower**	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	083001685T Not Reported 44 50.8 Not Reported 05/07/1996	**AQUIFLOW**	**38937**
E16 **NE** **1/2 - 1 Mile** **Lower**	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	083000019T NNW 12.30 36.41 Not Reported 10/30/1998	**AQUIFLOW**	**34057**

Map ID / Direction / Distance / Elevation			Database	EDR ID Number
E17 **NE** **1/2 - 1 Mile** **Lower**	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	083000019T NNW 12.30 36.41 Not Reported 10/30/1998	**AQUIFLOW**	**34058**
F18 **West** **1/2 - 1 Mile** **Higher**	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	083002070T Not Reported 70.8 75 Not Reported 05/09/1997	**AQUIFLOW**	**68282**
F19 **West** **1/2 - 1 Mile** **Higher**			**FED USGS**	**USGS40000136552**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-334022117553001		
Monloc name:	006S010W04Q002S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070203	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.6727972
Longitude:	-117.9258912	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	60.00
Vert measure units:	feet	Vertacc measure val:	2.5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	Not Reported
Welldepth units:	Not Reported	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1977-10-25	74.70	

20 **West** **1/2 - 1 Mile** **Higher**	**CA WELLS**	**CADW50000002537**

Latitude :	33.6728		
Longitude :	117.9268		
Site code:	336728N1179268W001	Casgem sta:	06S10W04Q002S
Local well:	Not Reported	Casgem s 1:	Unknown
County id:	30		
Basin cd:	8-1	Basin desc:	Coastal Plain Of Orange County
Org unit n:	Southern Region Office	Site id:	CADW50000002537

21
NNW
1/2 - 1 Mile
Lower

AQUIFLOW 65363

Site ID:	083000581T
Groundwater Flow:	Not Reported
Shallow Water Depth:	Not Reported
Deep Water Depth:	Not Reported
Average Water Depth:	45
Date:	07/15/1993

22
NE
1/2 - 1 Mile
Lower

CA WELLS 6291

Water System Information:

Prime Station Code:	05S/10W-34Q03 S	User ID:	TEE
FRDS Number:	3010004005	County:	Orange
District Number:	08	Station Type:	WELL/AMBNT/MUN/INTAKE
Water Type:	Well/Groundwater	Well Status:	Active Untreated
Source Lat/Long:	334100.0 1175400.0	Precision:	1 Mile (One Minute)
Source Name:	WELL 04		
System Number:	3010004		
System Name:	Mesa Consolidated WD		
Organization That Operates System:			
	P.O. Box 5008		
	Costa Mesa, CA 92628		
Pop Served:	97000	Connections:	22370
Area Served:	COSTA MESA		
Sample Collected:	02/01/2006	Findings:	712. US
Chemical:	SPECIFIC CONDUCTANCE		

23
NW
1/2 - 1 Mile
Lower

FED USGS USGS40000136700

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-334058117552001		
Monloc name:	006S010W04B001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070203	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.6827969
Longitude:	-117.9231133	Sourcemap scale:	Not Reported

Horiz Acc measure:	Unknown	Horiz Acc measure units:	Unknown
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	Not Reported
Vert measure units:	Not Reported	Vertacc measure val:	Not Reported
Vert accmeasure units:	Not Reported		
Vertcollection method:	Not Reported		
Vert coord refsys:	Not Reported	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	Not Reported
Welldepth units:	Not Reported	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

Map ID Direction Distance		Database	EDR ID Number

1
WNW
1/4 - 1/2 Mile — **OIL_GAS** — **CAOG9A000005937**

Districtnu:	1	Apinumber:	05901107
Blmwell:	N	Redrillcan:	Not Reported
Dryhole:	N	Wellstatus:	P
Operatorna:	Petroleum Securities Company		
Countyname:	Orange	Fieldname:	Any Field
Areaname:	Any Area		
Section:	3		
Township:	06S	Range:	10W
Basemeridi:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Glat:	33.674654		
Glong:	-117.916706		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Fairview	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	12/30/1899
Welldeptha:	Not Reported	Redrillfoo:	Not Reported
Abandonedd:	/ /	Completion:	/ /
Gissymbol:	PDH	Site id:	CAOG9A000005937

2
NW
1/2 - 1 Mile — **OIL_GAS** — **CAOG9A000006177**

Districtnu:	1	Apinumber:	05901286
Blmwell:	N	Redrillcan:	Not Reported
Dryhole:	N	Wellstatus:	I
Operatorna:	Western Oil & Refining Co., Gillis, Rec.		
Countyname:	Orange	Fieldname:	Any Field
Areaname:	Any Area		
Section:	4		
Township:	06S	Range:	10W
Basemeridi:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Glat:	33.676668		
Glong:	-117.91984		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Adams	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	12/30/1899
Welldeptha:	Not Reported	Redrillfoo:	Not Reported
Abandonedd:	/ /	Completion:	/ /
Gissymbol:	AOG	Site id:	CAOG9A000006177

3
NW
1/2 - 1 Mile — **OIL_GAS** — **CAOG9A000006433**

Districtnu:	1	Apinumber:	05901109
Blmwell:	N	Redrillcan:	Not Reported
Dryhole:	N	Wellstatus:	I
Operatorna:	Portland Petroleum Corp.		
Countyname:	Orange	Fieldname:	Any Field
Areaname:	Any Area		
Section:	4		
Township:	06S	Range:	10W
Basemeridi:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Glat:	33.679561		
Glong:	-117.920019		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Borchard	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	12/30/1899
Welldeptha:	Not Reported	Redrillfoo:	Not Reported
Abandonedd:	/ /	Completion:	/ /
Gissymbol:	AOG	Site id:	CAOG9A000006433

4
West **OIL_GAS** **CAOG9A000005370**
1/2 - 1 Mile

Districtnu:	1	Apinumber:	05921601
Blmwell:	N	Redrillcan:	Not Reported
Dryhole:	N	Wellstatus:	P
Operatorna:	Chevron U.S.A. Inc.		
Countyname:	Orange	Fieldname:	Newport, West
Areaname:	Onshore		
Section:	9		
Township:	06S	Range:	10W
Basemeridi:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Glat:	33.67092		
Glong:	-117.925092		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	NC-106
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	12/30/1899
Welldeptha:	Not Reported	Redrillfoo:	Not Reported
Abandonedd:	/ /	Completion:	/ /
Gissymbol:	PDH	Site id:	CAOG9A000005370

A5
West **OIL_GAS** **CAOG9A000005635**
1/2 - 1 Mile

Districtnu:	1	Apinumber:	05921600
Blmwell:	N	Redrillcan:	Not Reported
Dryhole:	N	Wellstatus:	P
Operatorna:	Chevron U.S.A. Inc.		
Countyname:	Orange	Fieldname:	Newport, West
Areaname:	Onshore		
Section:	9		
Township:	06S	Range:	10W
Basemeridi:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Glat:	33.672675		
Glong:	-117.925181		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	NC-105
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	12/30/1899
Welldeptha:	Not Reported	Redrillfoo:	Not Reported
Abandonedd:	/ /	Completion:	/ /
Gissymbol:	PDH	Site id:	CAOG9A000005635

B6
WSW
1/2 - 1 Mile
OIL_GAS **CAOG9A000005102**

Districtnu:	1	Apinumber:	05921602
Blmwell:	N	Redrillcan:	Not Reported
Dryhole:	N	Wellstatus:	P
Operatorna:	Chevron U.S.A. Inc.		
Countyname:	Orange	Fieldname:	Newport, West
Areaname:	Onshore		
Section:	9		
Township:	06S	Range:	10W
Basemeridi:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Glat:	33.669483		
Glong:	-117.924907		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	NC-107
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	12/30/1899
Welldeptha:	Not Reported	Redrillfoo:	Not Reported
Abandonedd:	/ /	Completion:	/ /
Gissymbol:	PDH	Site id:	CAOG9A000005102

A7
West
1/2 - 1 Mile
OIL_GAS **CAOG9A000005784**

Districtnu:	1	Apinumber:	05921599
Blmwell:	N	Redrillcan:	Not Reported
Dryhole:	N	Wellstatus:	P
Operatorna:	Chevron U.S.A. Inc.		
Countyname:	Orange	Fieldname:	Newport, West
Areaname:	Onshore		
Section:	4		
Township:	06S	Range:	10W
Basemeridi:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Glat:	33.673633		
Glong:	-117.925177		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	NC-104
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	12/30/1899
Welldeptha:	Not Reported	Redrillfoo:	Not Reported
Abandonedd:	/ /	Completion:	/ /
Gissymbol:	PDH	Site id:	CAOG9A000005784

B8
WSW **OIL_GAS** **CAOG9A000004929**
1/2 - 1 Mile

Districtnu:	1	Apinumber:	05921603
Blmwell:	N	Redrillcan:	Not Reported
Dryhole:	N	Wellstatus:	P
Operatorna:	Chevron U.S.A. Inc.		
Countyname:	Orange	Fieldname:	Newport, West
Areaname:	Onshore		
Section:	9		
Township:	06S	Range:	10W
Basemeridi:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Glat:	33.668605		
Glong:	-117.924911		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	NC-108
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	12/30/1899
Welldeptha:	Not Reported	Redrillfoo:	Not Reported
Abandonedd:	/ /	Completion:	/ /
Gissymbol:	PDH	Site id:	CAOG9A000004929

B9
WSW **OIL_GAS** **CAOG9A000005108**
1/2 - 1 Mile

Districtnu:	1	Apinumber:	05901279
Blmwell:	N	Redrillcan:	Not Reported
Dryhole:	N	Wellstatus:	P
Operatorna:	J. K. Wadley		
Countyname:	Orange	Fieldname:	Any Field
Areaname:	Any Area		
Section:	9		
Township:	06S	Range:	10W
Basemeridi:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Glat:	33.669526		
Glong:	-117.925673		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Segerstrom	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	12/30/1899
Welldeptha:	Not Reported	Redrillfoo:	Not Reported
Abandonedd:	/ /	Completion:	/ /
Gissymbol:	PDH	Site id:	CAOG9A000005108

C10
WNW
1/2 - 1 Mile **OIL_GAS** **CAOG9A000006142**

Districtnu:	1	Apinumber:	05921598
Blmwell:	N	Redrillcan:	Not Reported
Dryhole:	N	Wellstatus:	P
Operatorna:	Chevron U.S.A. Inc.		
Countyname:	Orange	Fieldname:	Newport, West
Areaname:	Onshore		
Section:	4		
Township:	06S	Range:	10W
Basemeridi:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Glat:	33.676266		
Glong:	-117.925071		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	NC-103
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	12/30/1899
Welldeptha:	Not Reported	Redrillfoo:	Not Reported
Abandonedd:	/ /	Completion:	/ /
Gissymbol:	PDH	Site id:	CAOG9A000006142

C11
WNW
1/2 - 1 Mile **OIL_GAS** **CAOG9A000006231**

Districtnu:	1	Apinumber:	05921597
Blmwell:	N	Redrillcan:	Not Reported
Dryhole:	N	Wellstatus:	P
Operatorna:	Chevron U.S.A. Inc.		
Countyname:	Orange	Fieldname:	Newport, West
Areaname:	Onshore		
Section:	4		
Township:	06S	Range:	10W
Basemeridi:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Glat:	33.677223		
Glong:	-117.924973		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	NC-102
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	12/30/1899
Welldeptha:	Not Reported	Redrillfoo:	Not Reported
Abandonedd:	/ /	Completion:	/ /
Gissymbol:	PDH	Site id:	CAOG9A000006231

12
WSW
1/2 - 1 Mile **OIL_GAS** **CAOG9A000004581**

Districtnu:	1	Apinumber:	05921604
Blmwell:	N	Redrillcan:	Not Reported
Dryhole:	N	Wellstatus:	P
Operatorna:	Chevron U.S.A. Inc.		
Countyname:	Orange	Fieldname:	Newport, West
Areaname:	Onshore		
Section:	9		
Township:	06S	Range:	10W
Basemeridi:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Glat:	33.665731		
Glong:	-117.924827		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	NC-110
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	12/30/1899
Welldeptha:	Not Reported	Redrillfoo:	Not Reported
Abandonedd:	/ /	Completion:	/ /
Gissymbol:	PDH	Site id:	CAOG9A000004581

13
WNW
1/2 - 1 Mile **OIL_GAS** **CAOG9A000006419**

Districtnu:	1	Apinumber:	05921596
Blmwell:	N	Redrillcan:	Not Reported
Dryhole:	N	Wellstatus:	P
Operatorna:	Chevron U.S.A. Inc.		
Countyname:	Orange	Fieldname:	Newport, West
Areaname:	Onshore		
Section:	4		
Township:	06S	Range:	10W
Basemeridi:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Glat:	33.679378		
Glong:	-117.924964		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	NC-100
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	12/30/1899
Welldeptha:	Not Reported	Redrillfoo:	Not Reported
Abandonedd:	/ /	Completion:	/ /
Gissymbol:	PDH	Site id:	CAOG9A000006419

14
WNW
1/2 - 1 Mile **OIL_GAS** **CAOG9A000006012**

Districtnu:	1	Apinumber:	05901052
Blmwell:	N	Redrillcan:	Not Reported
Dryhole:	N	Wellstatus:	P
Operatorna:	Long Beach Oil Operators		
Countyname:	Orange	Fieldname:	Any Field
Areaname:	Any Area		
Section:	4		
Township:	06S	Range:	10W
Basemeridi:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Glat:	33.675314		
Glong:	-117.927746		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Segerstrom	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	12/30/1899
Welldeptha:	Not Reported	Redrillfoo:	Not Reported
Abandonedd:	/ /	Completion:	/ /
Gissymbol:	PDH	Site id:	CAOG9A000006012

15
SW
1/2 - 1 Mile **OIL_GAS** **CAOG9A000004438**

Districtnu:	1	Apinumber:	05921605
Blmwell:	N	Redrillcan:	Not Reported
Dryhole:	N	Wellstatus:	P
Operatorna:	Chevron U.S.A. Inc.		
Countyname:	Orange	Fieldname:	Newport, West
Areaname:	Onshore		
Section:	9		
Township:	06S	Range:	10W
Basemeridi:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Glat:	33.662937		
Glong:	-117.924552		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	NC-112
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	12/30/1899
Welldeptha:	Not Reported	Redrillfoo:	Not Reported
Abandonedd:	/ /	Completion:	/ /
Gissymbol:	PDH	Site id:	CAOG9A000004438

16
SSW
1/2 - 1 Mile

OIL_GAS **CAOG9A000004099**

Districtnu:	1	Apinumber:	05901029
Blmwell:	N	Redrillcan:	Not Reported
Dryhole:	N	Wellstatus:	P
Operatorna:	Intex Oil Company		
Countyname:	Orange	Fieldname:	Any Field
Areaname:	Any Area		
Section:	10		
Township:	06S	Range:	10W
Basemeridi:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Glat:	33.658586		
Glong:	-117.917907		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Norris	Wellnumber:	18
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	12/30/1899
Welldeptha:	Not Reported	Redrillfoo:	Not Reported
Abandonedd:	/ /	Completion:	/ /
Gissymbol:	PDH	Site id:	CAOG9A000004099

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
92626	70	5

Federal EPA Radon Zone for ORANGE County: 3

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for ORANGE COUNTY, CA

Number of sites tested: 30

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.763 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	Not Reported	Not Reported	Not Reported	Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Services, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Water Well Database
Source: Department of Water Resources
Telephone: 916-651-9648

California Drinking Water Quality Database
Source: Department of Health Services
Telephone: 916-324-2319
The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

OTHER STATE DATABASE INFORMATION

California Oil and Gas Well Locations
Source: Department of Conservation
Telephone: 916-323-1779
Oil and Gas well locations in the state.

RADON

State Database: CA Radon
Source: Department of Health Services
Telephone: 916-324-2208
Radon Database for California

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

STREET AND ADDRESS INFORMATION

ATTACHMENT B

County of Orange Environmental Health Records

COUNTY OF ORANGE
HEALTH CARE AGENCY

PUBLIC HEALTH SERVICES
ENVIRONMENTAL HEALTH

Excellence
Integrity
Service

MARK A. REFOWITZ
DIRECTOR

DAVID M. SOULELES, MPH
DEPUTY AGENCY DIRECTOR

RICHARD SANCHEZ, REHS, MPH
DIRECTOR
ENVIRONMENTAL HEALTH

MAILING ADDRESS:
1241 E. DYER RD., #120
SANTA ANA, CA 92705-5611

TELEPHONE: (714) 433-6000
FAX: (714) 754-1732
E-MAIL: ehealth@ochca.com

12/16/2013

DUDEK
DHRISTINA LEYBA
605 THIRD STREET
ENCINITAS CA 92024-

RE: EHD REQ #: 21500
2701 FAIRVIEW ROAD COSTA MESA CA 92628-5005

Attached, please find the information that you have requested.

The information was prepared in the ordinary course of the business concerned at or near the time of the act, condition, or event, which they depict.

If you have any question, please call this office at (714) 433-6022.

Environmental Health Records Unit

Attachment(s):
224 Pages

Orange County TAX ID: 95-6000-928W

MICHAEL SCHUMACHER, Ph.D.
DIRECTOR

MIKE SPURGEON
DEPUTY AGENCY DIRECTOR
REGULATORY HEALTH SERVICES

JACK MILLER, REHS
DIRECTOR
ENVIRONMENTAL HEALTH

MAILING ADDRESS:
2009 EAST EDINGER AVENUE
SANTA ANA, CA 92705-4720

TELEPHONE (714) 667-3600
FAX: (714) 972-0749
E-MAIL: environhealth@hca.co.orange.ca.us

COUNTY OF ORANGE
HEALTH CARE AGENCY

REGULATORY HEALTH SERVICES
ENVIRONMENTAL HEALTH

February 2, 2000

Ben Kollmeyer
Environmental Health & Safety Coordinator
Coast Community College District
1370 Adams Avenue
Costa Mesa, CA 92626

99UT55

Subject: **Remedial Action Completion Certification**

Re: Underground Storage Tank (UST) Case
Orange Coast College
2701 Fairview Road
Costa Mesa, CA 92626
OCHCA Case #99UT55

Dear Mr. Kollmeyer:

This letter confirms the completion of site investigation and corrective action for the underground storage tank(s) formerly located at the above-described location. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the former underground storage tank(s) are greatly appreciated.

Based on information in the above-referenced file and with the provision that the information provided to this Agency was accurate and representative of site conditions, this Agency finds that the site investigation and corrective action carried out at your underground storage tank(s) site is in compliance with the requirements of subdivisions (a) and (b) of Section 25299.37 of the Health and Safety Code and with corrective action regulations adopted pursuant to Section 25299.77 of the Health and Safety Code and that no further action related to the petroleum release(s) at the site is required.

This notice is issued pursuant to subdivision (h) of Section 25299.37 of the Health and Safety Code.

Please contact Arghavan Rashidi-Fard of our office at (714) 667-3713 if you have any questions regarding this matter.

Sincerely,

Jack Miller, REHS, Director
Environmental Health

Attachment: Case Closure Summary

cc: Nancy Olson-Martin, Santa Ana Regional Water Quality Control Board
SB 562 Database, State Water Resources Control Board
Cleanup Fund Manager, State Water Resources Control Board
Larry Honeybourne, Environmental Health

Case Closure Summary
Leaking Underground Fuel Tank Program

I. Agency Information

Date: **December 9, 1999**

Agency Name: **Orange County Health Care Agency**	Address: **2009 East Edinger Avenue**
City/State/Zip: **Santa Ana, CA 92705**	Phone: **(714) 667-3713**
Responsible staff person: **Arghavan Rashidi-Fard**	Title: **Hazardous Waste Specialist**

II. Case Information

Site Facility Name: **Orange Coast Community College (Bldg. #7)**		
Site Facility Address: **2701 Fairview Road, Costa Mesa 92626**		
RB LUSTIS Case No.:	Local Case No.: **99UT55**	LOP Case No.:
URF Filing Date:	SWEEPS No.	

Responsible Party	Address	Phone Number
Ben Kollmeyer **Coast Community College District**	**1370 Adams Avenue** **Costa Mesa, CA 92626**	**(714) 438-4753**

Tank No	Size in Gal.	Contents	Closed in-Place/Removed?	Date
1	**Approx. 1000**	**Diesel**	**Partially left in place**	**Not known (late 1940's)**
2				
3				

III. Release and Site Characterization Information

Cause and type of release: **Not known**		
Site characterization complete? **Yes**	Date approved by oversight agency: **NA**	
Monitoring wells installed? **No**	Number:	Proper screened interval?
Highest GW depth BGS: **<40'**	Lowest depth:	Flow direction:
Most sensitive current use: **Domestic and Municipal Supply**		
Are drinking water wells affected? **No**	Aquifer name:	
Is surface water affected? **No**	Nearest/affected SW name:	
Off-site beneficial use impacts (addresses/locations): **None**		
Report(s) on file? **Yes**	Where is report(s) filed? **OCHCA**	

Treatment and Disposal of Affected Material

Material	Amount (include Units)	Action (treatment or disposal/destination)	Date
Tank	**NA**		
Piping			
Soil			

Case Closure Summary

Leaking Underground Fuel Storage Tank Program

Case#: 99UT55
Date: December 9, 1999

III. Release and Site Characterization Information (Continued)

Maximum Documented Contaminant Concentrations - - Before and After Cleanup									
Contaminant	Soil (ppm)		Water (ppm)		Contaminant	Soil (ppm)		Water (ppm)	
	Before	After	Before	After		Before	After	Before	After
TPH (diesel)	7400	same			MTBE	ND(1.4)	same		
Benzene	.200	same							
Toluene	.200	same							
Ethylbenzene	.200	same							
Xylenes	.600	same							

Comments (Depth of Remediation, etc.): **A portion of a concrete tank and diesel contaminated soil was discovered inside the building during earthquake retrofitting activities. The U.S. Army apparently abandoned the tank in place when they left the base in late 1940's when the property was turned over to the college district. A grab soil sample from 3 feet below grade (fbg) was collected by the college environmental health and safety staff for analysis. The results confirmed the presence of diesel contaminated soil. A site assessment consisting of drilling nine borings around the former tank was conducted to determine the extent of the soil contamination. The total depths of the borings extended between 10 to 30 fbg. The highest TPH concentrations ranging between 6000 and 7400 ppm were detected in samples collected from 15 and 20 foot samples in three borings (B-1, B-5 and B-6). The sample with the 7400 ppm at 15' in boring B-1 was not analyzed for BTEX and MTBE. The other samples with 6200 ppm TPH collected from B-6 at 20' and 6000 ppm TPH collected from B-5 at 15' did not show BTEX above the detection limit and or the MCLs. Also, MTBE was not detected above the detection limits of .700 and 1.4 ppm in the samples with 6000 and 6200 ppm TPH, respectively. (The MTBE results were detected by EPA Method 8021.) A ten foot clean zone was delineated in borings B-5 and B-6.**

No further work is recommended for this site since the extent of the soil contamination is limited and the samples did not show concentrations of volatile aromatic hydrocarbons in the soil that would pose a threat to public health or the groundwater that may occur at depth greater than 40 fbg.

IV. Closure

Does completed corrective action protect *existing* beneficial uses per the Regional Board Basin Plan? **Yes**		
Does completed corrective action protect *potential* beneficial uses per the Regional Board Basin Plan? **Yes**		
Does corrective action protect public health for current land use? **Yes**		
Site management requirements: **None**		
Should corrective action be reviewed if land use changes? **No**		
Monitoring wells decommissioned: **No**	Number decommissioned:	Number Retained:
List enforcement actions taken:		
List enforcement actions rescinded:		

V. Local Agency Representative Data

Name: **Arghavan Rashidi-Fard**	Title: **Hazardous Waste Specialist**
Signature: Arghavan Rashidi-Fard Karen Y. Hode 12/10/99	Date: 12-9-99

Case Closure Summary
Leaking Underground Fuel Storage Tank Program

Case#: **99UT55**
Date: **December 9, 1999**

VI. RWQCB Notification

Date Submitted to RB: 12-13-99	RB Response: concurs with Closure	
RWQCB Staff Name: Nancy Olson-Martin	Title: Sanitary Engineering Associate	Date:
Signature: Kenneth Williams	Title: Chief, UST Section	Date: 1-24-2000

This document and the related CASE CLOSURE LETTER, shall be retained by the lead agency as part of the official site file. Revised: 4/14/94

UNDERGROUND STORAGE TANK UNAUTHORIZED RELEASE (LEAK) / CONTAMINATION SITE REPORT

EMERGENCY [ ] YES [X] NO

HAS STATE OFFICE OF EMERGENCY SERVICES REPORT BEEN FILED ? [ ] YES [X] NO

FOR LOCAL AGENCY USE ONLY
I HEREBY CERTIFY THAT I HAVE DISTRIBUTED THIS INFORMATION ACCORDING TO THE DISTRIBUTION SHOWN ON THE INSTRUCTION SHEET ON THE BACK PAGE OF THIS FORM

SIGNED: Arghavan Rashidi-Fard DATE: 12-15-99

REPORT DATE: 1 1 0 8 9 9 (M M D D Y Y)

CASE #: 99UT55

REPORTED BY

NAME OF INDIVIDUAL FILING REPORT: Ben Kollmeyer
PHONE: (714) 438-4753
SIGNATURE: Ben Kollmeyer

REPRESENTING: [X] OWNER/OPERATOR [ ] REGIONAL BOARD [ ] LOCAL AGENCY [ ] OTHER

COMPANY OR AGENCY NAME: Coast Community College District

ADDRESS: 1370 Adams Avenue (STREET) Costa Mesa (CITY) CA (STATE) 92626 (ZIP)

RESPONSIBLE PARTY

NAME: **Coast Community College Dist. [ ] UNKNOWN
CONTACT PERSON: Ben Kollmeyer
PHONE: (714) 438-4728

ADDRESS: 1370 (STREET) Adams Ave (CITY) Costa Mesa (STATE) CA (ZIP) 92626

SITE LOCATION

FACILITY NAME (IF APPLICABLE): Orange Coast College, Conseling & Admin.
OPERATOR:
PHONE: (714) 438-4753

ADDRESS: 2701 (STREET) Fairview Road (CITY) Costa Mesa (COUNTY) Orange (ZIP) 92626

CROSS STREET: Merrimac Way

IMPLEMENTING AGENCIES

LOCAL AGENCY / AGENCY NAME: CUPA-Orange County Health Care Agency
CONTACT PERSON: Arghavan Rashidi-Fard
PHONE: (714) 667-3713

REGIONAL BOARD: Santa Ana Regional Water Quality Control Board Ken Williams
PHONE: ( )

SUBSTANCES INVOLVED

	NAME	QUANTITY LOST (GALLONS)
(1)	Petroleum Hydrocarbons	[X] UNKNOWN
(2)		[ ] UNKNOWN

DISCOVERY/ABATEMENT

DATE DISCOVERED: 1 0 2 7 9 9 (M M D D Y Y)

HOW DISCOVERED: [ ] INVENTORY CONTROL [ ] SUBSURFACE MONITORING [ ] NUISANCE CONDITIONS [ ] TANK TEST [ ] TANK REMOVAL [X] OTHER During Trenching Operations

DATE DISCHARGE BEGAN: M M D D Y Y [XX] UNKNOWN

METHOD USED TO STOP DISCHARGE (CHECK ALL THAT APPLY):
[ ] REMOVE CONTENTS [ ] CLOSE TANK & REMOVE [ ] REPAIR PIPING
[ ] REPAIR TANK [ ] CLOSE TANK & FILL IN PLACE [ ] CHANGE PROCEDURE
[ ] REPLACE TANK [XX] OTHER Tank removed (1940's)

HAS DISCHARGE BEEN STOPPED ? [X] YES [ ] NO IF YES, DATE UNKNOWN (M M D D Y Y)

SOURCE/CAUSE

SOURCE OF DISCHARGE: [XX] TANK LEAK [ ] UNKNOWN [ ] PIPING LEAK [ ] OTHER

CAUSE(S): [ ] OVERFILL [ ] RUPTURE/FAILURE [ ] SPILL [ ] CORROSION [XX] UNKNOWN [ ] OTHER

CASE TYPE

CHECK ONE ONLY
[ ] UNDETERMINED [XX] SOIL ONLY [ ] GROUNDWATER [ ] DRINKING WATER - (CHECK ONLY IF WATER WELLS HAVE ACTUALLY BEEN AFFECTED)

CURRENT STATUS

CHECK ONE ONLY
[ ] NO ACTION TAKEN
[ ] PRELIMINARY SITE ASSESSMENT WORKPLAN SUBMITTED
[ ] POLLUTION CHARACTERIZATION
[ ] LEAK BEING CONFIRMED
[XX] PRELIMINARY SITE ASSESSMENT UNDERWAY
[ ] POST CLEANUP MONITORING IN PROGRESS
[ ] REMEDIATION PLAN
[ ] CASE CLOSED (CLEANUP COMPLETED OR UNNECESSARY)
[ ] CLEANUP UNDERWAY

REMEDIAL ACTION

CHECK APPROPRIATE ACTION(S) (SEE BACK FOR DETAILS)
[ ] CAP SITE (CD)
[ ] EXCAVATE & DISPOSE (ED)
[ ] REMOVE FREE PRODUCT (FP)
[ ] ENHANCED BIO DEGRADATION (IT)
[ ] CONTAINMENT BARRIER (CB)
[ ] EXCAVATE & TREAT (ET)
[ ] PUMP & TREAT GROUNDWATER (GT)
[ ] REPLACE SUPPLY (RS)
[ ] VACUUM EXTRACT (VE)
[XX] NO ACTION REQUIRED (NA)
[ ] TREATMENT AT HOOKUP (HU)
[ ] VENT SOIL (VS)
[ ] OTHER (OT)

COMMENTS

** Previous Owner- Santa Ana Army Air Base - United States Military Base
The leak was detected under a building structure than has been in place since CCCD purchased the property. Leak may have been from a fuel storage tank used to heat a personnel military barracks. Substance most likely to be fuel oil (diesel).

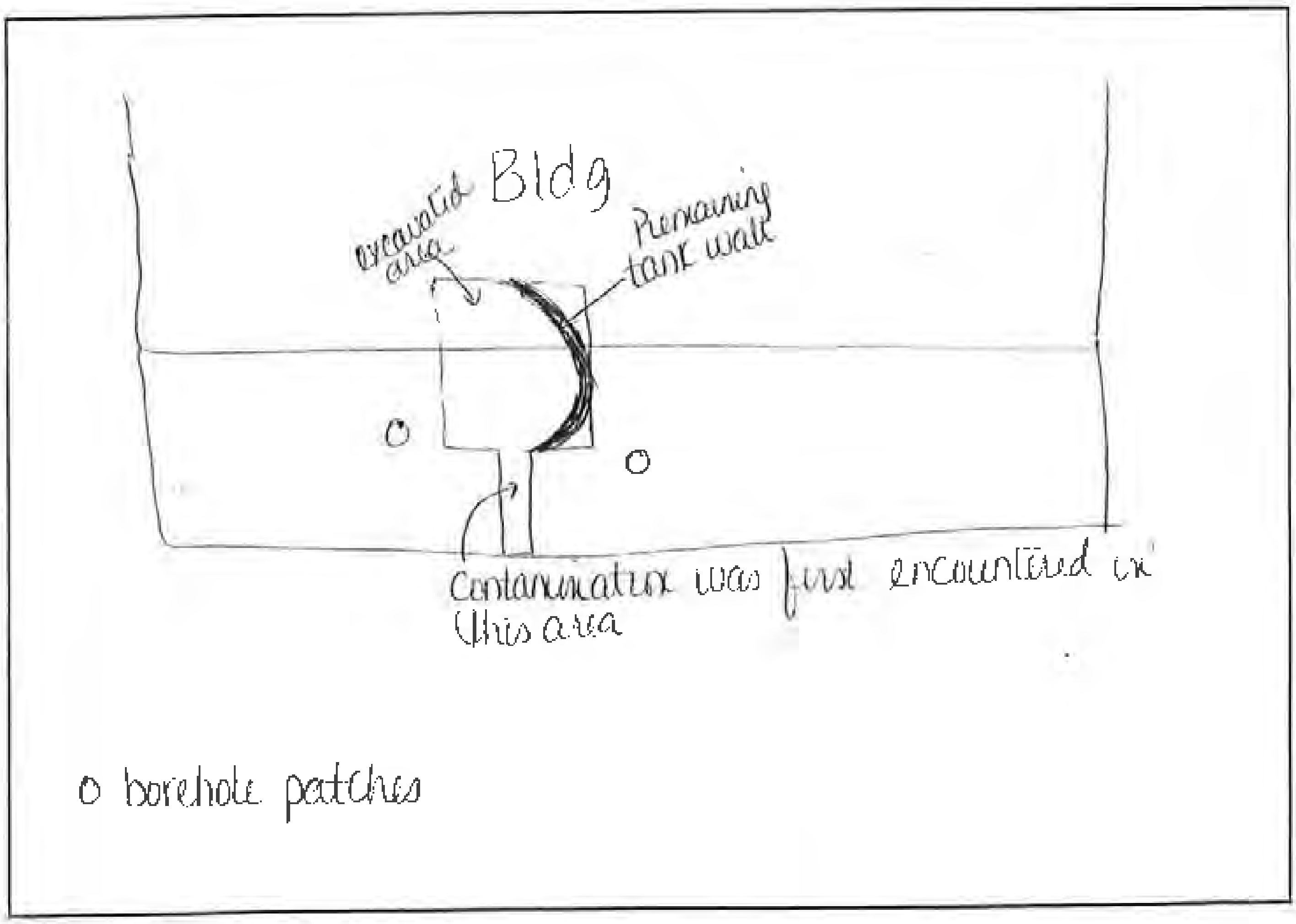
IELD ACTIVITY DESCRIPTIO

Orange Coast College, 2701 Fairview Rd, Costa Mesa
Facility Name

PC # ______ TI # ______ LUST # 99UT55 IR # ______

Inspector: Nighavan Rashidi-Fard Date: 11-9-99 Time: 2:15pm

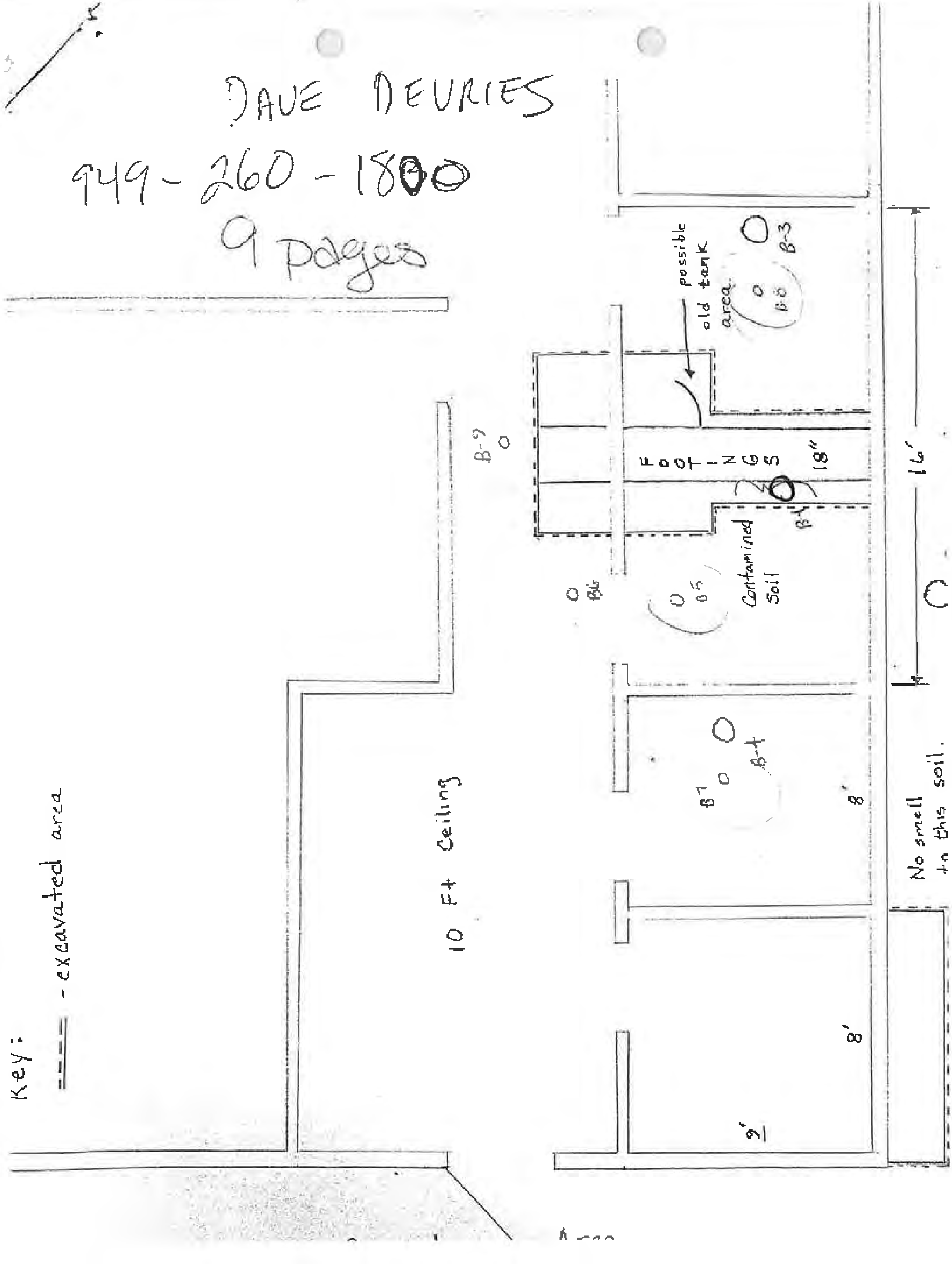
Field Activity: On-site to observe a concrete (half of a) tank discovered during seismic retrofitting inside a building by the footings. Soil contamination was encountered and some borings were drilled to identify contaminants.
This area use to be the barracks for the Santa Ana Base which operated until the late 1940's.
A report containing the investigation will be submitted.
There was no staining observed in the excavation but there was definite diesel odor.



DAVE DEVRIES

949-260-1800

9 pages



November 30, 1999

48900 1

Ms. Maggie Parks
Coast Community College District
Environmental Health & Safety
1370 Adams Avenue
Costa Mesa, California 92626

Soil Assessment Report
Orange Coast Community College
Building #7
Costa Mesa, California

Dear Ms. Parks:

This letter report presents the results of the soil assessment conducted by Harding Lawson Associates (HLA) at the Coast Community College District's (CCCD's) Orange Coast Community College (OCCC) facility located between Adams Avenue, Merrimac Way, Harbor Boulevard, and Fairview Road in Costa Mesa, California (Plate 1). The objective of the investigation was to assess the vertical and lateral extent of soil containing total petroleum hydrocarbons as diesel (TPHd) in the previous area of a suspected heating fuel underground storage tank (UST) (Plate 2).

BACKGROUND

CCCD personnel informed HLA that soil with petroleum hydrocarbon odors was encountered during excavations for earthquake retrofitting. The apparently hydrocarbon impacted soil was observed to be adjacent to a 6-foot-diameter vertically oriented cylindrical concrete structure suspected to be a former fuel oil UST. On October 27, 1999, CCCD health and safety personnel collected a grab soil sample at approximately 3-feet below ground surface (bgs) from the open sidewall of the excavation and analyzed it for total petroleum hydrocarbons as gasoline (TPHg), TPHd, and benzene, toluene, ethylbenzene, and xylenes (BTEX). The TPHg and TPHd results were reported as 16 milligrams per kilogram (mg/kg) and 820 mg/kg, respectively. Each of the BTEX results was reported as not detected. CCCD personnel requested that HLA assess the soil impact.

Based on a November 29, 1999 telephone conversation with Ms. Argavahn Rashidi-Fard of the Orange County Health Care Agency (OCHCA), depth to groundwater at sites near the intersection of Fairview Road and Baker Street ranges from 35 to 54 feet bgs. Ms. Rashidi-Fard also indicated that depth to groundwater near the intersection of Harbor Boulevard and Adams Avenue has been measured at 75 feet bgs. Based on conversations with CCCD employees, previous geotechnical soil assessments conducted at the OCCC campus indicate that groundwater was not encountered in soil borings drilled to depths of 40 feet bgs.

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Ms. Maggie Parks
Coast Community College District
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SOIL INVESTIGATION

The following soil investigation activities were performed during the reporting period:

- On November 2, 1999, four soil borings (B-1 through B-4, see Plate 2) were drilled by hand-auger method in the previous area of the suspected UST. Boring B-1 was drilled to a total depth of 15 feet bgs. Borings B-2, B-3, and B-4 were drilled to total depths of 10 feet bgs. Soil samples were collected at 2.5-foot intervals and screened in the field using a photoionization detector (PID). Each sample was taken to Del Mar Analytical in Irvine, California, under chain-of-custody documentation for TPHd analysis by EPA Test Method 8015 Modified. Soil analytical results are summarized in Table 1 and depicted on Plate 3. Laboratory data sheets are included in Attachment A.

- On November 5, 1999, five additional soil borings (B-5 through B-9) were drilled inside Building #7 to depths ranging from 20 to 30 feet bgs. The soil boring locations are shown on Plate 2. Soil samples were collected at 5-foot intervals, logged by an HLA scientist, and taken to Del Mar Analytical in Irvine, California, for TPHd analysis by EPA Test Method 8015 Modified. Based on the analytical results, selected soil samples were additionally analyzed for BTEX and methyl tertiary butyl ether (MTBE). Soil analytical results are summarized in Table 1 and depicted on Plate 3. Laboratory data sheets are included in Attachment A. Soil boring logs are included in Attachment B. Field procedures for soil boring installation and sample collection are included as Attachment C.

RESULTS OF THE SOIL INVESTIGATION

A review of the soil investigation results indicates the following:

- TPHd was reported in soil borings B-1, B-2, B-4, B-5, B-6, and B-9. The highest TPHd levels were detected in soil samples collected near the west and south areas of the suspected UST.

- Soil borings B-1, B-5, and B-6, which are nearest to the west and south perimeter of the UST, indicate that TPHd concentrations above 5,000 mg/kg are present in soil from ground surface to 15 or 20 feet bgs. Soil samples collected at or below 25 feet bgs in this area were not reported to contain detectable quantities of TPHd, indicating that assessment of the vertical extent in the suspected source area is complete.

- Soil borings B-4, B-7, and B-9, which are located southeast and southwest of the UST, indicate that relatively lower concentrations of TPHd, ranging from 1,300 mg/kg to 3,700 mg/kg, are present at 5 to 10 feet bgs. Soil samples collected at or below 15 feet bgs in these three soil borings were reported to contain below 10 mg/kg TPHd, indicating that assessment of the vertical extent in these areas is complete.

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Ms. Maggie Parks
Coast Community College District
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- Soil borings B-2, B-3, and B-8, located north and northeast of the UST, indicate that TPHd was not detected in these areas with the exception of a reported concentration of 20 mg/kg in B-1 at 2.5 feet bgs.

- Laboratory chromatographs for soil samples collected from soil borings B-1 through B-4 indicate that the detected petroleum hydrocarbons are within the diesel range. Refer to Attachment A for copies of the chromatographs.

- Results of the soil investigation indicate that although delineation of the entire TPHd impact was not completed, sufficient soil data have been collected to assess the general area, depth, and TPHd concentrations of impacted soil.

RECOMMENDATIONS

HLA recommends no further action at this site regarding the hydrocarbon-impacted soil due to the limited vertical and horizontal extent of hydrocarbons, lack of significant BTEX detections, no MTBE detections, and presence of groundwater at least 20 feet below the depth of detected petroleum hydrocarbons.

If you have any questions regarding this report, please contact the undersigned at 949/260-1800.

Very truly yours,

HARDING LAWSON ASSOCIATES

REGISTERED GEOLOGIST
DAVID J. DeVRIES
No. 6313
Exp. 4-30-01
STATE OF CALIFORNIA

David J. DeVries, R.G., C.HG.
Senior Hydrogeologist

Donald A. Pape, R.G., C.E.G.
Principal Hydrogeologist

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Attachments: Table 1 - Summary of Soil Analytical Results
Plate 1 - Site Location Map
Plate 2 - Boring Location Map
Plate 3 - TPHd Results Map
Attachment A - Laboratory Data Sheets for Soil Samples
Attachment B - Boring Logs/Hand-Auger Soil Descriptions
Attachment C - Field Procedures

cc: Ms. Argavahn Rashidi-Fard, OCHCA

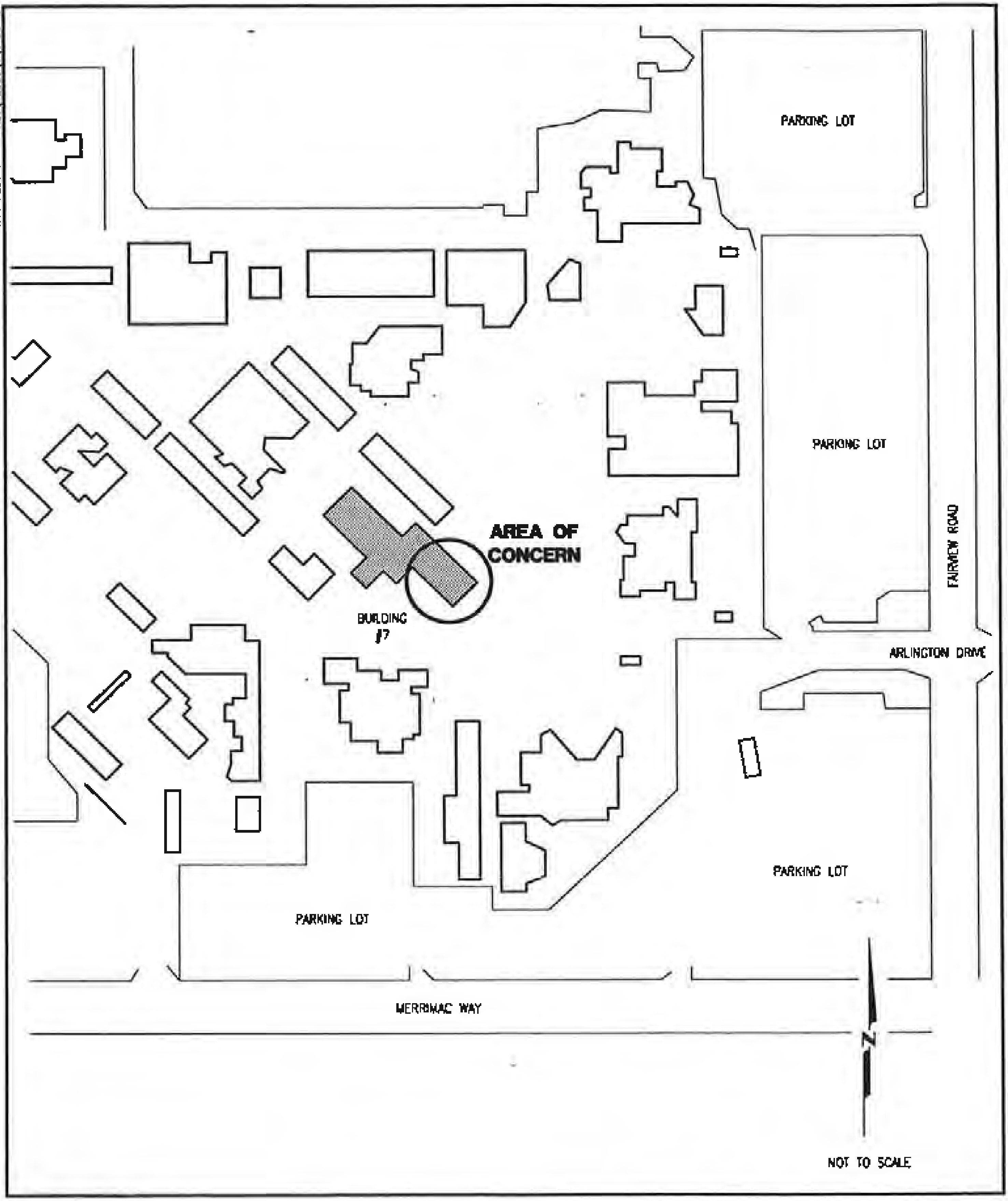
TABLE

Table 1. Summary of Soil Analytical Results
Grab, Hand Auger, and Geoprobe Sampling
Coast Community College District
Orange Coast Community College Building #7

Sample ID	Collection Method	Date Collected	Depth (feet bgs)	*EPA Method 8015M* TPHd (mg/kg)	TPHg (mg/kg)	*EPA Method 8021* Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	MTBE (mg/kg)
102899	Grab	10/27/99	3	820	16	(0.020)	(0.020)	(0.020)	(0.020)	(0.060)
B-1@10'	Hand Auger	11/2/99	10	2,200	NA	NA	NA	NA	NA	NA
B-1@15'	"	11/2/99	15	7,400	NA	NA	NA	NA	NA	NA
B-2@2.5'	"	11/2/99	2.5	20	NA	NA	NA	NA	NA	NA
B-2@10'	"	11/2/99	10	(5)	NA	NA	NA	NA	NA	NA
B-3@2.5'	"	11/2/99	2.5	(5)	NA	NA	NA	NA	NA	NA
B-3@10'	"	11/2/99	10	(5)	NA	NA	NA	NA	NA	NA
B-4@5'	"	11/2/99	5	1,300	NA	NA	NA	NA	NA	NA
B-4@10'	"	11/2/99	10	(5)	NA	NA	NA	NA	NA	NA
B5-15	Direct Push	11/5/99	15	6,000	NA	(0.10)	(0.10)	0.16	0.36	(0.70)
B5-20	"	11/5/99	20	(5)	NA	NA	NA	NA	NA	NA
B5-30	"	11/5/99	30	(5)	NA	(0.0050)	(0.0050)	(0.0050)	(0.015)	(0.035)
B6-5	"	11/5/99	5	2,500	NA	NA	NA	NA	NA	NA
B6-20	"	11/5/99	20	6,200	NA	(0.20)	(0.20)	(0.20)	(0.60)	(1.4)
B6-25	"	11/5/99	25	(5)	NA	NA	NA	NA	NA	NA
B6-30	"	11/5/99	30	(5)	NA	(0.0050)	(0.0050)	(0.0050)	(0.015)	(0.035)
B7-20	"	11/5/99	20	(5)	NA	NA	NA	NA	NA	NA
B8-20	"	11/5/99	20	(5)	NA	NA	NA	NA	NA	NA
B9-10	"	11/5/99	10	3,700	NA	(0.10)	(0.10)	(0.10)	(0.30)	(0.70)
B9-20	"	11/5/99	20	7.8	NA	NA	NA	NA	NA	NA
B9-30	"	11/5/99	30	(5)	NA	(0.0050)	(0.0050)	(0.0050)	(0.015)	(0.035)

Notes: NA = not analyzed
mg/kg = milligrams per kilogram
MTBE = methyl tertiary butyl ether
(5) = not detected at laboratory reporting limit shown in parenthesis

PLATES



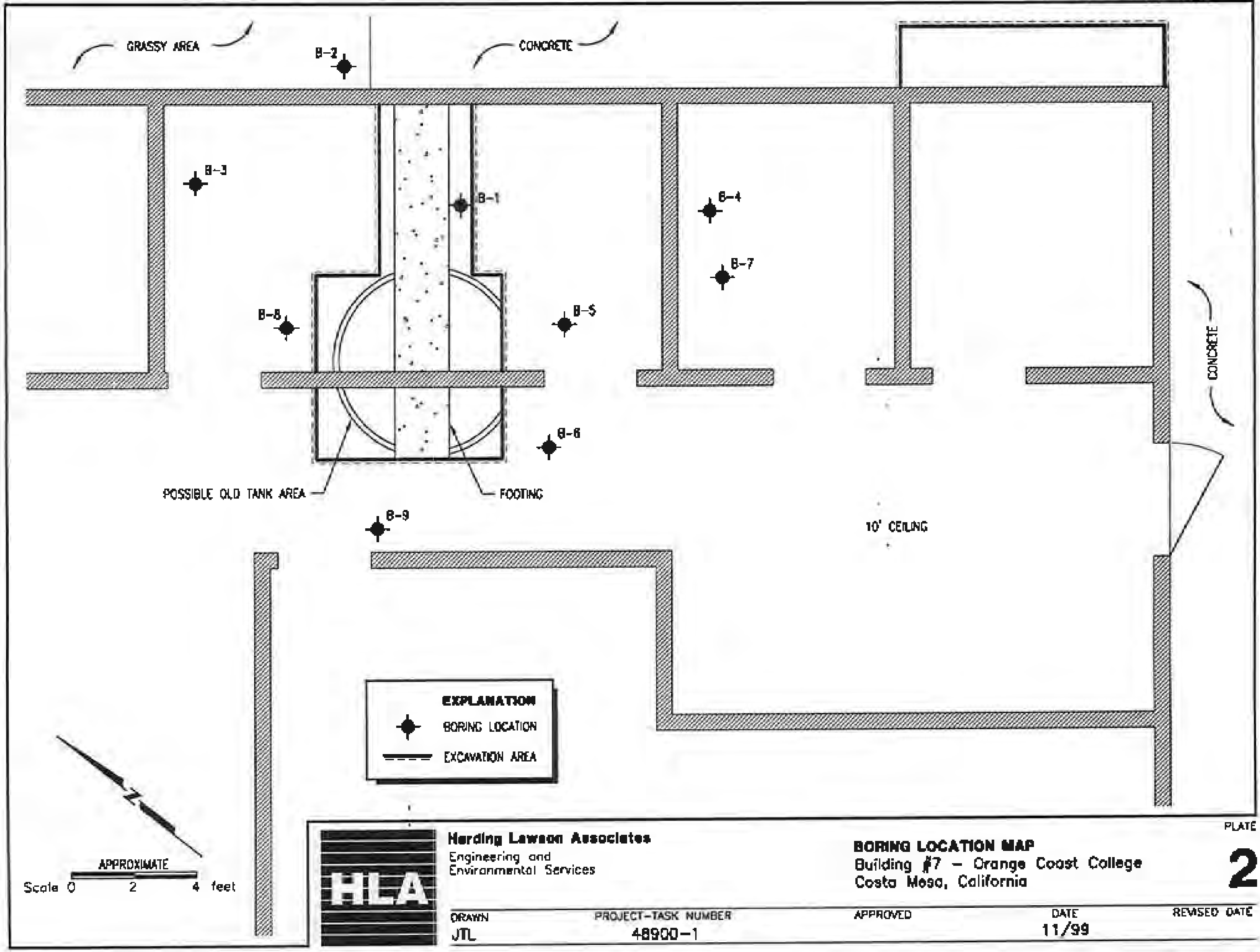
HLA

Harding Lawson Associates
Engineering and Environmental Services

SITE LOCATION MAP
Building #7 – Orange Coast College
Costa Mesa, California

PLATE
1

DRAWN	PROJECT-TASK NUMBER	APPROVED	DATE	REVISED DATE
JTL	48900-1		11/99	

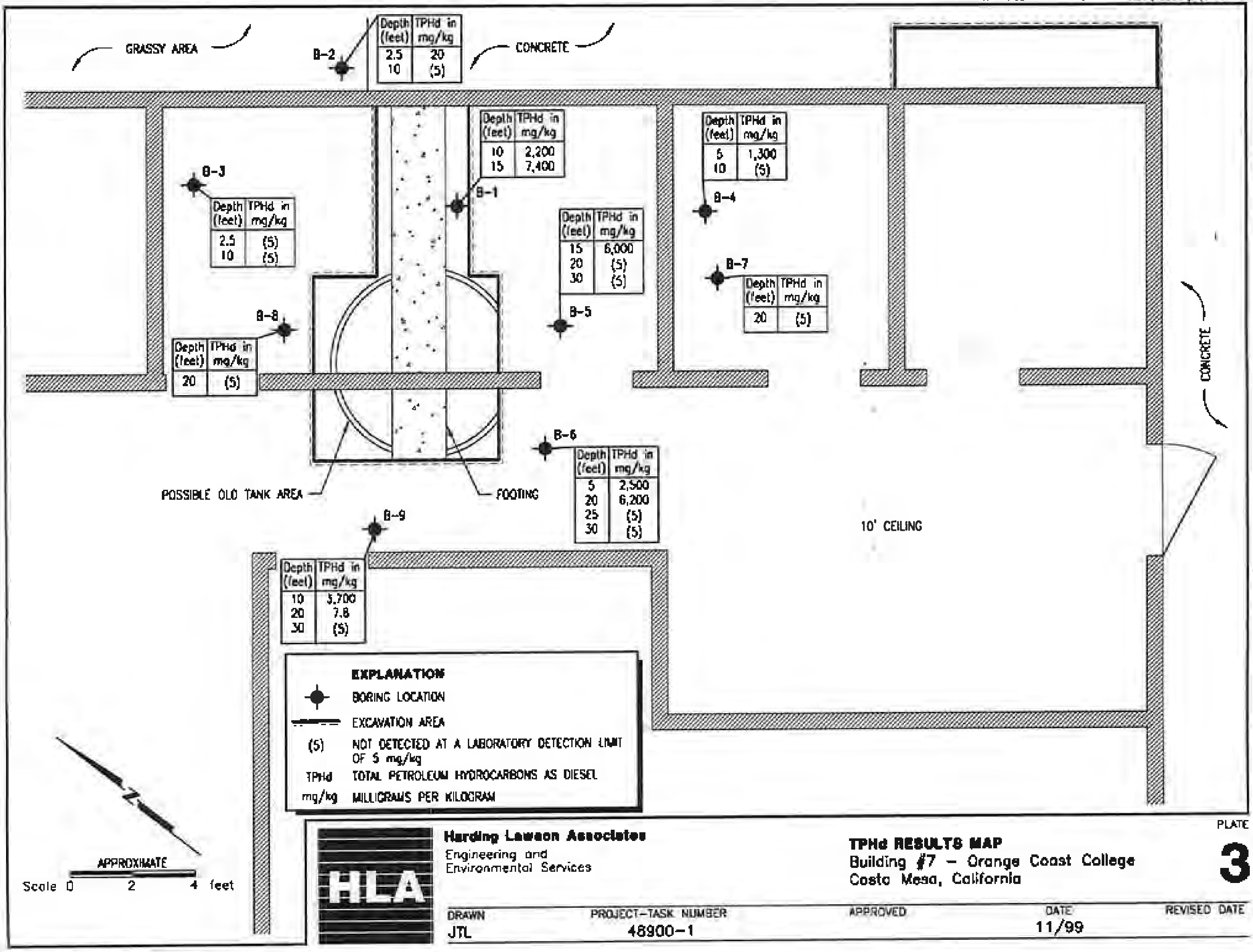


Harding Lawson Associates
Engineering and
Environmental Services

BORING LOCATION MAP
Building #7 – Orange Coast College
Costa Mesa, California

PLATE **2**

DRAWN	PROJECT-TASK NUMBER	APPROVED	DATE	REVISED DATE
JTL	48900-1		11/99	



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Engineering and
Environmental Services

TPHd RESULTS MAP
Building #7 – Orange Coast College
Costa Mesa, California

PLATE **3**

DRAWN	PROJECT-TASK NUMBER	APPROVED	DATE	REVISED DATE
JTL	48900-1		11/99	

ATTACHMENT A

LABORATORY DATA SHEETS FOR SOIL SAMPLES

Del Mar Analytical

1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (619) 505-9596 FAX (619) 505-9689
9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851

Coast Community College District
Environmental Health & Safety Coordinator
1370 Adams Avenue
Costa Mesa, CA 92626
Attention: Ben Kollmeyer

Client Project ID: Coast Community College District
Analysis Method: EPA 5030/CA DHS Mod. 8015B/8021B
First Sample #: IJ02997

Sampled: 10/27/99
Received: 10/29/99
Extracted: 10/29/99
Analyzed: 10/29/99
Reported: 10/29/99

VOLATILE FUEL HYDROCARBONS/BTEX DISTINCTION (CA DHS Mod. EPA 8015B/8021B)

Laboratory Number QC Batch	Sample Description Soil	Volatile Fuel Hydrocarbons mg/Kg (ppm)	Benzene mg/Kg (ppm)	Toluene mg/Kg (ppm)	Ethyl Benzene mg/Kg (ppm)	Total Xylenes mg/Kg (ppm)
IJ02997 IJ29191S	102899-PT635-01	16	N.D.	N.D.	N.D.	N.D.
Dilution: 4.0	Reporting Limit:	4.0	0.020	0.020	0.020	0.060

Volatile Fuel Hydrocarbons are quantitated against a gasoline standard. Hydrocarbons detected by this method range from C6 to C12. Analytes reported as N.D. were not present at or above the reporting limit. Dilution factors are due to matrix effects and other factors.

DEL MAR ANALYTICAL (ELAP #1197)
Jeanne Shoulder
Project Manager

Del Mar Analytical

1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
16525 Sherman Way, Suite C-11, Van Nuys, CA 92406 (818) 779-1844 FAX (818) 779-1843
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9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851

Coast Community College District
Environmental Health & Safety Coordinator
1370 Adams Avenue
Costa Mesa, CA 92626
Attention: Ben Kollmeyer

Method Blank

Extracted: 10/29/99
Analyzed: 10/29/99
Reported: 10/29/99

VOLATILE FUEL HYDROCARBONS/BTEX DISTINCTION (CA DHS Mod. EPA 8015B/8021B)

QC Batch	Sample Description	Volatile Fuel Hydrocarbons mg/Kg (ppm)	Benzene mg/Kg (ppm)	Toluene mg/Kg (ppm)	Ethyl Benzene mg/Kg (ppm)	Total Xylenes mg/Kg (ppm)
IJ29191S	Method Blank	N.D.	N.D.	N.D.	N.D.	N.D.
Dilution: 1.0	Reporting Limit	1.0	0.0050	0.0050	0.0050	0.015

Volatile Fuel Hydrocarbons are quantitated against a gasoline standard. Hydrocarbons detected by this method range from C6 to C12. Analytes reported as N.D. were not present at or above the reporting limit. Dilution factors are due to matrix effects and/or other factors.

DEL MAR ANALYTICAL (ELAP #1197)
Jeanne Shoulder
Project Manager

Del Mar Analytical

1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
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9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851

MS/MSD DATA REPORT

EPA Method 8015B/8021B

Date: 10/29/99

Sample #: 1J02911 Matrix: Soil

Batch #: IJ29191S

Analyte	**R1** mg/Kg	**Sp** mg/Kg	**MS** mg/Kg	**MSD** mg/Kg	**PR1** %	**PR2** %	**RPD** %	**Mean PR** %	**Acceptance Limits** **RPD**	**Mean PR**
TPH	1.4	1.1	3.0	2.3	145	85	25 *	115	≤20	65 - 130
Benzene	0.00020	0.10	0.094	0.10	94	99	5.4	97	≤20	75 - 120
Toluene	0.0031	0.10	0.094	0.095	90	92	2.0	91	≤20	75 - 120
Ethylbenzene	0.0048	0.10	0.098	0.095	93	90	2.8	92	≤20	80 - 125
Xylenes	0.0094	0.30	0.28	0.28	91	89	2.6	90	≤20	80 - 120

* The MS/MSD recoveries and/or RPD were outside of acceptance limits due to sample matrix effects. See LCS for batch validation.

Definition of Terms

R1...................... Result of Sample Analysis
Sp...................... Spike Concentration added to sample
MS...................... Matrix Spike Result
MSD.................... Matrix Spike Duplicate Result
PR1.................... Percent Recovery of MS; ((MS-R1)/SP) X 100
PR2.................... Percent Recovery of MSD; ((MSD-R1)/SP) X 100
RPD.................... Relative Percent Difference; ((MS-MSD)/(MS+MSD)/2) X 100
Mean PR............... Mean Percent Recovery
Acceptance Limits...... Determined by in-house Control Charts

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1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (619) 505-9596 FAX (619) 505-9689
9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851

LCS DATA REPORT

EPA Method 8015B/8021B

Date: 10/29/99

Batch #: IJ29191S

Analyte	Spike Conc. ppm	Result ppm	% Recovery	ACP
TPH	1.1	1.1	102	70 - 125 %
Benzene	0.10	0.095	95	80 - 120 %
Toluene	0.10	0.095	95	80 - 120 %
Ethylbenzene	0.10	0.096	96	85 - 120 %
Xylenes	0.30	0.29	96	85 - 120 %

Definition of Terms

LCS .... Laboratory Control Sample
Spike Conc .... Concentration of spike added to blank
Result .... Result of Laboratory Control Sample Analysis
%Recovery .... Percent Recovery of LCS; ((Result) / Spike Conc.) X 100
ACP .... Acceptance Limits for Percent Recovery
TPH .... Total Petroleum Hydrocarbons

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2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (619) 505-9596 FAX (619) 505-9689
2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

Coast Community College District
Environmental Health & Safety Coordinator
1370 Adams Avenue
Costa Mesa, CA 92626
Attention: Ben Kollmeyer

Client Project ID: Coast Community College District

Analysis Method: EPA 3550/CA DHS Mod. 8015B
First Sample #: IJ03215

Sampled: 10/27/99
Received: 10/29/99
Extracted: 10/29/99
Analyzed: 11/1/99
Reported: 11/1/99

EXTRACTABLE FUEL HYDROCARBONS (CA DHS Mod. EPA 8015B)

Laboratory Number QC Batch	Sample Description Soil	Sample Result mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)	Dilution Factor	Hydrocarbon Type
IJ03215 IJ29DE1S	102899-PT635-01	820	100	20	C8-C28

Extractable Hydrocarbons are quantitated against a diesel fuel standard. Hydrocarbons detected by this method range from C8 to C40. Analytes reported as N.D. were not present at or above the reporting limit. Dilution factors are due to matrix effects and other factors.

DEL MAR ANALYTICAL (ELAP #1197)
Jeanne Shoulder
Project Manager

Del Mar Analytical

2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (619) 505-9596 FAX (619) 505-9689
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Coast Community College District
Environmental Health & Safety Coordinator
1370 Adams Avenue
Costa Mesa, CA 92626
Attention: Ben Kollmeyer

Method Blank

Extracted: 10/29/99
Analyzed: 10/29/99
Reported: 11/1/99

EXTRACTABLE FUEL HYDROCARBONS (CA DHS Mod. EPA 8015B)

QC Batch	Laboratory Description	Sample Result mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)	Dilution Factor	Hydrocarbon Type
IJ29DE1S	Method Blank	N.D.	5.0	1.0	N.A.

Extractable Hydrocarbons are quantitated against a diesel fuel standard. Hydrocarbons detected by this method range from C8 to C40. Analytes reported as N.D. were not present at or above the reporting limit. Dilution factors are due to matrix effects and other factors.

DEL MAR ANALYTICAL (ELAP #1197)
Jeanne Shoulder
Project Manager

Del Mar Analytical

1014 E. Cooley Dr., Suite 4, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (619) 505-9596 FAX (619) 505-9689
9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851

MS/MSD DATA REPORT

EPA METHOD: 8015 Ext.
Matrix: Soil

Date Analyzed: 10/29/99

Sample: IJ03161

Batch: IJ29DE1S

Analyte	R1	Sp	MS	MSD	PR1	PR2	RPD	MEAN PR	Acceptance Limits	
	mg/Kg	mg/Kg	mg/Kg	mg/Kg	%	%	%	%	RPD	MPR
Hydrocarbons	4.26	33.3	33.2	33.2	87%	87%	0%	87%	40	40-110

Definition of Terms:

R1...................... Result of Sample Analysis
Sp...................... Spike Concentration Added to Sample
MS..................... Matrix Spike Result
MSD................... Matrix Spike Duplicate Result
PR1................... Percent Recovery of MS; ((MS-R1) / SP) X 100
PR2................... Percent Recovery of MSD; ((MSD-R1) / SP) X 100
RPD................... Relative Percent Difference; ((MS-MSD)/(MS+MSD)/2) X 100
Acceptance Limits...... Statistically determined on an annual basis.

DEL MAR ANALYTICAL

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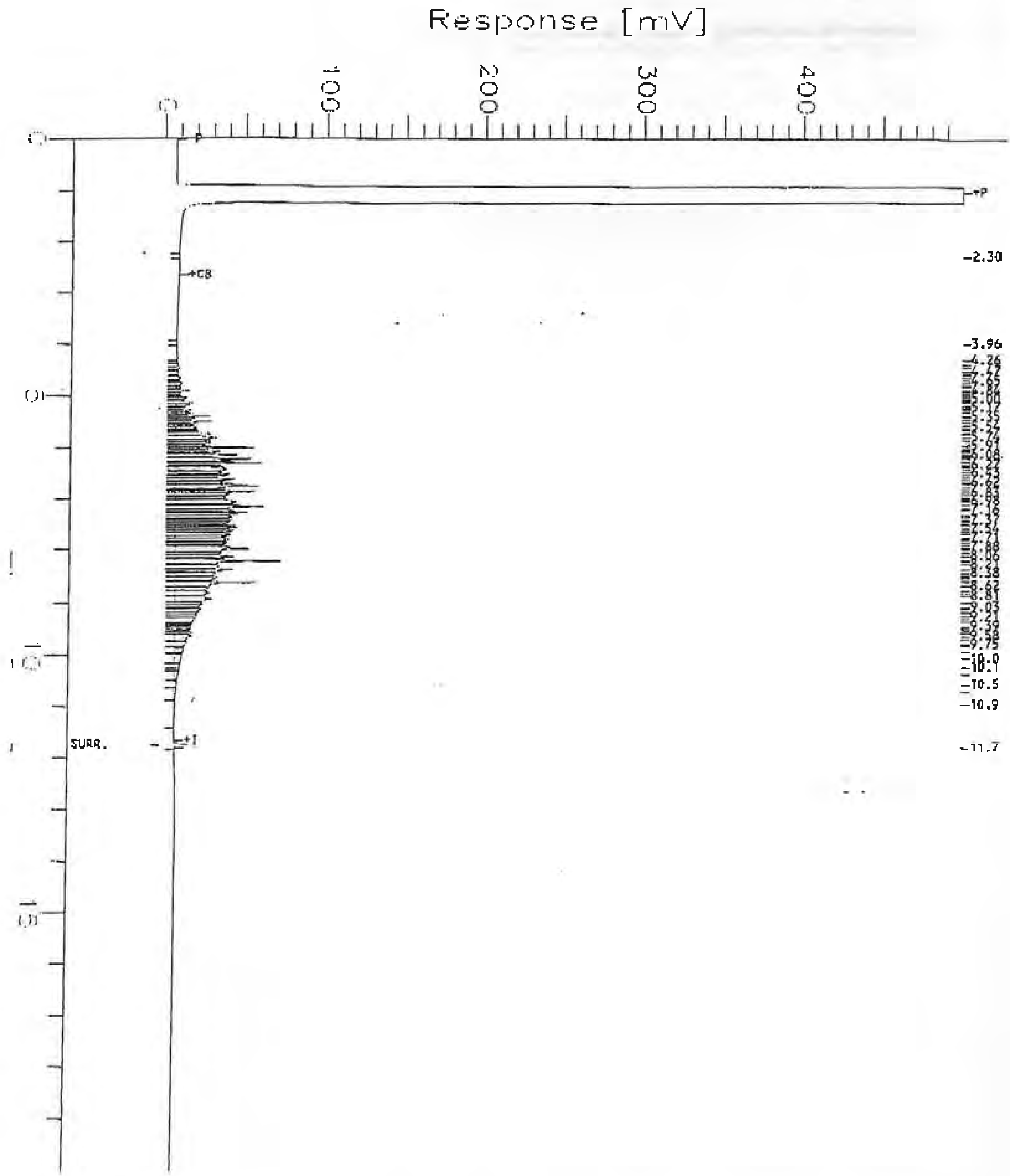
art Time : 0.00 min   End Time : 20.00 min
ale Factor: 0.0   Plot Offset: 0 mV

Date : 11/1/99 11:02 AM
Time of Injection: 11/1/99 10:33 AM
Low Point : 0.00 mV   High Point : 500.00 mV
Plot Scale: 500.0 mV



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2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
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9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851

LABORATORY REPORT

Prepared For: Harding Lawson Associates
2171 Campus Drive, Ste. 100
Irvine, CA 92612

Attention: Dave DeVries
Project: Orange Coast College
(Hand Auger)

Sampled: 11/2/99
Received: 11/2/99
Reported: 11/3/99

This laboratory report is confidential and is intended for the sole use of Del Mar Analytical and its client. This entire report was reviewed and approved for release.

CA ELAP Certificate #1197
AZ DHS License #AZ0428

DEL MAR ANALYTICAL

Michele Harper
Michele Harper
Project Manager

Del Mar Analytical

2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
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9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851

Harding Lawson Associates
2171 Campus Drive, Ste. 100
Irvine, CA 92612
Attention: Dave DeVries

Client Project ID: Orange Coast College
(Hand Auger)
Analysis Method: EPA 3550/CA DHS Mod. 8015B
First Sample #: IK00251

Sampled: 11/2/99
Received: 11/2/99
Extracted: 11/2/99
Analyzed: 11/2/99-11/3/99
Reported: 11/3/99

EXTRACTABLE FUEL HYDROCARBONS (CA DHS Mod. EPA 8015B)

Laboratory Number QC Batch	**Sample Description** Soil	**Sample Result** mg/Kg (ppm)	**Reporting Limit** mg/Kg (ppm)	**Dilution Factor**	**Hydrocarbon Type**
IK00251 IK02DE3S	B-1@10.0'	2,200	250	50	C8-C28
IK00252 IK02DE3S	B-1@15.0'	7,400	500	100	C8-C28
IK00253 IK02DE3S	B-2@2.5'	20	5.0	1.0	C8-C28
IK00256 IK02DE3S	B-2@10.0'	N.D.	5.0	1.0	N.A.
IK00257 IK02DE3S	B-3@2.5'	N.D.	5.0	1.0	N.A.
IK00260 IK02DE3S	B-3@10.0'	N.D.	5.0	1.0	N.A.
IK00262 IK02DE3S	B-4@5.0'	1,300	250	50	C8-C28
IK00264 IK02DE3S	B-4@10.0'	N.D.	5.0	1.0	N.A.

Extractable Hydrocarbons are quantitated against a diesel fuel standard. Hydrocarbons detected by this method range from C8 to C40. Analytes reported as N.D. were not present at or above the reporting limit. Dilution factors are due to matrix effects and other factors.

DEL MAR ANALYTICAL (ELAP #1197)
Michele Harper
Project Manager

Del Mar Analytical
2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
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9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851

Harding Lawson Associates
2171 Campus Drive, Ste. 100
Irvine, CA 92612
Attention: Dave DeVries

Method Blank

Extracted: 11/2/99
Analyzed: 11/2/99
Reported: 11/3/99

EXTRACTABLE FUEL HYDROCARBONS (CA DHS Mod. EPA 8015B)

QC Batch	Laboratory Description	Sample Result mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)	Dilution Factor	Hydrocarbon Type
IK02DE3S	Method Blank	N.D.	5.0	1.0	N.A.

Extractable Hydrocarbons are quantitated against a diesel fuel standard. Hydrocarbons detected by this method range from C8 to C40. Analytes reported as N.D. were not present at or above the reporting limit. Dilution factors are due to matrix effects and other factors.

DEL MAR ANALYTICAL (ELAP #1197)
Michele Harper
Project Manager

Del Mar Analytical

2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
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2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

MS/MSD DATA REPORT

EPA METHOD: 8015 Ext.
Matrix: Soil

Date Analyzed: 11/3/99

Sample: IK00252

Batch: IK02DE3S

Analyte	**R1**	**Sp**	**MS**	**MSD**	**PR1** *	**PR2** *	**RPD**	**MEAN PR**	**Acceptance Limits**	
	mg/Kg	mg/Kg	mg/Kg	mg/Kg	%	%	%	%	RPD	MPR
Hydrocarbons	7420	33.3	9900	11500	7447%	12252%	15%	9850%	40	40-110

* Due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery information. See LCS for batch validation.

Definition of Terms:

R1. . . . . Result of Sample Analysis
Sp. . . . . Spike Concentration Added to Sample
MS. . . . . Matrix Spike Result
MSD. . . . . Matrix Spike Duplicate Result
PR1. . . . . Percent Recovery of MS; ((MS-R1) / SP) X 100
PR2. . . . . Percent Recovery of MSD; ((MSD-R1) / SP) X 100
RPD. . . . . Relative Percent Difference; ((MS-MSD)/(MS+MSD)/2) X 100
Acceptance Limits. . . . . Statistically determined on an annual basis.

DEL MAR ANALYTICAL

Del Mar Analytical

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2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

LCS DATA REPORT

EPA METHOD: 8015 Ext.

Date Analyzed: 11/3/99

Batch: IK02DE3S

Analyte	St	R1	PR	Acceptance Limits
	mg/Kg	mg/Kg	%	%
Hydrocarbons	33.3	26.3	79%	50-125

Definition of Terms:

St. . . . . Concentration of standard added to blank.

R1 . . . . Standard Result

PR . . . . Percent Recovery of R1: (R1 / St) X 100

Acceptance Limits. . . . . Statistically determined on an annual basis.

DEL MAR ANALYTICAL

30 Corporate Park, Suite 430
Irvine, CA 92606
(949) 260-1800

CHAIN OF CUSTODY FORM

Lab: Del Mar

Samplers: JWH

Job Number:

Name/Location: Orange Coast Colledge (Hand Auger)

Project Manager: Dave DeVries

Recorder: Wes Haeglock (Signature Required)

Source Code	Matrix: Water	Sediment	Soil	Oil	# Containers & Preserv.: Unpres.	H_2SO_4	HNO_3	HCl	NaOH	Sample Number or Lab Number: Yr	Wk	Seq	Date: Yr	Mo	Day	Time	Station Description/ Notes	EPA 418.1 TRPH (Desi'l)	EPA 601/8010	EPA 602/8020	EPA 624/8240	EPA 625/8260	CAM METALS	EPA 8015M	EPA 8015M (GAS)/8021 BTEX	EPA 8081	EPA 8082
49			X		1								99	11	02	0720	B-1 @ 5.0'	X									
			X		1											0738	B-1 @ 7.5'	X									
			X		1											0800	B-1 @ 10.0'	X									
			X		1											0845	B-1 @ 15.0'	X									
			X		1											0907	B-2 @ 2.5'	X									
			X		1											0926	B-2 @ 5.0'	X									
			X		1											0946	B-2 @ 7.5'	X									
			X		1											1006	B-2 @ 10.0'	X									
			X		1											1028	B-3 @ 2.5'	X									
			X		1											1053	B-3 @ 5.0'	X									

Lab Number: Yr	Wk	Seq	Depth in Feet	Col Mtd CD	QA Code	Miscellaneous
						24 Hr TAT

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
Wes Haeglock	11-2-97 1435		

Dispatched by: (Signature)	Date/Time	Received for Lab by: (Signature)	Date/Time
		[signature]	11/2/99 1435

Method of Shipment:

Laboratory Copy White | Project Office Copy Yellow | Field or Office Copy Pink

Page ___ Of ___

30 Corporate Park, Suite 400
Irvine, CA 92606
(949) 260-1800

CHAIN OF CUSTODY FORM

Lab: Del Mar

Samplers: JWH

Job Number:

Name/Location: Orange Coast Colladge (Hand Auger)

Project Manager: Dave DeVries

Recorder: Wa. Haydel (Signature Required)

SOURCE CODE	Matrix: Water	Matrix: Sediment	Matrix: Soil	Matrix: Oil	# Containers & Preserv.: Unpres.	H_2SO_4	HNO_3	HCl	NaOH	Sample Number or Lab Number: Yr	Wk	Seq	Date: Yr	Mo	Day	Time	Station Description/ Notes
49			X		1								99	11	02	1113	B-3@ 7.5'
			X		1											1134	B-3@ 10.0'
			X		1											1200	B-4@ 2.5'
			X		1											1220	B-4@ 5.0'
			X		1											1235	B-4@ 7.5'
			X		1											1300	B-4@ 10.0'

ANALYSIS REQUESTED

EPA 418.1 TRPH (Desel)	EPA 601/8010	EPA 602/8020	EPA 624/8240	EPA 625/8260	CAM METALS	EPA 8015M	EPA 8015M (GAS)/8021 BTEX	EPA 8081	EPA 8082
X									
X									
X									
X									
X									
X									

Lab Number: Yr	Wk	Seq	Depth in Feet	COL MTD CD	QA Code	Miscellaneous
						24Hr TAT

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
Wa. Haydel	11-2-99 1435		
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
Dispatched by: (Signature)	Date/Time	Received for lab by: (Signature) [signature]	11/2/99 143[illegible]

METHOD OF SHIPMENT

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Page ___ Of ___

Del Mar Analytical

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2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

LABORATORY REPORT

Prepared For: Harding Lawson Associates
2171 Campus Drive, Ste. 100
Irvine, CA 92612

Attention: Dave DeVries
Project: 48827
CCCD

Sampled: 11/5/99
Received: 11/5/99
Reported: 11/12/99

This laboratory report is confidential and is intended for the sole use of Del Mar Analytical and its client. This entire report was reviewed and approved for release.

CA ELAP Certificate #1197
AZ DHS License #AZ0428

DEL MAR ANALYTICAL

Michele Harper
Project Manager

2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228
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Del Mar Analytical

Harding Lawson Associates
2171 Campus Drive, Ste. 100
Irvine, CA 92612
Attention: Dave DeVries

Client Project ID: 48827
CCCD
Analysis Method: EPA 3550/CA DHS Mod. 8015B
First Sample #: IK00769

Sampled: 11/5/99
Received: 11/5/99
Extracted: 11/5/99
Analyzed: 11/9/99-11/12/99
Reported: 11/12/99

EXTRACTABLE FUEL HYDROCARBONS (CA DHS Mod. EPA 8015B)

Laboratory Number QC Batch	Sample Description Soil	Sample Result mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)	Dilution Factor	Hydrocarbon Type
IK00769 IK05DE2S	B5-15	6,000	500	100	C8-C28
IK00770 IK05DE2S	B5-20	N.D.	5.0	1.0	N.A.
IK00771 IK05DE2S	B5-30	N.D.	5.0	1.0	N.A.
IK00772 IK05DE2S	B6-5	2,500	100	20	C8-C28
IK00773 IK05DE2S	B6-20	6,200	500	100	C8-C28
IK00774 IK05DE2S	B6-25	N.D.	5.0	1.0	N.A.
IK00775 IK05DE2S	B6-30	N.D.	5.0	1.0	N.A.
IK00776 IK05DE2S	B9-10	3,700	500	100	C8-C28
IK00777 IK05DE2S	B9-20	7.8	5.0	1.0	C8-C28
IK00778 IK05DE2S	B9-30	N.D.	5.0	1.0	N.A.

Extractable Hydrocarbons are quantitated against a diesel fuel standard. Hydrocarbons detected by this method range from C8 to C40. Analytes reported as N.D. were not present at or above the reporting limit. Dilution factors are due to matrix effects and other factors.

DEL MAR ANALYTICAL (ELAP #1197)
Michele Harper
Project Manager

Del Mar Analytical

2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
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Harding Lawson Associates
2171 Campus Drive, Ste. 100
Irvine, CA 92612
Attention: Dave DeVries

Client Project ID: 48827
CCCD
Analysis Method: EPA 3550/CA DHS Mod. 8015B
First Sample #: IK00779

Sampled: 11/5/99
Received: 11/5/99
Extracted: 11/5/99
Analyzed: 11/9/99
Reported: 11/12/99

EXTRACTABLE FUEL HYDROCARBONS (CA DHS Mod. EPA 8015B)

Laboratory Number QC Batch	Sample Description Soil	Sample Result mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)	Dilution Factor	Hydrocarbon Type
IK00779 IK05DE2S	B8-20	N.D.	5.0	1.0	N.A.
IK00780 IK05DE2S	B7-20	N.D.	5.0	1.0	N.A.

Extractable Hydrocarbons are quantitated against a diesel fuel standard. Hydrocarbons detected by this method range from C8 to C40. Analytes reported as N.D. were not present at or above the reporting limit. Dilution factors are due to matrix effects and other factors.

DEL MAR ANALYTICAL (ELAP #1197)
Michele Harper
Project Manager

Del Mar Analytical

2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
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Harding Lawson Associates
2171 Campus Drive, Ste. 100
Irvine, CA 92612
Attention: Dave DeVries

Method Blank

Extracted: 11/5/99
Analyzed: 11/6/99
Reported: 11/12/99

EXTRACTABLE FUEL HYDROCARBONS (CA DHS Mod. EPA 8015B)

QC Batch	Laboratory Description	Sample Result mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)	Dilution Factor	Hydrocarbon Type
IK05DE2S	Method Blank	N.D.	5.0	1.0	N.A.

Extractable Hydrocarbons are quantitated against a diesel fuel standard. Hydrocarbons detected by this method range from C8 to C40. Analytes reported as N.D. were not present at or above the reporting limit. Dilution factors are due to matrix effects and other factors.

DEL MAR ANALYTICAL (ELAP #1197)
Michele Harper
Project Manager

Del Mar Analytical

2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228
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MS/MSD DATA REPORT

EPA METHOD: 8015 Ext.
Matrix: Soil

Date Analyzed: 11/6/99

Sample: IK00711

Batch: IK05DE2S

Analyte	R1	Sp	MS	MSD	PR1	PR2	RPD	MEAN PR	Acceptance Limits	
	mg/Kg	mg/Kg	mg/Kg	mg/Kg	%	%	%	%	RPD	MPR
Hydrocarbons	8.10	33.3	42.7	45.1	104%	111%	5.5%	108%	40	40-110

Definition of Terms:

R1. Result of Sample Analysis
Sp. Spike Concentration Added to Sample
MS. Matrix Spike Result
MSD. . . . . Matrix Spike Duplicate Result
PR1. . . . . Percent Recovery of MS; ((MS-R1) / SP) X 100
PR2. . . . . Percent Recovery of MSD; ((MSD-R1) / SP) X 100
RPD. . . . . Relative Percent Difference; ((MS-MSD)/(MS+MSD)/2) X 100
Acceptance Limits. . . . Statistically determined on an annual basis.

DEL MAR ANALYTICAL

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GT- 3381

CHAIN OF CUSTODY FORM

Quote No.: ______ Page: ___ of ___

Client Name: HARDING LAWSON ASSOC.
Address: 2171 CAMPUS, SUITE 100
City: IRVINE State: CA Zip: 92612
Tel: 260-1800 Fax: 260-1830

P.O./Project Number: 48827
Project Name: CCCD
Project Manager: 48827 - DALE DEVRIES
Sampler(s) (signature): Pat Sh[illegible]

Sample I.D.	Matrix	Date Sampled	Time	Preservation	Number of Containers	Type of Containers	8015 (Gas) ☐ 8020 (BTEX) ☐	MTBE (8020) ☐	8015/8020/MTBE ☐	8015 (Diesel) ☒ fuel	simulated distillation ☐ fingerprint ☐	Oil & Grease - EPA 413.2	TRPH - EPA 418.1	EPA 8010 ☐	EPA 8010/8020 ☐	EPA 8270	Title 22 Metals EPA 6010/7000 ☐ +Cr VI ☐	EPA-8260 ☐ + Oxygenates ☐ + MTBE ☐ MTBE only ☐	Lead	pH
B5 - ~~10~~ 15	Soil	11-5-99								1										
B5 - 20 MH 11/12/99										1										
B5 - 30										1										
B6 - 5										1										
B6 - 20										1										
B6 - 25										1										
B6 - 30										1										
B9 - 10										1										
B9 - 20										1										
B9 - 30										1										

Relinquished by: Pat Sh[illegible] Date/Time: 11/5/99 4:58 Received by: Date/Time:
Relinquished by: Date/Time: Received by: Date/Time:
Relinquished by: Date/Time: Received in Lab by: [signature] Date/Time: 11/5/99 16:58

Turnaround Time: (check one):
Same Day ___ 72 hours ___
24 Hours ___ 5 Days ✓
48 Hours ___ Standard ___

Sample Integrity:
Intact: ✓ On Ice ✓

Remarks:

Note: By relinquishing samples to Del Mar Analytical, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of the invoice. Sample(s) will be disposed of after 30 days.

COC-G

Del Mar Analytical

2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228
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2465 Chesapeake Dr., Suite 805, San Diego, CA 92123 (619) 505-9596 FAX (619) 505-9689

GT- 3380

CHAIN OF CUSTODY FORM

Quote No.: ______ Page: ___ of ___

Client Name: HARDING LAWSON ASSOC.
Address: 2121 CAMPUS, SUITE 100
City: IRVINE State: CA. Zip:
Tel: 260-1800 Fax: 260-1830

P.O./Project Number: 48827
Project Name: CCCD
Project Manager: DAVE DEVRIES
Sampler(s) (signature): Pat Sh

Sample I.D.	Matrix	Date Sampled	Time	Preservation	Number of Containers	Type of Containers	8015 (Gas) ☐ 8020 (BTEX) ☐	MTBE (8020) ☐	8015/8020/MTBE ☐	8015 (Diesel) X fuel ☐ simulated distillation ☐ fingerprint	Oil & Grease - EPA 413.2	TRPH - EPA 418.1	EPA 8010 ☐	EPA 8010/8020 ☐	EPA 8270	Title 22 Metals EPA 6010/7000 ☐ +Cr VI ☐	EPA 8260 ☐ + Oxygenates ☐ +MTBE ☐ MTBE only ☐	Lead	pH							
B8-20	Soil	11/5/99								1																
B7-20	"	"								1																

Relinquished by: Pat Sh Date/Time: 11/5/99 - 4:58
Received by: Date/Time:
Relinquished by: Date/Time:
Received by: Date/Time:
Relinquished by: Date/Time:
Received in lab by: [signature] Date/Time: 11/5/99 1658

Turnaround Time: (check one)
Same Day ___ 72 hours ___
24 Hours ___ 5 Days ___
48 Hours ___ Standard ___

Sample Integrity:
Intact: ✓ On Ice ___

Remarks:

CO

Note: By relinquishing samples to Del Mar Analytical, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on ... sample(s) will be disposed of after 30 days.

Del Mar Analytical

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2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

LABORATORY REPORT

Prepared For: Harding Lawson Associates
2171 Campus Drive, Ste. 100
Irvine, CA 92612

Attention: Dave DeVries
Project: 48827
CCCD

Sampled: 11/5/99
Received: 11/5/99
Reported: 11/12/99

This laboratory report is confidential and is intended for the sole use of Del Mar Analytical and its client. This entire report was reviewed and approved for release.

CA ELAP Certificate #1197
AZ DHS License #AZ0428

DEL MAR ANALYTICAL

Michele Harper
Michele Harper
Project Manager

Del Mar Analytical

2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1229
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
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2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

Harding Lawson Associates
2171 Campus Drive, Ste. 100
Irvine, CA 92612
Attention: Dave DeVries

Client Project ID: 48827
CCCD
Analysis Method: EPA 5030/8021B
First Sample #: IK01598

Sampled: 11/5/99
Received: 11/5/99
Extracted: 11/12/99
Analyzed: 11/12/99
Reported: 11/12/99

BTEX DISTINCTION (EPA 8021B)

Laboratory Number QC Batch	Sample Description Soil	Benzene mg/Kg (ppm)	Toluene mg/Kg (ppm)	Ethyl Benzene mg/Kg (ppm)	Total Xylenes mg/Kg (ppm)
IK01598 IK12191S	**B-5-15**	**N.D.**	**N.D.**	**0.16**	**0.36**
Dilution: 20	Reporting Limit:	0.10	0.10	0.10	0.30
IK01599 IK12191S	**B-5-30**	**N.D.**	**N.D.**	**N.D.**	**N.D.**
Dilution: 1.0	Reporting Limit:	0.0050	0.0050	0.0050	0.015
IK01600 IK12191S	**B-6-20**	**N.D.**	**N.D.**	**N.D.**	**N.D.**
Dilution: 40	Reporting Limit:	0.20	0.20	0.20	0.60
IK01601 IK12191S	**B-6-30**	**N.D.**	**N.D.**	**N.D.**	**N.D.**
Dilution: 1.0	Reporting Limit:	0.0050	0.0050	0.0050	0.015
IK01602 IK12191S	**B-9-10**	**N.D.**	**N.D.**	**N.D.**	**N.D.**
Dilution: 20	Reporting Limit:	0.10	0.10	0.10	0.30
IK01603 IK12191S	**B-9-30**	**N.D.**	**N.D.**	**N.D.**	**N.D.**
Dilution: 1.0	Reporting Limit:	0.0050	0.0050	0.0050	0.015

Analytes reported as N.D. were not present at or above the reporting limit. Dilution factors are due to matrix effects and other factors.

DEL MAR ANALYTICAL (ELAP #1197)
Michele Harper
Project Manager

Del Mar Analytical

2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228
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Harding Lawson Associates
2171 Campus Drive, Ste. 100
Irvine, CA 92612
Attention: Dave DeVries

Client Project ID: 48827
CCCD
Analysis Method: EPA 5030/8021B Modified
First Sample #: IK01598

Sampled: 11/5/99
Received: 11/5/99
Extracted: 11/12/99
Analyzed: 11/12/99
Reported: 11/12/99

MTBE (EPA 8021B Mod.)

Laboratory Number QC Batch	**Sample Description** Soil	**Sample Result** mg/Kg (ppm)	**Reporting Limit** mg/Kg (ppm)	**Dilution Factor**
IK01598 IK12191S	B-5-15	N.D.	0.70	20
IK01599 IK12191S	B-5-30	N.D.	0.035	1.0
IK01600 IK12191S	B-6-20	N.D.	1.4	40
IK01601 IK12191S	B-6-30	N.D.	0.035	1.0
IK01602 IK12191S	B-9-10	N.D.	0.70	20
IK01603 IK12191S	B-9-30	N.D.	0.035	1.0

MTBE = Methyl tert-Butyl Ether

Analytes reported as N.D. were not present at or above the reporting limit. Dilution factors are due to matrix effects and other factors.

DEL MAR ANALYTICAL (ELAP #1197)
Michele Harper
Project Manager

Del Mar Analytical

2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (619) 505-9596 FAX (619) 505-9689
2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

Harding Lawson Associates
2171 Campus Drive, Ste. 100
Irvine, CA 92612
Attention: Dave DeVries

Method Blank

Extracted: 11/12/99
Analyzed: 11/12/99
Reported: 11/12/99

BTEX DISTINCTION (EPA 8021B)

QC Batch	Sample Description	Benzene mg/Kg (ppm)	Toluene mg/Kg (ppm)	Ethyl Benzene mg/Kg (ppm)	Total Xylenes mg/Kg (ppm)
IK12191S	Method Blank	N.D.	N.D.	N.D.	N.D.
Dilution: 1.0	Reporting Limit	0.0050	0.0050	0.0050	0.015

Analytes reported as N.D. were not present at or above the reporting limit. Dilution factors are due to matrix effects and other factors.

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Michele Harper
Project Manager

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Harding Lawson Associates
2171 Campus Drive, Ste. 100
Irvine, CA 92612
Attention: Dave DeVries

Method Blank

Extracted: 11/12/99
Analyzed: 11/12/99
Reported: 11/12/99

MTBE (EPA 8021B Mod.)

QC Batch	Sample Description	Sample Result mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)	Dilution Factor
IK12191S	Method Blank	N.D.	0.035	1.0

MTBE = Methyl tert-Butyl Ether

Analytes reported as N.D. were not present at or above the reporting limit. Dilution factors are due to matrix effects and other factors.

DEL MAR ANALYTICAL (ELAP #1197)
Michele Harper
Project Manager

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9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851

MS/MSD DATA REPORT

Date: 11/12/99 **EPA Method 8015B/8021B**

Sample #: IK01603 Matrix: Soil

Batch #: IK12191S

Analyte	R1 mg/Kg	Sp mg/Kg	MS mg/Kg	MSD mg/Kg	PR1 %	PR2 %	RPD %	Mean PR %	Acceptance Limits RPD	Acceptance Limits Mean PR
TPH	0.10	1.1	1.1	1.2	94	98	3.7	96	≤20	65 - 130
Benzene	0.00025	0.10	0.094	0.095	94	95	0.48	94	≤20	75 - 120
Toluene	0.0012	0.10	0.095	0.096	94	95	0.43	94	≤20	75 - 120
Ethylbenzene	0.0	0.10	0.096	0.095	96	95	0.69	96	≤20	80 - 125
Xylenes	0.0011	0.30	0.28	0.28	94	94	0.025	94	≤20	80 - 120
MTBE	0.0053	1.5	1.5	1.5	98	100	1.7	99	≤30	50 - 150

Definition of Terms

R1...................... Result of Sample Analysis
Sp...................... Spike Concentration added to sample
MS...................... Matrix Spike Result
MSD.................... Matrix Spike Duplicate Result
PR1.................... Percent Recovery of MS; ((MS-R1)/SP) X 100
PR2.................... Percent Recovery of MSD; ((MSD-R1)/SP) X 100
RPD.................... Relative Percent Difference; ((MS-MSD)/(MS+MSD)/2) X 100
Mean PR................ Mean Percent Recovery
Acceptance Limits ...... Determined by in-house Control Charts

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LCS DATA REPORT

EPA Method 8015B/8021B

Date: 11/12/99

Batch #: IK12191S

Analyte	Spike Conc. ppm	Result ppm	% Recovery	ACP
TPH	1.1	1.3	114	70 - 125 %
Benzene	0.10	0.091	91	80 - 120 %
Toluene	0.10	0.092	92	80 - 120 %
Ethylbenzene	0.10	0.092	92	85 - 120 %
Xylenes	0.30	0.27	91	85 - 120 %
MTBE	1.5	1.4	95	75 - 130 %

Definition of Terms

LCS .... Laboratory Control Sample
Spike Conc .... Concentration of spike added to blank
Result .... Result of Laboratory Control Sample Analysis
%Recovery .... Percent Recovery of LCS; ((Result) / Spike Conc.) X 100
ACP .... Acceptance Limits for Percent Recovery
TPH .... Total Petroleum Hydrocarbons

Del Mar Analytical

Del Mar Analytical

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ADDITIONAL ANALYSIS REQUEST FORM

Today's Date: 11/11/99 Del Mar Analytical Project Manager: MH

Request Via: ___ telephone ___ chain of custody form X fax transmission ___ E-mail ___ other

Client: HLA-IRV Contact: ______

Project: 48827 / CCCD.

Date Sampled: 11/5/99 Date Received: 11/5/99

Status: X in progress ___ completed ___ received today ___ received yesterday ___ on hold ___ other

SAMPLE NUMBER	SAMPLE DESCRIPTION	ANALYSIS REQUESTED	SPECIAL REQUIREMENTS
1K00769	B5-15	8021 BTEX + MTBE	Diesel = 20x DF
1K00771	B5-30	↓	= ND
1K00773	B6-20	↓	= 20x DF
1K00775	B6-30	↓	= ND
1K00776	B9-10	↓	= 20x DF
1K00778	B9-30	↓	= ND

TURNAROUND STATUS: ___ Same Day X 24hr ___ 48hr ___ 3days

___ 5days ___ Standard ___ No Rush Charge

g:\dmail\misc\forms\add-req.doc

P. 02

FAX NO. 949 2601831

NOV-11-1999 THU 03:43 PM HARDING LAWSON ASSOCIATE

Del Mar Analytical

2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228
1014 E. Cooley Dr., Suite A Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
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Revised 11-11-99 by Dave DeVries @ HLA

GT- 3381

CHAIN OF CUSTODY FORM

Quote No.: ______ Page: ___ of ___

Client Name: HARDING LAWSON ASSOC.

Address: 2171 CAMPUS, SUITE 100

City: IRVINE State: CA. Zip: 92612

Tel: 260-1800 Fax: 260-1830

P.O./Project Number: 48827

Project Name: CCCD

Project Manager: 48827 - DALE DEVRIES

Sampler(s) (signature): Pat Shd

Sample I.D.	Matrix	Date Sampled	Time	Preservation	Number of Containers	Type of Containers	8015 (Gas) / 8020 (BTEX) ☒	MTBE (8020) ☒ / 8015/8020/MTBE ☐	8015 (Diesel) ☒ fuel / simulated distillation ☐ / fingerprint ☐	Oil & Grease - EPA 413.2	TRPH - EPA 418.1	EPA 8010 ☐	EPA 8010/8020 ☐	EPA 8270	Title 22 Metals EPA 6010/7000 ☐ / +Cr VI ☐	EPA 8260 ☐ + Oxygenates ☐ / - MTBE ☐ / MTBE only ☐	Lead	pH
B5 - ~~10~~ 15	soil	11-5-99						X	1									
B5 - 20									1									
B5 - 30								X	1									
B6 - 5									1									
B6 - 20								X	1									
B6 - 25									1									
B6 - 30								X	1									
B9 - 10								X	1									
B9 - 20									1									
B9 - 30								X	1									

Relinquished by: Pat Shd Date/Time: 11/5/99 4:58 Received by: Date/Time:

Relinquished by: Date/Time: Received by: Date/Time:

Relinquished by: Date/Time: Received in Lab by: [signature] Date/Time: 11/5/99 11:50

Turnaround Time: (check one): Same Day ___ 24 Hours ☒ 48 Hours ___ 72 hours ___ 5 Days ✓ Standard ___

Sample Integrity: Intact: ✓ On Ice ✓

Remarks:

Note: By relinquishing samples to Del Mar Analytical, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of the invoice. Sample(s) will be disposed of after 30 days

COC-GT

Del Mar Analytical

GT- 3380

CHAIN OF CUSTODY FORM

Quote No.: ______ Page: ___ of ___

Client Name: HARDING LAWSON ASSOC.
Address: 2171 CAMPUS, SUITE 100
City: IRVINE State: CA Zip:
Tel: 260-1800 Fax: 260-1830

P.O./Project Number: 48827
Project Name: CCCD
Project Manager: DAVE DEVRIES
Sampler(s) (signature): Pat Sl.

Sample I.D.	Matrix	Date Sampled	Time	Preservation	Number of Containers	Type of Containers	8015 (Gas) ☐ 8020 (BTEX) ☐	MTBE (8020) ☐	8015/8020/MTBE ☐	8015 (Diesel) ☒ fuel	simulated distillation ☐ fingerprint ☐	Oil & Grease - EPA 413.2	TRPH - EPA 418.1	EPA 8010 ☐	EPA 8010/8020 ☐	EPA 8270	Title 22 Metals EPA 6010/7000 ☐ +Cr VI ☐	EPA 8260 ☐ + Oxygenates ☐ + MTBE ☐ MTBE only ☐	Lead	pH							
B8-20	Soil	11/5/99								1																	
B7-20	↓	↓								1																	
~~B8-25~~										~~5~~																	

Relinquished by: Pat SLL Date/Time: 11/5/99 - 4:58 Received by: Date/Time:
Relinquished by: Date/Time: Received by: Date/Time:
Relinquished by: Date/Time: Received in lab by: [signature] Date/Time: 11/5/99 16:58

Turnaround Time: (check one)
Same Day ___ 72 hours ___
24 Hours ___ 5 Days ✓
48 Hours ___ Standard ___

Sample Integrity: Intact ✓ On Ice ✓

Remarks:

Note: By relinquishing samples to Del Mar Analytical, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on ... Payment for services is due within 30 days from the date of the invoice. Sample(s) will be disposed of after 30 days.

COC-GT

ATTACHMENT B

BORING LOGS/HAND AUGER SOIL DESCRIPTIONS

Equipment: Direct Push

Elevation: NA   Date: 11/5/99

PID (ppm)	Depth ft	Description
	0	4" CONCRETE SLAB
	5	
		Refer to hand auger soil descriptions
	10	
343	15	GRAY SILT (ML) moist, medium-grained sand, low plasticity
23	20	LIGHT BROWN SANDY SILT (ML) moist
0.1	25	LIGHT BROWN SILTY SAND (SM) moist
0	30	Boring terminated at 30 feet. Groundwater not encountered during drilling. Boring backfilled with granular bentonite on 11/5/99.
	35	
	40	

Harding Lawson Associates
Engineering and
Environmental Services

HLA

Log of Boring B- 5

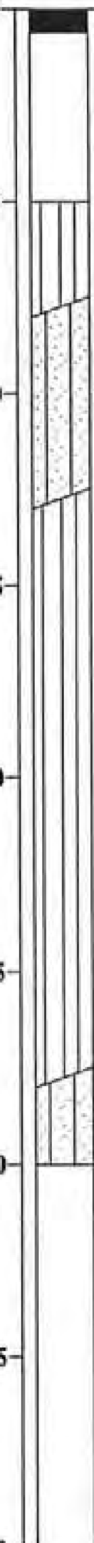
(sheet 1 of 1)

PLATE

Coast Community College District
Costa Mesa, California

DRAWN	PROJECT NUMBER	APPROVED	DATE	REVISED DATE
HK	48900-1		11/99	

Equipment	Direct Push
Elevation	NA
Date	11/5/99



PID (ppm)	Depth ft	Description
	0	6" CONCRETE
469	5	DARK GRAY SILT (ML) moist, medium-grained sand, low plasticity
		DARK GRAY SILTY SAND (SM) moist, fine grained, low plasticity
417	10	
		BROWNISH GRAY SILT (ML) moist, moderate odor
247	15	
407	20	
11.2	25	brown, no odor
		BROWNISH SILTY SAND (SM) moist, very micaceous, no odor
3.6	30	Boring terminated at 30 feet. Groundwater not encountered during drilling. Boring backfilled with granular bentonite on 11/5/99.
	35	
	40	

Sample

HLA

Harding Lawson Associates
Engineering and
Environmental Services

Log of Boring B- 6 (sheet 1 of 1)

Coast Community College District
Costa Mesa, California

PLATE

DRAWN	PROJECT NUMBER	APPROVED	DATE	REVISED DATE
HK	48900-1		11/99	

PID (ppm)	Depth ft	Sample	
			Equipment: Direct Push
			Elevation: NA Date: 11/5/99
	0		6" CONCRETE
	5		
			Refer to hand auger soil descriptions
	10		
0	15		BROWN SILT (ML) moist, no odor
0	20		Boring terminated at 20 feet. Groundwater not encountered during drilling. Boring backfilled with granular bentonite on 11/5/99.
	25		
	30		
	35		
	40		

Harding Lawson Associates
Engineering and
Environmental Services

Log of Boring B- 7

(sheet 1 of 1)

PLATE

Coast Community College District
Costa Mesa, California

DRAWN	PROJECT NUMBER	APPROVED	DATE	REVISED DATE
HK	48900-1		11/99	

Equipment: **Direct Push**

Elevation: **NA** Date: **11/5/99**

PID (ppm)	Depth ft	Description
	0	6" CONCRETE
	5	
		Refer to hand auger soil descriptions
	10	
0	15	BROWNISH CLAYEY SILT (ML) moist, no odor
		BROWN SILT (ML) moist, no odor
0	20	Boring terminated at 20 feet. Groundwater not encountered during drilling. Boring backfilled with granular bentonite on 11/5/99.
	25	
	30	
	35	
	40	

Harding Lawson Associates
Engineering and
Environmental Services

HLA

Log of Boring B- 8

(sheet 1 of 1)

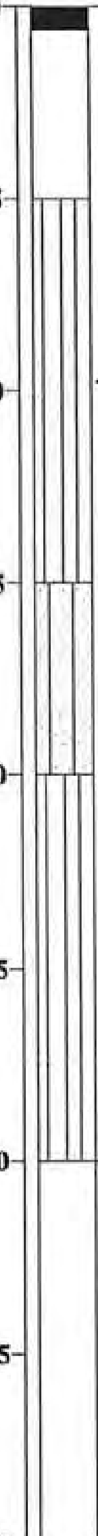
Coast Community College District
Costa Mesa, California

PLATE

DRAWN	PROJECT NUMBER	APPROVED	DATE	REVISED DATE
HK	48909-1		11/99	

Equipment: Direct Push

Elevation: NA Date: 11/5/99



PID (ppm)	Depth ft	Description
	0	6" CONCRETE
0	5	DARK BROWN SILT (ML) moist, no odor
325	10	
462	15	GRAY SILTY SAND (SM) moist, no odor
432	20	DARK BROWN SILT (ML) moist, no odor
0	25	light brown
		LIGHT BROWN SANDY SILT (ML) moist, no odor
0	30	Boring terminated at 30 feet. Groundwater not encountered during drilling. Boring backfilled with granular bentonite on 11/5/99.
	35	
	40	

Harding Lawson Associates
Engineering and Environmental Services

Log of Boring B- 9

(sheet 1 of 1)

PLATE

Coast Community College District
Costa Mesa, California

DRAWN	PROJECT NUMBER	APPROVED	DATE	REVISED DATE
HK	48900-1		11/99	

HAND AUGER SOIL DESCRIPTIONS
HLA Project # 48900-1
OCCC Building #7
11-2-99

Boring ID	Depth (feet)	Soil Type	Odor	PID (ppm)
B-1	5.0	Clay	Strong	20.0
	7.5	Silty Clay	Strong	67.0
	10.0	Sandy Silt	Strong	95.0
	11.5	Sandy Silt	Moderate	49.0
	15.0	Sandy Silt	Strong	208.0
B-2	2.5	Clay	Moderate	35.0
	5.0	Silty Clay	Light	22.0
	7.5	Sandy Silt	Light	9.0
	10.0	Sandy Silt	Light	5.8
B-3	2.5	Clay	Light	12.5
	5.0	Silty Clay	Light	1.5
	7.5	Sandy Silt	Light	9.0
	10.0	Sandy Silt	No Odor	0.0
B-4	2.5	Clay	Light	7.0
	5.0	Silty Clay	Strong	123.0
	7.5	Sandy Silt	Light	10.0
	10.0	Sandy Silt	Light	9.0

ATTACHMENT C

FIELD PROCEDURES

FIELD PROCEDURES

All drilling activities were supervised by a Harding Lawson Associates (HLA) scientist, who logged the borings and collected soil samples. Each proposed boring location was hand augered to a depth of approximately 5 feet prior to drilling to confirm the absence of subsurface utilities.

Field Equipment

Borings were drilled by hand auger methods or by Vironex, Inc. of Santa Ana, California, with a Geopropbe direct push equipped rig. Soil samples were collected with a 1.5-inch outside diameter by 24-inch long barrel sampler lined with four 1-inch outside diameter by 6-inch long brass tubes. The sampler was driven into undisturbed soil using the drill rigs hydraulics.

The breathing zone of workers was monitored for volatile organic compounds using a photoionization detector (PID). The PID was calibrated to a hexane standard prior to the start of work each day. Field screening of soil samples was also conducted with a PID calibrated to a hexane standard.

Drilling and Soil Sampling

All downhole equipment was fully decontaminated prior to drilling each boring. Upon retrieval, the sampler was disassembled and sampling tubes were separated using a sampling knife. Soil samples were screened with a PID using both the headspace-reading methods. The headspace-reading method consisted of placing a small quantity of soil collected from the shoe of the sampler into a resealable plastic bag, and allowing VOCs to volatilize approximately 15 minutes. The soil vapor in the plastic bag was then monitored by inserting the probe of the PID into the bag, and measuring and recording the VOC reading. Samples exhibiting the highest PID measurements were generally selected for laboratory analysis.

Each sample tube was covered at both ends with Teflon sheets and capped with plastic caps. Labels with job designation, time, boring number, sample depth interval, sample number, date sampled, and the initials of the field geologist were attached to each sample tube. The samples were then individually enclosed in plastic bags and stored in ice-chilled coolers prior to and during shipment. The ice used to maintain cooler temperature was double-bagged in plastic bags.

Soil samples from the direct push borings were logged following the Unified Soil Classification System (USCS), which conforms to ASTM Method D2488-90, under the direct supervision of an HLA geologist.

Upon completion of soil sampling, the borings were backfilled to the surface with granular bentonite. The soil cuttings were placed on the existing stockpile inside building #7.

Decontamination

The soil sampler and downhole equipment were decontaminated by washing in a Liqui-Nox and water solution, and rinsing with potable and distilled water, respectively. Clean, new brass tubes were used as the two lowermost sampling tubes for each drive. The uppermost sampling tube was decontaminated as described above, and reused.

TOM L
DIRE

L. REX EHLING,
HEALTH OFI

ENVIRONMENTAL HEALTH DIV
ROBERT E. MERRYMAN, REHS
DEPUTY DIRE

MAILING ADDRESS: P.O. BO
SANTA ANA, CA

COUNTY OF ORANGE

HEALTH CARE AGENCY
PUBLIC HEALTH SERVICES
ENVIRONMENTAL HEALTH DIVISION
2009 E. EDINGER AVENUE
SANTA ANA, CALIFORNIA 92705
(714) 667-3700

88UT91

August 31, 1990

Eugene F. Harrie
Coast Community College District
1370 Adams Avenue
Coast Mesa, CA 92626

Subject: Remedial Action At Orange Coast Community College, 2701 Fairview, Costa Mesa, CA 92626 - O.C.H.C.A. Case #88UT91

Dear Mr. Harrie:

This letter confirms the completion of site investigation and remedial action at the above site. With the provision that the information provided to this Agency was accurate and representative of existing conditions, it is the position of this office that no further action is required at this time.

Please be advised that this letter does not relieve you of any liability under the California Health and Safety Code or Water Code for past, present, or future operations at the site. Nor does it relieve you of the responsibility to clean up existing, additional or previously unidentified conditions at the site which cause or threaten to cause pollution or nuisance or otherwise pose a threat to water quality or public health.

Additionally, be advised that changes in the present or proposed use of the site may require further site characterization and mitigation activity. It is the property owner's responsibility to notify this Agency of any changes in report content, future contamination findings, or site usage.

If you have any questions regarding this matter, please contact Arghavan Rashidi-Fard at (714) 667-3713.

Very truly yours,

Livio F. Davanzo, Ph.D., R.E.A.
Program Manager
Hazardous Materials Management Section
Environmental Health Division

LFD:ARF:gmj

cc: Steve Overman, Santa Ana Regional Water Quality Control Board
Costa Mesa Fire Department

Date: 8/24/[illegible]

Case: I.D.: 38

SUMMARY SITE CLOSURE RATIONALE

Facility Name: Orange Coast Community College Resources affected: ✓ Soil ___ Groundwater

Address: 2701 Fairview Costa Mesa 92626

Current Land Use: Horticulture Area Future Land Use: unknown

Current Adjacent Land Use: Buildings (Agriculture) Future Adjacent Use: unknown

---

Resources affected: ✓ Soil ___ Groundwater

Highest Initial/Final Concentrations (mg/kg) of Each Contaminant in Soil:

(Name)	(Conc.)	(Name)	(Conc.)
TPH (Waste Oil)	30000/43		/
	/		/

Extent of Contamination (Lateral And Vertical) - Areal 45 x 40 x Vertical 25'

Estimated - never been on site

Soil Type: Silty Clay, native Soil Deepest Boring 30'

Depth To Groundwater: 45 Ft. (___ Measured By Borings, ✓ Estimated)

Hydrogeologic Conditions: ___ Forebay ✓ Pressure Zone ___ Hills ___ Near O.C.W.D. Recharge Zones

---

Special Conditions: Soil piles from another tank pull (OCHCA case # 89UT198) was mixed with this tank p

Describe Cleanup Efforts: Soils were chemically treated with [illegible] and left on site after verification sampling results were non-detect. Pit was excavated + backfilled with clean soil.

Rationale For Closure: Three tanks containing diesel and waste oil were removed on 1/5/88. Pit was excavated down to 25' and some TPH contamination was found. Accordi

[illegible] 8/31/89

COMPUTER NUMBER 88 UT 91

HEALTH INSPECTION REPORT (continued)
Orange County Health Care Agency / Public Health
Environmental Health

Mailing Address: P.O. Box 355
Santa Ana, CA 92702

DBA Orange Coast Comm. College ADDRESS 2701 Fairview CITY Costa Mesa

ITEM NO.

to Gene Harris of OCC, the pit was "overexcavated" and filled with "clean fill." (10/25/88 Activity log). Pit was then cemented over. On 6/22/89, an initial vertical boring was drilled to 33' below grade. Three samples were collected at 20', 25' and 33'. Samples were analyzed for TPH, TRPH and BTXE. The only contamination was 3.2 ppm TRPH at 33'. On 1/30/90 two additional borings, one slanted + one vertical, were drilled to 36' below grade to complete site investigation. Nine samples were taken and analyzed for TPH, TRPH and BTXE. All lab results from nine samples were non-detect except 43 ppm TRPH in one boring (OCC-3) at 15' + 20' below grade. However two additional samples taken from the same boring (OCC-3) at 25' and 30' below grade were non-~~det~~detect.

Spoils from this site were mixed with spoils from adjacent cleanup site (OCHCA case # 89 UT 198) and treated chemically. After verification sampling showed soil clean, soils were left on site.

Present contamination is within allowable.

SANITARIAN A. Rashidi-Fard RECEIVED BY DATE 8/30/90

F0272-9.373.4

OFFICE COPY

APPENDIX A

SOIL SAMPLING AND HEADSPACE ANALYSIS PROCEDURES

APPENDIX A

SOIL SAMPLING AND HEADSPACE ANALYSIS PROCEDURES

A.1 Soil Sampling Procedures

1. Drilling was conducted using a drilling rig equipped with 7-inch, 8-inch, and 11-inch outside diameter hollow stem augers. All the augers were steam cleaned prior to being used.

2. The soil samples were collected with a split-barrel sampler lined with pre-washed brass and/or stainless steel tubes. Each sampler was driven approximately 18 inches with a 140-pound hammer dropping approximately 30 inches per blow. The number of blows used to drive the sampler each six inches was then recorded.

3. Either the lowermost or second lowermost tube from each sampler was removed from the sampler and capped on each end with heavy-duty aluminum foil and polyethylene end caps. The edges of the end caps were secured with electrical tape.

4. The samples were labeled with the boring number, date, and project number, and then placed in a plastic Ziploc bag.

5. The samples were stored in an ice chest cooled with ice to approximately 40 degrees Fahrenheit prior to being transported to a California Department of Health Services (DOHS) state-certified hazardous waste laboratory under chain-of-custody procedures.

6. The sampling equipment was washed between samples with a solution of water and trisodium phosphate, rinsed twice with tap water, and finally rinsed with deionized water.

A.2 Headspace Analytical Procedures

1. Soil from each sampled interval was extracted from the shoe of the sampler for a headspace analysis and placed in a plastic Ziploc bag. The bag was filled with approximately 50 grams of soil and closed.

2. After agitating the soil sample and then allowing it to sit for approximately three to four minutes, the probe of a portable organic vapor meter (OVM) was inserted through an opening in the bag and a reading was taken in the headspace.

3. The OVM used was an Hnu Systems, Inc. Model PI 101 photoionizer equipped with a 10.2 eV probe calibrated to 58 ppmv benzene.

4. The detection range reported by the manufacturer is 0.1 ppmv to 2,000 ppmv for benzene, and is reported to be similar for other volatile organic (hydrocarbon) compounds (VOCs).

APPENDIX B

BORING LOGS

PROJECT ▷ KEY	APPLIED GEOSCIENCES INC.	PROJECT NUMBER ▷ AGI0000
LOGGED BY ▷ JOHN GEOLOGIST		START DATE ▷ 8 June 1989
CHECKED BY ▷ JON LOVEGREEN		COMPLETION DATE ▷ 8 June 1989

GROUND SURFACE ELEVATION DATUM (FT MSL) ▷ 157.0	DRILLING COMPANY ▷ DRILLCO
DRILLING EQUIPMENT ▷ MOBILE DRILL CME WITH 6-INCH HOLLOW STEM AUGER	
BORING DEPTH (FT) ▷ 11.5 / WELL DEPTH (FT) ▷ N/A	WATER DEPTH (FT)-Initial: Completion:
WELL MATERIALS ▷ N/A	WELL SCREEN INTERVAL (FT) ▷ N/A TO N/A
WELL CASING ELEVATION (FT-MSL) ▷ N/A	OVM/OVA ▷ HNU WITH 10.2 EV PROBE
BACKFILL MATERIAL ▷ BENTONITE CHIPS	

DEPTH (FT)	LITHOLOGY: DESCRIPTION	GRAPHIC	WELL	BLOW COUNT	OVM/OVA (PPM)	SAMPLE: RECOVERY %	SAMPLE: TYPE	SAMPLE: NUMBER	COMMENTS
0	ASPHALT								
	Brown, moist, stiff, Silty CLAY (CL), some fine-grained sand, trace calcium carbonate stringers, minor carbonaceous material								
5									
				15	26			K1-1	Strong odor (petroleum product?)
10									
				20	34			K1-2	

UNIFIED SOIL CLASSIFICATION SYSTEM (USCS) DESCRIBED IN FOLLOWING FIGURES

GRAPHIC PRESENTATION OF LITHOLOGY DESCRIBED IN FOLLOWING FIGURES

NUMBER OF BLOWS REQUIRED TO ADVANCE SAMPLER ONE FOOT USING A 140-POUND DOWNHOLE HAMMER WITH 30-INCH DROP

ORGANIC VAPOR METER (OVM/OVA) READINGS IN PARTS PER MILLION (PPM)

SAMPLE LOCATION AND TYPE

MODIFIED CALIFORNIA DRIVE SAMPLER

STANDARD PENETRATION SAMPLER

REMARKS AND COMMENTS BY LOGGER OR INSPECTOR

BORING DESIGNATION		PAGE NUMBER	FIGURE NUMBER
K1	BORING LOG	1 OF 1	

PRIMARY DIVISIONS			GROUP SYMBOL	SECONDARY DIVISIONS
COARSE GRAINED SOILS MORE THAN HALF OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVELS MORE THAN HALF OF COARSE FRACTION IS LARGER THAN NO. 4 SIEVE	CLEAN GRAVELS (LESS THAN 5% FINES)	GW	Well graded gravels, gravel-sand mixtures, little or no fines.
			GP	Poorly graded gravels or gravel-sand mixtures, little or no fines.
		GRAVEL WITH FINES	GM	Silty gravels, gravel-sand-silt mixtures, non-plastic fines.
			GC	Clayey gravels, gravel-sand-clay mixtures, plastic fines.
	SANDS MORE THAN HALF OF COARSE FRACTION IS SMALLER THAN NO. 4 SIEVE	CLEAN SANDS (LESS THAN 5% FINES)	SW	Well graded sands, gravelly sands, little or no fines.
			SP	Poorly graded sands or gravelly sands, little or no fines.
		SANDS WITH FINES	SM	Silty sands, sand-silt mixtures, non-plastic fines.
			SC	Clayey sands, sand-clay mixtures, plastic fines.
FINE GRAINED SOILS MORE THAN HALF OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS LIQUID LIMIT IS LESS THAN 50%		ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity.
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.
			OL	Organic silts and organic silty clays of low plasticity.
	SILTS AND CLAYS LIQUID LIMIT IS GREATER THAN 50%		MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts.
			CH	Inorganic clays of high plasticity, fat clays.
			OH	Organic clays of medium to high plasticity, organic silts.
HIGHLY ORGANIC SOILS			Pt	Peat and other highly organic soils.

DEFINITION OF TERMS

U.S. STANDARD SERIES SIEVE — CLEAR SQUARE SIEVE OPENINGS

200	40	10	4	3/4"	3"	12"	

SILTS AND CLAYS	SAND			GRAVEL		COBBLES	BOULDERS
	FINE	MEDIUM	COARSE	FINE	COARSE		

GRAIN SIZES

SANDS, GRAVELS AND NON-PLASTIC SILTS	BLOWS/FOOT†
VERY LOOSE	0 - 4
LOOSE	4 - 10
MEDIUM DENSE	10 - 30
DENSE	30 - 50
VERY DENSE	OVER 50

RELATIVE DENSITY

CLAYS AND PLASTIC SILTS	STRENGTH‡	BLOWS/FOOT†
VERY SOFT	0 - 1/4	0 - 2
SOFT	1/4 - 1/2	2 - 4
FIRM	1/2 - 1	4 - 8
STIFF	1 - 2	8 - 16
VERY STIFF	2 - 4	16 - 32
HARD	OVER 4	OVER 32

CONSISTENCY

† Number of blows of 140 pound hammer falling 30 inches to drive a 2 inch O.D. (1-3/8 inch I.D.) split spoon (ASTM D-1586).

‡ Unconfined compressive strength in tons/sq. ft. as determined by laboratory testing or approximated by the standard penetration test (ASTM D-1586), pocket penetrometer, torvane, or visual observation.

APPLIED GEOSCIENCES INC.

Engineering Geology and Hazardous Materials Consultants

UNIFIED SOIL
CLASSIFICATION SYSTEM

LITHOLOGY

- Clayey SAND
- Silty SAND
- SAND
- Sandy SILT
- SILT
- Clayey SILT
- Silty CLAY
- Sandy CLAY
- Gravelly CLAY
- CLAY

OBSERVATION WELL

- BENTONITE
- DRY MIX OF BENTONITE AND SAND
- CEMENT
- CUTTINGS
- BLANK CASINGS
- SLOTTED INTERVAL
- BORING INFILL

APPLIED GEOSCIENCES INC.

Engineering Geology and Hazardous Materials Consultants

BORING LOG KEY

PROJECT ▷ ORANGE COAST COLLEGE

LOGGED BY ▷ KERRY LEFEVER

CHECKED BY ▷ DAVID M. HENRY

APPLIED GEOSCIENCES INC.

PROJECT NUMBER ▷ A891514A

START DATE ▷ 30 January 1990

COMPLETION DATE ▷ 30 January 1990

GROUND SURFACE ELEVATION DATUM (FT-MSL) ▷ 62.0

DRILLING COMPANY ▷ H-F DRILLING, INC.

DRILLING EQUIPMENT ▷ MOBILE DRILL B-53 WITH 7-INCH O.D. HOLLOW STEM AUGER (SLANT)

BORING DEPTH (FT) ▷ 40.0

WELL DEPTH (FT) ▷ N/A

WATER DEPTH (FT)-Initial: Completion:

WELL MATERIALS ▷ N/A

WELL SCREEN INTERVAL (FT) ▷ N/A TO N/A

WELL CASING ELEVATION (FT-MSL) ▷ N/A

OVM/OVA ▷ HNU WITH 10.2 EV PROBE

BACKFILL MATERIAL ▷ BENTONITE CHIPS

DEPTH (FT)	LITHOLOGY DESCRIPTION	GRAPHIC	WELL	BLOW COUNT	OVM/OVA (PPM)	SAMPLE RECOVERY %	SAMPLE TYPE	SAMPLE NUMBER	COMMENTS
0	ASPHALT								Boring drilled at approximately 20 degree angle from vertical All depths are drill depths unless otherwise noted Artificial fill from 0.5 to 1.5 feet below ground surface
	Gray, dry, Sandy GRAVEL (GM)								
5	Dusky brown (5 YR 2/2), damp, hard, Silty CLAY (CL) with roots								
	Becomes dark yellowish brown (10 YR 4/2), dry with caliche at 6.0 feet			89	<1	50		OCC2-1	
10	Becomes pale orange (10 YR 8/2) at 10.0 feet			81/6"	<1	40		OCC2-2	Vertical depth - 9.4 feet below ground surface
15	Yellowish gray (5 Y 7/2), dry, very dense, very fine SAND (SW)			76	<1	100		OCC2-3	
	Pale yellowish brown (10 YR 6/2), damp, hard, Silty CLAY (CL) with black concretions								
20	Becomes grayish orange (10 YR 7/4) at 18.0 feet Becomes grayish moderate yellowish brown (10 YR 5/4), with decreasing silt content and white stringers at 20.0 feet			59	<1	100		OCC2-4	Vertical depth - 18.8 feet below ground surface
25	Becomes greenish gray (5 GY 6/1), with orange mottling and caliche veins at 23.5 feet			47	<1	50		OCC2-5	
	Moderate yellowish brown (10 YR 5/4), damp, dense, medium to coarse SAND (SW) with mica								
30	Becomes reddish brown, very dense, and			112	<1	100		OCC2-6	

BORING DESIGNATION OCC2

BORING LOG

FIGURE NUMBER 3

PROJECT ▷ **ORANGE COAST COLLEGE** | PROJECT NUMBER ▷ **A891514A**

DEPTH (FT)	LITHOLOGY DESCRIPTION	GRAPHIC	WELL	BLOW COUNT	OVM/OVA (PPM)	SAMPLE RECOVERY %	SAMPLE TYPE	SAMPLE NUMBER	COMMENTS
30	coarse-grained at 29.0 feet								Vertical depth - 28.2 feet below ground surface
	Becomes medium to coarse-grained with minor clay at 32.0 feet								
35	Becomes brownish gray (5 YR 4/1), dry, fine to medium-grained at 35.0 feet			108	<1	100		OCC2-7	No petroleum hydrocarbon odor noted from samples or cuttings
				14/ 3"	<1	100		OCC2-8	
40	Bottom of boring at 40.00 feet								Vertical depth - 36.6 feet below ground surface

BORING DESIGNATION		PAGE NUMBER	FIGURE NUMBER
OCC2	**BORING LOG**	2 OF 2	b

PROJECT ▷ ORANGE COAST COLLEGE	PROJECT NUMBER ▷ A891514A
LOGGED BY ▷ ROB JOHNSON	START DATE ▷ 30 January 1990
CHECKED BY ▷ DAVID M. HENRY	COMPLETION DATE ▷ 30 January 1990
GROUND SURFACE ELEVATION DATUM (FT-MSL) ▷ 62.0	DRILLING COMPANY ▷ H-F DRILLING, INC.
DRILLING EQUIPMENT ▷ MOBILE DRILL B-53 WITH 7-INCH O.D. HOLLOW STEM AUGER	
BORING DEPTH (FT) ▷ 36.0 / WELL DEPTH (FT) ▷ N/A	WATER DEPTH (FT)-Initial: Completion:
WELL MATERIALS ▷ N/A	WELL SCREEN INTERVAL (FT) ▷ N/A TO N/A
WELL CASING ELEVATION (FT-MSL) ▷ N/A	OVM/OVA ▷ HNU WITH 10.2 EV PROBE
BACKFILL MATERIAL ▷ BENTONITE CHIPS	

APPLIED GEOSCIENCES INC.

DEPTH (FT)	LITHOLOGY DESCRIPTION	GRAPHIC	WELL	BLOW COUNT	OVM/OVA (PPM)	SAMPLE RECOVERY %	SAMPLE TYPE	SAMPLE NUMBER	COMMENTS
0	ASPHALT								Artificial fill from 0.5 to 22.0 feet below ground surface
	Gray brown, damp, Silty, Sandy GRAVEL (GM)								
5									
10									
	Increasing clay content at 11.0 feet								
15				16	3.5	40		OCC3-1	
20				15	1	65		OCC3-2	
	Orange brown, moist, dense, medium to coarse SAND (SW)								
25				47	<1	100		OCC3-3	Slight petroleum hydrocarbon odor noted in sample
	White gray, damp, very dense, Silty, fine to medium SAND (SM)								
30				112	<1	100		OCC3-4	Slight petroleum hydrocarbon odor

BORING DESIGNATION		PAGE NUMBER	FIGURE NUMBER
OCC3	BORING LOG	1 OF 2	a

PROJECT ▷ **ORANGE COAST COLLEGE** | PROJECT NUMBER ▷ **A891514A**

DEPTH (FT)	LITHOLOGY: DESCRIPTION	GRAPHIC	WELL	BLOW COUNT	OVM/OVA (PPM)	SAMPLE: RECOVERY %	SAMPLE: TYPE	SAMPLE: NUMBER	COMMENTS
30									noted in sample
	Interbedded grey brown, damp, very dense, Silty, fine SAND (SM) and orange brown, coarse SAND (SP) with occasional gravel								
35				90/ 8"	<1	50		OCC-5	
	Bottom of boring at 36.0 feet								

BORING DESIGNATION		PAGE NUMBER	FIGURE NUMBER
OCC3	BORING LOG	2 OF 2	b

APPENDIX C

LABORATORY REPORT OF CHEMICAL ANALYSES AND CHAIN-OF-CUSTODY RECORD

February 5, 1990

RECEIVED
FEB 06 1990
APPLIED GEOSCIENCES INC.

WCAS
WEST COAST ANALYTICAL SERVICE, INC.
ANALYTICAL CHEMISTS

A

APPLIED GEOSCIENCES
17321 Irvine Blvd
Tustin, CA 92680

Attn: Kerry Lefever

JOB NO. 14735

LABORATORY REPORT

Samples Received: Thirteen (13) soil samples
Date Received: 1-31-90
Purchase Order No: Proj#: A891514A/OCC

The samples were analyzed as follows:

Samples Analyzed	Analysis	Results
Four (4) soils	Volatile Aromatics by EPA 8020	Data Sheets
Five (5) soils	Fuel Hydrocarbons by modified EPA 8015 (LUFT Manual, May 1988)	Table I
Eight (8) soils	Total Petroleum Hydrocarbons by EPA 418.1	Table II

Enclosures: Chromatograms

Michael Shelton Senior Chemist	B. Michael Hovanec Senior Staff Chemist

9840 Alburtis Avenue • Santa Fe Springs, California 90670 • 213/948-2225 • FAX 213/948-5850

WEST COAST ANALYTICAL SERVICE, INC.

APPLIED GEOSCIENCES
Mr. Kerry Lefever

Job # 14735
February 5, 1990

LABORATORY REPORT

TABLE I

Fuel Hydrocarbons by Modified EPA 8015
(LUFT Manual, May 1988)

Parts Per Million (mg/Kg)

Sample No.	C_5-C_{10} Gasoline	C_7-C_{12} Mineral Spirits	C_7-C_{15} Kerosene	C_{10}-C_{20} Diesel Fuel	C_{15}-C_{30} Heavy Hydrocarbons
OCC2-4	ND	ND	ND	ND	ND
OCC2-6	ND	ND	ND	ND	ND
OCC2-8	ND	ND	ND	ND	ND
OCC3-3	ND	ND	ND	ND	ND
OCC3-5	ND	ND	ND	ND	ND
Detection Limit	10	10	10	10	100

ND - Not Detected

Date Analyzed: 2-1-90

TABLE II

Parts Per Million (mg/Kg)

Sample No.	Total Petroleum Hydrocarbons
OCC2-4	ND
OCC2-6	ND
OCC2-7	ND
OCC2-8	ND
OCC3-2	43
OCC3-3	ND
OCC3-4	ND
OCC3-5	ND
Detection Limit	5

ND-Not Detected
Date Analyzed: 2-2-90

Client: APPLIED GEOSCIENCES INC.
Job No: 14735
Date
Analyzed: 01-Feb-90
Analysis: EPA 602 (8020)

Sample: OCC2-6

Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Benzene	ND	1
Toluene	ND	1
Chlorobenzene	ND	2
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: APPLIED GEOSCIENCES INC.
Job No: 14735
Date
Analyzed: 01-Feb-90
Analysis: EPA 602 (8020)

Sample: OCC2-8

Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Benzene	ND	1
Toluene	ND	1
Chlorobenzene	ND	2
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: APPLIED GEOSCIENCES INC.
Job No: 14735
Date
Analyzed: 01-Feb-90
Analysis: EPA 602 (8020)

Sample: OCC3-3

Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Benzene	ND	1
Toluene	ND	1
Chlorobenzene	ND	2
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: APPLIED GEOSCIENCES INC.
Job No: 14735
Date
Analyzed: 01-Feb-90
Analysis: EPA 602 (8020)

Sample: OCC3-5

Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Benzene	ND	1
Toluene	ND	1
Chlorobenzene	ND	2
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

APPLIED GEOSCIENCES INC.

SHIPMENT NO.: 1

PAGE 1 OF 1

CHAIN OF CUSTODY RECORD

DATE 1/31/90

PROJECT NAME: OCC

PROJECT NO.: A891514A

Sample Number	Location	Type of Sample		Type of Container	Type of Preservation		Analysis Required*
		Material	Method		Temp	Chemical	
OCC Z-1	5'	SOIL	DRIVE	SS tube	AMB	ICE	HOLD
OCC Z-2	10'	↓	↓	↓	↓	↓	HOLD
OCC Z-3	15'						HOLD
OCC Z-4	20'						[illegible]
OCC Z-5	25'						[illegible]
OCC Z-6	30'						[illegible] 8020
OCC Z-7	35'						413.1
OCC Z-8	40'						413.1, [illegible]
OCC 3-1	15'						HOLD
OCC 3-2	20'						413.1
OCC 3-3	25'						[illegible]
OCC 3-4	30'			2			[illegible]
OCC 3-5	35'						[illegible]

Total Number of Samples Shipped: 13

Sampler's Signature: Kerry Lefever

Relinquished By:	Received By:	Date / Time
Signature Printed Name K. LEFEVER Company APPLIED GEOSCIENCES, INC. Reason	Signature [illegible] Printed Name MARK NAVARRO Company FED. EXPRESS	Date 1/31/90 Time 1:20pm
Signature [illegible] Printed Name MARK NAVARRO Company FED EXPRESS Reason	Signature April Richards Printed Name Company WCAS # 814735	Date 1/31/90 Time 3:40p
Signature Printed Name Company Reason	Signature Printed Name Company	Date / / Time
Signature Printed Name Company Reason	Signature Printed Name Company	Date / / Time

Special Shipment / Handling / Storage Requirements:

NORMAL TURNAROUND TIME
[illegible] RESULTS TO KERRY LEFEVER

* Note — This does not constitute authorization to proceed with analysis

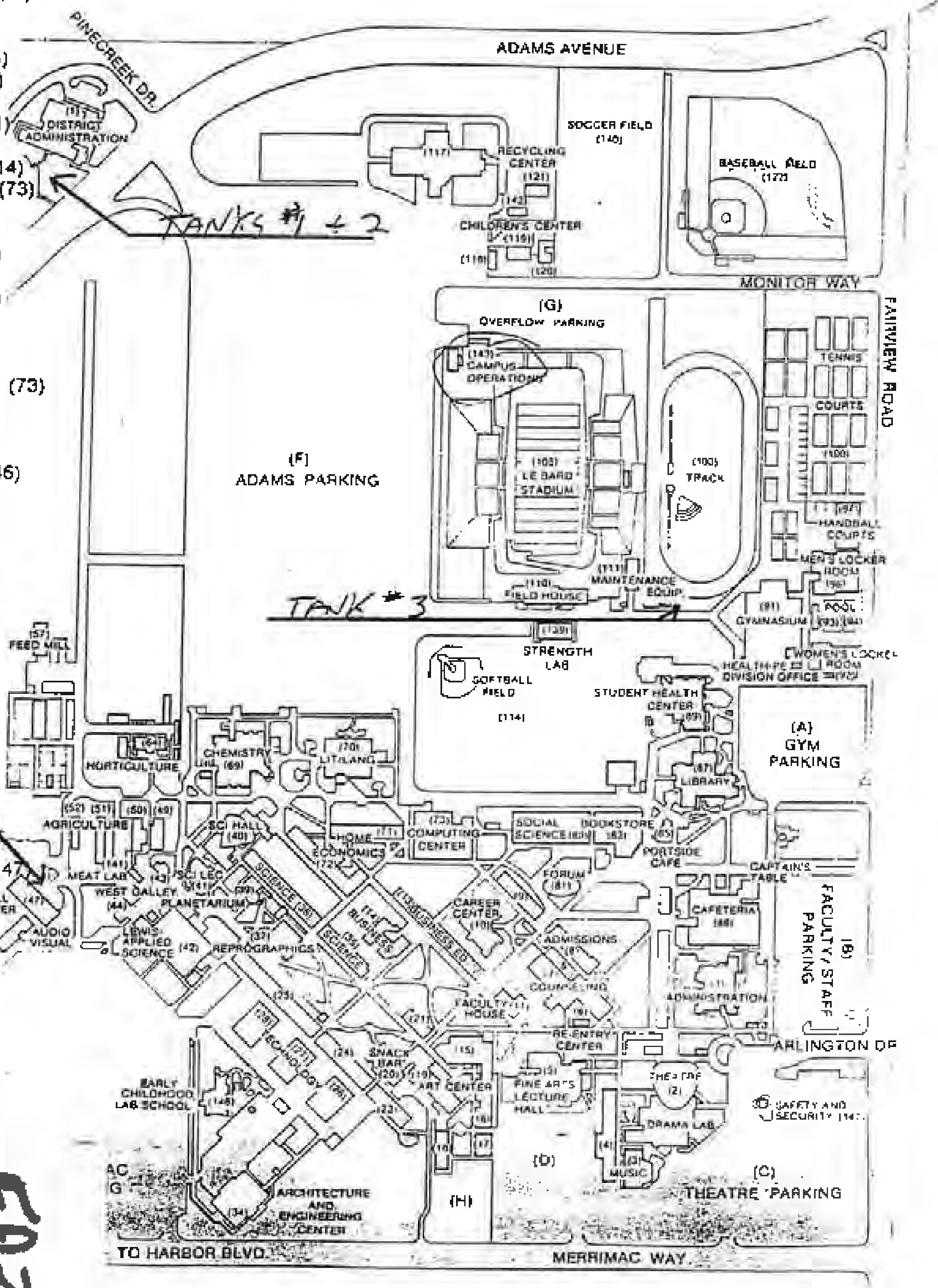
ORANGE COAST COLL EGE

2701 Fairview Rd. Costa Mesa, CA 92626 (714) 432-0202

#1 & #2 : 1370 Adams (acct.# 6690)
#3 & #4 : 2701 Fairview (acct.# 6695

BUILDING NUMBERS IN PARENTHESES

- ● Administration (1)
- ● Admissions & Counseling (7, 8, 9)
- Agriculture (49-63, 65-68)
- Allied Health (44)
- Architecture & Engineering (34)
- ● Art Center/Gallery (15-19 & 21)
- Assessment Center (10)
- Associated Students of OCC (1)
- Bookstore & Warehouse (83)
- Business Education (12, 13, & 14)
- Business Information Systems (73)
- ● Cafeteria (86)
- Campus Operations (143)
- Captain's Table Restaurant (86)
- ● Career Center (10)
- ● Center for Applied Science (42)
- ● Chemistry (69)
- Children's Center (118-120)
- Community Services (86)
- ● Computer Center/Lab/Graphics (73)
- Construction (26)
- ● Disabled Students Center (10)
- Drama Lab (12)
- Early Childhood Lab School (146)
- EOPS (8)
- Financial Aid (87)
- ● Fine Arts (5)
- Forum (81)
- Gymnasium (Peterson) (91)
- ● Health Center (Student) (89)
- ● Home Economics (71 & 72)
- ● Horticulture (64)
- ● Learning Center (10)
- ● Library (87)
- ● Literature & Language (70)
- Media Center (87)
- ● Music (3 & 4)
- Planetarium (39)
- Recycling Center (121)
- Re-Entry (6)
- ● Reprographics (37)
- Safety/Security & Information (147)
- Science (35-39)
- Science Hall (40)
- ● Science Lecture Halls 1 & 2 (41)
- ● Skill Center (47 & 48)
- Snack Bars
  - The Cove (43)
  - Port Side Cafe (85)
  - West Galley (20)
- ● Social Science (80)
- Special Services (10)
- Stadium (Le Bard) (105-107)
- Student Center (86)
- Student Services (1
- Technology (23-33)
- Tennis Courts (100)
- Theatre (2)
- Tutorial Center (10)
- Windjammer (86)



REV 7-23-87

FA24548

● ACC MS FOR THE DISABLED

MOINE BROS.

CONTRACTORS LIC. NO. 343468

CERTIFICATE OF DESTRUCTION

On this 20th day of OCTOBER (month), 19 89, empty tanks/containers (as described below) were accepted by Moine Bros. and were cut/sheared or otherwise processed for scrapping in a safe and legal manner according to standard practices.

Item	Size	Description	Source
1	3,000	STEEL TANK	2701 FAIRVIEW COSTA MESA.
2	1,000	STEEL TANK	"
3	2,000	STEEL TANK	"
4	1,000	STEEL TANK	"
5			
6			

Moine Bros.

10/20/90

Date

319 North Avalon Blvd, Wilmington, California 90744 (213) 830-1570

State of California—Health and Welfare Agency
Form Approved OMB No. 2050—0039 (Expires 9-30-
Please print or type. (Form designed for use on elite (12-pitch) typewriter).

Department of Health Services
Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: CA [illegible]
Manifest Document No.: [illegible]
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Orange Coast Community College Dist., Adm. 1st
1370 Adams Ave., Costa Mesa, CA 92626
4. Generator's Phone (714) 432-0202

A. State Manifest Document Number: 89608017
B. State Generator's ID

5. Transporter 1 Company Name: Gunderson Vacuum Truck
6. US EPA ID Number: CAD[illegible]
C. State Transporter's ID: 911430
D. Transporter's Phone: 213/437-1362

7. Transporter 2 Company Name
8. US EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
Petroleum Recycling Corp.
1835 East 29th St.
Signal Hill, CA 90806
10. US EPA ID Number: [illegible]
G. State Facility's ID
H. Facility's Phone: 213/595-7431

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. California Regulated Waste Only (Tank Rinsate)	001	TT	003850	G	State 221 EPA/Other
b.					State EPA/Other
c.					State EPA/Other
d.					State EPA/Other

RECYCLING CERTIFICATE

Petroleum Recycling Corporation certifies that the abovementioned waste(s), more specifically identified by reference to the waste manifest set forth above, was / were recycled in accordance with the provisions of 40CFR 261.6 and 264. pursuant to 40CFR 261.3(c) (2), hazardous waste generated from the recycling efforts was also recycled in accordance with the provisions of 40CFR266 Subpart D.

J. Additional Descriptions for Materials Listed Above

PETROLEUM RECYCLING CORPORATION

By: [signature]

K. Handling Codes for Wastes Listed Above
a. R-01
b.
c.
d.

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: Jesus Ramirez
Signature: [signature]
Month Day Year: 1/23/1989

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Alfredo Gutierrez
Signature: [signature]
Month Day Year: 1 2 3 1 9 8 9

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Luke Briggs
Signature: [signature]
Month Day Year: 1 25 1989

GENERATOR / TRANSPORTER / FACILITY

IF SPILL OR LEAK ... CALL 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

3 8022 A (1/88)
EPA 8700—22
(Rev. 9-88) Previous editions are obsolete.

Do Not Write Below This Line

Tank Closure Report
Closure Permit No. 98-299
Orange Coast College
2701 Fairview Road
Costa Mesa, California

Prepared for

Coast Community College District
1370 Adams Avenue
Costa Mesa, California 92626

HLA Project No. 41334

Camilla Frejd-Smith

Camilla Frejd-Smith
Staff Environmental Specialist

Donald A. Pape

Donald A. Pape, C.E.G.
Principal Hydrogeologist

October 27, 1998

Harding Lawson Associates
Engineering and Environmental Services
30 Corporate Park, Suite 400
Irvine, California 92606 - (949) 260-1800

CONTENTS

EXECUTIVE SUMMARY

Harding Lawson Associates (HLA) was retained by Coast Community College District (CCCD) to remove one underground storage tank (UST) and prepare this closure report. The tank was associated with Orange Coast College's maintenance equipment storage area.

The fuel dispensing area consisted of one 1,000-gallon UST (gasoline), one fuel dispenser, and associated piping. According to CCCD, the tank was installed in 1990 with a primary wall constructed of steel and a secondary wall constructed of fiberglass.

Between August 10 and 11, 1998, the dispenser, piping, and UST were removed by Quest Environmental. Under the direction of the Orange County Health Care Agency (OCHCA), soil samples were collected beneath the UST and dispenser. Samples were submitted to a State of California certified laboratory for analyses of total petroleum hydrocarbons as gasoline (TPHg); benzene, toluene, ethylbenzene, and xylenes (BTEX); and methyl tertiary butyl ether (MTBE). The soil excavated from the tank, dispenser, and piping areas was stockpiled at the Site.

The results of the laboratory analyses indicated that TPHg, BTEX, and MTBE were not detected in the soil samples collected beneath the USTs and piping. However, MTBE was detected in soil samples collected beneath the dispenser.

Based upon the analytical data collected during the tank removal, the tank and dispenser excavation was backfilled with the stockpiled soil as well as with clean, imported soil. The soil was compacted to a minimum of 93 percent maximum dry density.

1.0 INTRODUCTION

Harding Lawson Associates (HLA) was contracted by Coast Community College District (CCCD), Costa Mesa, California, to prepare this tank closure report for one fuel underground storage tank (UST) formerly located in the maintenance equipment storage area of Orange Coast College (Plates 1 and 2). This report documents the removal and disposal of the tank, the collection and disposal of tank rinsate, and the results of soil sampling. HLA performed environmental services for UST removal at the Site during the period August 10 through 14, 1998.

Tank removal, excavation, backfilling, and compaction services were performed by Quest Environmental (Brea, California) under contract to CCCD. Laboratory services were provided by Del Mar Analytical (Irvine, California) under contract to HLA. The laboratory is certified by the California Department of Health Services. Offsite transportation and disposal services of the UST and rinsate were coordinated by Nieto and Sons Trucking, Inc., which was contracted by Quest Environmental. This work was performed under the supervision of a State of California certified engineering geologist and in accordance with an Orange County Health Care Agency (OCHCA) closure permit (No. 98-299). HLA provided job coordination, site supervision, air monitoring, soil sampling, and reporting services.

2.0 SITE DESCRIPTION

The Site is a former fuel dispensing area used by the Orange Coast College Maintenance and Operations Department. The fuel dispensing area consisted of one fuel UST (one 1,000-gallon unleaded fuel tank), one dispenser, and associated product piping (Plate 3). According to CCCD, the tank was installed in 1990 with a primary wall constructed of steel and a secondary wall constructed of fiberglass. The UST was used from 1990 until July 1998, when it was taken out of service.

3.0 SCOPE OF WORK

The project scope of work consisted of the following activities:

- Removing interior fencing, surface concrete, and asphalt
- Performing air monitoring during all activities associated with substructure and grading excavations
- Removing the dispenser, product lines, and tank
- Collecting and analyzing soil samples as instructed by OCHCA Inspector Arghavan Rashidi-Fard
- Providing oversight of backfilling and compaction
- Preparing this report for submittal to CCCD and OCHCA

HLA's fieldwork and soil sampling activities were performed in accordance with our standard field procedures outlined in Appendix A. The work was also performed in accordance with the OCHCA-approved tank closure permit, which is included in Appendix B.

3.1 Underground Storage Tank Removal

On August 10, 1998, the product dispenser was removed. Approximately 250 gallons of clean fuel was removed from the UST before the process of removing the dispenser could start. The surface concrete and asphalt covering the tank and product lines were removed, and the tops of the tank and product lines were exposed. Organic vapor analyzer (OVA) readings were conducted per the South Coast Air Quality Management District's (SCAQMD) Rule 1166, "Volatile Organic Compound Emissions from Decontamination of Soil." OVA readings indicated 2 parts per million by volume (ppmv) of volatile organic compounds during tank and product line exposure. Results of air monitoring conducted during the removal of the UST, dispensers, piping, and soil are included in Appendix C.

On August 11, 1998, the tank was triple rinsed and rendered inert using dry ice until the interior atmosphere of the tank was below the lower explosive limit. The tank rinsate fluids were pumped from the tank and transported by Nieto and Sons Trucking, Inc., of Anaheim, California, to DeMenno Kerdoon of Compton, California, for recycling. The tank and product lines were removed under the direction of Fire Prevention Inspector Bill Halley of the Costa Mesa Fire Department (CMFD). During removal, the tank was observed by HLA to be in good condition with no evidence of cracks, holes, or spillage. The tank was transported by Nieto & Sons Trucking, Inc., to Adams Steel in Anaheim, California, where the tank was scrapped, crushed, and destroyed in a safe and legal manner according to standard practices. Copies of the rinsate manifests and certificate of tank destruction are included as Appendix D.

As instructed by OCHCA Inspector Rashidi-Fard, two confirmatory soil samples were collected. The first sample was collected at approximately 11 feet below ground surface (bgs), which was 2 feet below the tank invert. The second sample was collected approximately 1 foot below the former dispenser location. Soil samples were submitted to the laboratory for analyses of total petroleum hydrocarbons as gasoline (TPHg); benzene, toluene, ethylbenzene, and xylenes (BTEX); and methyl tertiary butyl ether (MTBE). All laboratory certificates of analysis are included in Appendix E.

As shown in Table 1 and on Plate 3, no petroleum hydrocarbons, BTEX, or MTBE was detected in soil sample HLA-01. However, soil sample HLA-02, collected below the former dispenser location at approximately 1 foot bgs, was found to contain MTBE at a concentration of 0.051 milligram per kilogram (mg/kg). To obtain a more accurate analysis of MTBE in sample HLA-02, an EPA 8260 (Mod.) analysis was performed. The MTBE concentration was found to be 0.21 mg/kg. As instructed by OCHCA Inspector Rashidi-Fard, a second, confirmatory soil sample was collected (S-1) at 2.5 to 3.0 feet below the former dispenser location. This sample did not contain detectable concentrations of petroleum hydrocarbons, BTEX, or MTBE.

3.2 Backfilling, Compaction, and Restoration Activities

Approximately 9 cubic yards of fill was imported from Livingston Graham for excavation backfilling. On August 14, 1998, the UST excavation was backfilled. Compaction was accomplished by using a backhoe with a vibratory plate. Geo Environ performed compaction testing under contract to Quest Environmental. The required minimum 90 percent relative compaction was achieved. The compaction report is included in Appendix F.

4.0 SUMMARY AND CONCLUSIONS

The results of the tank, product line, and dispenser removals and associated soil investigations are summarized as follows:

- The tank was removed and disposed of in accordance with the guidance provided by the OCHCA and CMFD.
- The only detectable chemical in the soil samples collected below the UST or dispenser was MTBE at a concentration of 0.21 mg/kg. According to the OCHCA, this MTBE does not warrant remediation.

Based on the information provided in this report, HLA recommends that the OCHCA close the UST and that no additional environmental work related to the former fuel tank and dispenser area be performed. The tanks and lines have been removed and disposed in accordance with all applicable regulations.

TABLES

Table 1. Soil Sampling Analytical Data
Orange Coast College
Costa Mesa, California

			Mod. EPA 8015	Mod. EPA 8020				
Sample Location	Sample ID	Depth (feet)	TPHg* mg/kg (ppm)	Benzene mg/kg (ppm)	Toluene mg/kg (ppm)	Ethyl-benzene mg/kg (ppm)	Total Xylenes mg/kg (ppm)	MTBE mg/kg (ppm)
UST Bottom	HLA-01	11	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Dispenser	HLA-02	1	N.D.	N.D.	N.D.	N.D.	N.D.	**0.051**
Reporting Limit			1.0	0.0050	0.0050	0.0050	0.015	0.035

Confirmatory Analysis of MTBE	
	Mod. EPA 8260 MTBE µg/kg (ppb)
Sample Result	**210**
Reporting Limit	5.0

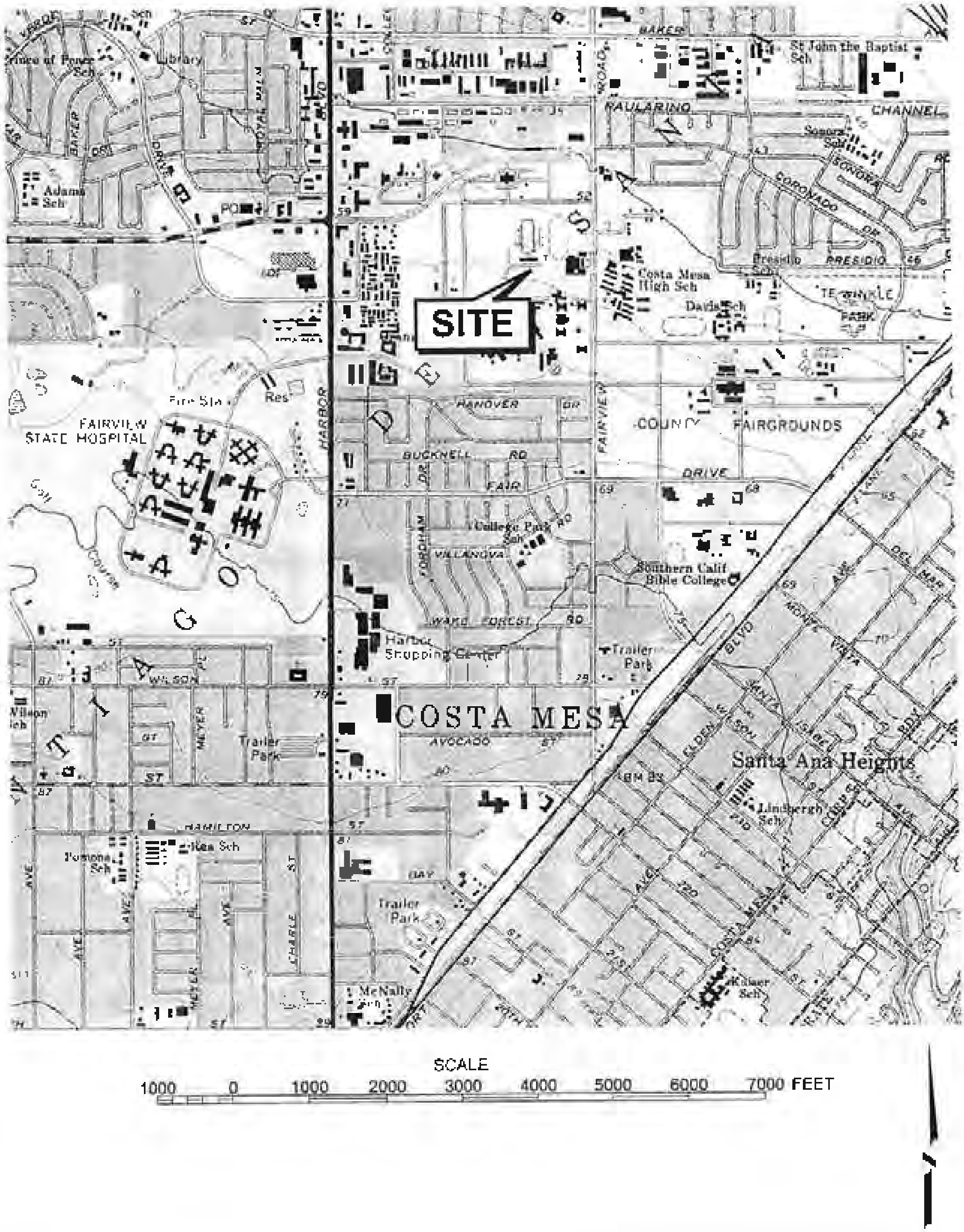
			Mod. EPA 8015	Mod. EPA 8260					
Sample Location	Sample ID	Depth (feet)	TPHg* mg/kg (ppm)	Benzene µg/kg (ppb)	Ethyl-benzene µg/kg (ppb)	Toluene µg/kg (ppb)	o-Xylene µg/kg (ppb)	m,p-Xylenes µg/kg (ppb)	MTBE µg/kg (ppb)
Dispenser	S-1	2.5-3.0	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Reporting Limit			1.0	2.0	2.0	2.0	2.0	2.0	5.0

* Listed as Volatile Fuel Hydrocarbons in Laboratory Certificates of Analyses
N.D. = not detected

mg/kg = milligrams per kilogram
µg/kg = micrograms per kilogram

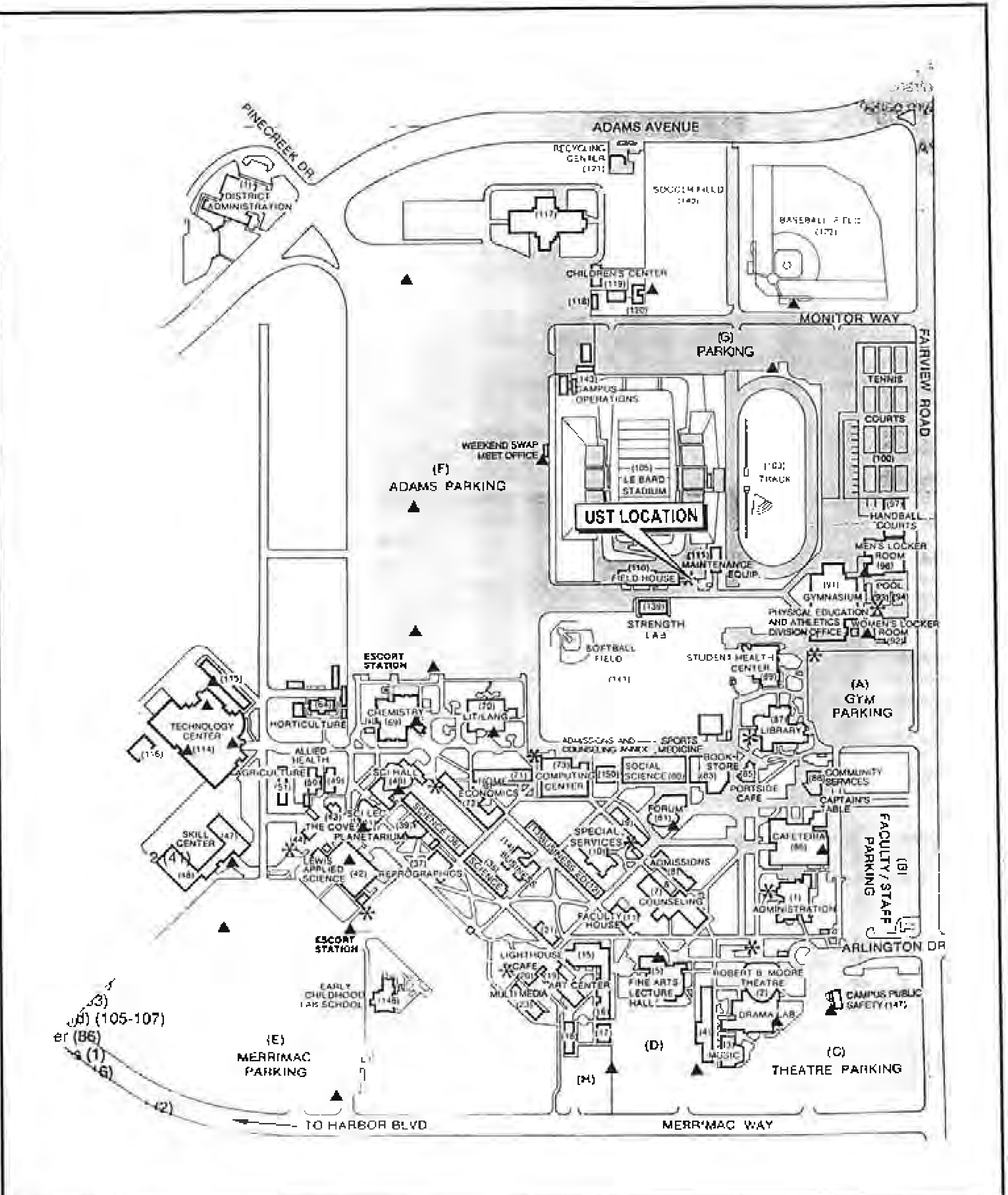
p:\occd\Analyses.xls

PLATES



REFERENCE: USGS 7.5-MINUTE QUADRANGLE, NEWPORT BEACH, CALIFORNIA (PHOTOREVISED 1981)

Harding Lawson Associates Engineering and Environmental Services		**SITE LOCATION MAP** Orange Coast College Coast Community College District Costa Mesa, California		PLATE 1
DRAWN JTL	PROJECT-TASK NUMBER 41334-6	APPROVED	DATE 10/98	REVISED DATE

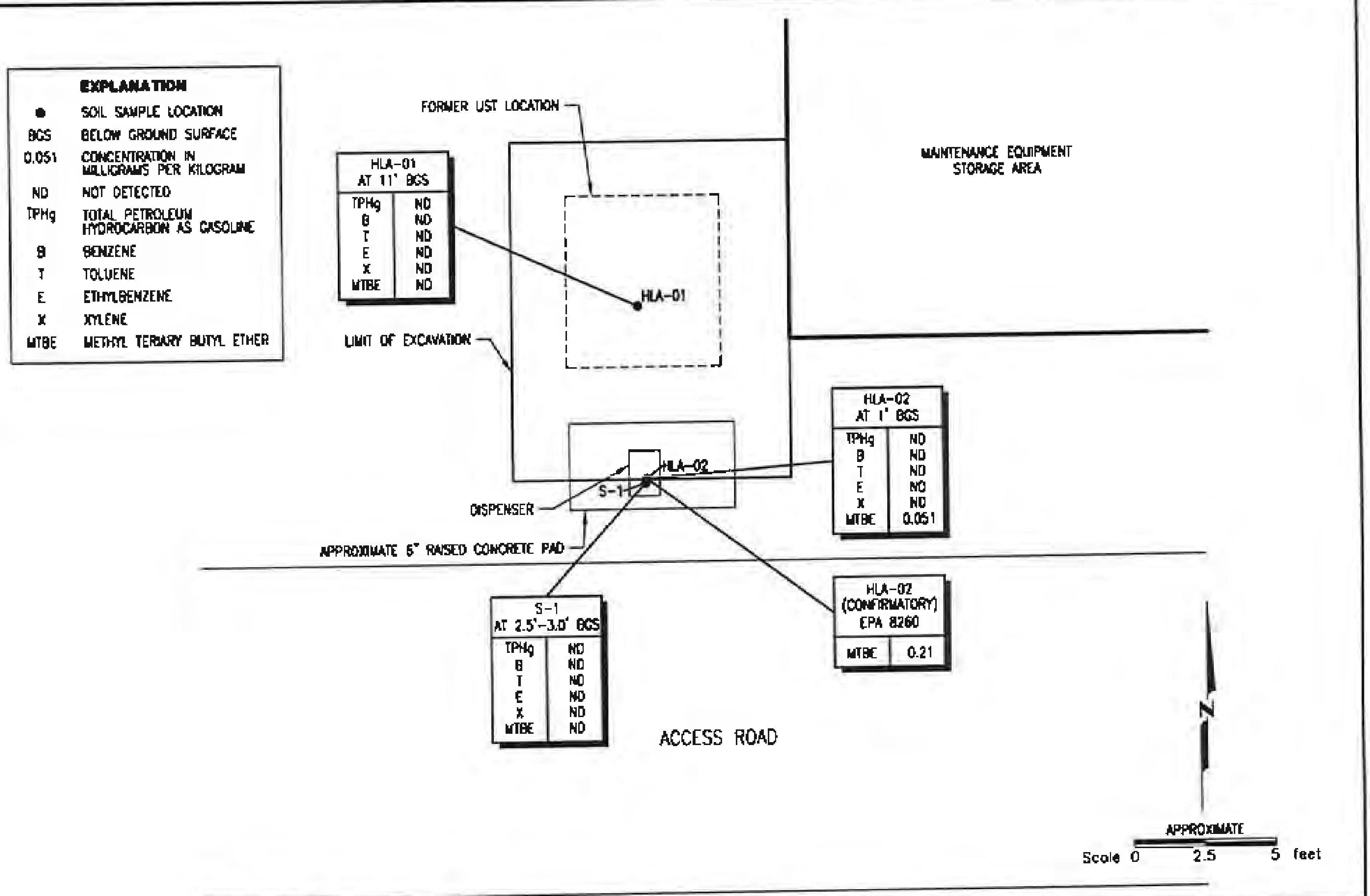


Harding Lawson Associates
Engineering and
Environmental Services

SITE MAP
Orange Coast College
Coast Community College District
Costa Mesa, California

PLATE
2

DRAWN	PROJECT/TASK NUMBER	APPROVED	DATE	REVISED DATE
JTL	41334-6		10/98	



HLA

Harding Lawson Associates
Engineering and
Environmental Services

UST AND FUEL DISPENSER AREA MAP
Orange Coast College
Coast Community College District
Costa Mesa, California

PLATE
3

DRAWN	PROJECT-TASK NUMBER	APPROVED	DATE	REVISED DATE
JTL	41334-6		10/98	

APPENDIX A

STANDARD FIELD PROCEDURES

SOIL SAMPLE TRACKING, STORAGE, AND HANDLING

1.0 PURPOSE

The purpose of this procedure is to describe the process for soil sample handling, inventory, and processing.

2.0 SCOPE

Numerous soil samples will be collected during soil borings and surface soil sampling. Some of these samples may be analyzed for their physical properties, some will be sent to a chemical laboratory for analysis, and some will be retained for possible future analysis. This procedure describes the handling and processing controls imposed on those samples that arrive at HLA offices for storage and/or analysis.

3.0 EQUIPMENT AND MATERIALS

The following equipment and materials will be utilized during soil sample handling, inventory and processing:

- Completed boring log,
- Permanent ink pen (i.e., Sharpie),
- Red pen, and
- Completed chain-of-custody (COC) form.

4.0 PROCEDURES

4.1 Sample Handling

1. After each sample is collected and screened, the COC form will be filled out for all samples. The sample identification number will be placed in the station described/notes columns. A different COC form will be filled out for each laboratory receiving samples.

2. Fill out sample tags and affix them to tubes or mason jars. Label core boxes as appropriate.

3. Place sample containers pending chemical analysis in cooler, on ice, until transported to the laboratory or HLA office. Samples for chemical analysis will be delivered to the laboratory within 48 hours of collection.

4. The field geologist/engineer responsible for sample collection will fax a photocopy of the COC form to the responsible geologist/engineer.

5. Tube soil samples and core will be location and depth indexed and will be stored for future reference until any soil remediation required is completed.

4.2 Receipt of Non-Analytical Samples and Boring Log Editing

1. Upon arrival at HLA, the non-analytical samples will be placed on the sample receiving table by the person delivering them, and that person will notify the responsible engineer/geologist of their arrival.

2. Samples will be placed in inventory and logged upon their arrival by the laboratory technician. Inventory may be delayed if it conflicts with boring log editing or if the sample will be immediately tested. If samples are not going to be immediately tested or there is a delay prior to boring log editing, samples will be placed into inventory upon their arrival.

4. The editor of the boring log will mark up/line out the log in red pen with corrections as necessary. Original boring log entries will not be erased. After edit completion, the boring log will be signed by the editor in the spaces provided.

5. Tube soil samples and core will be location and depth indexed and will be stored for future reference until any soil remediation required is completed.

4.3 Laboratory Testing

1. The responsible geologist/engineer will check the COC form to ensure that the correct tests have been requested.

2. The responsible geologist/engineer then will notify the field engineer/geologist, who in turn will notify the laboratory that samples are ready for pickup, and the laboratory will arrange for sample transportation. The engineer/geologist may alternately transfer the samples to the laboratory directly from the field.

3. The white copy of the COC form will be signed by the laboratory upon sample receipt. HLA will retain two copies of the COC form (pink copy returned with results).

SOIL SAMPLING USING HAND AUGER AND DRIVE-SAMPLING EQUIPMENT

1.0 PURPOSE

The purpose of this procedure is to describe the process for collecting soil samples using hand auger and drive-sampling equipment.

2.0 SCOPE

Hand augering and drive sampling will be performed to collect soil samples for laboratory analysis. The work will be performed by an HLA employee or by an HLA subcontractor under the direct supervision of a qualified geologist or engineer.

3.0 EQUIPMENT AND MATERIALS

- Hand auger, drive sampler, and extension rods
- Slide hammer
- Brass or stainless steel sample tubes, teflon seals, and end caps
- Sample labels
- Ziploc storage bags
- Cooler
- Ice
- Chain-of-custody forms

4.0 PROCEDURE

A hand auger will be used to complete a boring to the desired sampling depth. If refusal is encountered at any location, another attempt may be made to advance the sampler after stepping-over approximately 5 feet. If the hand auger continues to be refused, alternate soil sampling techniques will be used, such as the use of a backhoe and "potholing" in the area of the proposed sample location. At that point, a drive-sampler may be used to collect a sample near the teeth of the bucket.

After the boring is completed to the desired depth into the soil, a soil sample will be collected from the bottom of the boring. An attempt will be made to fill the sample tube completely with soil. The tube will then be removed from the sampler and sealed using teflon seals and end caps. Finally, the sample tube will be labeled, placed in a Ziploc bag, and stored in an ice chest for transport to the analytical laboratory.

All sample tubes, hand auger, and drive sampling equipment will be decontaminated before the collection of each sample.

APPENDIX B

TANK CLOSURE PERMIT

COUNTY OF ORANGE

HUGH F. STALLWORTH, M.D.
HEALTH OFFICER

ENVIRONMENTAL HEALTH DIVISION
ROBERT E. MERRYMAN, REHS, MPH
DEPUTY DIRECTOR

HEALTH CARE AGENCY
PUBLIC HEALTH SERVICES
ENVIRONMENTAL HEALTH DIVISION
2009 E. EDINGER AVENUE
SANTA ANA, CALIFORNIA 92705
(714) 667-3700

FACILITY MODIFICATION APPLICATION (INSTALLATION/REMOVAL/REPAIR)

(COMPLETE PAGES 1 & 2)

DATE: 7/31/98

FACILITY INFORMATION

NAME: ORANGE COAST COLLEGE

STREET ADDRESS: 2701 FAIRVIEW RD

CITY: COSTA MESA

TOTAL NUMBER OF TANKS (AFTER INSTALLATION/REMOVAL) AT THIS LOCATION: 1 SKILL CENTER

TYPE OF BUSINESS:

- ☐ GASOLINE STATION
- ☐ GOVERNMENT
- ☐ FARM
- ☒ OTHER

TANK OWNER

NAME (CORP., INDIVIDUAL, PUBLIC AGENCY): ORANGE COAST COMM COLLEGE DISTRICT

STREET ADDRESS: 1370 ADAMS AVE

CITY: COSTA MESA

STATE: CA ZIP 92626

TELEPHONE NO: 714-435-4754

BILLING ADDRESS INFORMATION

BILL TO NAME: COAST COMMUNITY COLLEGE DIST.

BILL TO ADDRESS: 1370 ADAMS AVE

CITY: COSTA MESA

STATE: CA ZIP 92626

TELEPHONE NO.: 714) 435-4673

TYPE OF CONSTRUCTION

INDICATE NO. OF TANK(S) BEING REMOVED/REPAIRED/INSTALLED BELOW: (COMPLETE PAGE 2 - INDICATING THE TANKS TO BE INSTALLED/REMOVED, OR AFFECTED BY THE REPAIR)

- ☐ INSTALLATION(S)
- ☐ REPAIR(S)/RELINE(S) TO USTs
- ☒ CLOSURE(S)/REMOVAL(S) 1
- ☐ SYSTEM MODIFICATION (E.G. REPIPE, REPAIR TO PIPING)
- ☐ OTHER (SPECIFY)

24 HOUR EMERGENCY CONTACT PERSON

DAYS: TERRY CRAIG (NAME) 714)432-5590 (TELEPHONE)

NIGHTS: ON-DUTY OFFICER UNIT #1 (NAME) 714)904-4630 (TELEPHONE)

APPLICANT

NAME: J GARY BLEVINS (PLEASE PRINT)

SIGNATURE: [signature]

COMPANY NAME: QUEST ENVIRONMENTAL

TELEPHONE NO: 714-671-7777

FACILITY OPERATOR (CONTACT PERSON)

NAME: CAMILLA FREJD-SMITH

BUSINESS TELEPHONE NO.: 714-435-4754

NOTES: NEW INSTALLATIONS, CLOSURES, REPAIRS AND SYSTEM MODIFICATIONS OF UNDERGROUND STORAGE TANKS REQUIRE THE SUBMITTAL OF (4) SETS OF PLANS TO THIS DIVISION. THESE PLANS MUST BE APPROVED PRIOR TO THE INITIATION OF ANY CONSTRUCTION OR MODIFICATION. ALL PLANS OR REPORTS REQUIRED MUST ACCOMPANY THIS FORM AT THE TIME OF SUBMITTAL.

PLAN APPROVAL AND FEES ARE VALID FOR ONE YEAR. IF TANKS HAVE NOT BEEN REMOVED, INSTALLED OR MODIFIED WITHIN ONE YEAR OF THE APPROVAL DATE, NEW PLANS AND FEES MUST BE SUBMITTED.

1502 151910 CK 0367

OFFICE USE ONLY

PLAN CHECK NO.: 98-799

FEES PAID: $187.-

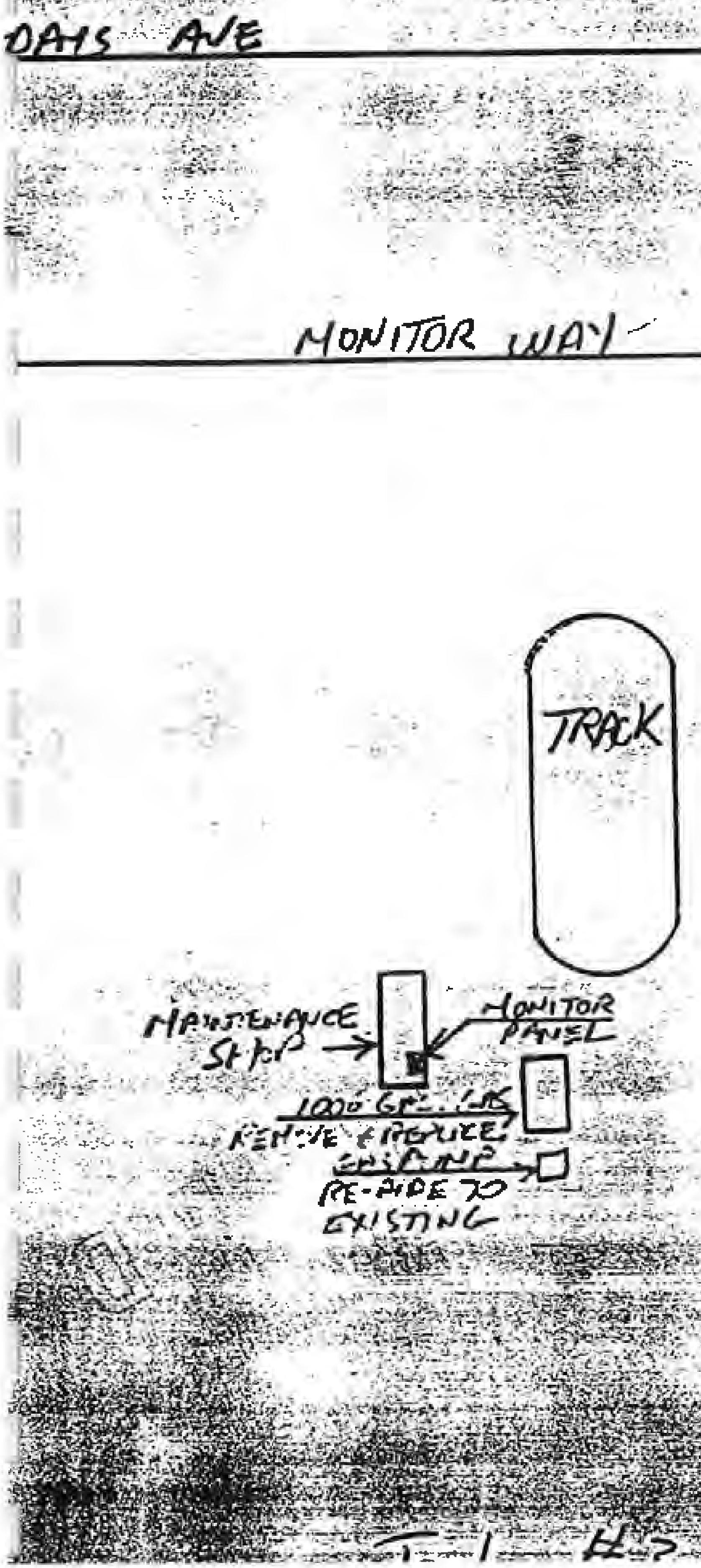
RCVD. BY: ML 7/31

PLAN APPROVAL DATE: 8/3/98

BY: NC

NUMBER OF TANKS TO RECEIVE A SURCHARGE BILL:

NUMBER OF TANKS TO BE ADDED TO BILLING:



APPROVED

ORANGE COUNTY HEALTH CARE AGENCY
ENVIRONMENTAL HEALTH DIVISION
HAZARDOUS MATERIALS MANAGEMENT SECTION
THIS APPROVAL IS VALID FOR 12 MONTHS FROM THE APPROVAL DATE

RC	8/3/98	98-299
Plan Reviewed By	Date	Plan #

This approval shall not be construed to permit the violation of any law, nor does it prevent further corrections of errors found on the plans. Plans must be resubmitted for approval if any additional changes are made by the applicant.

In addition to this approval, all applicable permits required by the local fire department, building department, and the Air Quality Management District must be obtained.

Underground tank installation, removal, and repair inspections are required and must be scheduled 48 hours in advance. Contact (714) 667-37[illegible] for an appointment.

A copy of these approved plans must be available at the site at all times.

All piping associated with underground storage tanks shall be removed and properly disposed of

FRANK ROAD

APPROVED

BY

COSTA MESA FIRE DEPT.
BUREAU OF FIRE PREVENTION
COSTA MESA, CALIF.

DATE 8-3-98

BY [illegible]

[illegible] Approval applies to [illegible] and [illegible] construction [illegible]

TANK I.D.			#1	#2	#3	#4
MATERIAL STORED	MATERIAL OR WASTE STORED	CURRENTLY	1205 GASOLINE	APPROVED		
		PROPOSED				
		PREVIOUSLY				
	FUEL TYPE, I.E., UNLEADED		UNLEADED			
CONTAINER	TYPE (TANK, SUMP, OTHERS)		TANK	AL	8/3/98	98-299
	DOUBLE WALL/SINGLE WALL		DOUBLE			
	UL NUMBER					
	YEAR INSTALLED		1990			
	VAULTED/NOT VAULTED		NOT VAULTED			
	PRIMARY	MANUFACTURER	TRUSCO - SUPERTANK			
		CAPACITY (GALLONS)	1000			
		CONSTRUCTION MATERIAL	STEEL			
		THICKNESS (UNITS)	3/16			
		INTERIOR LINING	N/A			
	SECONDARY	MANUFACTURER	TRUSCO - SUPERTANK			
		CAPACITY (GALLONS)	1000			
		CONSTRUCTION MATERIAL	COMPOSITE STEEL			
		THICKNESS (UNITS)				
	CORROSION PROTECTION					
	TYPE OF LEAK DETECTION FOR USTs (LIQUID, PROBE, ETC.)		LIQUID PROBE CONTINUOUS			
	MANUFACTURER OF LEAK DETECTOR		EMCO WHEATON			
PIPING	LOCATION (UNDER/ABOVE GROUND)		UNDER			
	SUCTION/PRESSURE GRAVITY/UNKNOWN		SUCTION			
	PRIMARY	CONSTRUCTION MATERIAL	FIBERGLASS			
		MANUFACTURER	A.O. SMITH			
	SECONDARY	CONSTRUCTION MATERIAL	FIBERGLASS			
		MANUFACTURER	A.O. SMITH			
	TYPE OF LEAK DETECTION FOR PIPING (PRESSURE LOSS DEVICE, ETC.)		LIQ PROBE CONTINUOUS			
	MANUFACTURER OF LEAK DETECTOR		EMCO WHEATON			
OVERFILL PROTECTION (TYPE)			BALL FLOAT VALVE			
SPILL CONTAINMENT (TYPE)			YES			

ORANGE COUNTY HEALTH CARE AGENCY
ENVIRONMENTAL HEALTH DIVISION
HEALTH SERVICE ORDER

151910

Date 7/31 Initials m

Client Name Orange Coast College

Address 2701 Fairview Rd

C. Mesa Ph#

Paid By Catch-Up Insulation

Address 155 Arovista Circle

Brea 92821 Ph#

Please circle the respective service code(s)

01	CEQ/HSF (Acct/Bat#)	$
02	CEQ Plan Check/Foods (PC#)	$
03	CEQ Plan Check/Pools (PC#)	$
04	Food Vehicles Cat Decal No(s)	$
05	CEQ/Court Restitution/Judgement Name Case#	$
06	Hotels/Motels (Acct/Bat#)	$
07	Massage Parlor (Acct/Bat#)	$
08	Noise	$
09	Liquid Waste Hauler	$
10	Farm Labor Camp Registration	$
11	Land Use	$
12	Hazardous Waste (Acct/Bat#)	$
13	Hazardous Waste Fines	$
14	Hazardous Waste Restitution/Judgement Name Case#	$
15	Hazardous Waste Clean-up	$
16	Infectious Waste (Acct/Bat#)	$
17	UST/HSF (Acct/Bat#)	$
18	UST Plan Check (PC# 98-299)	$ 187.
19	UST State Surcharge	$
20	UST Restitution/Judgement Name Case#	$
21	Wells (Const Recon Destr) Water Cath Init. Monit.) Add. Monit. #Wells Driller Consultant	$
22	Backflow/Cross Connection Client(s)	$
23	Small Water Systems	$
24	Copies of Records	$
25	Tax (Refer to Cost of Copies)	$
__	OTHER	$

PAID BY CHECK NO: 036719

F272-9 1539

PAID

APPENDIX C

AIR MONITORING RESULTS

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
RULE 1166 SOIL MONITORING RECORDS

SITE INFORMATION

OWNER: Coast Community College District

ADDRESS: 1370 Adams Avenue

CITY: Costa Mesa

ZIP CODE: 92626

DATE OF EXCAVATION: August 11, 1998

MONITORING INFORMATION

COMPANY: Harding Lawson Associates

NAME OF PERSON: Stephanie Chute

MONITOR MFG: Foxboro

MODEL NO: OVA 128-B

CALIBRATION GAS Hexane

TIME	VOC CONCENTRATION (ppmV)		COMMENTS
	EACH LOAD AS REMOVED	STOCKPILE SURFACE	No sampling of pea gravel required per Arghavan Rashidi-Fard because
10:40	2 ppm		
10:50		2 ppm	silty clay from bottom of tank

SIGNATURE: Stephanie Chute DATE: 8/11/98

South Coast
Air Quality Management District
21865 E. Copley Drive, Diamond Bar, CA 91765-4182
(909) 396-2000 · http://www.aqmd.gov

December 26, 1997

CO. ID 77722
Harding Lawson Associates
30 Corporate Park, Suite 400
Irvine, CA 92606

Attention Andrew Keller

VARIOUS LOCATIONS
RULE 1166 CONTAMINATED SOIL MITIGATION PLAN

Reference is made to your Application (A/N 334421) received on November 21, 1997, for the excavation and handling of VOC-contaminated soil at **various locations** within the South Coast Air Quality Management District.

This excavation and mitigation plan has been approved under the provisions of Rule 1166 of the Rules and Regulations of the SCAQMD and is subject to the following conditions.

PLAN CONDITIONS: PROPERTY OWNER'S INITIALS

1. AT LEAST 24 HOURS PRIOR TO COMMENCING EXCAVATION OF UNDERGROUND TANKS OR TRANSFER PIPING WHICH HAVE STORED OR TRANSFERRED VOLATILE ORGANIC COMPOUNDS (VOC), THE EXECUTIVE OFFICER OR DESIGNEE SHALL BE NOTIFIED BY TELEPHONE OF ALL INFORMATION ITEMS LISTED IN RULE 1166(c)(1)(B) AND THE NAME OF THE COMPANY PERFORMING THE EXCAVATION. THE NOTIFICATION SHALL BE MADE BY CALLING (909) 396-3886, DURING NORMAL BUSINESS HOURS. AT THE TIME OF THE NOTIFICATION, A REFERENCE NUMBER SHALL BE OBTAINED FROM THE SCAQMD AND RETAINED AS PROOF OF COMPLIANCE WITH THIS REQUIREMENT. [____]

   REFERENCE NO:______________ NOTIFICATION DATE:____________

2. THIS PLAN IS VALID ONLY FOR THE EXCAVATION AND HANDLING OF A MAXIMUM OF <u>2000 CUBIC YARDS</u> OF VOC-CONTAMINATED SOIL AT EACH SITE. EXCAVATION OF A GREATER AMOUNT REQUIRES SUBMITTAL OF A SITE SPECIFIC RULE 1166 EXCAVATION PLAN. [____]

3. THE EXCAVATION OPERATOR SHALL HAVE ON SITE AN ORGANIC VAPOR ANALYZER (OVA) USING FLAME IONIZATION OR PHOTO IONIZATION OR OTHER ANALYTICAL METHODS COMPLYING WITH 40 CFR PART 60 APPENDIX A, EPA METHOD 21 SECTION 3, "DETERMINATION OF VOLATILE ORGANIC COMPOUND LEAKS, MONITORING INSTRUMENT SPECIFICATIONS". [____]

4. THE OVA SHALL BE CAPABLE OF BEING CALIBRATED USING HEXANE AT A RANGE OF 0 PART PER MILLION BY VOLUME (PPMV) TO 50 PPMV AND AT A DETECTION RANGE OF AT LEAST 30 PPMV TO 1100 PPMV. THE OVA SHALL BE INITIALLY CALIBRATED USING HEXANE OR OTHER CALIBRATION GAS AS SPECIFIED BY THE MANUFACTURER. THE OVA SHALL BE CALIBRATED AT LEAST ONCE AT THE BEGINNING OF EACH WORKING DAY WITH THE PROCEDURES SPECIFIED BY THE MANUFACTURER. IF A CALIBRATION GAS OTHER THAN HEXANE IS USED, THE OBSERVED READINGS SHALL BE CONVERTED TO AND EXPRESSED AS HEXANE BASED ON CONVERSION FACTORS PROVIDED BY THE MANUFACTURER [ ]

5. DURING EXCAVATION, MONITORING SHALL BE CONDUCTED TO MEASURE VOCS AT A DISTANCE NO MORE THAN 3 INCHES ABOVE THE FRESHLY DUG SOIL BY USING AN ORGANIC VAPOR ANALYZER (OVA) DESCRIBED UNDER CONDITION 4. THIS MEASUREMENT SHALL BE MADE FOR EVERY LOAD OF SOIL AND SHALL BE TAKEN NO LONGER THAN THREE (3) MINUTES AFTER EACH LOAD OF SOIL IS EXCAVATED. [ ]

6. ALL MONITORING SPECIFIED IN CONDITION NO. 5 SHALL BE CONDUCTED BY TRAINED PERSONNEL WHO ARE PROFICIENT IN THE USE OF THE HYDROCARBON MONITOR SELECTED FOR USE AT THIS SITE. [ ]

7. WRITTEN RECORDS OF OVA MONITORING AND CALIBRATIONS REQUIRED ABOVE SHALL BE KEPT IN A FORMAT APPROVED BY THE SCAQMD THE APPROVED FORMAT IS INCLUDED WITH THIS PLAN. THE CERTIFICATION ON ALL RECORDS SHALL BE SIGNED AND DATED ON THE DAY THE MEASUREMENTS ARE OBSERVED. [ ]

8. THE EXCAVATION SHALL BE CONDUCTED IN 50 FT. X 50 FT. OR SMALLER SECTIONS TO MINIMIZE EXPOSURE OF SOIL POTENTIALLY CONTAMINATED WITH VOC TO THE ATMOSPHERE. [ ]

9. VOC CONTAMINATED SOIL IS A SOIL WHICH REGISTERS A CONCENTRATION OF 50 PPM OR GREATER OF VOLATILE ORGANIC COMPOUNDS, WHEN MEASURED AT A DISTANCE OF NO MORE THAN THREE INCHES FROM THE SURFACE OF THE EXCAVATED SOIL WITH AN ORGANIC VAPOR ANALYZER OR EQUIVALENT (CALIBRATED TO HEXANE). IF OTHER CALIBRATING GASES WERE USED, THEN THE MEASURED READINGS SHALL BE CORRELATED TO AND EXPRESSED AS HEXANE. [ ]

10. UPON DETECTION OF VOC CONTAMINATED SOIL (READINGS 50 PPM OR GREATER), THE EXECUTIVE OFFICER OR DESIGNEE SHALL BE NOTIFIED WITHIN 24 HOURS OF THE FIRST DETECTION OF VOC CONTAMINATION. THE NOTIFICATION SHALL BE MADE BY CALLING (909) 396-3886. AT THE TIME OF THE NOTIFICATION A REFERENCE NUMBER SHALL BE OBTAINED FROM THE SCAQMD AND RETAINED AS PROOF OF COMPLIANCE WITH THIS REQUIREMENT. [ ]

REFERENCE NO:______________ NOTIFICATION DATE:____________

11. ALL VOC-CONTAMINATED SOIL SHALL BE STOCKPILED SEPARATELY FROM NON-VOC-CONTAMINATED SOIL AND KEPT MOIST WITH WATER OR WITH A FUME SUPPRESSANT TO PREVENT EMISSIONS OF VOC OR PARTICULATES. [ ]

12. A STOCKPILE SHALL NOT CONTAIN MORE THAN 400 CUBIC YARDS OF SOIL. [____]

13. IF THE OVA MEASUREMENT IS BETWEEN 50 PPMV AND 1000 PPMV, THE WORKAREA AND LOAD OF SOIL SHALL BE SPRAYED WITH WATER AND/OR APPROVED VAPOR SUPPRESSANT. [____]

14. IF THE OVA MEASUREMENT EQUALS OR IS GREATER THAN 1000 PPMV, [____]
    A) THE WORKING AREA SHALL BE SPRAYED WITH WATER OR AN APPROVED VAPOR SUPPRESSANT, AND

    B) THE SOIL DUG UNDER THE ABOVE CONDITIONS SHALL BE STORED IN SCAQMD APPROVED CONTAINERS, AND

    C) IN LIEU OF CONTAINERS, OTHER MITIGATION MEASURES MAY BE SUBSTITUTED WITH PRIOR WRITTEN APPROVAL FROM THE SCAQMD.

15. ANY STOCKPILES OF VOC-CONTAMINATED SOIL EXPOSED FOR HANDLING SHALL BE COVERED DURING PERIODS OF INACTIVITY LONGER THAN ONE (1) HOUR. DURING THE PERIOD THE STOCKPILE IS UNCOVERED, THE EXPOSED SOIL SHALL BE KEPT MOIST WITH WATER. AT THE END OF EACH WORKING DAY, ALL STOCKPILES SHALL BE COVERED WITH A HEAVY DUTY CONTINUOUS CLEAR PLASTIC SHEETING (>=8MIL THICK), JOINED AT THE SEAMS, AND SECURELY ANCHORED TO PREVENT ANY EXPOSURE OF SOIL TO THE ATMOSPHERE. [____]

16. VOC-CONTAMINATED SOIL SHALL NOT BE SPREAD ON-SITE OR OFF-SITE. THIS INCLUDES ANY UNNECESSARY MOVEMENT OR AGITATION OF SOIL THAT MAY CAUSE THE UNCONTROLLED EVAPORATION OF VOCS INTO THE ATMOSPHERE. [____]

17. THE OWNER OR OPERATOR SHALL SUBMIT A WRITTEN RECORD WHICH INCLUDES: [____]

    A) METHOD TO TREAT THE VOC-CONTAMINATED SOIL, SCHEDULES TO HAUL THE SOIL AWAY, BACKFILL THE SOIL, OR OTHER MEANS OF DISPOSAL/TREATMENT.

    B) THE RECORD SHALL ALSO INDICATE THAT THE NECESSARY PERMITS HAVE BEEN OBTAINED OR ARE IN THE PROCESS OF BEING OBTAINED.

18. ALL VOC-CONTAMINATED SOIL SHALL BE BACKFILLED, REMOVED FROM THE SITE, OR TREATED USING ONSITE PROCESSES APPROVED BY THE SCAQMD WITHIN 40 DAYS OF IT'S EXCAVATION. WHERE ONSITE TREATMENT IS USED, SUCH PROCESSES SHALL BE IN PLACE ON THE SITE AND OPERATING PRIOR TO THE DATE SPECIFIED IN THIS CONDITION [____]

19. ALL VOC-CONTAMINATED SOIL REMOVED FROM THE SITE SHALL BE TRANSPORTED TO AN APPROVED TREATMENT/DISPOSAL FACILITY. IF THE RECEIVING FACILITY IS LOCATED WITHIN THE SCAQMD'S JURISDICTION, IT SHALL BE THE RESPONSIBILITY OF THE APPLICANT TO ENSURE THAT THE RECEIVING FACILITY HAS OBTAINED THE REQUIRED SCAQMD PERMITS AND/OR PLANS. [____]

20. RECORDS OF TREATMENT/DISPOSAL SHALL BE MAINTAINED FOR ALL VOC-CONTAMINATED SOIL REMOVED FROM THIS SITE. SUCH RECORDS SHALL BE CLEARLY LABELED "**SCAQMD RULE 1166 - VOC CONTAMINATED SOIL**" AND INCLUDE IDENTIFICATION AND LOCATION OF: THE GENERATOR, THE TRANSPORTER AND THE RECEIVING FACILITY. IN ADDITION, SUCH RECORDS SHALL BE SIGNED AND DATED BY EACH OF THE ABOVE PARTIES INDICATING RECEIPT OR RELINQUISHMENT OF THE VOC-CONTAMINATED SOIL AT THE TIME CUSTODY IS TRANSFERRED. [____]

21. RECORDS OF DISPOSAL OR TREATMENT OF VOC-CONTAMINATED SOIL SHALL BE MAINTAINED FOR A PERIOD OF TWO (2) YEARS AND MADE AVAILABLE TO SCAQMD PERSONNEL UPON REQUEST. [____]

22. WITHIN THIRTY (30) DAYS OF THE INITIAL EXCAVATION OF THE VOC CONTAMINATED SOIL AT EACH SITE, THE WRITTEN RECORDS UNDER CONDITIONS NO. 7 AND 17 SHALL BE SUBMITTED TO THE SCAQMD AT THE FOLLOWING ADDRESS. [____]

    SCAQMD
    STATIONARY SOURCE COMPLIANCE DIV.
    RULE 1166 COMPLIANCE SECTION
    21865 E. COPLEY DR.
    DIAMOND BAR, CA. 91765-4182

23. THIS PLAN IS NOT VALID FOR EXCAVATING VOC-CONTAMINATED SOILS AT LANDFILLS OR SITES USED FOR DISPOSAL OF REFUSE OR OTHER TYPES OF WASTE. [____]

24. THIS PLAN DOES NOT ALLOW THE TREATMENT OF VOC-CONTAMINATED SOIL BY CHEMICAL, BIOLOGICAL OR MECHANICAL PROCESSES. ANY OF THE ABOVE TREATMENT PROCESSES REQUIRES A SEPARATE PERMIT TO OPERATE FROM THE SCAQMD. [____]

25. A COPY OF THIS PLAN SHALL BE PRESENT AT EACH EXCAVATION SITE DURING ALL SOIL HANDLING AND STORAGE PROCESSES. [____]

26. THIS EXCAVATION PLAN IS VALID FOR TWO YEARS FROM ISSUANCE. [____]

27. THIS PLAN IS NOT VALID UNTIL THE VERIFICATION BELOW IS SIGNED. [____]

I ______________________________, AM THE OWNER OR DESIGNATED REPRESENTATIVE FOR THE OWNER OF THE PROPERTY LOCATED AT ____ (SITE OF THE EXCAVATION). I VERIFY THAT I HAVE READ, UNDERSTOOD, AND HAVE INITIALED EACH CONDITION OF THIS PLAN. IN DOING SO, I ACKNOWLEDGE THAT THE OWNER ALSO ASSUMES RESPONSIBILITY FOR THE REQUIREMENTS SET FORTH IN THIS PLAN.

______________________________	______________________________
AUTHORIZED SIGNATURE	TITLE
______________________________	( ) ______________________
DATE	PHONE

Other governmental agencies may require approval before any excavation begins. It shall be the responsibility of the applicant to obtain that approval. The South Coast Air Quality Management District shall not be responsible or liable for any losses because of measures required or taken pursuant to the requirements of this approved 1166 Contaminated Soil Mitigation Plan.

If you have any questions concerning this plan, please call Stephen O. Ngwu at (909) 396 2355.

Very truly yours,

Tran D. Vo, P.E.
Senior Air Quality Engineer

VARIOUS

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

RULE 1166 SOIL MONITORING RECORDS

PLAN HOLDER	SITE INFORMATION/SOIL ORIGIN
Harding Lawson Associates	Facility Name:________
30 Corporate Park, Suite 400	Address:________
Irvine, CA 92606	City:________
SCAQMD Reference No.:________	Contact:________

MONITORING INFORMATION

Mfg. Model No:________	Conversion to Hexane:________
Calibration Gas:________	Monitoring Conducted By:________
Calibration Date:________	Phone No.:________
Calibrated By:________	Total Soil Excavated:________ (Cub. Yds.,Tons)

TIME	VOC CONC. (PPMV) @ STOCKPILE/LOAD		COMMENTS	TIME	VOC. CONC. (PPMV) @ STOCKPILE/LOAD		COMMENTS
	READING	AS HEXANE			READING	AS HEXANE	

I certify that I possess the appropriate knowledge and training necessary to operate the above listed hydrocarbon monitor in the manner specified by the conditions of this plan. I further certify that the above readings are my measurements and are accurate representations of VOC contamination encountered during soil excavation.

SIGNATURE:________________ DATE:________

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

RULE 1166 SOIL MONITORING RECORDS

PLAN HOLDER	SITE INFORMATION/SOIL ORIGIN
Harding Lawson Associates	Facility Name:
30 Corporate Park, Suite 400	Address:
Irvine, CA 92606	City:
SCAQMD Reference No.:	Contact:

MONITORING INFORMATION

Mfg. Model No:	Conversion to Hexane:
Calibration Gas:	Monitoring Conducted By:
Calibration Date:	Phone No.:
Calibrated By:	Total Soil Excavated: (Cub. Yds..Tons)

TIME	VOC CONC. (PPMV) @ STOCKPILE/LOAD		COMMENTS	TIME	VOC. CONC. (PPMV) @ STOCKPILE/LOAD		COMMENTS
	READING	AS HEXANE			READING	AS HEXANE	

I certify that I possess the appropriate knowledge and training necessary to operate the above listed hydrocarbon monitor in the manner specified by the conditions of this plan. I further certify that the above readings are my measurements and are accurate representations of VOC contamination encountered during soil excavation.

SIGNATURE: DATE:

South Coast
AIR QUALITY MANAGEMENT DISTRICT
21865 E. Copley Drive, Diamond Bar, CA 91765-4182 (909) 396-2000

May 6, 1993

QUEST ENVIRONMENTAL A DIVISION OF:
Latch-on Insulation Inc
195 Arovista Circle
Brea, CA 92621

Attention: Tom Marshall

(714) 671-7777
APPLICATION NO. 280792
COMPANY ID 52749

RULE 1166 CONTAMINATED SOIL MITIGATION PLAN

Reference is made to your Application (A/N 280792) received on April 29, 1993, for the excavation and handling of VOC-contaminated soil at various locations within the South Coast Air Quality Management District.

Your excavation and mitigation plan has been approved under the provisions of Rule 1166 of the Rules and Regulations of the SCAQMD and is subject to the following conditions.

PLAN CONDITIONS: PROPERTY OWNER'S INITIALS

1. AT LEAST 24 HOURS PRIOR TO COMMENCING EXCAVATION OF UNDERGROUND TANKS WHICH HAVE STORED VOLATILE ORGANIC COMPOUNDS (VOC), THE EXECUTIVE OFFICER SHALL BE NOTIFIED OF ALL INFORMATION ITEMS LISTED IN RULE 1166(c)(1)(A) AND THE NAME OF THE COMPANY PERFORMING THE EXCAVATION. [_____]

   IF VOC-CONTAMINATED SOIL IS DETECTED, THE EXECUTIVE OFFICER SHALL BE NOTIFIED AGAIN WITHIN 24 HOURS. BOTH NOTIFICATIONS SHALL BE MADE BY CALLING (909) 396-3886, MONDAY THROUGH FRIDAY, BETWEEN 8 A.M. AND 5 P.M.

2. THIS PLAN IS VALID ONLY FOR THE EXCAVATION AND HANDLING OF A MAXIMUM OF 2000 CUBIC YARDS OF VOC-CONTAMINATED SOIL AT EACH SITE. EXCAVATION OF A GREATER AMOUNT REQUIRES SUBMITTAL OF A SITE SPECIFIC RULE 1166 EXCAVATION PLAN. [_____]

3. ALL VOC-CONTAMINATED SOIL SHALL BE DISPOSED, BACKFILLED, OR REMOVED FROM THE SITE WITHIN 40 DAYS AFTER IT HAS BEEN EXCAVATED FROM THE AFFECTED AREAS. [______]

RECORDS OF DISPOSAL OR TREATMENT OF VOC-CONTAMINATED SOIL SHALL BE MAINTAINED FOR A PERIOD OF TWO (2) YEARS AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.

4. THE OWNER OR OPERATOR SHALL PREPARE A WRITTEN PLAN WHICH INCLUDES METHODS TO TREAT THE VOC-CONTAMINATED SOIL, SCHEDULES TO HAUL THE SOIL AWAY, BACKFILL THE SOIL, OR OTHER MEANS OF DISPOSAL. THE PLAN SHALL ALSO INDICATE THAT THE NECESSARY PERMITS HAVE BEEN OBTAINED OR ARE IN THE PROCESS OF BEING OBTAINED. SUCH A PLAN SHALL BE PREPARED NO LATER THAN 5 DAYS AFTER THE COMPLETION OF THE EXCAVATION, AND SHALL BE MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST. [______]

5. THE EXCAVATION SHALL BE CONDUCTED IN 50 FT. X 50 FT. OR SMALLER SECTIONS TO MINIMIZE EXPOSURE OF SOIL POTENTIALLY CONTAMINATED WITH VOC TO THE ATMOSPHERE. [______]

6. THE EXCAVATION OPERATOR SHALL HAVE ON SITE AN ORGANIC VAPOR ANALYZER (OVA) USING FLAME IONIZATION OR PHOTO IONIZATION OR OTHER ANALYTICAL METHODS COMPLYING WITH 40 CFR PART 60 APPENDIX A, EPA METHOD 21 SECTION 3.1.1.a., "DETERMINATION OF VOLATILE ORGANIC COMPOUND LEAKS, MONITORING INSTRUMENT SPECIFICATIONS". [______]

7. THE OVA SHALL BE CAPABLE OF BEING CALIBRATED USING HEXANE AT A RANGE OF 0 PARTS PER MILLION BY VOLUME (PPMV) TO 50 PPMV AND AT A DETECTION RANGE OF AT LEAST 50 PPMV TO 1100 PPMV. THE OVA SHALL BE INITIALLY CALIBRATED USING HEXANE BY THE MANUFACTURER AND CALIBRATED AT LEAST ONCE AT THE BEGINNING OF EACH WORKING DAY WITH THE PROCEDURES SPECIFIED BY THE MANUFACTURER. [______]

8. DURING EXCAVATION, MONITORING SHALL BE CONDUCTED TO MEASURE VOC'S AT A DISTANCE NO MORE THAN 3 INCHES ABOVE THE FRESHLY DUG SOIL BY USING AN ORGANIC VAPOR ANALYZER (OVA) DESCRIBED UNDER CONDITION 7. THIS MEASUREMENT SHALL BE MADE FOR EVERY LOAD OF SOIL AND SHALL BE TAKEN NO LONGER THAN THREE (3) MINUTES AFTER EACH LOAD OF SOIL IS EXCAVATED. [______]

9. WRITTEN RECORDS OF OVA MONITORING AND CALIBRATIONS REQUIRED ABOVE SHALL BE KEPT IN A FORMAT APPROVED BY THE DISTRICT. A TYPICAL FORMAT IS ATTACHED WITH THIS PLAN. [______]

10. VOC-CONTAMINATED SOIL IS A SOIL WHICH REGISTERS 50 PPMV OR MORE WHEN MEASURED WITH AN ORGANIC VAPOR ANALYZER (CALIBRATED USING HEXANE) AT A DISTANCE OF NO MORE THAN THREE INCHES ABOVE EXCAVATED AND EXPOSED SOIL. [______]

11. IF THE OVA MEASUREMENT IS BETWEEN 50 PPMV AND 1000 PPMV, [______]

A) THE WORKING AREA SHALL BE IMMEDIATELY SPRAYED WITH WATER, OR COVERED WITH CLEAN SOIL OR TREATED WITH A DISTRICT APPROVED SUPPRESSANT, AND

B) EACH VOC-CONTAMINATED LOAD OF SOIL SHALL BE SPRAYED WITH WATER OR TREATED WITH A DISTRICT APPROVED VAPOR SUPPRESSANT AND BE STOCKPILED SEPARATELY.

12. IF THE OVA MEASUREMENT EQUALS OR IS GREATER THAN 1000 PPMV, [______]

A) THE WORKING AREA SHALL BE SPRAYED WITH WATER OR DISTRICT APPROVED VAPOR SUPPRESSANTS OR COVERED WITH AT LEAST 4 INCHES OF CLEAN SOIL, AND

B) THE SOIL DUG UNDER THE ABOVE CONDITIONS SHALL BE STORED IN DISTRICT APPROVED CONTAINERS, AND

C) IN LIEU OF CONTAINERS, OTHER MITIGATION MEASURES MAY BE SUBSTITUTED WITH PRIOR WRITTEN APPROVAL OF THE EXECUTIVE OFFICER, IF THE OWNER OR OPERATOR CAN DEMONSTRATE THAT AN ALTERNATIVE MEASURE IS EQUALLY OR MORE EFFECTIVE IN REDUCING VOC EMISSIONS. PRIOR TO THE EXECUTIVE OFFICER'S APPROVAL, THE OWNER OR OPERATOR SHALL SUBMIT A COMPREHENSIVE WRITTEN STUDY WHICH COMPARES QUANTITATIVELY THE ESTIMATED VOC EMISSIONS DIFFERENCE BETWEEN THE ALTERNATIVE MITIGATION MEASURES.

13. ALL VOC-CONTAMINATED SOIL SHALL BE STOCKPILED SEPARATELY FROM NON VOC-CONTAMINATED SOIL AND KEPT MOIST, COVERED OR SPRAYED WITH WATER OR WITH A FUME SUPPRESSANT TO PREVENT EMISSIONS OF PARTICULATES OR VOC. [______]

14. AT THE END OF EACH WORKING DAY, ALL STOCKPILES SHALL BE COVERED WITH A HEAVY DUTY CONTINUOUS PLASTIC SHEET(S), JOINED AT THE SEAMS, AND SECURELY ANCHORED TO PREVENT ANY EXPOSURE OF SOIL TO THE ATMOSPHERE. [______]

15. A STOCKPILE SHALL NOT CONTAIN MORE THAN 450 CUBIC YARDS OF SOIL. [______]

16. WITHIN 5 DAYS AFTER THE EXCAVATION IS COMPLETED AT EACH SITE, THE WRITTEN RECORDS UNDER CONDITIONS 4 AND 9 SHALL BE SUBMITTED TO THE DISTRICT AT THE FOLLOWING ADDRESS. [______]

SCAQMD
STATIONARY SOURCE & COMPLIANCE DIV.
SERVICE STATION TEAM
21865 E. COPLEY DR.
DIAMOND BAR, CA. 91765-4182

17. VOC-CONTAMINATED SOIL SHALL NOT BE SPREAD ON-SITE OR OFF-SITE TO CAUSE THE EVAPORATION OF UNCONTROLLED VOC TO THE ATMOSPHERE. [______]

18. THIS PLAN IS NOT VALID FOR EXCAVATING VOC-CONTAMINATED SOILS AT LANDFILLS OR SITES USED FOR DISPOSAL OF REFUSE OR OTHER TYPES OF WASTE. [______]

19. THIS PLAN DOES NOT ALLOW ANY TREATMENT OF VOC-CONTAMINATED SOIL. [______]

20. A COPY OF THIS PLAN SHALL BE PRESENT AT EACH EXCAVATION SITE DURING ALL SOIL HANDLING AND STORAGE PROCESSES. [______]

21. THIS PLAN IS NOT VALID UNTIL THE VERIFICATION BELOW IS SIGNED. [______]

I ______________________, AM THE OWNER OF THE PROPERTY LOCATED AT ______________________________ (SITE OF THE EXCAVATION). I VERIFY THAT I HAVE READ, UNDERSTOOD, AND INITIALED EACH CONDITION OF THIS PLAN.

______________________ ______________________
SIGNED DATE

Other governmental agencies may require approval before any excavation begins. It shall be the responsibility of the applicant to obtain that approval. The South Coast Air Quality Management District shall not be responsible or liable for any losses because of measures required or taken pursuant to the requirements of this approved 1166 Contaminated Soil Mitigation Plan.

If you have any questions concerning this plan, please call Mr. Arthur Lawler at (909) 396-2533.

Very truly yours,

Brian L. Yeh
A.Q.A.C, Supervisor

AL R1166DSK

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
RULE 1166 SOIL MONITORING RECORDS

SITE INFORMATION

OWNER: ______________________

ADDRESS: ______________________

CITY: ______________________

ZIP CODE: ______________________

DATE OF EXCAVATION: ______________________

MONITORING INFORMATION

COMPANY: ______________________

NAME OF PERSON: ______________________

MONITOR MFG: ______________________

MODEL NO: ______________________

CALIBRATION GAS ______________________

TIME	VOC CONCENTRATION (ppmV)		COMMENTS
	EACH LOAD AS REMOVED	STOCKPILE SURFACE	

SIGNATURE: ______________________ DATE: ______________________

APPENDIX D

RINSATE MANIFESTS AND CERTIFICATE OF TANK DESTRUCTION

State of California—Environmental Protection Agency
Form Approved OMB No. 2050-0039 (Expires 9-30-99)
Please print or type. Form designed for use on elite (12 pitch) typewriter

See Instructions on back of page 6.

Qest

Department of Toxic Substances Control
Sacramento, California

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA, CALL 1-800-852-7550

97439850

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No: [illegible] Manifest Document No: 00001

2. Page 1 of 1

Information in the shaded areas is not required by Federal law

A. State Manifest Document Number: 97439850

B. State Generator's ID

3. Generator's Name and Mailing Address:
Coast Community College District CCC
1370 Adams Avenue ... M, CA 92626

4. Generator's Phone: 714 438-4728

C. State Transporter's ID: XXXXXXXXXXXXXXXXX

D. Transporter's Phone: (714) 990-6855

5. Transporter 1 Company Name: Nieto and Sons Trucking, Inc.

6. US EPA ID Number: CAT080016216

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address:
DeMenno Kerdoon
2000 N. Alameda Street
Compton, CA 90222

10. US EPA ID Number: CAT080013352

G. State Facility's ID: CAT080013352

H. Facility's Phone: (310) 537-7100

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste Number
a. NON RCRA HAZARDOUS WASTE LIQUID	001	TT	4250	G	State 221; EPA/Other Exempt
b.					State; EPA/Other
c.					State; EPA/Other
d.					State; EPA/Other

J. Additional Descriptions for Materials Listed Above: Job Site: [illegible] Rd, Costa Mesa, CA 92626

K. Handling Codes for Wastes Listed Above: a. 01 b. c. d.

15. Special Handling Instructions and Additional Information
NO SMOKING
Alternate Disposal Site : Crosby & Overton
24 Hour Emergency Phone Number : 714-990-6855
1630 W. 17th Street (310) 432-5445
Wear Appropriate Protective Clothing
Long Beach, CA 90813 CAD028409019

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
CAMILLA FREID-SMITH	Camilla Freid Smith	08	1	98

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
GILBERT GALLA	[illegible]	08	1	98

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
SCHEHAL P. SVAN	[illegible]	08	11	98

DO NOT WRITE BELOW THIS LINE.

DTSC 8022A (4/97)
EPA 8700—22

Green TRANSPORTER RETAINS

NIETO & SONS TRUCKING, INC.

License # 673912
1281 Brea Canyon Road • Brea, CA 92821
Mail Address: P.O. Box 760 • Yorba Linda, CA 92885-0760
(714) 990-6855 • Fax (714) 990-4862

(1)

DAILY TICKET
DT 91688

JOB DATE 8/ 11 /98

Su M Tu W Th F Sa

CUSTOMER: Quest	ORDER DATE: 8-3-98 / ORDER TIME: / P.O. NUMBER:
ORDERED BY: Gary / TELEPHONE:	JOB SITE - NAME - ADDRESS WITH CROSS STREETS: Orange Coast College, 1371 Adams, Costa Mesa. See map provided by Quest
ADDRESS:	
Gil Bocio 209	

DRIVER	TRUCK NO.	TRAILER	HELPER #1	HELPER #2	TRUCK NO.	START TIME
[illegible]	[illegible]	—	Fidel Arzick	—	187	5AM

ON SITE AT: 9 AM   PREVAILING WAGE

TANKS: #1 1 K Contents GAS FG Steel 8' or 9'6" | #2 ___ K ___ FG Steel 8' or 9'6" | #3 ___ K ___ FG Steel 8' or 9'6"
#4 ___ K ___ FG Steel 8' or 9'6" | #5 ___ K ___ FG Steel 8' or 9'6" | #3 ___ K ___ FG Steel 8' or 9'6"

Any excess fluid in tank(s): YES NO If yes, what and how much? ___

Windows required: YES NO If yes, A/C & rivet bust by NIETO CLIENT   Water on site YES NO

Chemist required: YES NO If yes, chemist by NIETO CLIENT ___ On site at ___ Date on site ___ YES NO V/M

Double Degas: YES NO   Day #1 On site time ___ Date ___ AQMD# ___   Day #2 Date ___ Time ___

Single degassing required: YES NO   On site time: 9:00 Am   Date: ___ AQMD # ___

Tank(s) lifted by: CLIENT'S backhoe   NIETO 12-1/2 ton stinger crane   NIETO 14 ton stinger crane   Hydro crane

Hydro crane by: NIETO CLIENT   Hydro crane company: ___ Crane scheduled: YES NO

Tank pull time: 10:00 Am   Crane arrival time: ___ Tank pull date: ___

Tanks hauled by: NIETO CLIENT To: Adams   Trk # ___ of ___ On site time ___ FLATBED   DROP DECK & PERMIT   SIGNS

Dry ice required: YES NO   Provided by: NIETO CLIENT • If Nieto by: WASH CREW   TRACTOR TRAILER

Type of dry ice: Sliced 15 lbs.   Pellets ___ lbs.   Block ___ lbs.   Amount ___ at ___ lbs/1k

Special LEL/O2 meter req'd. YES NO   Air compressor venturi req'd. YES NO   Needed next day for tank pull YES NO

ON SITE REPORT

YARD DEPART	JOB ARRIVE	START WORK	STOP WORK	JOB DEPART	YARD ARRIVE	DELAYS ON SITE	TOTAL HOURS
7 Am	8:45	8:45 Am					

Tanks on site: #1 1 K GAS FG Steel 8' or 9'6" | #2 ___ K ___ FG Steel 8' or 9'6" | #3 ___ K ___ FG Steel 8' or 9'6"
#4 ___ K ___ FG Steel 8' or 9'6" | #5 ___ K ___ FG Steel 8' or 9'6" | #6 ___ K ___ FG Steel 8' or 9'6"

Manifest No. 97435850   Gallons: 50   Excess fluid on site: YES NO   How much? ___

Total Solids: ☐ Less than 1/2 drum   ☐ 1/2 Drum ___   ☐ 1 Drum ___ Drums

NOTES:

DRIVER SIGNATURE	TRUCK NO.	CUSTOMER SIGNATURE	DATE
[illegible signature]	209	X [signature]	8/11/98

Quest

CERTIFICATE OF
DESTRUCTION

COMPANY NAME Orange Coast College

ADDRESS 2701 Fairview
Costa Mesa

ADAMS STEEL CERTIFIES THAT 1) 1K tank

HAS/HAVE BEEN SCRAPPED, CRUSHED AND TOTALLY DESTROYED ON: 8/12/98

SIGNATURE Cheryl Hartman

TITLE Weighmaster

DATE 8/12/98

Adams Steel
3200 E. Frontera Street
Anaheim, California 92806
(714) 630-6523
FAX (714) 630-5836

APPENDIX E

LABORATORY CERTIFICATES OF ANALYSES

Del Mar Analytical

2852 Alton Ave., Irvine, CA 92606 (714) 261-1022 FAX (714) 261-1228
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

Harding Lawson Associates 30 Corporate Park, Suite 400 Irvine, CA 92606 Attention: Marielle Coquia	Client Project ID: 41334.4 Coast Community College Analysis Method: EPA 5030/CA DHS Mod. 8015/8020 First Sample #: HH00969	Sampled: Aug 11, 1998 Received: Aug 11, 1998 Extracted: Aug 12, 1998 Analyzed: Aug 12, 1998 Reported: Aug 12, 1998

VOLATILE FUEL HYDROCARBONS/BTEX DISTINCTION (CA DHS Mod. EPA 8015/8020)

Laboratory Number QC Batch	Sample Description Soil	Volatile Fuel Hydrocarbons mg/Kg (ppm)	Benzene mg/Kg (ppm)	Toluene mg/Kg (ppm)	Ethyl Benzene mg/Kg (ppm)	Total Xylenes mg/Kg (ppm)
HH00969	**HLA-01**	**N.D.**	**N.D.**	**N.D.**	**N.D.**	**N.D.**
Dilution: **1**	Reporting Limit:	1.0	0.0050	0.0050	0.0050	0.015
HH00970	**HLA-02**	**N.D.**	**N.D.**	**N.D.**	**N.D.**	**N.D.**
Dilution: 1	Reporting Limit:	1.0	0.0050	0.0050	0.0050	0.015

Volatile Fuel Hydrocarbons are quantitated against a gasoline standard. Hydrocarbons detected by this method range from C6 to C12. Analytes reported as N.D. were not present at or above the reporting limit. Dilution factors are due to matrix effects and other factors

DEL MAR ANALYTICAL (ELAP #1169)

Rick DiMaio
Project Manager

2852 Alton Ave. Irvine, CA 92606 [illegible]
[illegible]
[illegible]
[illegible]

Del Mar Analytical

Harding Lawson Associates	Client Project ID: 41334.4	Sampled:	Aug 11, 1998
30 Corporate Park, Suite 400	Coast Community College	Received:	Aug 11, 1998
Irvine, CA 92606	Analysis Method: EPA 5030/8020 Modified	Extracted:	Aug 12, 1998
Attention: Marielle Coquia	First Sample #: HH00969	Analyzed:	Aug 12, 1998
		Reported:	Aug 12, 1998

MTBE (EPA 8020 Mod.)

Laboratory Number QC Batch	**Sample Description** Soil	**Sample Result** mg/Kg (ppm)	**Reporting Limit** mg/Kg (ppm)	**Dilution Factor**
HH00969	HLA-01	N.D.	0.035	1.0
HH00970	HLA-02	0.051	0.035	1.0

MTBE = Methyl tert-Butyl Ether

Analytes reported as N.D. were not present at or above the reporting limit. Dilution factors are due to matrix effects and other factors.

DEL MAR ANALYTICAL (ELAP #1169)

Rick DiMaio
Project Manager

Del Mar Analytical

2852 Alton Ave., Irvine, CA 92606 (714) 261-1022 FAX (714) 261-1228
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

Harding Lawson Associates
30 Corporate Park, Suite 400
Irvine, CA 92606
Attention: Marielle Coquia

Method Blank

Extracted: Aug 12, 1998
Analyzed: Aug 12, 1998
Reported: Aug 12, 1998

VOLATILE FUEL HYDROCARBONS/BTEX DISTINCTION (CA DHS Mod. EPA 8015/8020)

QC Batch	Sample Description	Volatile Fuel Hydrocarbons mg/Kg (ppm)	Benzene mg/Kg (ppm)	Toluene mg/Kg (ppm)	Ethyl Benzene mg/Kg (ppm)	Total Xylenes mg/Kg (ppm)
	Method Blank	**N.D.**	**N.D.**	**N.D.**	**N.D.**	**N.D.**
Dilution: 1	Reporting Limit	1.0	0.0050	0.0050	0.0050	0.015

Volatile Fuel Hydrocarbons are quantitated against a gasoline standard. Hydrocarbons detected by this method range from C6 to C12.
Analytes reported as N.D. were not present at or above the reporting limit. Dilution factors are due to matrix effects and/or other factors.

DEL MAR ANALYTICAL (ELAP #1169)

Rick DiMaio
Project Manager

Del Mar Analytical

2852 Alton Ave., Irvine, CA 92606 (714) 261-1022 FAX (714) 261-1228
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
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2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

Harding Lawson Associates
30 Corporate Park, Suite 400
Irvine, CA 92606
Attention: Marielle Coquia

Method Blank

Extracted: Aug 12, 1998
Analyzed: Aug 12, 1998
Reported: Aug 12, 1998

MTBE (EPA 8020 Mod.)

QC Batch	Sample Description	Sample Result mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)	Dilution Factor

MTBE = Methyl tert-Butyl Ether

Analytes reported as N.D. were not present at or above the reporting limit. Dilution factors are due to matrix effects and other factors.

DEL MAR ANALYTICAL (ELAP #1169)

Rick DiMaio
Project Manager

Del Mar Analytical

2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228
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9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (619) 505-9596 FAX (619) 505-9689
2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

MS/MSD DATA REPORT

EPA METHOD: **8015/8020**
Matrix: Soil

Date: 8/12/98

Sample #: C8080457

Batch #: HH12G11S

Analyte	R1	Sp	MS	MSD	PR1	PR2	RPD	MEAN PR	cceptance Limit RPD	MPR
	ppm	ppm	ppm	ppm	%	%	%	%		
TPH *	0.36	1.0	1.0	1.1	66%	71%	5.1%	68%	30	85-130
Benzene	0.00028	0.10	0.099	0.096	99%	95%	3.5%	97%	25	85-130
Toluene	0.00048	0.10	0.11	0.10	107%	101%	5.9%	104%	25	85-130
Ethylbenzene	0.00016	0.10	0.10	0.10	102%	95%	6.3%	99%	25	85-130
Xylenes	0.0053	0.30	0.31	0.29	100%	94%	6.6%	97%	25	85-130

* See LCS for batch validation.

Definition of Terms

R1.................... Result of Sample Analysis

Sp.................... Spike Concentration Added to Sample

MS.................... Matrix Spike Result

MSD.................... Matrix Spike Duplicate Result

PR1.................... Percent Recovery of MS; ((MS-R1) / SP) X 100

PR2.................... Percent Recovery of MSD; ((MSD-R1) / SP) X 100

RPD.................... Relative Percent Difference; ((MS-MSD)/(MS+MSD)/2)) X 100

Mean PR................ Mean Percent Recovery

Del Mar Analytical

Del Mar Analytical

2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (619) 505-9596 FAX (619) 505-9689
2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

LCS DATA REPORT

EPA METHOD: **8015/8020**
Matrix: Soil

Date: 8/12/98

Batch #: HH12G11S

Analyte	Spike Conc.	Result	% Recovery	ACP
TPH	1.0	1.1	112%	80-120%
Benzene	0.10	0.10	103%	80-120%
Toluene	0.10	0.11	112%	80-120%
Ethylbenzene	0.10	0.11	105%	80-120%
Xylenes	0.30	0.31	105%	80-120%

Definition of Terms

LCS .... Laboratory Control Sample

Spike Conc. .... Spike concentration added to blank

Result .... Result of Laboratory Control Sample Analysis

% Recovery .... Percent Recovery of LCS; ((Result-Spike Conc.)/Spike Conc.)X 100

ACP .... Acceptance Limits for Percent Recovery

TPH .... Total Petroleum Hydrocarbons

Harding Lawson Associates
30 Corporate Park, Suite 400
Irvine, CA 92714
(714) 260-1800

CHAIN OF CUSTODY FORM

Lab: Del Mar Analytical

Samplers: Stephanie Chute

Job Number: 41334, 4

Name/Location: Coast Community College

Project Manager: Marielle Coquia

Recorder: [signature] (Signature Required)

SOURCE CODE	MATRIX: Water	Sediment	Soil	Oil	#CONTAINERS & PRESERV.: Unpres.	H_2SO_4	HNO_3	SAMPLE NUMBER OR LAB NUMBER: Yr	Wk	Seq	DATE: Yr	Mo	Dy	Time	STATION DESCRIPTION/ NOTES	EPA 601/8010	EPA 602/8020	EPA 624/8240	EPA 625/8270	ICP METALS	EPA 8015M/TPH
			x					HLA-01			98	08	11	1040	HLA-01 at 11' bgs		X				X
			x					HLA-02			98	08	11	1048	HLA-02 at 1' bgs		X				X

ANALYSIS REQUESTED: BTEX + MTBE; 24 HOUR TAT

Fax prelims to Marielle Coquia 949 260-1830

LAB NUMBER: Yr	Wk	Seq	DEPTH IN FEET	COL MTD CD	QA CODE	MISCELLANEOUS
						24 HR TAT

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
[signature]	W. [signature]	8/11 1130
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
DISPATCHED BY: (Signature) DATE/TIME	RECEIVED FOR LAB BY (Signature)	DATE/TIME

METHOD OF SHIPMENT: Intact / cool

CHAIN OF CUSTODY
Orange County Health Care Agency
Environmental Health Division
2009 E. Edinger Ave., Santa Ana, CA 92705
Telephone: (714) 667-3700

1. **ALL SAMPLES ARE TO BE HANDLED AS COURT EVIDENCE, AND ARE TO BE PROPERLY STORED IN A SECURE LOCATION.**
2. **PLEASE WRITE LEGIBLY.**
3. **ATTACH THIS FORM TO THE ORIGINAL REPORT OF THE ANALYTICAL RESULTS AND RETURN THEM TO THIS OFFICE. LABORATORY RESULTS RECEIVED WITHOUT PROPER CHAIN OF CUSTODY DOCUMENTATION WILL NOT BE ACCEPTED.**

4. **TO BE COMPLETED BY LABORATORY ANALYST**

LAB NO.: 1197
DATE RECEIVED: 8-11-98
SAMPLE(S) CONDITION (PLEASE CHECK):
CHILLED: YES COUNTY SEAL(S) INTACT: YES
CONTAINER IN GOOD CONDITION: YES
DATE ANALYSIS COMPLETED: 8/12/98
ANALYST: DiMaio

5. **TO BE COMPLETED BY SAMPLE COLLECTOR**

SITE NAME/ADDRESS: Orange Coast College 2701 Fairview Rd. Costa Mesa
DATE OF COLLECTION: 8-11-98
SAMPLE COLLECTOR/COMPANY: S. Chute Harding Lawson Associates
TELEPHONE NO.:
HCA REPRESENTATIVE: A. Rashidi-Fard

6.

SAMPLE NUMBER	DETERMINATION REQUESTED	SAMPLE DESCRIPTION/COMMENTS	TIME OF COLLECTION
HLA-D1	TPH gasoline (8015),	BTEX + MTBE (8020)	10:40am
HLA-D2	↓ ↓	↓ ↓ ↓	10:48am

7. **CHAIN OF CUSTODY** Intact/cool

	SIGNATURE	COMPANY/AGENCY	INCLUSIVE DATES/TIMES
1.	Aghavan Rashidi-Fard	Haz. Waste	8-11-98 . 10:50am
2.	[illegible signature]	Harding Lawson	8-11-98 . 10:52am
3.	[illegible signature]	"	8-11-98 . 11:30AM
4.	K. Whaley	Delmar	8-11-98 . 11:30Am
5.			
6.			

WHITE-RETURN THIS COPY TO ENVIRONMENTAL HEALTH, CANARY-LABORATORY COPY

Del Mar Analytical

2852 Alton Ave., Irvine, CA 92606 (714) 261-1022 FAX (714) 261-1228
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-5457

Harding Lawson Associates	Client Project ID: 41334.4	Sampled:	Aug 11, 1998
30 Corporate Park, Suite 400	Coast Community College	Received:	Aug 11, 1998
Irvine, CA 92606	Sample Descript: Soil, HLA-02	Extracted:	Aug 13, 1998
Attention: Marielle Coquia	Lab Number: HH01284	Analyzed:	Aug 13, 1998
		Reported:	Aug 13, 1998

MTBE (EPA 8260)

Analyte	Reporting Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)
Methyl tert-Butyl Ether	5.0	210

Analytes reported as N.D. were not present at or above the reporting limit.

DEL MAR ANALYTICAL (ELAP #1169)

Rick DiMaio
Project Manager

Surrogate Standard Recoveries (Accept. Limits):	
Dibromofluoromethane (60-120).....	102%

Del Mar Analytical

2852 Alton Ave., Irvine, CA 92606 (714) 261-1022 FAX (714) 261-[illegible]
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-[illegible]
16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-[illegible]
2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-[illegible]

Harding Lawson Associates
30 Corporate Park, Suite 400
Irvine, CA 92606
Attention: Marielle Coquia

Method Blank

Extracted: Aug 13, 1998
Analyzed: Aug 13, 1998
Reported: Aug 13, 1998

MTBE (EPA 8260)

Analyte	Reporting Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)
Methyl tert-Butyl Ether	5.0	N.D.

Analytes reported as N.D. were not present at or above the reporting limit.

DEL MAR ANALYTICAL (ELAP #1169)

Rick DiMaio
Project Manager

Surrogate Standard Recoveries (Accept. Limits):	
Dibromofluoromethane (80-120)	104%

Del Mar Analytical

2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1229
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (619) 505-9596 FAX (619) 505-9689
2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

MS/MSD Data Sheet

Method: EPA 8260
Matrix: Soil

Date: 8/13/98

Sample #: C8080560

Batch: HH13061S

Analyte	R1	Sp	MS	MSD	PR1	PR2	RPD	MEAN PR	Acceptance Limits RPD	Acceptance Limits Mean PR
	ppb	ppb	ppb	ppb	%	%	%	%	%	%
Vinyl Chloride	0	25	23	22	92%	88%	4.4%	90%	20	25-190
1,1-Dichloroethene	0	25	28	28	112%	112%	0.0%	112%	50	45-165
MtBE	0.30	25	28	28	111%	111%	0.0%	111%	25	60-150
1,1-Dichloroethane	0	25	28	28	112%	112%	0.0%	112%	20	55-160
Chloroform	0	25	27	27	108%	108%	0.0%	108%	20	60-150
1,2-Dichloroethane	0	25	27	27	108%	108%	0.0%	108%	20	65-140
Benzene	0	25	26	26	104%	104%	0.0%	104%	20	40-160
Trichloroethene	0	25	27	28	108%	112%	3.6%	110%	20	65-130
Toluene	1.1	25	21	22	80%	84%	4.7%	82%	20	70-135
Tetrachloroethene	0.10	25	21	22	84%	88%	4.7%	86%	20	50-155
Chlorobenzene	0	25	24	25	96%	100%	4.1%	98%	20	75-130
Ethylbenzene	0.60	25	25	25	98%	98%	0.0%	98%	20	70-135
m,p-Xylenes	1.2	25	26	26	99%	99%	0.0%	99%	20	65-140
o-Xylene	0.90	25	25	25	96%	96%	0.0%	96%	25	70-150

Definition of Terms:

R1.............................. Result of Sample Analysis
Sp.............................. Spike Concentration Added to Sample
MS.............................. Matrix Spike Result
MSD............................ Matrix Spike Duplicate Result
PR1............................ Percent Recovery of MS; ((MS-R1) / SP) X 100
PR2............................ Percent Recovery of MSD; ((MSD-R1) / SP) X 100
RPD............................ Relative Percent Difference; ((MS-MSD)/((MS+MSD)/2)) X 100
Acceptance Limits.............. Statistically determined on an annual basis.

CHAIN OF CUSTODY
Orange County Health Care Agency
Environmental Health Division
2009 E. Edinger Ave., Santa Ana, CA 92705
Telephone: (714) 667-3700

1. ALL SAMPLES ARE TO BE HANDLED AS COURT EVIDENCE, AND ARE TO BE PROPERLY STORED IN A SECURE LOCATION.
2. PLEASE WRITE LEGIBLY.
3. ATTACH THIS FORM TO THE ORIGINAL REPORT OF THE ANALYTICAL RESULTS AND RETURN THEM TO THIS OFFICE. LABORATORY RESULTS RECEIVED WITHOUT PROPER CHAIN OF CUSTODY DOCUMENTATION WILL NOT BE ACCEPTED.

4. TO BE COMPLETED BY LABORATORY ANALYST

LAB NO.: 1197
DATE RECEIVED: 8-11-98
SAMPLE(S) CONDITION (PLEASE CHECK):
CHILLED: YES COUNTY SEAL(S) INTACT: YES
CONTAINER IN GOOD CONDITION: YES
DATE ANALYSIS COMPLETED: 8/12/98
ANALYST: DiMaio

5. TO BE COMPLETED BY SAMPLE COLLECTOR

SITE NAME/ADDRESS: Orange Coast College 2701 Fairview Rd, Costa Mesa
DATE OF COLLECTION: 8-11-98
SAMPLE COLLECTOR/COMPANY: S. Chute Harding Lawson Associates
TELEPHONE NO.:
HCA REPRESENTATIVE: A. Rashidi-Fard

6.

SAMPLE NUMBER	DETERMINATION REQUESTED	SAMPLE DESCRIPTION/COMMENTS	TIME OF COLLECTION
HLA-D1	TPH gasoline (8015),	BTEX + MTBE (8020)	10:40 am
HLA-D2	↓ ↓	↓ ↓ ↓	10:48 am

7. CHAIN OF CUSTODY

Intact/cool

	SIGNATURE	COMPANY/AGENCY	INCLUSIVE DATES/TIMES
1.	Afshan Rashidi-Fard	Haz. Waste	8-11-98 . 10:50am
2.	[illegible]	Harding Lawson	8-11-98 . 10:52am
3.	[illegible]	〃	8-11-98 . 11:30 AM
4.	L. [illegible]	DELMAR	8-11-98 . 11:30 AM
5.			
6.			

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PINK-CONTRACTOR/CONSULTANT COPY, GOLDENROD OFFICE COPY

F272-9.1531.1(R8/89)

Harding Lawson Associates
30 Corporate Park, Suite 400
Irvine, CA 92714
(714) 260-1800

CHAIN OF CUSTODY FORM

Lab: Del Mar Analytical

Samplers: Stephanie Chute

Job Number: 41334.4

Name/Location: Coast Community College

Project Manager: Marielle Coquia

Recorder: Stephanie Chute (Signature Required)

SOURCE CODE	MATRIX: Water	Sediment	Soil	Oil	#CONTAINERS & PRESERV.: Unpres.	H_2SO_4	HNO_3	SAMPLE NUMBER OR LAB NUMBER: Yr	Wk	Seq	DATE: Yr	Mo	Dy	Time	STATION DESCRIPTION/ NOTES	EPA 601/8010	EPA 602/8020 (BTEX MTBE)	EPA 624/8240	EPA 625/8270	ICP METALS	EPA 8015M/TPH	24 HOUR TAT
			X					HLA-01			98	08	11	1040	HLA-01 at 11' bgs		X				X	
			X					HLA-02			98	08	11	1048	HLA-02 at 1' bgs		X				X	

Fax prelims to Marielle Coquia 949 260-1830

LAB NUMBER: Yr	Wk	Seq	DEPTH IN FEET	COL MTD CD	QA CODE	MISCELLANEOUS
						24 HR TAT

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
Stephanie Chute	[signature]	8/11 1130
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
DISPATCHED BY: (Signature) DATE/TIME	RECEIVED FOR LAB BY: (Signature)	DATE/TIME

METHOD OF SHIPMENT: Intact / cool

Laboratory Copy White — Project Office Copy Yellow — Field or Office Copy Pink

Del Mar Analytical

Harding Lawson Associates	Client Project ID: OCC	Sampled:	Aug 14, 1998
30 Corporate Park, Suite 400		Received:	Aug 14, 1998
Irvine, CA 92606	Analysis Method: EPA 5030/CA DHS Mod. 8015	Extracted:	Aug 17, 1998
Attention: Don Pape	First Sample #: HH01517	Analyzed:	Aug 17, 1998
		Reported:	Aug 17, 1998

VOLATILE FUEL HYDROCARBONS (CA DHS Mod. EPA 8015)

Laboratory Number QC Batch	**Sample Description** Soil	**Sample Result** mg/Kg (ppm)	**Reporting Limit** mg/Kg (ppm)	**Dilution Factor**
HH01517 HH17151S	S-1@2.5-3.0	N.D.	1.0	1.0

Volatile Fuel Hydrocarbons are quantitated against a gasoline standard. Hydrocarbons detected by this method range from C6 to C12. Analytes reported as N.D. were not present at or above the reporting limit. Dilution factors are due to matrix effects and/or other factors

DEL MAR ANALYTICAL (ELAP #1197)

Rick DiMaio
Project Manager

[illegible]

Del Mar Analytical

Harding Lawson Associates 30 Corporate Park, Suite 400 Irvine, CA 92606 Attention: Don Pape	Client Project ID: OCC Sample Descript: Soil, S-1@2.5-3.0 Lab Number: HH01517 QC Batch: HH14011S	Sampled: Aug 14, 1998 Received: Aug 14, 1998 Extracted: Aug 14, 1998 Analyzed: Aug 14, 1998 Reported: Aug 17, 1998

BTEX and MTBE by GC/MS (EPA 8260)

Analyte	Reporting Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)
Benzene	2.0	N.D.
Ethylbenzene	2.0	N.D.
Toluene	2.0	N.D.
o-Xylene	2.0	N.D.
m,p-Xylenes	2.0	N.D.
Methyl tert-Butyl Ether	5.0	N.D.

Analytes reported as N.D. were not present at or above the reporting limit.

DEL MAR ANALYTICAL (ELAP #1197)

Rick DiMaio
Project Manager

Surrogate Standard Recoveries (Accept. Limits):	
Dibromofluoromethane (80-120)	105%
Toluene-d8 (81-117)	105%
4-Bromofluorobenzene (74-121)	108%

Del Mar Analytical

[illegible]
[illegible]
[illegible]
[illegible]

Harding Lawson Associates
30 Corporate Park, Suite 400
Irvine, CA 92606
Attention: Don Pape

Method Blank

Extracted: Aug 17, 1998
Analyzed: Aug 17, 1998
Reported: Aug 17, 1998

VOLATILE FUEL HYDROCARBONS (CA DHS Mod. EPA 8015)

QC Batch	Laboratory Description	Sample Result mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)	Dilution Factor
HH17151S	Method Blank	N.D.	1.0	1.0

Volatile Fuel Hydrocarbons are quantitated against a gasoline standard. Hydrocarbons detected by this method range from C6 to C12.
Analytes reported as N.D. were not present at or above the reporting limit. Dilution factors are due to matrix effects and/or other factors.

DEL MAR ANALYTICAL (ELAP #1197)

Rick DiMaio
Project Manager

2852 Alton Ave., Irvine, CA 92606 [illegible]
1014 E. Cooley Dr., Suite A, Colton, CA 92324 [illegible]
16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

Del Mar Analytical

Harding Lawson Associates
30 Corporate Park, Suite 400
Irvine, CA 92606
Attention: Don Pape

Method Blank

Extracted: Aug 14, 1998
Analyzed: Aug 14, 1998
Reported: Aug 17, 1998

BTEX and MTBE by GC/MS (EPA 8260)

Analyte	Reporting Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)
Benzene	2.0	N.D
Ethylbenzene	2.0	N.D
Toluene	2.0	N.D.
o-Xylene	2.0	N.D.
m,p-Xylenes	2.0	N.D.
Methyl tert-Butyl Ether	5.0	N.D.

Analytes reported as N.D. were not present at or above the reporting limit.

DEL MAR ANALYTICAL (ELAP #1197)

Rick DiMaio
Project Manager

Surrogate Standard Recoveries (Accept. Limits):	
Dibromofluoromethane (80-120)	104%
Toluene-d8 (81-117)	106%
4-Bromofluorobenzene (74-121)	108%

Del Mar Analytical

2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (619) 505-9596 FAX (619) 505-9689
2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

MS/MSD DATA REPORT

EPA METHOD: 8260
Matrix: Soil

Date Analyzed: 8/14/98

Sample: HH01571

Batch: HH14011S

Analyte	R1	Sp	MS	MSD	PR1	PR2	RPD	MEAN PR	Acceptance Limits	
	ppb	ppb	ppb	ppb	%	%	%	%	RPD	MPR
Vinyl Chloride	0	25	26	28	104%	112%	7.4%	108%	30	30-160
1,1-Dichloroethene	0	25	27	27	108%	108%	0.0%	108%	40	45-165
MTBE	0	25	32	27	128%	108%	17%	118%	40	55-155
1,1-Dichlororethane	0	25	27	27	108%	108%	0.0%	108%	20	55-150
Chloroform	0	25	28	27	112%	108%	3.6%	110%	20	65-140
1,2-Dichlororethane	0	25	30	29	120%	116%	3.4%	118%	30	55-145
Benzene	0	25	25	25	100%	100%	0.0%	100%	25	60-140
Trichloroethene	0	25	27	27	108%	108%	0.0%	108%	30	60-145
Toluene	0	25	26	26	104%	104%	0.0%	104%	20	65-140
Tetrachloroethene	0	25	27	28	108%	112%	3.6%	110%	50	10-200
Chlorobenzene	0	25	26	27	104%	108%	3.8%	106%	20	70-135
Ethylbenzene	0	25	27	27	108%	108%	0.0%	108%	20	70-140
m,p-Xylenes	0	50	53	55	106%	110%	3.7%	108%	20	40-160
o-Xylene	0	25	27	27	108%	108%	0.0%	108%	20	65-150

Definition of Terms:

R1.................... Result of Sample Analysis
Sp.................... Spike Concentration Added to Sample
MS.................. Matrix Spike Result
MSD................. Matrix Spike Duplicate Result
PR1................. Percent Recovery of MS; ((MS-R1) / SP) X 100
PR2................. Percent Recovery of MSD; ((MSD-R1) / SP) X 100
RPD................. Relative Percent Difference; ((MS-MSD)/(MS+MSD)/2) X 100
Acceptance Limits..... Statistically determined on an annual basis.

DEL MAR ANALYTICAL

Del Mar Analytical

2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228
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2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

MS/MSD DATA REPORT

Date: 08/17/98

EPA Method 8015/8020

Sample #: HH01467 Matrix: Soil

Batch #: HH17151S

Analyte	R1	Sp	MS	MSD	PR1	PR2	RPD	Mean PR	Acceptance Limits	
	mg/Kg	mg/Kg	mg/Kg	mg/Kg	%	%	%	%	RPD	Mean PR
TPH	0.025	1.1	1.1	1.1	97	95	1.1	96	≤20	65 - 130
Benzene	0	0.10	0.11	0.11	109	108	0.73	109	≤20	75 - 120
Toluene	0	0.10	0.10	0.10	104	103	1.5	104	≤20	75 - 120
Ethylbenzene	0	0.10	0.11	0.11	110	108	1.7	109	≤20	80 - 125
Xylenes	0.0014	0.30	0.32	0.31	106	104	2.5	105	≤20	80 - 120
MTBE	0	1.5	1.4	1.4	92	92	0.14	92	≤30	50 - 150

Definition of Terms

R1. .... Result of Sample Analysis
Sp. .... Spike Concentration added to sample
MS. .... Matrix Spike Result
MSD. .... Matrix Spike Duplicate Result
PR1. .... Percent Recovery of MS; ((MS-R1)/SP) X 100
PR2. .... Percent Recovery of MSD; ((MSD-R1)/SP) X 100
RPD. .... Relative Percent Difference; ((MS-MSD)/(MS+MSD)/2) X 100
Mean PR. .... Mean Percent Recovery
Acceptance Limits ...... Determined by in-house Control Charts

Del Mar Analytical

CHAIN OF CUSTODY
Orange County Health Care Agency
Environmental Health Division
2009 E. Edinger Ave., Santa Ana, CA 92705
Telephone: (714) 667-3700

1. ALL SAMPLES ARE TO BE HANDLED AS COURT EVIDENCE, AND ARE TO BE PROPERLY STORED IN A SECURE LOCATION.

2. PLEASE WRITE LEGIBLY.

3. ATTACH THIS FORM TO THE ORIGINAL REPORT OF THE ANALYTICAL RESULTS AND RETURN THEM TO THIS OFFICE. LABORATORY RESULTS RECEIVED WITHOUT PROPER CHAIN OF CUSTODY DOCUMENTATION WILL NOT BE ACCEPTED.

4. TO BE COMPLETED BY LABORATORY ANALYST

LAB NO.: 1197
DATE RECEIVED: 8/14/98
SAMPLE(S) CONDITION (PLEASE CHECK):
CHILLED: X COUNTY SEAL(S) INTACT: X
CONTAINER IN GOOD CONDITION: X
DATE ANALYSIS COMPLETED:
ANALYST:

5. TO BE COMPLETED BY SAMPLE COLLECTOR

SITE NAME/ADDRESS: Orange Coast College 2701 Fairview Rd., Costa Mesa
DATE OF COLLECTION: 8-14-98
SAMPLE COLLECTOR/COMPANY: D. Pape HCA
TELEPHONE NO.:
HCA REPRESENTATIVE: A. Rashidi-Fard

6.

SAMPLE NUMBER	DETERMINATION REQUESTED	SAMPLE DESCRIPTION/COMMENTS	TIME OF COLLECTION
S1	TPH gasoline (8015),	BTEX + MTBE (8260)	10:50am

7. CHAIN OF CUSTODY

	SIGNATURE	COMPANY/AGENCY	INCLUSIVE DATES/TIMES
1.	Aghavan Rashidi-Fard	Haz Waste	8-14-98 . 10:58am
2.	Don Pape R.G.	HCA	8-14-98 . 10:58 Am
3.	Don Pape RG	HCA	8-14-98 . 1410
4.	Corey Carlson	Del Mar	8/14/98 . 1410
5.			
6.			

F272-9.1531.1(R8/89)

WHITE-RETURN THIS COPY TO ENVIRONMENTAL HEALTH, CANARY-LABORATORY COPY
PINK-CONTRACTOR/CONSULTANT COPY, GOLDENROD-OFFICE COPY

Harding Lawson Associates
30 Corporate Park, Suite 400
Irvine, CA 92714
(714) 260-1800

CHAIN OF CUSTODY FORM

Lab: Del Mar

Job Number:
Name/Location: OC
Project Manager: Don Pape

Samplers: Don Pape
Recorder: (Signature Required)

Source Code	Water	Sediment	Soil	Oil	Unpres.	H_2SO_4	HNO_3	Sample No. Yr	Wk	Seq	Date Yr	Mo	Dy	Time	Station Description/Notes	EPA 601/8010	EPA 602/8020	EPA ~~624/8240~~ 8260	EPA 625/8270	ICP METALS	EPA 8015M/TPH	
49			X				1				98	08	14	1045	5-1 @ 2.5-3.0			X				Rush 24 hours
49			X				1				98	08	14	1105	5-2 @ 6.0-6.5			X				Hold - Run only if H ton
49			X				1				98	08	14	1140	5-3 @ 8.25-8.75			X				Hold - Run only if hit 6.1

Lab Number Yr	Wk	Seq	Depth in Feet	Col Mtd CD	QA Code	Miscellaneous
						Re Don Pape / HLA -
						8015 GAS /
						8260 BTEX / MTBE

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
[signature]		

Dispatched by: (Signature)	Date/Time	Received for lab by: (Signature)	Date/Time
		[signature] Carlson	8/14 1:0?

Method of shipment: Hand del, intact, on ice

Laboratory Copy White | Project Office Copy Yellow | Field or Office Copy Pink

6515

APPENDIX F

SOIL COMPACTION REPORT

GEO ENVIRON
GEOTECHNICAL AND ENVIRONMENTAL SERVICES
3904 E. Miraloma Ave. Unit 1, Anaheim, CA 92806 . (714) 632-3190 . Fax (714) 632-3191

Job No. 98-8-94-22H1
September 7, 1998

Mr. Bill Gebhart
Quest Environmental
155 Arovista Circle
Brea, CA 92621

Subject: In-Place Density Test Results for the Tank Excavation Backfill
Orange Coast College
1371 Adams Avenue, Costa Mesa, Orange County, California.

Dear Mr. Gebhart:

Submitted herewith is a report of in-place density test results for the tank excavation backfill on the subject site. Field density test results are presented in the Summary Sheet in Appendix 'A. The approximate location of the field density tests, excavation areas, and other pertinent dates are shown on the attached plot plan in Appendix 'B'.

Date Of Observation

August 13, 1998

Grading Equipment

Backhoe with Vibratory Plate

Grading & Field Operation

The subject tank area was excavated to approximately 12 feet below the existing site grade and the size of the excavation was approximately 10'x 12'.

The excavation bottom was compacted prior to fill placement. Excavated on-site pea gravel were used to backfill the excavation to within 1.5' of existing grade. The pea gravel were placed at one foot thick horizontal lifts and rolled properly to maximize the consolidation of gravel. The remainder of the excavation was then backfilled with crushed aggregate base materials and compacted to within existing site grade.

See the summary sheet in Appendix 'A' for the description of the fill materials and the density test results.

Density Testing

In-place density tests were performed in general accordance with Sand Cone Method ASTM D-1556 procedures at a frequency sufficient to verify the moisture content and degree of compaction obtained. Maximum dry density of the fill soil was obtained in general accordance with ASTM D-1557 procedures.

Conclusion

The tank excavation backfill was placed and compacted to a minimum relative compaction of 93% of maximum dry density.

The excavation backfill are determined to be suitable for support for pavement for parking and driveway areas only. If buildings or structures are planned in the excavation backfill areas, a geotechnical investigation must be conducted to evaluate the fill and natural soils for specific supports of the buildings or structures.

Our observation and testing of the backfill materials did not include any environmental assessment of the backfill materials or opinions relating to possible soil or subsurface contamination by hazardous or toxic substances.

Closure

This evaluation was performed in accordance with generally accepted engineering practices. The conclusions and recommendations contained in this report were based on the data available and the interpretation of such data as dictated by our experience and background. Hence, our conclusions and recommendations are professional opinions; no other warranty is offered or implied.

This opportunity to be of service is appreciated. If you have any further questions regarding this matter, please contact our office at your earliest convenience.

Respectfully submitted,

Geo Environ

Jabed Masud
Project Manager

Saeed Shahidi
RCE 51711

REGISTERED PROFESSIONAL ENGINEER
SAEED SHAHIDI
No. 51711
Exp. June 30, 02
CIVIL
STATE OF CALIFORNIA

9/13/98

JM/SS/gm
Attachments: Appendix 'A'- Summary Sheet
Appendix 'B'- Plot Plan

APPENDIX A

DENSITY TEST SUMMARY SHEET

Maximum Density Test Results

Type	Soil Classification	Maximum Dry Density (pcf)	Optimum Moisture Content (%)
A	Crushed Aggregate Base	140.0	7.5

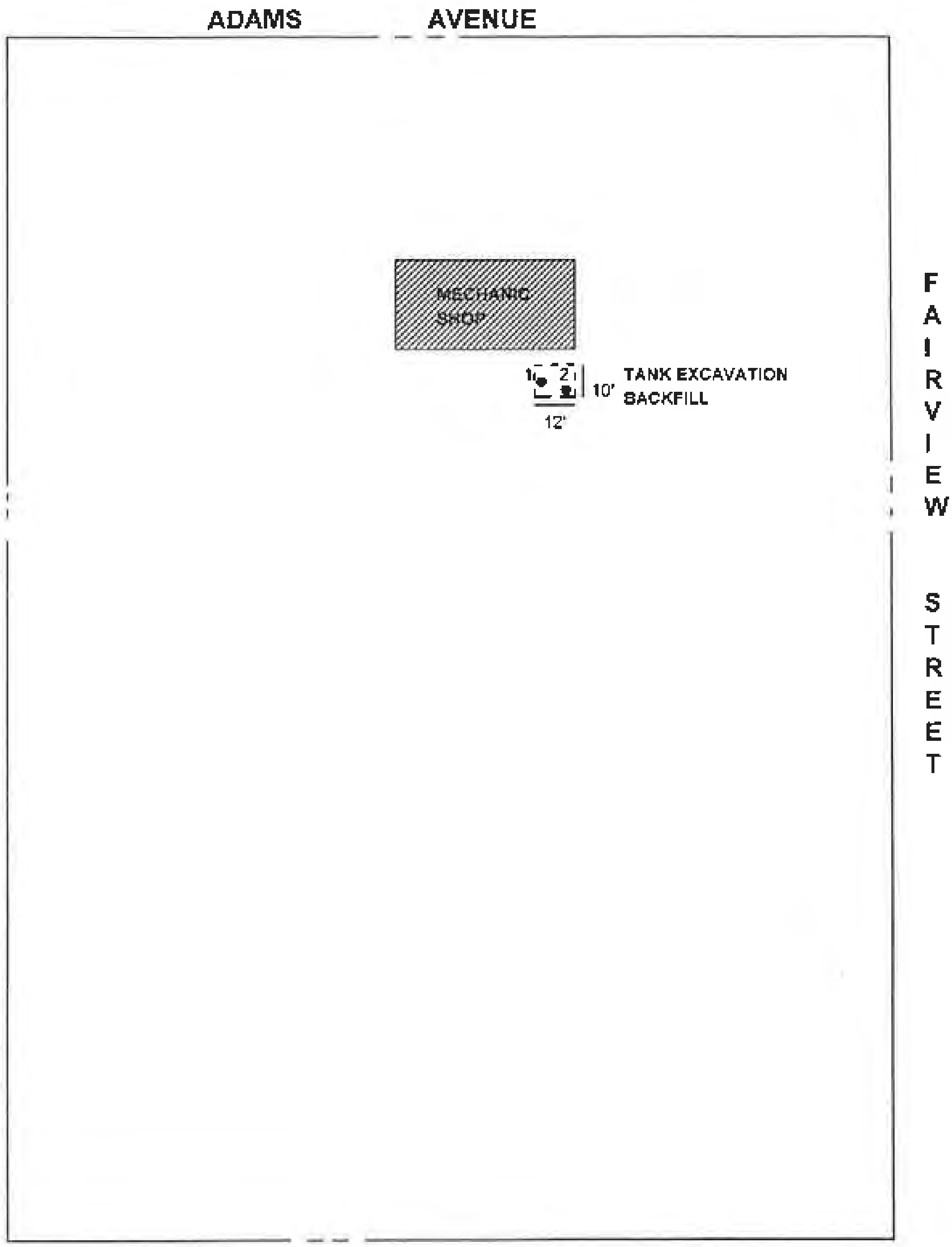
Field Density Test Results

Test No.	Date	Location	Test Elev. (ft.)	Soil Type	Moisture Content (%)	Dry Density (pcf)	Relative Compaction (%)	Test Type	Remark
1	8/13/98	Excavation Area	-1.0	A	6.1	130.8	93.4	S	Passed
2	9/19/97	Excavation Area	Grade	A	7.2	130.2	93.0	S	Passed

Method: S: Sand Cone Method per ASTM D-1556

APPENDIX B

PLOT PLAN



GEO ENVIRON GEOTECHNICAL & ENVIRONMENTAL SERVICES 3904 E. MIRALOMA AVE #1 ANAHEIM CA 92806	ORANGE COAST COLLEGE 1371 ADAMS AVENUE COSTA MESA, CA.	DWG. NO. 1 PLOT PLAN Project No. 98-8-94-22H"

DISTRIBUTION

Tank Closure Report
Closure Permit No. 98-299
Orange Coast College
2701 Fairview Road
Costa Mesa, California

October 27, 1998

Copy 1:	Ms. Arghavan Rashidi-Fard Orange County Health Care Agency Environmental Health Division 2009 E. Edinger Avenue Santa Ana, California 92708
Copy 2:	Mr. Eloy O. Oakley Coast Community College District 1370 Adams Avenue Costa Mesa, California 92626
Copies 3-4:	HLA Project File

Quality Control Reviewer:

Ed Stewart

Ed Stewart
Associate Geologist, R.E.A.

CFS/DAP/hk N:\CCCD\OCC\41334CR.DOC

ORANGE COAST COLLEGE

SOIL REMEDIATION PROJECT

FINAL REPORT

SUBMITTED BY ALWS AND TRICOAST ENGINEERING

PREPARED BY ALWS

JANUARY 9, 1989

Analytical Liquid Waste Systems, Inc.

(818) 793-2435
(Mon - Fri, 8 - 5)
(714) 960-3218
(Machine)

Frank Visco, President
Al Balzano, Vice-President
Kasi Gabbita, Vice President/R & D
Ken Visco, Secretary/Treasurer

8616 Hamilton Ave.
Huntington Beach, CA 92646

January 09, 1989

Coast Community College District
1370 Adams Avenue
Costa Mesa, CA 92626

Attention: Mr. Gene Harrie

Dear Mr. Harrie:

Enclosed are the results of the treatment of the petroleum hydrocarbon contaminated soil located on the Orange Coast College campus. The treatment was carried out by Tri Coast Engineering of Costa Mesa on Oct. 15, Oct. 31, and Nov. 1, 1988. The treatment process is known as chemical fixation and uses HCC-104 developed by ALWS under the supervision of Dr. Kasi Gabbita.

The enclosed report was prepared by ALWS and is accompanied by support data from two independent labs: Edward S. Babcock & Sons, Inc. (P.O. Box 432, Riverside, California, 92505, phone 714 684-1881) and MBC Applied Environmental Sciences,(947 Newhall St., Costa Mesa, California, 92627, phone, 714 646-1601).

Utilizing the analytical data obtained from this study, the Department of Health Services can now evaluate the soil for hazardous waste declassification. Should you have any questions regarding this report, please contact Dr. Kasi Gabbita of ALWS at (818) 793-2435.

Please forward copies of this report to Health Care Agency of Orange County; Alternative Technologies Section of Department of Health Services, Sacramento, California, seeking their assistance for sign off of the treated soil, with a time frame of 4 to 6 weeks.

Sincerely Yours,

Frank Visco

Frank Visco
President
enclosure

TABLE OF CONTENTS

I. HISTORY OF CONTAMINATED SOIL AT ORANGE COAST COLLEGE

The approximate 80 cubic yards of soil at Orange Coast College was thought to be contaminated with both diesel and waste oil that leaked from underground storage tanks. Upon removal of the tanks and the contaminated soil from its original site, the contaminated soil was placed in a vacant field at the corner of Adams Avenue and Pinecreek Drive at the Orange Coast College campus. The soil was spread on plastic sheeting to a thickness of about 1 foot. The soil was allowed to aerate for several months. During this period ALWS collected several samples at different time intervals for analysis by Babcock Labs to determine the levels of total peteroleum hydrocarbon (TPH) contamination. From March 1988 through October 1988 TPH values were determined and ranged from as low as 380 ppm to as high as 10,000 ppm (see Appendix A elsewhere in this report). It is clear that the contamination levels vary substantially. Variations are probably due to the fact that the soil has "hot" and "cold" spots. Hot spots have higher than average levels of contamination while cold spots have lower than average levels of contamination. Since diesel and oil are not known to evaporate readily, it is unlikely that aeration could have reduced the levels of contamination. Laboratory treatment studies on 50 pound samples of this contaminated soil over a period of several months indicated that the ALWS chemical fixation process using the polymer known as HCC-104 could reduce levels of TPH contamination to below 100 ppm for TPH_s. Based upon these studies and encouragement from Alternative Technology Section of the Department of Health Services of the State of California, Coast Community College District agreed to try the chemical fixation process on the contaminated soil discussed here.

II. DOCUMENTATION OF SOIL CONTAMINATION BY THE OCC

In February and March of 1988 Coast Community College District initiated the analysis of the soil surrounding the leaky tanks in question. Associated Labs in Orange, and NorCal Engineering of Los Alamitos were involved in these initial studies, at the direction of Pomona Valley Equipment Rentals, Inc., Chino, CA, who pulled out the tanks. Contamination levels appear to be variable, ranging as high as 38,000 parts per million (ppm or mg/kg) for Total Petroleum Hydrocarbons (TPH_s) as determined by EPA 418.1. The next page refers to the results from the Laboratory. (See Appendix B).

III. DOCUMENTATION OF LEVELS OF CONTAMINATION OF SOIL BY THE ALWS

From March 1988 through November 1988 ALWS collected samples of the suspected contaminated soil with the permission of Gene Harrie. The samples were primarily analyzed for total petroleum hydrocarbons (TPH_s) with a few samples analyzed for total nonvolatile petroleum hydrocarbons ($TNVPH_s$). TPH_s were determined by EPA 418.1 (modified) and $TNVPH_s$ were determined by carbon disulfide extraction (GC method). TPH values ranged from 250 to 10,000 parts per million, while $TNVPH_s$ ranged from 54 to 520 parts per million (Table I).

TABLE I

Total Petroleum Hydrocarbons (TPH_s) in soil samples* at the Orange Coast College, Costa Mesa, California.

DATE ANALYZED	BABCOCK LAB I.D. #	PARTS PER MILLION
03/10/88	ALWS 3/8/88 #1	5000
05/11/88	ALWS TPH 1001	5000
05/18/88	1004	5500
05/19/88	1006	10000
05/19/88	1009	1600
05/19/88	1010	3500
07/05/88	1020	1400
07/05/88	OCC 1021	1300
07/05/88	OCC 1022	3500
07/05/88	OCC 1023	3000
07/05/88	OCC 1024	5500
07/07/88	OCC 1025	4500
07/07/88	OCC 1028	4500
07/07/88	OCC 1029	4300
07/12/88	OCC 1032	3600
07/12/88	OCC 1033	6300
09/23/88	OCC 1064	3600
09/23/88	OCC 1065	4000
10/17/88	OCC 1070	3300
10/17/88	OCC 1071	3000
10/17/88	OCC 1072	250
10/17/88	OCC 1073	2500
10/17/88	OCC 1095	380
11/07/88	OCC 1097	3500
11/07/88	OCC 1101	1000
11/07/88	OCC 1103	5000
AVERAGE		3655

* Each soil sample represents a composite of several smaller subsamples. TPH_s analysis was performed according to EPA 418.1 protocol, as approved by the Department of Health Services, State of California. Appendix A contains the results from the Babcock Labs, including those for $TNVPH_s$.

IV. STUDIES ON THE CONTAMINATED SOIL AT OCC

In March 1988 ALWS began its lab studies to determine the effectiveness of the chemical fixation process on the contaminated soil in question. The majority of the studies consisted of treating anywhere from 25 to 90 pounds of the soil. Treatment consisted of creating a water/soil slurry and allowing the slurry to mix for 10 minutes. HCC-104 was then added to this slurry and the slurry/HCC-104 mixture was allowed to mix for anywhere from 30 minutes to 2 hours, depending on the specific experimental plan. The results summarized below are for both Total Petroleum Hydrocarbons and Nonvolatile Petroleum Hydrocarbons. All contamination levels were determined by Babcock Labs and hard copies of their analytical data are found in Appendix C.

TABLE II

Effect of chemical fixation treatment with HCC-104 on Total Petroleum Hydrocarbons (TPH_s, ppm) in the soil.

DATE TESTED (LAB STUDY)	SOIL CHECK/CONTROL (UNTREATED)	CHEMICALLY FIXED WITH HC-104 (TREATED)
03/23/88	5000	40
07/07/88	4400 (avg. of 4500 & 4300)	100
07/12/88	4950 (avg. of 3600 & 6300)	20 (retested on 07/29 10 ppm)
09/15/88	3800 (avg. of 3600 4000)	80 (avg. of 70 & 90)

TABLE III

Effect of chemical fixation treatment with HCC-104 on Total Nonvolatile Petroleum Hydrocarbons* ($TNVPH_s$, ppm) in soil.

	SOIL	
DATE TESTED (LAB STUDY)	CONTROL/CHECK (UNTREATED)	CHEMICALLY FIXED WITH HC-104 (TREATED)
09/15/88	365 (avg. of 210 & 520)	78 (avg. of 60 &90)

* Analyzed as per the method recommended by the Department of Health Services, State of California (carbon disulfide extraction followed by gas chromatography as outlined in LUFT manual).

V. PERMIT APPLICATION AND MANAGEMENT BROGRAM (PAMP)

The process of chemical fixation of petroleum hydrocarbons is a new process in the State of California as well as the U.S.A. Tricoast and ALWS worked closely with state, county, and local agencies to inform them of the technical aspects of the process. Dr. Gabbita of ALWS had several personal conversations with representatives of these agencies and accordingly he followed the direction of the Alternative Technology Section of the Health Services and filed the specific, necessary permits required by the various state, county and local designated agencies.

Subsequent investigation revealed that possibly as many as 8 agencies (at least) may be required to issue permits.

VI. DESCRIPTION OF CHEMICAL FIXATION PROCESS USING HCC-104

The process, proprietary in nature, is a chemical fixation-stabilization mechanism to lock up hydrocarbons (light as well as heavy) when found to be associated with a soil matrix.

The process is based on the use of polymer and polymer-additives which, when mixed with contaminated soil, render hydrocarbons immobilized and thus make hydrocarbons non-labile preventing possible transport to groundwater. The process requires optimal use of water which acts as a carrier to aid action of polymer and polymer-additives in pulling the hydrocarbons from soil particles or "fixing" them in place.

After treatment with the combination of polymer and polymer-additives, the soil (originally contaminated with the hydrocarbons) is ready to be put back into the same ground from where it was originally excavated.

It is also possible to mix cement with the slurry (soil treated with polymer and polymer-additives, together with water) and put it back in the ground so as to minimize possible future leak(s) of hydrocarbons from the container tank.

Chemical fixation is one of the most viable and versatile tools available to industry and has received considerable attention from many state agencies, as well as USEPA.

VII. TREATMENT OF THE SOIL AT THE OCC

Approximately 100 cubic yards of soil contaminated with petroleum hydrocarbons was treated on the Orange Coast College campus. The soil was thought to be contaminated by the leaky underground tanks containing diesel and waste oil. The soil was first removed from the OCC farm shop area in March of 1988 and later allowed to aerate on the corner of Adams Avenue and Pincreek Drive (on the OCC campus). In late October the soil was stockpiled. On Oct. 15, 31, and Nov. 1, 1988 the soil was treated by Tricoast Engineering using the ALWS polymer known as HCC-104. Treatment consisted of loading 8 cubic yards of soil (by conveyor belt) into a cement mixer. Enough water was added to the soil to create a homongenized soil/water slurry. This slurry was allowed to mix for a period of 15 minutes to dissolve larger clumps of soil. Next, 1 ton of HCC-104 (the polymer) was added to the slurry creating a soil/water/polymer slurry. This final slurry was mixed for at least 30 minutes. After mixing, the slurry was deposited on a plastic liner in a containment area. Samples of untreated soil and samples of each treated slurry were collected for analysis by Babcock Labs in Riverside, for total petroleum hydrocarbons. On the first 16 cubic yards of soil the nonvolatile petroleum hydrocarbons were also determined by use of carbon disulfide extraction (GC method). Results of these analyses are found in the following Tables (4 & 5) on the following two pages. In addition the hard copies of these analytical results are to be found in Appendix D.

TABLE IV

Effect of chemical fixation treatment with HCC-104 on total petroleum hydrocarbons (PPH_g ppm) in the soil.

SOIL

CONTROL/CHECK (UNTREATED)

2366
(Mean value from 8 samples below, sample was collected before treatment from each of the batches);

OCC ID#s	
1070	3300
1071	3000
1072	250
1073	2500
1095	380
1097	3500
1101	1000
1103	5000

CHEMICALLY FIXED WITH HC-104

BATCH #	TREATED	OCC ID#
1	10	1074
2	N.D.*	1076
3	N.D.*	1096
4	N.D.*	1098
5	N.D.*	1100
6	N.D.	1102
7	10	1104a
8	10	1104b
9	N.D.*	1105
10	N.D.*	1106

* Indicates nondetectable levels of contamination or less than 10 ppm TPH_g.

TABLE V

Effect of chemical fixation treatment with HCC-104 on Total Nonvolatile Petroleum Hydrocarbons * (TNVPH's, ppm) in the soil.

SOIL

CONTROL/CHECK (UNTREATED	**CHEMICALLY FIXED WITH HCC-104 (TREATED)**		
	BATCH #	**OCC ID#**	
128 (averaged from four samples collected from batches 1 and 2)	1	1074	N.D.*
	2	1076	N.D.*

OCC ID#	
1070	200
1071	180
1072	76
1073	54

* Indicates nondetectable levels of contamination or less than 10 parts per million.

VIII. RESULTS OF ACUTE AQUATIC TOXICITY BIOASSAY (TITLE 22, AQUATIC TOXICITY BIOASSAY TEST, *ATBT, DEPARTMENT OF HEALTH SERVICES, CALIFORNIA).

In September of 1988 a 40 pound sample of the soil in question was treated with the polymer used in the previously described field studies. The treated sample was analyzed by MBC Applied Environmental Sciences in Costa Mesa, for fish toxicity. This consisted of subjecting fish to various concentrations of treated soil for a period of 5 days and analysis of fish kills (if any) were monitored. Results of this test showed "the sample passed Title 22, Section 66696, Article 11 of the California Administrative Code (96 hour acute aquatic toxicity, following DOHS methodology) testing at least 750 mg/l with no mortality." In other words the treated soil sample passed the test because all of the fish in the test lived. The passage of this test serves as a manifest to delist the treated waste for landfilling in a regular, municipal (nonhazardous) landfill.

In Appendix E are the essentials of the toxicity test results. Copy of the MBC report is available from ALWS.

IX. EFFECT OF CHEMICAL FIXATION TREATMENT WITH HCC-104 ON SOIL CONDITION FOR PLANT GROWTH: EXPERIMENTS WITH RYE GRASS

On November 8, 1988 approximately 5 pounds of rye grass seeds were broadcast randomly by hand over approximately 1/3 of the treated soil. Within one week the seeds had sprouted. While this is only a subjective and qualitative test it does suggest that the treated soil can support the growth of rye grass. On the next page, photo 1 shows the soil shortly after the treatment but before the spreading of the seed, photo 2 shows the same treated soil 1 week after seeding, photo 3 shows the same area 1 month after seeding. The third photo suggests that the vegetation is continuing to flourish.

1

2

3

XI. CONCLUSIONS

Soil contamination occurred from petroleum hydrocarbons (diesel and waste oil) that leaked from underground tanks located in the "Farm Shop" area on the OCC campus. Documentation from independent lab sources indicated that soil contamination levels averaged 3655 parts per million for Total Petroleum Hydrocarbons as determined by EPA protocol 418.1 (modified). This contaminated soil was subjected to chemical fixation by mixing the soil with water and the ALWS product known as HCC-104. Following chemical fixation the parts per million dropped to 10 or less. In addition, fish toxicity testing indicated that soil treated by this chemical process was nontoxic to fish and therefore, may be safe for most landfilling.

Finally, the growth of rye grass continues to flourish at the time that this report is being prepared.

In conclusion, it appears that the chemical fixation process was successful in reducing the total petroleum hydrocarbons to levels under 100 parts per million.

APPENDIX A

Documentation of analytical test results from Babcock Labs confirming soil contamination levels before chemical fixation process.

BACTERIOLOGY
WATER TESTING
HAZARDOUS WASTE TESTING
CALIF. DHS CERTIFIED
PHONE (714) 684-1881
LABORATORIES
3215 CHICAGO AVE.

ESTABLISHED 1906
EDWARD S. BABCOCK & SONS, INC.
P. O. BOX 432
RIVERSIDE, CALIFORNIA 92502

JAN 20 1989

TO Analytical Liquid Waste System
8616 Hamilton Ave.
Huntington Beach, CA 92646

Lab No. 890119-15
Invoice No. 96999

	Submitted	Sampled
By	Lisa	
Date		
Time		

SAMPLE MARKED Compilation of various reports

EPA 418.1 - Soil Extension Petroleum Hydrocarbons

LAB NUMBER	ALWS I.D.	RESULT (mg/kg)
880310-193	3/8/88 #1 OCC	5000
880510-206	ALWS TPH 1001	5000
880517-163	#1004	5500
880517-165	#1006	10000
880517-168	#1009	1600
880517-169	#1010	3500
880630-213	OCC 1020	1400
880630-214	OCC 1021	1300
880630-215	OCC 1022	3500
880630-216	OCC 1023	3000
880705-141	OCC 1024	5500
880705-142	OCC 1025	4500
880705-145	OCC 1028	4500
880705-146	OCC 1029	4300
880711-120	OCC 1032	3600
880711-121	OCC 1033	6300
880916-241	OCC 1064	3600
880916-242	OCC 1065	4000
881017-267	OCC 1070	3300
881017-268	OCC 1071	3000
881017-269	OCC 1072	250
881017-266	OCC 1073	2500
881103-327	OCC 1095	380
881103-328	OCC 1097	3500
881103-330	OCC 1101 Batch #6	1000
881103-331	OCC 1103 Batch #7	5000

EDWARD S. BABCOCK & SONS, INC.

Laurence J Chrystal

APPENDIX B

Preliminary documentation of soil contamination at OCC

Analytical Liquid Waste Systems, Inc.

RECEIVED

MAR 3 - 1988

PHYSICAL FACILITIES PLANNING
COAST COMM. COLLEGE DISTICT

ASSOCIATED LABORATORIES
806 North Batavia - Orange, California 92668 - 714/771-6900

CLIENT

Pomona Valley Equip. Rentals (1965)
17301 Beach Blvd.
#8
Huntington Beach, CA 92647
Attn: Bob Bunnell

LAB NO. F44798

REPORTED 02/17/88

SAMPLE Soil

RECEIVED 02/09/88

IDENTIFICATION Fuel Farm, Costa Mesa

BASED ON SAMPLE As Submitted with County Seals Intact

	#2	#3
Hydrocarbons (418.1) (mg/kg)	15,200	760
Benzene (mg/kg)	3.6	ND<0.05
Toluene (mg/kg)	8.0	ND<0.05
Ethyl Benzene (mg/kg)	ND<0.1	ND<0.1
Total Xylene (8020) (mg/kg)	61.5	ND<0.1

ASSOCIATED LABORATORIES

Edward S. Behare, Ph.D.

ESB/ql

cc: O.C. Health Care Dept.

NOTE: Unless notified in writing, all samples will be discarded by appropriate disposal protocol 30 days from date reported.

TESTING & CONSULTING
Chemical •
Microbiological •
Environmental •

1 10M

cc to Joan 5/23/88

NorCal Engineering

SOILS AND GEOTECHNICAL CONSULTANTS
10571 CALLE LEE SUITE 155 LOS ALAMITOS, CA 90720
(714) 826-4231 (213) 267-0125

March 18, 1988

Project Number 1082-88

RECEIVED
MAR 30 1988
PHYSICAL F... COAST ... COLLEGE ...

Pomona Valley Eqipment Rentals, Inc.
17301 Beach Boulevard, Suite 8
Huntington Beach, California 92647

Re: Chemical Analysis of Soils - Located at Orange Coast College, in the City of Costa Mesa, California

Dear Sirs:

Pursuant to your request, Total Hydrocarbons EPA Method 418.1 and EPA Method 8015 tests were performed on samples transported to this firm.

Samples which were in airtight containers, sealed and packed in ice were transported while chilled to Anaheim Test Laboratories, Inc. Tests as required were performed and results are attached.

We appreciate this opportunity to be of service to you. If you have any further questions, please do not hesitate to contact the undersigned.

Respectfully submitted,
NORCAL ENGINEERING

Troy D. Norrell
President

801
ALL SA.

NorCal Engineering

SOILS AND GEOTECHNICAL CONSULTANTS
10571 CALLE LEE SUITE 155 LOS ALAMITOS, CA 90720
(714) 826-4231 (213) 267-0125

CHAIN OF CUSTODY

Project #	Sample #	Date Obtained	Time Obtained	Depth
1082-88	1	3-2-88	11:30	5'
1082-98	2	3-2-98	11:45	5'
1082-98	3	3-2-88	12:00	8'
1092-98	4	3-2-98	12:15	5'

Samples Obtained by: Pomona Valley Equip. Rentals Location: Orange Coast Col.
Costa Mesa
At the Direction of: Jim McKenzie

Received by:

Anaheim Test Laboratory 3/3/98 Date 10:00 AM Time

Samples placed in airtight containers and transported to Anaheim Test Laboratory. (samples packed in ice and refrigerated)

*Locations shown on attached plan

ANAHEIM TEST LABORATORY

3004 S. ORANGE AVENUE
SANTA ANA, CALIFORNIA 92707
PHONE (714) 549-7267

NorCal Engineering

DATE: 3-10-88

P.O. No. Verbal

Shipper No.

Lab. No. A-2898-1-4

Specification:

Material: Soil

Job 1082-88
-1-4

TOTAL HYDROCARBONS
per EPA 8015

-1	10 mg/kg
-2	ND less than .
-3	6150
-4	ND less than

Signature

RM #2

ANAHEIM TEST LABORATORY

3004 S. ORANGE AVENUE
SANTA ANA, CALIFORNIA 92707
PHONE (714) 549-7267

NorCal Engineering

DATE: 3-10-88

P.O. No. Verbal

Shipper No.

Lab. No. A-2898-1-4

Specification:

Material: Soil

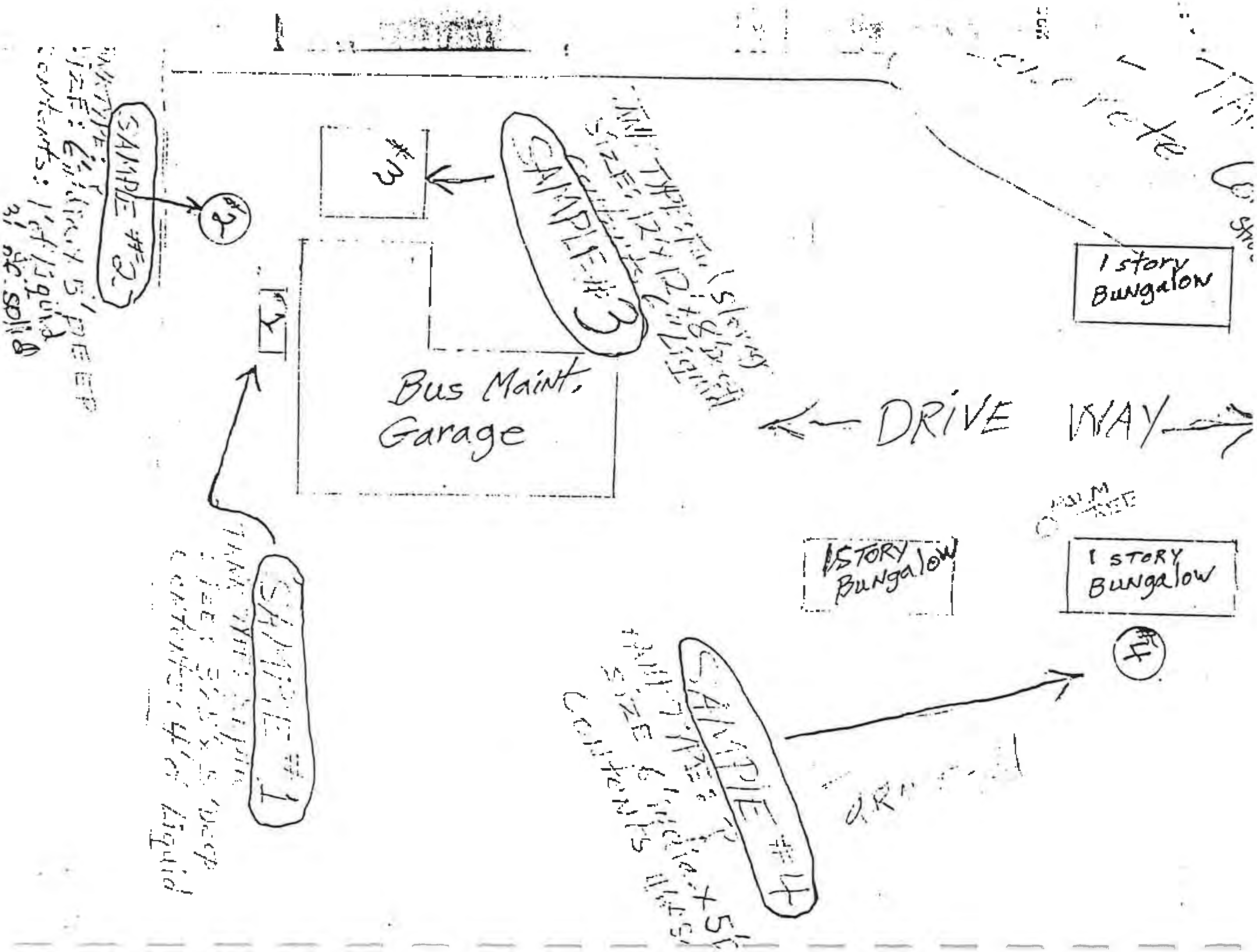
Job 1082-88
1-4

TOTAL HYDROCARBONS
per EPA 418

-1	12 mg/kg
-2	68
-3	38,300
-4	20

ANAHEIM TEST LABORATORY

James A. Kallas, Chief Chemist


SAMPLE #1
SAMPLE #2
SAMPLE #3
SAMPLE #4
#2
#3
#4
Bus Maint. Garage
DRIVE WAY
1 story Bungalow
1 STORY Bungalow
1 STORY Bungalow

APPENDIX C

Documentation by Babcock labs of laboratory studies conducted by ALWS

BACTERIOLOGY
WATER TESTING
HAZARDOUS WASTE TESTING
CALIF. DHS CERTIFIED
PHONE (714) 684-1881
LABORATORIES
3215 CHICAGO AVE

ESTABLISHED 1906
EDWARD S. BABCOCK & SONS, INC.
P. O. BOX 432
RIVERSIDE, CALIFORNIA 92502

JAN 20 1989

TO Analytical Liquid Waste System
8616 Hamilton Ave.
Huntington Beach, CA 92646

Lab No. 890119-16
Invoice No. 96999

	Submitted	Sampled
By	Lisa	
Date		
Time		

SAMPLE MARKED .Compilation of various reports

EPA 418.1 Soil Extension Petroleum Hydrocarbons

LAB NUMBER	ALWS I.D.	RESULT (mg/kg)
880310-193	3/8/88 #1 OCC	5000
880321-150	OCC 1 Week Passive	40
880705-145	OCC 1028	4500
880705-146	OCC 1029	4300
880705-147	OCC 1030	100
880711-121	OCC 1033	6300
880711-120	OCC 1032	3600
880711-122	OCC 1034	20
880727-337	OCC 1034 Retest Soil	10
880916-242	OCC 1065	4000
880916-241	OCC 1064	3600
880916-243	OCC 1066	70
880916-244	OCC 1067	90

EDWARD S. BABCOCK & SONS, INC.

Lawrence J. Chrystal

APPENDIX D

Documentation by Babcock Labs of soil contamination levels after treatment with chemical fixation process.

BACTERIOLOGY
WATER TESTING
HAZARDOUS WASTE TESTING
CALIF. DHS CERTIFIED

PHONE (714) 684-1881

LABORATORIES
3215 CHICAGO AVE.

ESTABLISHED 1906

EDWARD S. BABCOCK & SONS, INC.

P. O. BOX 432
RIVERSIDE, CALIFORNIA 92502

TO Analytical Liquid Waste System
8616 Hamilton Ave.
Huntington Beach, CA 92646

Lab No. 881212-1
Invoice No. 95979

	Submitted	Sampled
By	Lisa	
Date	10/17 and 11/3	

SAMPLE MARKED Compilation of various reports

EPA 418.1- soil extension Petroleum Hydrocarbons

LAb NUMBER	ALWS I.D.	RESULT (mg/kg)
881017-266	OCC 1073	2500
881017-267	OCC 1070	3300
881017-268	OCC 1071	3000
881017-269	OCC 1072	250
881103-327	OCC 1095	380
881103-328	OCC 1097	3500
881103-330	OCC 1101 Batch #6	1000
881103-331	OCC 1103 Batch #7	5000
881017-262	OCC 1075	ND (<10)
881017-265	OCC 1078	ND (<10)
881103-321	OCC 1096	ND (<10)
881103-322	OCC 1098	ND (<10)
881103-323	OCC 1100	ND (<10)
881103-324	OCC 1102	ND (<10)
881103-332	OCC 1104 Batch #7	10
881103-333	OCC 1104	10
881103-325	OCC 1106	ND (<10)
881103-334	OCC 1105	ND (<10)

ND = None Detected. The Practical Quantitation Limit (PQL) is 10 mg/kg.

NOTE: The results for lab numbers 881103-321 thru 881103-325 and lab numbers 881103-332 thru 881103-334 are amended to reflect the milder extraction procedure. These samples were re-analyzed on November 14, 1988.

EDWARD S. BABCOCK & SONS, INC.

Laurence J. Chrystal

28 September 1988

Analytical Liquid Waste Systems, Inc.
8616 Hamilton Avenue
Huntington Beach, California 92646

Attention: Mr. Frank Visco

Dear Mr. Visco:

Enclosed are the results of the California Department of Health Services 96-Hour Acute Aquatic Toxicity Bioassay performed on the ALWS 1068 sample submitted on 16 September 1988. MBC utilized the latest California Department of Health Services procedures for testing the sample.

The ALWS treated sample submitted **PASSED** the 96-hour acute toxicity testing at all concentrations tested. Currently, Title 22, Section 66696, Article 11 of the California Administrative Code requires wastes to pass the 96-hour aquatic toxicity testing with greater than 50% survival at the 500 mg/ℓ concentration for compliance.

MBC Sample Number 8275 - Client Identification: ALWS 1068

PERCENT SURVIVORSHIP

250 mg/ℓ	100%
500 mg/ℓ	100%
750 mg/ℓ	100%

Utilizing the analytical data obtained from this test, the Department of Health Services can now evaluate the material for hazardous waste declassification. Should you have any questions regarding procedures or results of these tests, please contact me at your convenience.

Cordially,

MBC Applied Environmental Sciences

Michael J. Mancuso

Michael J. Mancuso, Manager
Technical Services

enclosure

DEPARTMENT of HEALTH SERVICES ACUTE AQUATIC TOXICITY BIOASSAY

Job No.: 88420X Client: ALWS Date Sampled: 16 Sep 88 Date Started: 20 Sep 88

WBC Sample #: 8275 Client Identification: ALWS #1068 Time Sampled: - Time Started: 0900 hrs

		0 Hours				24 Hours				48 Hours				72 Hours				96 Hours			
Aquar. #	Test Conc.	pH	DO	Temp.	Live	pH	DO	Temp.	Live	pH	DO	Temp.	Live	pH	DO	Temp.	Live	pH	DO	Temp.	Live
	Control	7.7	0.3	20.9	10	7.4	7.7	20.7	10	7.1	7.5	20.8	10	7.3	7.9	20.7	10	6.9	7.8	20.5	10
1	250 mg/l	8.0	0.3	20.9	10	7.7	8.0	20.7	10	7.4	7.6	20.8	10	7.5	7.9	20.6	10	7.1	7.9	20.3	10
2	250 mg/l	7.9	0.3	20.9	10	7.7	7.3	20.7	10	7.4	8.0	20.9	10	7.5	7.2	20.6	10	7.3	7.3	20.3	10
3	500 mg/l	8.0	0.5	20.9	10	7.8	7.4	20.6	10*	7.7	8.1	20.4	10*	7.8	7.2	20.4	10*	7.5	7.2	20.2	10*
4	500 mg/l	8.1	0.4	20.5	10	7.8	7.3	20.3	10*	7.7	8.0	20.4	10*	7.8	7.2	20.4	10*	7.6	7.2	20.1	10*
5	750 mg/l	8.2	0.5	20.5	10	8.0	7.4	20.2	10*	7.9	7.3	20.9	10*	7.8	7.4	21.2	10*	7.7	7.4	20.8	10*
6	750 mg/l	8.2	0.5	20.5	10	8.0	7.4	20.3	10*	7.8	7.3	20.8	10*	7.8	7.4	21.1	10*	7.7	7.5	20.5	10*

Species: Fathead minnow (Pimephales promelas) Avg. Length (mm) 38.7 Max. Length (mm) 45.0 Min. Length (mm) 34.0
No. of fish/replicate concentration: 10 Avg. Weight (gm) 0.81 Max. Weight (gm) 1.27 Min. Weight (g): 0.50
Volume of Test Solution: 15 liters Depth (cm): 20 cm Type Aeration: as per Poliein1 (1986)
Acclimatization: 17 days at 20oC Percent dead in acclimatization tank: <1% Dilution Water Source: Reconstituted softwater

pH Range	6.9	8.2
DO Range	0.3	8.1
Temp Ran	20.1	21.2

	Control	750 mg/l		Control	750 mg/l
Initial Hardness	46.0	76.0	Initial Alkalinity:	33.0	61.6
Final Hardness:	45.6	88.0	Final Alkalinity:	37.0	73.0

Notes: * 24, 48 and 72 hours very cloudy in 500 mg/l and 750 mg/l concentrations - could not obtain totally accurate number until fish screened out at 96 hours.
(Describe condition of fish during test especially any abnormalities in behavior & color).

RESULTS:

Concentration	% Survival
Control	100%
250 mg/l	100%
500 mg/l	100%
750 mg/l	100%
LC 50	>750mg/l

Technician: Martina Budris

88UT91

Copy No. 4

15 August 1989

SUBSURFACE INVESTIGATION AT THE PREVIOUS LOCATION OF THREE UNDERGROUND STORAGE TANKS ORANGE COAST COLLEGE FARM MAINTENANCE FACILITY COSTA MESA, CALIFORNIA

Prepared for:

COAST COMMUNITY COLLEGE DISTRICT
1370 Adams Avenue
Costa Mesa, California 92626

Prepared by:

Applied Geosciences Inc.
17321 Irvine Boulevard
Tustin, California 92680
(714) 838-8545

RECEIVED
AUG 18 1989
HEALTH CARE AGENCY
Environmental Health

Project No. A891514

APPLIED GEOSCIENCES INC.

17321 Irvine Boulevard
Tustin, California 92680
(714) 838-8545
FAX (714) 838-1401

15 August 1989
A891514
OCC-9

Coast Community College District
1370 Adams Avenue
Costa Mesa, California 92626

Attention: Mr. Eugene Harrie

SUBJECT: SUBSURFACE INVESTIGATION FOR COAST COMMUNITY COLLEGE DISTRICT, ORANGE COAST COLLEGE FARM MAINTENANCE FACILITY, COSTA MESA, CALIFORNIA

Gentlemen:

Applied Geosciences Inc. is pleased to submit three copies of this report in general accordance with our contract dated 4 April 1989.

We have enjoyed working with you on this investigation, and look forward to future projects with you.

If you have any questions regarding this report, please call either of us.

Very truly yours,
APPLIED GEOSCIENCES INC.

Jon R. Lovegreen

JON R. LOVEGREEN
Certified Engineering Geologist
No. EG1164

cc: Ms. Lisa Casner - OCHCA (with 1 encl.)
Mr. Steve Overman - CRWQCB (with 1 encl.)
File A891514

SUBSURFACE INVESTIGATION AT
THE PREVIOUS LOCATION OF
THREE UNDERGROUND STORAGE TANKS
ORANGE COAST COLLEGE
FARM MAINTENANCE FACILITY
COSTA MESA, CALIFORNIA

1.0 INTRODUCTION

Presented herein are the findings of the subsurface investigation performed by Applied Geosciences Inc. at the Orange Coast College Farm Maintenance Facility, located at 2701 Fairview Road in Costa Mesa, California (Figure 1).

The subsurface investigation was performed in general accordance with the 4 April 1989 contract between Applied Geosciences Inc. and Coast Community College District. In addition, the investigation was conducted in general accordance with the proposal prepared by Applied Geosciences Inc. dated 28 March 1989 (Applied Geosciences Inc., 1989).

2.0 BACKGROUND

In December of 1987, the permitting process began for the removal of three underground storage tanks (USTs) from an area near the southeast corner of the Farm Maintenance Facility at Orange Coast College in Costa Mesa, California. The three respective USTs were reported to contain: 1) diesel fuel, 2) weed oil (primarily crude oil), and 3) waste oil (with solvents added).

Upon removal of the USTs, the Orange County Health Care Agency (OCHCA) carried out an investigation that included the excavation and sampling of in situ soils that were apparently degraded by petroleum hydrocarbons. After completion of the OCHCA investigation, the UST excavation was backfilled and capped with concrete.

In February 1989, Coast Community College District requested that Applied Geosciences Inc. propose a site investigation relative to the area where the USTs were previously removed. The proposed investigation was to include a project history review based on the existing OCHCA project records.

The information contained within this section of the subsurface investigation report was taken from copies of the project file records provided by the OCHCA Records Section (OCHCA, 1989), Santa Ana, California. Quotations contained herein indicate words, phrases or statements that have been taken verbatim from the original records.

18 December 1987

The following activities were reported to have occurred on this date:

1. A representative of Pomona Valley Equipment Rentals filed an "Application For Facility Modification" permit with the OCHCA for the removal of three USTs in the "Farm Area" (Farm Maintenance Facility) of Orange Coast College.

2. Attached to this application was a hand-drawn sketch (plan view) of the "Farm Area" which indicated the following:

   o The permit had been stamped "APPROVED" by the OCHCA Environmental Health, Waste Management Section (Plan #87-583); it was signed and dated 24 December 1987.

   o Three USTs were located near the southeast corner of the "Equipment Shed Canopy."

   o The USTs were shown to be side by side with the long axis of each tank oriented in an east-west direction.

Table 1 indicates how the tanks were labeled on the 18 December 1987 sketch.

TABLE 1

Tank A	1,000-gallon diesel fuel	(northernmost tank)
Tank B	250-gallon weed oil	(southernmost tank)
Tank C	250-gallon waste oil	(middle tank)

5 January 1988

The three USTs were removed by Pomona Valley Equipment Rentals, after which one soil sample was collected by an OCHCA representative. These activities were described by the OCHCA on a "Field Activity Description" form (which included a plan-view sketch) and on an "Underground Tank Cleanup Form," both of which were dated 5 January 1988.

A generalized subsurface cross section of the UST excavation, as well as soil sampling locations and chemical analyses results, are presented in Figures 3 and 4.

The following information is contained on these forms:

1. On the sketch, the tanks are located near the southeast corner of the "Equipment Shed"; they are side by side and oriented with the long axes in an east-west direction. The

tanks are labeled 1, 2 and 3 (from north to south), coinciding with Tanks A, C and B, respectively, of the previously discussed records (this information is found on the "Field Activity Description" form).

2. The tanks had been removed prior to the arrival of the OCHCA field representative (noted on both forms). It was noted on the "Field Activity Description" form that "Tank 3 contained weed oil which is apparently only crude oil; no pesticides, herbicides pr.". Also noted was that "Tank 2 waste oil & solvent tank: solvents were dump into tank..."

3. Soil Sample No. 1-C was collected approximately 1 foot below Tank 2 (assumed to be approximately 10 feet below ground surface [BGS]) in the center of the excavation, in a "black, discolored clay"; there was "evident discoloration to soil below center of excavation" (quotations taken from both forms).

4. The chain-of-custody record indicated that Sample No. 1-C was acquired on 5 January 1988 and was to be analyzed for total recoverable petroleum hydrocarbons (TRPH, by EPA Method No. 418.1) and for halogenated volatile organic compounds (HVOC, by EPA Method No. 8010).

5. Results of the analyses performed by Associated Laboratories of Orange, California, are shown in Table 2.

TABLE 2
(RESULTS IN MG/KG)

SOIL SAMPLE NO. 1-C	
TRPH (418.1): 30,000	HVOC (8010): ND

NOTES:

1. ND = Not detected; detection limit = 0.002
2. Mg/kg = Milligrams per kilogram

25 January 1988

An "Activities Report" form from the OCHCA read, in part:

> "3 tanks removed from fuel farm area: 1 tank contained waste oil - soil discolored around tank. Verbal results 418.1 30,000 ppm; 8010 ND."

1 February 1988

Mr. E.F. Harrie of Coast Community College District filed an "Underground Storage Tank Unauthorized Release (Leak)/ Contamination Site Report" form with the OCHCA. On that document, the "Farm School" was referenced as the location of a 250-gallon waste oil tank that was discovered to be leaking during its removal.

9 February 1988

A copy of an OCHCA chain-of-custody form dated 9 February 1988 was attached to a copy of laboratory results dated 17 February 1988. Associated Laboratories performed the chemical analyses for Pomona Valley Equipment Rentals. Both documents contained essentially the same information, as discussed below.

1. Two soil samples were collected at the "Fuel Farm" (assumed to mean the Farm Maintenance Facility) of Orange Coast College. They were labeled as sample "#2" and sample "#3"; neither the depths nor the locations from which the samples were collected were indicated on these records.

2. The samples were run for TRPH (EPA Method No. 418.1) and for benzene, toluene, ethylbenzene and total xylenes (BTEX, EPA Method No. 8020). Laboratory results for these two samples are given in Table 3 below.

3. Neither a site sketch nor the standard OCHCA forms describing field activities were included in the records provided by the OCHCA Records Section for this date.

TABLE 3
(RESULTS IN MG/KG)

Sample No.	TRPH (418.1)	B/T/E/X (8020)
#2	15,200	3.6/8.0/ND/61.5
#3	760	ND/ND/ND/ND

NOTES:

1) Detection limits for B/T/E/X: 0.05/0.05/0.1/0.1
2) ND = Not detected
3) Mg/kg = Milligrams per kilogram

17 March 1988

Excavation and sampling of degraded soils resumed in the area where the three USTs had previously been removed. The following activities were described by an OCHCA representative on standard OCHCA field forms that included a sketch (not to scale) illustrating the project area.

1. The sketch shows an excavation near the southeast corner of the "Workshop"; in it, three USTs are oriented as in previous records; the position of each UST is illustrated by dashed lines (found on the "Field Activity Description" form).

2. Soil sample "No. 5" was acquired with a backhoe in a "gray-green micaceous silty fine sand" (noted on the same form).

3. The approximate area from which the sample was collected (located on the sketch) is in the center of the excavation; the text portion of the field record describes Sample "No. 5" as having been "...taken from ~16 ft below grade at the approximate center of excavation (closer to north end of excavation)."

4. The "soil has a distinct diesel odor"; the reading on the gastech meter was "> 500 ppm"; the "sidewalls appear "clean"; mainly bottom of excavation appears contaminated," (quotations taken from the "Field Activity Description" form).

5. The records indicate that the soil sample was "...sent to Associated Labs and analyzed using EPA 8015/8020 for diesel contamination." However, no evidence of analytical results from samples collected on 17 March could be found in the file records provided by the OCHCA Records Section, (the quoted information was found on in the "Underground Tank Cleanup Form").

14 April 1988

Excavation and sampling of degraded soils again resumed in the area where the three USTs had been removed. The OCHCA records for work performed on this date include: 1) a description of field activities and a sketch (not to scale) of the project area, 2) a blank form that is used to document UST removal, 3) a chain-of-custody record, and 4) results of chemical analyses from Associated Laboratories. The following information was obtained from these records (quotations are taken from the "Field Activity Description" form, unless otherwise noted).

1. An excavation is located (on the sketch) next to the southeast corner of the "Maintenance Shop"; the perimeter of the digging is labeled as "15'" in a north-south direction

by "approximately 13'" in an east-west direction. The written field records indicate that it was "Excavated to approximately 25' depth."

2. Records also indicate that there was a "Slight odor of solvent in air above pit." Readings on the gastech meter were "0 to very low."

3. The sketch apparently shows soil sample "#1" to be located in the extreme south-central portion of the excavation at a depth of "25'." A gastech meter reading of "20 ppm" is apparently indicated for soil taken from this depth.

   Sample "#2" is shown to be located in the extreme north-central part of the excavation, also at a depth of "25'." A gastech reading from this soil is shown to be "0 ppm."

4. The chain-of-custody record indicates that the samples were to be analyzed as follows: "Analyze for waste oil, gasoline and diesel. If the TPH > 100 ppm, run EPA 8010."

5. Results of laboratory analyses for the two soil samples are summarized in Table 4.

TABLE 4
(RESULTS IN MG/KG)

Sample No.	TRPH (418.1)	TPH (8015)	B/T/E/X (8020)	HVOC (8010)
#1	4310	882	ND	ND
#2	ND	ND	ND	NA

NOTES:

1) ND = Not detected
2) NA = Not analyzed by this method
3) Detection limits:
   TRPH 10
   TPH 10
   B/T/E/X ... 0.05/0.05/0.1/0.1
   HVOC 0.01
4) Mg/kg = Milligrams per kilogram

<u>25 October 1988 To 25 April 1989</u>

The ensuing information was derived from the OCHCA "Activities Report" (communication logs) for this project. Words and phrases appearing within quotation marks have been taken verbatim from the records.

10/25/88 Based upon current information and laboratory results, the site assessment was decided to be incomplete.

10/25/88 The excavation where the three USTs were previously removed was overexcavated, backfilled with "clean fill" and "cemented over."

12/22/88 The project history of soil sampling and laboratory results was reviewed in an attempt to clarify what may remain beyond existing limits of the excavation.

01/04/89 Based upon the "last report received 10-13-88 ... we still need to know extent (of) contam."

04/25/89 Representatives of Applied Geosciences Inc. became actively involved in the project.

3.0 OBJECTIVE

The objective of the subsurface investigation conducted by Applied Geosciences Inc. was to assess the vertical extent and concentration of petroleum hydrocarbons and aromatic VOCs in the soil in the reported area where three USTs were previously removed.

4.0 SCOPE OF INVESTIGATION

The scope of the subsurface investigation included the following:

Task 1. Preparation and implementation of a health and safety plan.

Task 2. Review of OCHCA file records with regards to previous soil sampling locations and results of laboratory analyses.

Task 3. Removal of a 12-inch diameter, 6-inch thick concrete core; the drilling of one soil boring to a depth of approximately 33 feet BGS; collection of three soil samples; backfill and surface patch of the boring.

Task 4. Laboratory chemical analyses of all of the soil samples for TRPH in general accordance with EPA Method No. 418.1 and for BTXE in general accordance with EPA Method No. 8020; analysis of one of the soil samples for total petroleum hydrocarbons (TPH) in general accordance with EPA Method No. 8015 (modified).

Task 5. Data evaluation and preparation of this report.

5.0 FIELD INVESTIGATION

5.1 Soil Boring Location and Installation

5.1.1 Boring Location

The location of the recently drilled soil boring was based on information provided by the OCHCA Records Section. The OCHCA field records dated 14 April 1988 were judged to be particularly useful in assessing the approximate location of the most recent and deepest excavation-bottom-sample impacted with petroleum hydrocarbons. The "Activities Report" of 25 January 1988 and the UST leak document of 1 February 1988, discussed in Section 2.0, were also used as guidelines for boring placement prior to the actual field work.

As was noted in the 14 April 1988 information discussed in Section 2.0, the UST excavation was reported to have reached a maximum depth of 25 feet BGS on that date. It was also reported that soil sample "#1" was collected at this depth in the south-central portion of the excavation. Of the two soil samples collected on that date, sample "#1" had the highest reported concentration of petroleum hydrocarbons.

Based on this and other information provided in the records, the location of the recently drilled soil boring was selected to be positioned vertically over the approximate vicinity where soil sample "#1" was collected on 14 April 1988. The location of the boring, designated as OCC1, is presented in Figure 2.

5.1.2 Boring Installation

On 22 June 1989, an attempt was made to drill one soil boring to approximately 25 to 30 feet BGS with a trailer-mounted drilling rig equipped with an approximate 8-inch outside diameter (OD) hollow stem auger.

A total depth of approximately 22 feet BGS was reached on that day before the drilling rig malfunctioned and had to be removed from the project site. The boring was temporarily covered and the area enclosed with barricades and caution tape.

On 28 June 1989, the drilling of boring OCC1 was completed with a truck-mounted drilling rig equipped with approximately 8- and 11-inch OD hollow stem auger. The boring was drilled to a total depth of approximately 33 feet BGS.

Relatively undisturbed soil samples were obtained in the boring at 20 feet BGS on the first day of drilling activities, and at 25 and 31.5 feet BGS on the second day with a 2-inch inside diameter (ID) split-barrel sampler. Furthermore, a standard penetrometer (SPT) sampler was used to obtain relatively undisturbed soil (from approximately 1.5- to 2-foot intervals) between the collected samples mentioned above.

The SPT samples provided additional lithologic characteristics of soil between those samples collected for analysis. A generalized subsurface cross section of the UST excavation, as well as soil sampling locations and associated chemical analyses results, are depicted in Figures 3 and 4.

Results of chemical analyses of selected soil samples are also presented in Table 5 of Section 7.0. In addition, a headspace analysis for volatile aromatics was conducted during drilling operations on soil from each sampler. No detectable headspace readings were measured in any of the samples. Procedures for the collection of soil samples and headspace analysis are discussed in more detail in Appendix A.

Upon the completion of drilling and soil sampling of boring OCC1, the boring was backfilled in the following manner: 1) from 33 to approximately 10.5 feet BGS with activated bentonite chips, 2) from 10.5 to approximately 2 feet BGS with a mixture of #3 sand and bentonite chips at a 3:1 ratio, 3) from 2 to approximately 0.5 feet BGS with activated bentonite chips and 4) from 0.5 feet to the surface with the previously removed concrete core; asphaltic concrete (cold patch) was placed in the sawcut between the concrete core and the remainder of the concrete pad.

5.2 Soil Observations

Notes taken on the soil types encountered in the soil boring have been incorporated into the soil description presented in Section 6.1. In addition, olfactory observations were made in the field regarding the presence of petroleum hydrocarbons in the auger cuttings (soil brought to the surface during drilling). No olfactory evidence of hydrocarbon odors was noted.

6.0 SUBSURFACE CONDITIONS

6.1 Soil Lithology

Predominant soil types encountered in the soil boring (as interpreted during drilling operations), include gravels, sands, silts and clays. These soil types were observed to be distributed as described below.

In general, a sandy gravel was encountered in the soil cuttings from approximately the upper 16 feet of the boring. This unit is interpreted to be artificial fill material used to backfill the UST excavation. Beneath the artificial fill, a fine sandy clay containing some gravel was encountered in the cuttings to a depth of approximately 20 feet BGS. This soil interval is construed to be a zone of mixing where the bottom of the digging was overexcavated, prior to placement of the fill (documented on the OCHCA "Activities Report" dated 25 October 1988). Below this sandy clay (at 20 feet BGS), a relatively impermeable clay unit was encountered in the samples to approximately 22 feet BGS. This clay unit appeared to be undisturbed native soil, in our judgment.

Beneath the clay unit, a series of fine to coarse sands with occasional interbeds of silty fine sand was encountered between approximately 22 and 33 feet BGS. A more detailed description of the soils encountered during this investigation is presented on the soil boring log in Appendix B.

6.2 Groundwater Occurrence

The shallow groundwater table was not encountered during the course of this subsurface investigation. Furthermore, the amount of moisture observed in the soil units encountered during drilling operations, described on boring log OCC1, was "dry to damp."

In addition, the OCHCA project records for 14 April 1988 indicate that groundwater was not observed during the excavation and sampling of subsurface soils on that day.

7.0 CHEMICAL ANALYSES RESULTS

Vadose zone soil samples collected as described in Section 5.1.2 were analyzed by Truesdail Laboratories Inc., a California state-certified hazardous waste laboratory located in Tustin, California.

A total of three soil samples were collected during the subsurface drilling program. The three samples were analyzed for TRPH in general accordance with EPA Method No. 418.1 and for BTXE in general accordance with EPA Method No. 8020. One of the three soil samples was analyzed for TPH in general accordance with EPA Method No. 8015 (modified).

One of the samples analyzed for TRPH was found to contain 3.2 mg/kg by EPA Method 418.1. Otherwise, laboratory results for all of the samples analyzed by the three EPA methods discussed above (where applicable) contained non-detectable quantities of the respective components analyzed for, at the detection limits noted. Laboratory results of chemical analyses are summarized in Table 5. The laboratory report is presented in Appendix C.

TABLE 5
(RESULTS IN MG/KG)

Sample No.	TRPH (418.1)	TPH (8015)	B/T/X/E (8020)
OCC1-1	ND	NA	ND
OCC1-2	ND	ND	ND
OCC1-3	3.2	NA	ND

NOTES TO TABLE 5:

1) ND = Not detected
2) NA = Not analyzed by this method
3) Detection limits:
   TRPH 1.61
   TPH 10.0
   B/T/X/E ... 0.005/0.005/0.005/0.005
4) Mg/kg = Milligrams per kilogram

8.0 DISCUSSION

Three USTs were removed from an area near the southeast corner of the Farm Maintenance Facility at Orange Coast College in Costa Mesa, California. The OCHCA performed an investigation which included the excavation and sampling of soils that were apparently degraded by petroleum hydrocarbons. Information pertaining to this investigation was provided to Applied Geosciences Inc. by the OCHCA records section (OCHCA, 1989). These records were observed to be incomplete regarding: 1) field activity descriptions, 2) measurements for locating the USTs with respect to existing site features and 3) results of laboratory analyses.

Applied Geosciences Inc. carried out a subsurface investigation in June 1989 based on information contained in the OCHCA records (OCHCA, 1989) and on visits to the site by field personnel. There were primarily two factors used to determine the location of soil boring OCC1 for the investigation.

One factor used to select the location of soil boring OCC1 was the observed presence of a relatively "new" concrete slab in the area where the USTs were previously removed. The "new" concrete slab apparently indicated the approximate location of the UST excavation. The slab measured approximately 23 feet in a north-south direction by 19 feet in an east-west direction. A sketch from the OCHCA records showed the UST excavation to be approximately 15 feet (north-south) by 13 feet (east-west). With no source of information to indicate otherwise, the lateral limits of the UST excavation were assumed to be centrally located within the perimeter of the "new" slab (Figure 2).

A second factor used to determine the location of the soil boring was based on information contained in the OCHCA records (OCHCA, 1989). That information is more fully discussed in Item 5.1.1 of Section 5.0 of this report. To summarize that section, the records indicated that the approximate location of the most recent and deepest excavation-bottom-sample impacted with petroleum hydrocarbons was collected from the south-central portion of the UST excavation. The OCHCA records did not contain information regarding the actual (measured) locations of soil samples relative to existing site features near the UST excavation.

Based on the two factors discussed above and our professional judgment, there is a high likelihood that the soil boring was positioned vertically over the approximate location in the UST excavation where previous soil sampling indicated the presence of soils that were degraded by petroleum hydrocarbons.

Results of chemical analyses for soil samples collected by the OCHCA on 14 April 1988 indicated that soils degraded by petroleum hydrocarbons (TRPH by EPA Method No. 418.1 and TPH by EPA Method No. 8015 [modified]) existed in the south-central portion of the UST excavation at a depth of 25 feet BGS. However, laboratory results for soil samples collected from approximately the same area by Applied Geosciences Inc. on 22 June and 28 June 1989 indicated that no significant concentrations of these petroleum hydrocarbons existed in the samples analyzed, to a depth of approximately 33 feet BGS.

At this time, it is not clear how much of the existing soil in the area of the UST excavation is degraded by petroleum hydrocarbons, nor is it clear to what degree the soil is degraded. Applied Geosciences Inc. recommends in Section 10.0 of this report that further assessment of this area be carried out with the use of drilling and soil sampling equipment and a mobile laboratory.

If results of chemical analyses for selected soil samples indicate that neither petroleum hydrocarbons nor aromatic VOCs are present in significant amounts in future soil borings (and upon consent of the OCHCA), Applied Geosciences Inc. would be of the opinion that further subsurface assessment in this particular area would not be necessary.

9.0 CONCLUSIONS

The following conclusions are based on data obtained during the subsurface investigation, current regulatory guidelines, a review of the OCHCA project records and our professional judgment:

- No significant concentrations of total recoverable petroleum hydrocarbons (TRPH, in general accordance with EPA Method No. 418.1), total petroleum hydrocarbons (TPH, in general accordance with EPA Method No. 8015 [modified]) or benzene, toluene, total xylenes or ethylbenzene (BTXE, in general accordance with EPA Method No. 8020) were detected in the soil samples collected and analyzed during the Applied Geosciences Inc. subsurface investigation.

- Previous investigative work by the OCHCA indicated that concentrations of TRPH and TPH exceeded 4300 mg/kg and 800 mg/kg, respectively. At this time, it is not clear how much of the existing soil in the area of the UST excavation is degraded by petroleum hydrocarbons, nor is it clear to what degree the soil is degraded.

- Groundwater was not encountered during the course of either the OCHCA investigation or the Applied Geosciences Inc. subsurface investigation.

10.0 RECOMMENDATIONS

The recommendations presented in this section are based on data obtained during the subsurface investigation, current regulatory guidelines, a review of the OCHCA project records and our professional judgment:

- Use a bucket-auger drilling rig to further assess the extent of soils degraded by petroleum hydrocarbons in the area of the UST excavation; and

- Collect and analyze soil samples for total recoverable petroleum hydrocarbons (TRPH, in general accordance with EPA Method No. 418.1), total petroleum hydrocarbons (TPH, in general accordance with EPA Method No. 8015 [modified]) and benzene, toluene, total xylenes and ethylbenzene (BTXE, in general accordance with EPA Method No. 8020) using an on-site mobile laboratory.

11.0 REFERENCES

Applied Geosciences Inc., 1989, Proposal to drill and sample one soil boring in the vicinity of removed USTs, Orange Coast College, Costa Mesa, California: Unpublished report prepared by Applied Geosciences Inc., Tustin, California; prepared for Coast Community College District, dated 3 April 1989.

Orange County Health Care Agency (OCHCA), 1989, project files.

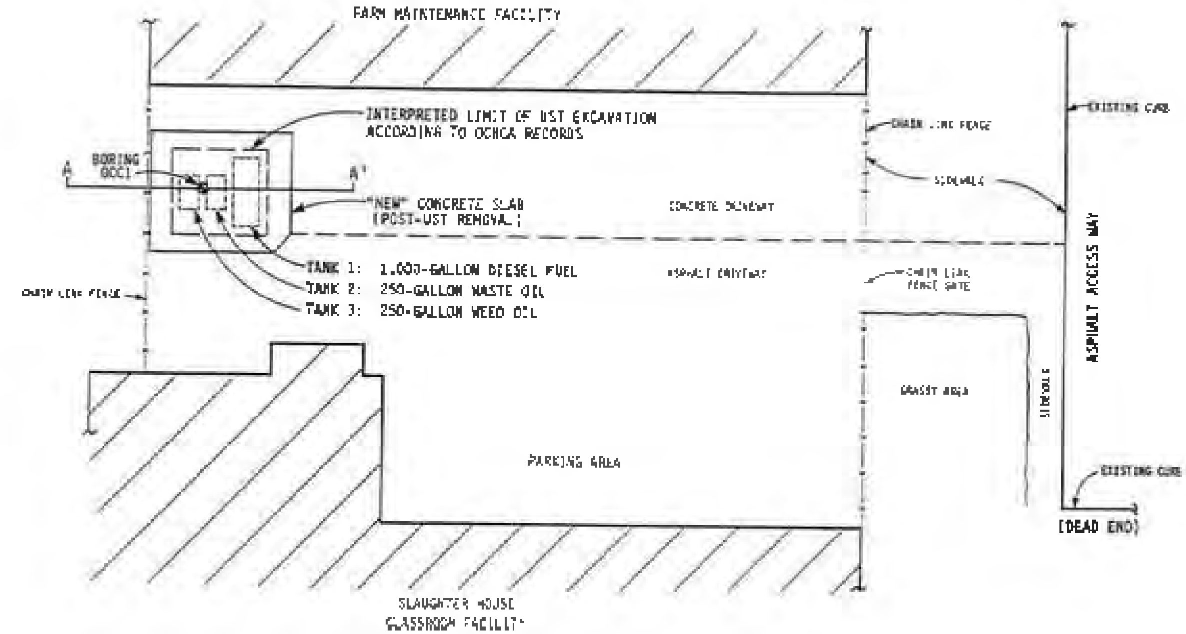
NOTE:
BASE MAP IS TAKEN FROM USGS NEWPORT BEACH QUADRANGLE, CALIFORNIA-ORANGE CO., 7.5 MINUTE SERIES (TOPOGRAPHIC), 1965, PHOTOREVISED 1981

APPLIED GEOSCIENCES INC.
Engineering Geology and Hazardous Materials Consultants

SITE VICINITY MAP

PROJECT NUMBER A891514

FIGURE 1



EXPLANATION

A-A' CROSS SECTION LOCATION AND DESIGNATION

NOTES:

1) SITE PLAN CONSTRUCTED FROM FIELD MEASUREMENTS TAKEN BY APPLIED GEOSCIENCES INC. PERSONNEL
2) ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE
3) FORMER UNDERGROUND STORAGE TANK (UST) EXCAVATION LIMIT BASED UPON ORANGE COUNTY HEALTH CARE AGENCY (OCHCA) RECORDS

NORTH

0 20 40

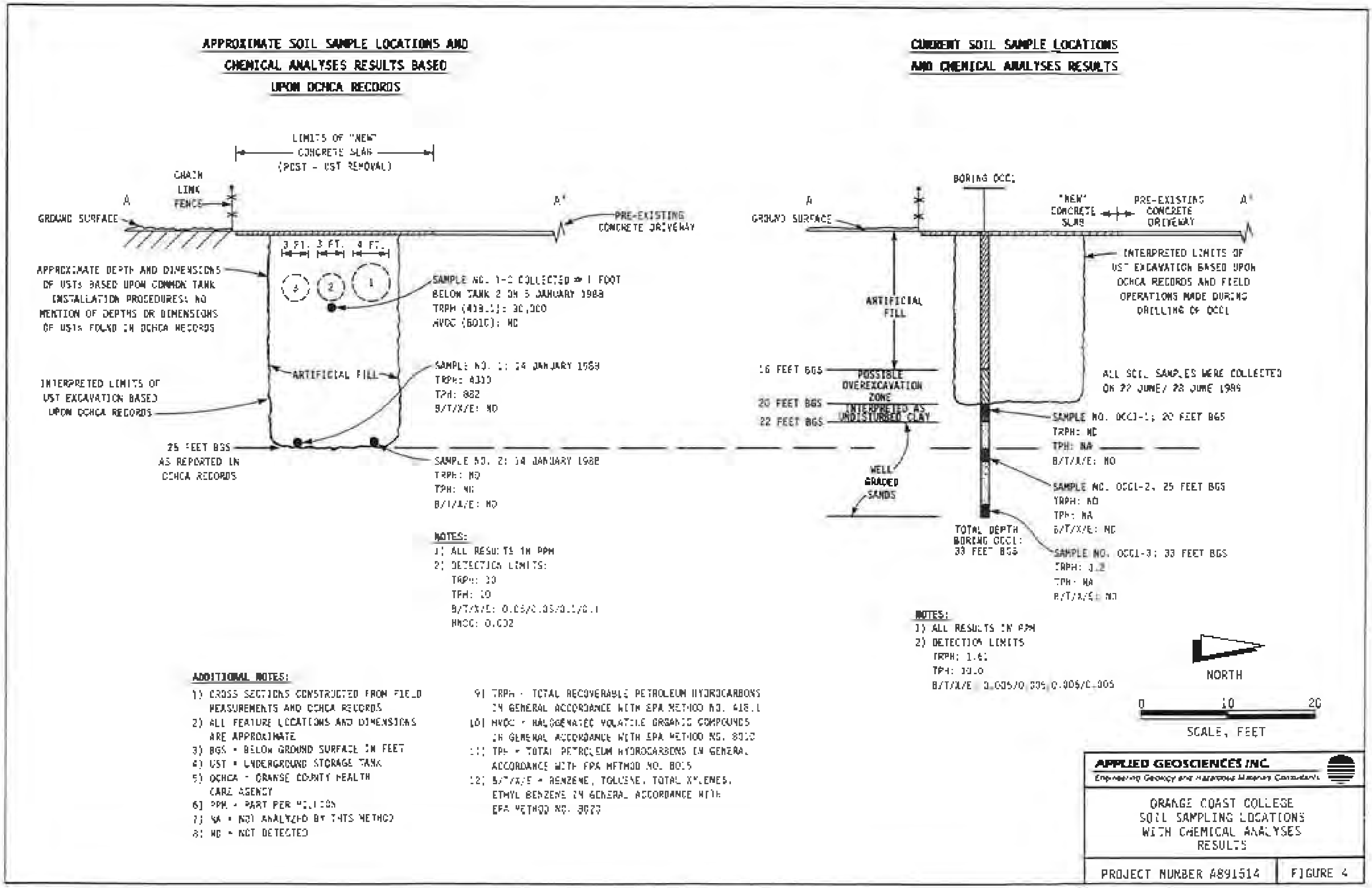
SCALE, FEET

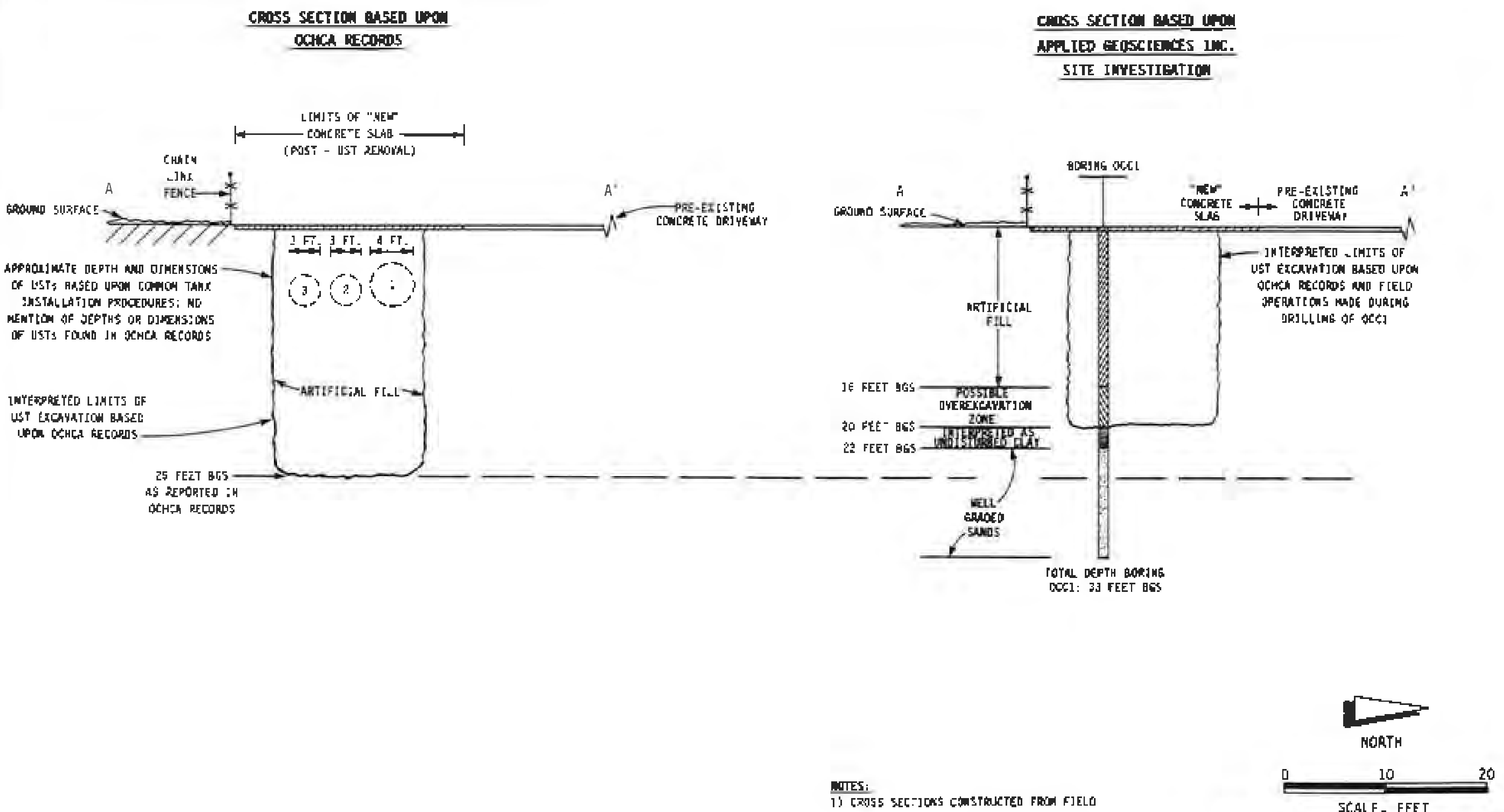
APPLIED GEOSCIENCES INC.

Engineering Geology and Hazardous Materials Consultants

ORANGE COAST COLLEGE
SITE PLAN

PROJECT NUMBER AG91514 | FIGURE 2


APPROXIMATE SOIL SAMPLE LOCATIONS AND
CHEMICAL ANALYSES RESULTS BASED
UPON OCHCA RECORDS
LIMITS OF "NEW" CONCRETE SLAB (POST - UST REMOVAL)
CHAIN LINK FENCE
A
A'
GROUND SURFACE
PRE-EXISTING CONCRETE DRIVEWAY
3 FT. 3 FT. 4 FT.
APPROXIMATE DEPTH AND DIMENSIONS OF USTs BASED UPON COMMON TANK INSTALLATION PROCEDURES; NO MENTION OF DEPTHS OR DIMENSIONS OF USTs FOUND IN OCHCA RECORDS
SAMPLE NO. 1-2 COLLECTED @ 1 FOOT BELOW TANK 2 ON 5 JANUARY 1988
TRPH (418.1): 30,000
HVOC (8010): ND
ARTIFICIAL FILL
INTERPRETED LIMITS OF UST EXCAVATION BASED UPON OCHCA RECORDS
SAMPLE NO. 1: 14 JANUARY 1988
TRPH: 4310
TPH: 882
B/T/X/E: ND
25 FEET BGS AS REPORTED IN OCHCA RECORDS
SAMPLE NO. 2: 14 JANUARY 1988
TRPH: ND
TPH: ND
B/T/X/E: ND
NOTES:
1) ALL RESULTS IN PPM
2) DETECTION LIMITS:
TRPH: 10
TPH: 10
B/T/X/E: 0.05/0.05/0.1/0.1
HVOC: 0.002
CURRENT SOIL SAMPLE LOCATIONS
AND CHEMICAL ANALYSES RESULTS
BORING OCCL
A
A'
GROUND SURFACE
"NEW" CONCRETE SLAB
PRE-EXISTING CONCRETE DRIVEWAY
INTERPRETED LIMITS OF UST EXCAVATION BASED UPON OCHCA RECORDS AND FIELD OPERATIONS MADE DURING DRILLING OF OCCL
ARTIFICIAL FILL
16 FEET BGS
POSSIBLE OVEREXCAVATION ZONE
20 FEET BGS
INTERPRETED AS UNDISTURBED CLAY
22 FEET BGS
WELL GRADED SANDS
ALL SOIL SAMPLES WERE COLLECTED ON 27 JUNE/ 28 JUNE 1989
SAMPLE NO. OCCL-1, 20 FEET BGS
TRPH: ND
TPH: NA
B/T/X/E: ND
SAMPLE NO. OCCL-2, 25 FEET BGS
TRPH: ND
TPH: NA
B/T/X/E: ND
TOTAL DEPTH BORING OCCL: 33 FEET BGS
SAMPLE NO. OCCL-3, 33 FEET BGS
TRPH: 3.2
TPH: NA
B/T/X/E: ND
NOTES:
1) ALL RESULTS IN PPM
2) DETECTION LIMITS
TRPH: 1.61
TPH: 10.0
B/T/X/E: 0.005/0.005/0.005/0.005
NORTH
0 10 20
SCALE, FEET
ADDITIONAL NOTES:
1) CROSS SECTIONS CONSTRUCTED FROM FIELD MEASUREMENTS AND OCHCA RECORDS
2) ALL FEATURE LOCATIONS AND DIMENSIONS ARE APPROXIMATE
3) BGS = BELOW GROUND SURFACE IN FEET
4) UST = UNDERGROUND STORAGE TANK
5) OCHCA - ORANGE COUNTY HEALTH CARE AGENCY
6) PPM - PART PER MILLION
7) NA = NOT ANALYZED BY THIS METHOD
8) ND = NOT DETECTED
9) TRPH - TOTAL RECOVERABLE PETROLEUM HYDROCARBONS IN GENERAL ACCORDANCE WITH EPA METHOD NO. 418.1
10) HVOC - HALOGENATED VOLATILE ORGANIC COMPOUNDS IN GENERAL ACCORDANCE WITH EPA METHOD NO. 8010
11) TPH = TOTAL PETROLEUM HYDROCARBONS IN GENERAL ACCORDANCE WITH EPA METHOD NO. 8015
12) B/T/X/E = BENZENE, TOLUENE, TOTAL XYLENES, ETHYL BENZENE IN GENERAL ACCORDANCE WITH EPA METHOD NO. 8020
APPLIED GEOSCIENCES INC.
Engineering Geology and Hazardous Materials Consultants
ORANGE COAST COLLEGE
SOIL SAMPLING LOCATIONS
WITH CHEMICAL ANALYSES
RESULTS
PROJECT NUMBER A891514
FIGURE 4



NOTES:

1) CROSS SECTIONS CONSTRUCTED FROM FIELD MEASUREMENTS AND OCHCA RECORDS
2) ALL FEATURE LOCATIONS AND DIMENSIONS ARE APPROXIMATE
3) BGS = BELOW GROUND SURFACE IN FEET
4) UST - UNDERGROUND STORAGE TANK
5) OCHCA = ORANGE COUNTY HEALTH CARE AGENCY

APPLIED GEOSCIENCES INC.
Engineering Geology and Hazardous Materials Consultants

ORANGE COAST COLLEGE
GENERALIZED SUBSURFACE
CROSS SECTION A-A'

PROJECT NUMBER A891514	FIGURE 3

APPENDIX A

SOIL SAMPLING AND HEADSPACE ANALYSIS PROCEDURES

APPENDIX A

SOIL SAMPLING AND HEADSPACE ANALYSIS PROCEDURES

A.1 Soil Sampling Procedures

1. Drilling was conducted using a drilling rig equipped with 7-inch, 8-inch and 11-inch outside diameter hollow stem augers. All augers were steam cleaned prior to use.

2. Soil samples were collected with a split barrel sampler lined with pre-washed brass and/or stainless steel tubes. Each sampler was driven approximately 18 inches with a 140-pound hammer dropping approximately 30 inches per blow. The number of blows required to drive the sampler each six inches was then recorded.

3. Either the lowermost or second lowermost tube from each sampler was removed from the sampler and capped on each end with heavy-duty aluminum foil and polyethylene end caps. Edges of the end caps were secured with electrical tape.

4. Samples were labeled with boring number, date and project number, and then placed in a plastic Ziploc bag.

5. Samples were stored in an ice chest cooled with ice to approximately 40 degrees Fahrenheit prior to transportation to a California Department of Health Services state-certified hazardous waste laboratory under chain-of-custody procedures.

6. Sampling equipment was washed between samples with a solution of water and trisodium phosphate, rinsed twice with tap water and finally rinsed with deionized water.

A.2 Headspace Analytical Procedures

1. Soil at each sampled interval was extracted from the shoe of the sampler for headspace analysis and placed in a plastic Ziploc bag. The bag was filled with approximately 50 grams of soil and closed.

2. After agitating the soil sample and then allowing it to sit for approximately three to four minutes, the probe of a portable organic vapor meter (OVM) was inserted through an opening in the bag and a reading was taken in the headspace.

3. The OVM used was an Hnu Systems, Inc. Model PI 101 photoionizer equipped with a 10.2 eV probe calibrated to 58 ppm_v benzene.

4. The detection range reported by the manufacturer is 0.1 ppm_v to 2,000 ppm_v for benzene, and is similar for other volatile organic (hydrocarbon) compounds.

APPENDIX B

BORING LOG

PROJECT ▷ ORANGE COAST COLLEGE	APPLIED GEOSCIENCES INC.	PROJECT NUMBER ▷ A891514
LOGGED BY ▷ CRAIG McCAMMACK		START DATE ▷ 22 JUNE 1989
CHECKED BY ▷ JON LOVEGREEN		COMPLETION DATE ▷ 28 JUNE 1989

GROUND SURFACE ELEVATION DATUM (FT-MSL) ▷ 62 | DRILLING COMPANY ▷ WESTECH ENVIRONMENTAL

DRILLING EQUIPMENT ▷ CME 45 WITH 8-INCH O.D. HSA; MOBILE B-61 WITH 7¼-INCH AND 11-INCH O.D. HSA

BORING DEPTH (FT) ▷ 33 | WELL DEPTH (FT) ▷ NA | WATER DEPTH (FT)-INITIAL: NA COMPLETION: NA

WELL MATERIALS ▷ NA | WELL SCREEN INTERVAL (FT) ▷ NA

WELL CASING ELEVATION (FT-MSL) ▷ NA | OVM/OVA ▷ HNU WITH 10.2 EV PROBE

BACKFILL MATERIAL ▷ 33-10.5FT BENTONITE;10.5-2FT 3:1 RATIO SAND & BENTONITE;2-0.5FT BENTONITE;0.5-0FT CONCRETE

DEPTH (FT)	LITHOLOGY DESCRIPTION	GRAPHIC	WELL	BLOW COUNT	OVM/OVA (PPM)	SAMPLE RECOVERY %	SAMPLE TYPE	SAMPLE NUMBER	COMMENTS
0	CONCRETE								ARTIFICIAL FILL
	Gray-brown, damp, Sandy GRAVEL (GM); well graded; some silt								
5									
10									
15									
	Gray-brown, damp, fine Sandy CLAY (CL); minor fine gravel; interpreted as overexcavation zone								Became harder to drill at 16 feet
20	Pale greenish-gray, damp, CLAY (CL); stiff to very stiff; orange mottling; caliche veins			32	<1			OCC1-1	No hydrocarbon odor or staining
	Reddish-brown, dry, medium to coarse SAND (SW); trace mica; poorly consolidated								
25	Becomes light orange-brown, very dense, fine to coarse; trace silt			>50	<1			OCC1-2	No hydrocarbon odor or staining
	Interbedded orange-brown, dry, Silty fine SAND (SM) and tan-brown, dry coarse SAND (SP); sand is poorly consolidated								
30									

BORING DESIGNATION		PAGE NUMBER	FIGURE NUMBER
OCC1	BORING LOG	1 OF 2	B1

PROJECT ▷ ORANGE COAST COLLEGE | PROJECT NUMBER ▷ A891514

DEPTH (FT)	LITHOLOGY: DESCRIPTION	GRAPHIC	WELL	BLOW COUNT	OVM/OVA (PPM)	SAMPLE: RECOVERY %	SAMPLE: TYPE	SAMPLE: NUMBER	COMMENTS
30	Tan-brown, dry, very dense, fine to coarse SAND (SW); trace silt			37				NR	Sample not recovered
				>50	<1			OCC1-3	No hydrocarbon odor or staining
33	Bottom of boring at 33 feet								
35									
40									
45									
50									
55									
60									
65									
70									

BORING DESIGNATION		PAGE NUMBER	FIGURE NUMBER
OCC1 (CONTINUED)	**BORING LOG**	2 OF 2	B1

APPENDIX C

LABORATORY CHEMICAL ANALYSES REPORT AND CHAIN-OF-CUSTODY RECORD

REPORT

TRUESDAIL LABORATORIES, INC.

CHEMISTS · MICROBIOLOGISTS · ENGINEERS
RESEARCH — DEVELOPMENT — TESTING

14201 FRANKLIN AVENUE
TUSTIN, CALIFORNIA 92680
AREA CODE 714 • 730-6239
AREA CODE 213 • 225-1564
CABLE: TRUELABS

CLIENT **Applied Geoscience, Inc.**
17321 Irvine Boulevard
Tustin, California 92680
Attention: Craig A. McCormick

DATE July 12, 1989

RECEIVED June 30, 1989

LABORATORY NO. 34040

SAMPLE **Three soil**
Project: Orange Coast College
Project No.: A891514 Task 3

INVESTIGATION
Analysis as requested

RESULTS

Parameter		CONCENTRATION, MG/KG	
	OCC1-1-1 6/30/89	OCC1-2-1 6/30/89	OCC1-3-2 6/30/89
Total Petroleum Hydrocarbons (EPA 418.1)	<1.61	<1.61	3.2
Total Petroleum Hydrocarbons (EPA 8015 Modified)	--	<10.0	--
Benzene (8020)	<0.005	<0.005	<0.005
Toluene (8020)	<0.005	<0.005	<0.005
Xylenes (8020)	<0.005	<0.005	<0.005
Ethylbenzene (8020)	<0.005	<0.005	<0.005

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Gregory W. Everett
Project Manager

APPLIED GEOSCIENCES INC.

SHIPMENT NO.:

CHAIN OF CUSTODY RECORD

PAGE 1 **OF** 1

DATE 6/20/89

PROJECT NAME: ORANGE COAST COLLEGE

PROJECT NO.: A891514 TASK 3

Sample Number	Location	Type of Sample: Material	Type of Sample: Method	Type of Container	Type of Preservation: Temp	Type of Preservation: Chemical	Analysis Required*
OCC1-1-1	OCC 1	SOIL	CA MOD	6" BRASS TUBE	CHILL	ICE	418.1 / 8020 (BTXE)
OCC1-2-1	↓	↓	↓	4" STEEL TUBE	↓	↓	418.1 / 8020 BTXE / [illegible]
OCC1-3-2	↓	↓	↓	" "	↓	↓	418.1 / 8020 BTXE

Total Number of Samples Shipped: 3

Sampler's Signature: [signature]

Relinquished By	Received By	Date / Time
Signature: [signature] Printed Name: CRAIG A. McCAMMACK Company: APPLIED GEOSCIENCES INC. Reason:	Signature: [signature] Printed Name: [illegible] Company: [illegible]	Date: 6/20/89 Time: 11:12
Signature: Printed Name: Company: Reason:	Signature: Printed Name: Company:	Date: / / Time:
Signature: Printed Name: Company: Reason:	Signature: Printed Name: Company:	Date: / / Time:
Signature: Printed Name: Company: Reason:	Signature: Printed Name: Company:	Date: / / Time:

Special Shipment / Handling / Storage Requirements:

PLEASE FAX RESULTS TO CRAIG A. McCAMMACK (714) 838-1401

STANDARD TURNAROUND TIME

* Note — This does not constitute authorization to proceed with analysis

Copy No. ______

16 March 1990

FOLLOW-UP PHASE II SOIL INVESTIGATION IN THE VICINITY OF REMOVED UNDERGROUND STORAGE TANKS FARM MAINTENANCE FACILITY ORANGE COAST COLLEGE COSTA MESA, CALIFORNIA

Prepared for:

COAST COMMUNITY COLLEGE DISTRICT
1370 Adams Avenue
Costa Mesa, California 92626

Prepared by:

APPLIED GEOSCIENCES INC.
17321 Irvine Boulevard
Tustin, California 92680
(714) 838-8545

Project No. A891514A

APPLIED GEOSCIENCES INC.

17321 Irvine Boulevard
Tustin, California 92680
(714) 838-8545
FAX (714) 838-1401

16 March 1990
A891514A
OCCA-3

Coast Community College District
1370 Adams Avenue
Costa Mesa, California 92626

Attention: Mr. Eugene Harrie

SUBJECT: FOLLOW-UP PHASE II SOIL INVESTIGATION IN THE VICINITY OF REMOVED UNDERGROUND STORAGE TANKS FARM MAINTENANCE FACILITY, ORANGE COAST COLLEGE, COSTA MESA, CALIFORNIA

Dear Mr. Harrie:

Applied Geosciences Inc. is pleased to submit two copies of this referenced report in general accordance with our signed contract of 27 November 1989 between Coast Community College District and Applied Geosciences Inc. Based on the results we recommend that the Orange County Health Care Agency be requested to issue a closure permit for the former underground storage tanks discussed in the report.

We appreciate the opportunity to work with you; if you have any questions regarding this report, please contact us at your convenience.

Very truly yours,
APPLIED GEOSCIENCES INC.

JR Lovegreen

JON R. LOVEGREEN
California Certified Engineering
Geologist, No. EG1164

cc: File A891514A

TABLE OF CONTENTS

FOLLOW-UP PHASE II SOIL INVESTIGATION IN THE VICINITY OF REMOVED UNDERGROUND STORAGE TANKS FARM MAINTENANCE FACILITY ORANGE COAST COLLEGE COSTA MESA, CALIFORNIA

1.0 INTRODUCTION

Presented herein are the findings of the Phase II soil investigation performed by Applied Geosciences Inc. at the Orange Coast College Farm Maintenance Facility, located at 2701 Fairview Road in Costa Mesa, California (Figure 1).

The work was performed for the Coast Community College District by Applied Geosciences Inc., in general accordance with Attachment 2 of the contract dated 4 April 1989.

The scope of the Phase II soil investigation was based on the recommendations presented in the previous subsurface investigation report dated 15 August 1989 (Applied Geosciences Inc., 1989) and discussions with Lisa Prouty of the Orange County Health Care Agency (OCHCA).

2.0 BACKGROUND

In January 1988, three underground storage tanks (USTs) reported to contain diesel fuel, weed oil, and waste oil were excavated and removed from the site. Following the removal of the USTs, several iterations of excavation and soil sampling were conducted in the former tank excavation area prior to its being backfilled. A summary of these activities, as interpreted from the OCHCA records, is presented in Applied Geosciences Inc. (1989).

In June 1989 Applied Geosciences Inc. performed a subsurface investigation in the area of the three USTs which were removed in January 1988 (Applied Geosciences Inc., 1989). The subsurface investigation included the drilling of one soil boring (OCC1) to an approximate depth of 33 feet below ground surface (BGS). Three soil samples were analyzed for total recoverable petroleum hydrocarbons (TRPH), in general accordance with Environmental Protection Agency (EPA) Method No. 418.1; total petroleum hydrocarbons (TPH), in general accordance with EPA Method No. 8015 (modified); and benzene, toluene, total xylenes, and ethylbenzene, in general accordance with EPA Method No. 8020. Although no significant levels of TPRH, TPH, or BTXE were found, additional soil borings were recommended by Applied Geosciences Inc. (with the concurrence of OCHCA) to increase the level of confidence in the results of the initial subsurface investigation.

3.0 OBJECTIVE

The objective of the follow-up Phase II soil investigation was to further assess the potential presence and concentration of petroleum hydrocarbons and aromatic volatile organics north and south of the previously drilled OCC1 soil boring (Figure 2).

4.0 SCOPE OF WORK

The scope of work conducted included the following:

Task 1. Modification and implementation of an existing Health and Safety Plan;

Task 2. Cutting out concrete; drilling two soil borings to approximately 36 feet BGS (one slant boring and one straight boring); collecting soil samples; backfilling the borings; and patching the surface with concrete;

Task 3. Laboratory chemical analyses of nine soil samples for TRPH in general accordance with EPA Method No. 418.1, five soil samples for TPH in general accordance with EPA Method No. 8015 (modified), and four soil samples for aromatic volatile organics in general accordance with EPA Method No. 8020; and

Task 4. Project management, data analysis, and report preparation.

The chemical analysis program was modified slightly from the original scope due to site conditions. See Section 7.0 for an explanation.

5.0 SITE SETTING

The area of investigation is located in the area adjacent to the Farm Maintenance Facility at the Orange Coast College campus in the city of Costa Mesa in Orange County, California (Figure 2). The topography of the area is relatively flat with natural surface drainage to the northeast. The area of investigation is in the general vicinity of the previously removed USTs. A concrete slab, approximately six inches thick, covers the area of the former tank locations. Two buildings used for the storage and maintenance of equipment are located east and west of the concrete slab respectively. Immediately adjacent to the south side of the area of investigation is an area with large trees and shrubbery; it is relatively inaccessible to drilling equipment.

6.0 FIELD INVESTIGATION

6.1 Summary of Drilling Procedures

The field investigation was conducted on 30 January 1990. Two soil borings, one slant and one vertical, were drilled at the site to approximately 36 feet BGS (Figure 2). Boring OCC2, located south of the previously drilled boring OCC1 (Applied Geosciences Inc., 1989), was drilled at an approximate 20-degree angle from the vertical toward the south and was sampled at approximately 5-foot linear intervals along the slant of the boring. Vertical boring OCC3, located north of the previously drilled boring OCC1 (Applied Geosciences Inc., 1989), was sampled at approximately 5-foot depth intervals beginning at approximately 15 feet BGS. The soil sampling procedures are presented in Appendix A. Logs of the borings are presented in Appendix B. Borings OCC2 and OCC3 were backfilled with medium-sized bentonite chips installed through the hollow stem augers. The bentonite chips were then activated with water. Due to the instability of the borehole wall of the slant boring OCC2, only the approximate upper one-third of the boring could be backfilled with bentonite chips. The shallow groundwater table was not encountered during the course of this subsurface investigation.

Visual and olfactory observations were made in the field regarding the presence of petroleum hydrocarbons in the auger cuttings. Headspace readings of the volatile organic compounds (VOCs) were measured using an organic vapor meter (OVM) photo ionization detector (PID) and recorded on the boring logs (Appendix B). The headspace analytical procedures are explained in Appendix A.

6.2 Soil Lithology

The predominant soil types encountered in the soil borings (interpreted during the drilling operations) include silty clay, sandy gravel, and sand. These soil types were observed to be distributed as described below. A generalized cross-section is presented in Figure 3.

In general, sandy gravel with varying amounts of silt and clay was noted in the approximate upper 20 feet BGS in borings OCC1 (Applied Geosciences Inc., 1989) and OCC3. This material is interpreted to be artificial fill used to backfill the UST excavation. In slant boring OCC2, the artificial fill is interpreted to have been encountered in the upper 1.5 feet.

Below the interpreted artificial fill material, a silty clay unit, interpreted as native soil, was encountered to an approximate depth of 24.4 feet BGS (vertical depth) in slant boring OCC2. However, this silty clay unit was not observed in borings OCC1 and OCC3. In boring OCC1, a lens of clay that appeared to be relatively impermeable, approximately 2 feet thick, was encountered below the interpreted artificial fill material at approximately 20 feet BGS (Applied Geosciences Inc., 1989). In boring OCC3, sands were observed below the interpreted artificial fill material.

A series of fine to coarse sands with interbeds of fine silty sand was encountered from 22 feet (borings OCC1 and OCC3) and 24.4 feet (boring OCC2) to the bottom of the three borings. A more detailed description of the soils encountered during this investigation is presented in the soil boring logs in Appendix B.

7.0 CHEMICAL ANALYTICAL RESULTS

The soil samples were analyzed by West Coast Analytical Service, Inc., a state of California certified, hazardous waste laboratory located in Santa Fe Springs, California.

Soil sample selection was based on site conditions and field observations. Thus, nine samples were analyzed for TRPH in general accordance with EPA Method No. 418.1; five samples were analyzed for TPH, in general accordance with EPA Method No. 8015 (modified); and four samples were analyzed for benzene, toluene, total xylenes, and ethylbenzene (BTXE) in general accordance with EPA Method No. 8020.

With the exception of two samples, all the analyzed soil samples contained no detectable TRPH (EPA Method No. 418.1) above the 10 milligrams per kilogram (mg/kg) detection limit. Sample OCC3-1, collected from an approximate depth of 15 feet BGS in boring OCC3, and sample OCC3-2, collected from an approximate depth of 20 feet BGS in boring OCC3 were both reported to contain 43 mg/kg of TRPH.

In addition, none of the analyzed soil samples contained detectable TPH (EPA Method No. 8015 [modified]) above the 5 mg/kg detection limit, or BTXE (EPA Method No. 8020) above the 1 microgram per kilogram detection limit. The soil sample analytical results are summarized in Table 1 and presented in Figure 3, the generalized cross section. The laboratory reports on the chemical analyses of the soil samples are presented in Appendix C.

8.0 DISCUSSION

Based on the data obtained, it is the judgment of Applied Geosciences Inc. that there is a low likelihood that petroleum hydrocarbons are present in the area investigated. The data on which this judgment is based included the fact that no significant petroleum hydrocarbon indicators were detected during the drilling of the borings, no TPH or BTXE were detected in the analyzed soil samples, and TRPH concentrations were low (<50 ppm) or were not detected.

9.0 CONCLUSIONS

The following conclusions are based on data obtained during the subsurface investigation, current regulatory guidelines, results of the previous investigation (Applied Geosciences Inc., 1989), and our professional judgment:

- o No indications of petroleum hydrocarbon impacted soil were noted, with exception of a slight petroleum hydrocarbon odor in one sample.
- o No detectable concentrations of TPH (EPA Method No. 8015 [modified]), or BTXE (EPA Method No. 8020) were detected in any of the soil samples analyzed.
- o The maximum reported TRPH (EPA Method No. 418.1) in the analyzed soil samples was 43 mg/kg of TRPH.
- o There is a low likelihood that the elevated concentrations of petroleum hydrocarbons are present in the area of the former underground storage tanks.

10.0 RECOMMENDATION

The following recommendation is based on data obtained during the subsurface investigation, current regulatory guidelines, results of the previous investigation (Applied Geosciences Inc., 1989), and our professional judgment:

- o Request the Orange County Health Care Agency to issue a closure permit for the investigated tanks.

11.0 REFERENCE

Applied Geosciences Inc., 1989, Subsurface investigation at the previous location of three underground storage tanks, Orange Coast College, Farm Maintenance Facility, Costa Mesa, California: August 15, 1989, 14 p.

TABLE 1

SOIL SAMPLE ANALYTICAL RESULTS

SAMPLE NO.	DEPTH (FEET)	TRPH[1] (418.1) (mg/Kg)	TPH[2] (8015) (mg/Kg)	BTXE[3] (8020) (ug/Kg)
OCC2-4	20[4]	ND[5]	ND	---[6]
OCC2-6	30[4]	ND	ND	ND
OCC2-7	35[4]	ND	---	---
OCC2-8	40[4]	ND	ND	ND
OCC3-1	15	43	---	---
OCC3-2	20	43	---	---
OCC3-3	25	ND	ND	ND
OCC3-4	30	ND	---	---
OCC3-5	35	ND	ND	ND

1 Total Recoverable Petroleum Hydrocarbons' analysis conducted in general accordance with EPA Method No. 418.1.

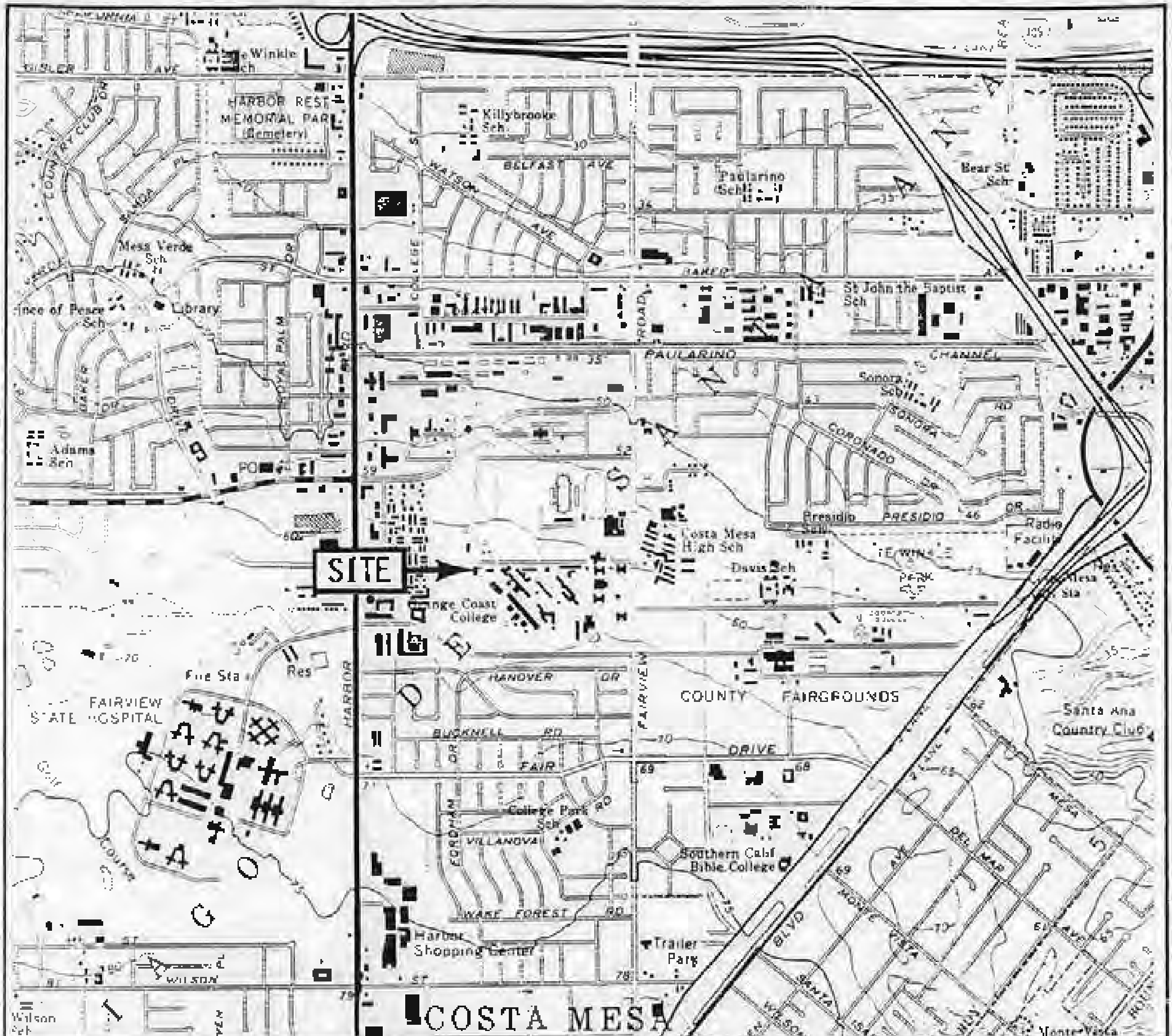
2 Total Petroleum Hydrocarbons' analysis conducted in general accordance with EPA Method No. 8015 (modified).

3 Benzene, toluene, total xylenes, and ethylbenzene analysis conducted in general accordance with EPA Method No. 8020.

4 Linear depths below ground surface along the slant of the boring.

5 Not detected.

6 Not analyzed.



NORTH

0 ½ 1

SCALE, MILES

NOTE:
BASE MAP IS TAKEN FROM USGS NEWPORT BEACH QUADRANGLE, CALIFORNIA-ORANGE CO., 7.5 MINUTE SERIES (TOPOGRAPHIC), 1965, PHOTOREVISED 1981

APPLIED GEOSCIENCES INC.
Engineering Geology and Hazardous Materials Consultants

SITE VICINITY MAP

PROJECT NUMBER A891514A	FIGURE 1

ATTACHMENT C

Property Background Information Questionnaire

Environmental Site Assessment
Property Background Information Questionnaire for Property Owner, Occupant, or Representative

PLEASE GIVE FURTHER DETAILS FOR ALL "YES" ANSWERS.

1. Describe the current uses of the Property. How long has the property been used for these purposes, and how long have you occupied the Property?
   Current use is for education, for about 62 years.

2. Describe the past uses, owners, and operators of the Property.
   Santa Ana Air Base training facility
   No flights training

3. Have the Property or adjoining properties been used for industrial activities including the following? (Please note that an adjoining property is a property that is next to your Property, even if it is across the street).

Gasoline Station	☐ Yes	☒ No	
Printing Facility	☒ Yes	☐ No	for graphics
Metal Plating Manufacturing	☐ Yes	☒ No	
Landfill	☐ Yes	☒ No	
Motor Repair Facility	☐ Yes	☒ No	
Dry Cleaners	☐ Yes	☒ No	
Junkyard	☐ Yes	☒ No	
Waste Treatment	☐ Yes	☒ No	
Storage, Disposal, or Recycling Facility	☒ Yes	☐ No	

Describe other industrial activities, if any.
Campus has an aircraft repair program.
There is an above ground aviation fuel tank.
The UST removed about 10 years ago, no releases known.

4. Have any hazardous substances, petroleum products, unidentified waste materials, tires, automotive or industrial batteries, or other waste materials been dumped above ground, buried, or burned on the Property? ☐ Yes ☒ No

   If yes, please describe.

Environmental Site Assessment
Property Background Information Questionnaire for Property Owner, Occupant, or Representative

5. Have any of the following items been stored on the Property in containers greater than 5 gallons?

   Paint ☐ Yes ☒ No
   Chemicals ☐ Yes ☒ No
   Pesticides ☐ Yes ☒ No

6. Have hazardous substances or petroleum products been stored on the Property or transferred across the Property in pipelines, either above or below ground?

   ☒ Yes ☐ No ☐ Unknown gasoline & diesel pumps for underground [illegible] used for campus vehicles and equipment.

7. Have 55-gallon drums or sacks of chemicals been stored on the Property?

   ☐ Yes ☒ No ☐ Unknown

8. Has fill dirt been brought onto the property from an offsite source?

   ☒ Yes ☐ No ☐ Unknown for construction

9. Is there evidence that the fill dirt in Question 8 may be contaminated?

   ☐ Yes ☒ No ☐ Unknown

10. Are there currently any pits, ponds, or lagoons on the Property?

    ☐ Yes ☒ No ☐ Unknown

11. Have any pits, ponds, or lagoons previously existed on the Property?

    ☒ Yes ☐ No ☐ Unknown irrigation ponds

12. Are there currently areas on the Property with stained soil?

    ☐ Yes ☒ No ☐ Unknown

13. Have stained soils previously existed on the property?

    ☐ Yes ☒ No ☐ Unknown

14. Do underground or above-ground storage tanks exist, or have they existed previously on the Property?

    ☒ Yes ☐ No ☐ Unknown

15. Do fill pipes, vent pipes, or access ways indicating the presence of underground storage tanks exist on the Property?

    ☐ Yes ☒ No ☐ Unknown

16. Have fill pipes or vent pipes which may indicate the presence of an underground storage tank been removed from the Property?

    ☐ Yes ☒ No ☐ Unknown

17. Are floor drains stained with anything other than water in any area on the Property?

    ☐ Yes ☒ No ☐ Unknown

18. Do floor drains on the Property emit foul odors?

    ☐ Yes ☒ No ☐ Unknown ~~Sometimes~~ at times maybe from mop water

19. Is the Property served by private well or non-public water source?

    ☐ Yes ☒ No ☐ Unknown

20. Are contaminants known to exist in any private well or non-public water system serving the Property?

    ☐ Yes ☒ No ☐ Unknown

21. Does the Property discharge wastewater, other than domestic wastewater or storm water, into the sewer?

    ☐ Yes ☒ No ☐ Unknown

22. Other than permission for domestic hookup, have any city, county, or local permits for wastewater discharge been issued to the Property?

    ☐ Yes ☐ No ☒ Unknown He knows the owners pays a fee to the Orange County Sanitation District

23. Does a septic tank exist, or has one existed previously at the Property?

☐ Yes ☒ No ☐ Unknown

24. Do cesspools or cisterns currently exist on the Property?

☐ Yes ☒ No ☐ Unknown

25. Have cesspools or cisterns previously existed on the Property?

☐ Yes ☒ No ☐ Unknown

26. Other than storm water, does the Property discharge waste water onto the neighboring Property?

☐ Yes ☒ No ☐ Unknown

27. Is there a transformer or capacitor that may contain PCBs on the Property?

☒ ~~Yes~~ ☒ No ☐ Unknown

28. Is there any hydraulic equipment such as automobile lifts or elevators on the property?

☒ Yes ☒ No ☐ Unknown

29. Are PCBs contained in hydraulic oil associated with hydraulic equipment located on the Property?

☐ Yes ☒ No ☐ Unknown

30. Has an asbestos and/or lead based paint survey been conducted at the Property?

☒ Yes ☐ No ☐ Unknown

31. Have pesticides, herbicides, or insecticides been applied on the Property?

☒ Yes ☐ No ☐ Unknown

32. Are you aware of any environmental liens against the Property that are filed or recorded under federal, tribal, state, or local law?

☐ Yes ☒ No ☐ Unknown

Environmental Site Assessment
Property Background Information Questionnaire for Property Owner, Occupant, or Representative

33. Have any environmental violations or citations associated with activities conducted on the Property been issued?

☐ Yes ☒ No ☐ Unknown

34. Has the property been included in other environmental assessments?

☐ Yes ☐ No ☒ Unknown

35. Have other environmental assessments identified hazardous substances or petroleum products that exist, or may have existed on the Property?

☐ Yes ☐ No ☒ Unknown

36. Are there any pending law suits that involve the release or threatened release of hazardous substances associated with the Property?

☐ Yes ☒ No ☐ Unknown

37. Are you aware of any activity and land use limitations, such as engineering controls, land use restrictions or institutional controls that are in place at the Property and/or have been filed or recorded in a registry under federal, tribal, state or local law?

☐ Yes ☐ No ☒ Unknown

38. Are you aware of any commonly known or reasonably ascertainable information about the Property that would help the environmental professional to identify conditions indicative of releases or threatened releases?

☐ Yes ☐ No ☒ Unknown

39. Do you have any specialized knowledge or experience related to the Property or near-by properties, including the knowledge of the chemicals and processes used by this type of business?

☐ Yes ☒ No ☐ Unknown

40. Based in your knowledge or experience related to the Property, are there any obvious indicators that point to the presence or likely presence of contamination?

Not to my knowledge.

11-22-2013

Signature ____________________ Date ____________

Mark Goode, Director
Name (Printed)

☐ Owner ☐ Occupant ☐ Owner Representative

Property Address: ____

ATTACHMENT D

Aerial Photographs and Topographic Maps

Orange Coast College
2701 Fairview Road
Costa Mesa, CA 92626

Inquiry Number: 3772737.5
November 04, 2013

The EDR Aerial Photo Decade Package

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

When delivered electronically by EDR, the aerial photo images included with this report are for ONE TIME USE ONLY. Further reproduction of these aerial photo images is prohibited without permission from EDR. For more information contact your EDR Account Executive.

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

Date EDR Searched Historical Sources:

Aerial Photography November 04, 2013

Target Property:

2701 Fairview Road
Costa Mesa, CA 92626

Year	***Scale***	***Details***	***Source***
1938	Aerial Photograph. Scale: 1"=500'	Flight Year: 1938	Laval
1947	Aerial Photograph. Scale: 1"=500'	Flight Year: 1947	Fairchild
1953	Aerial Photograph. Scale: 1"=500'	Flight Year: 1953	Pacific Air
1963	Aerial Photograph. Scale: 1"=500'	Flight Year: 1963	EDR
1972	Aerial Photograph. Scale: 1"=500'	Flight Year: 1972	EDR
1977	Aerial Photograph. Scale: 1"=500'	Flight Year: 1977	Teledyne
1990	Aerial Photograph. Scale: 1"=500'	Flight Year: 1990	USGS
1995	Aerial Photograph. Scale: 1"=500'	/DOQQ - acquisition dates: 1995	EDR
2005	Aerial Photograph. Scale: 1"=500'	Flight Year: 2005	EDR
2009	Aerial Photograph. Scale: 1"=500'	Flight Year: 2009	EDR
2010	Aerial Photograph. Scale: 1"=500'	Flight Year: 2010	EDR
2012	Aerial Photograph. Scale: 1"=500'	Flight Year: 2012	EDR


Subject Property
INQUIRY #: 3772737.5
YEAR: 1938
= 500'
N


Subject Property
INQUIRY #: 3772737.5
YEAR: 1947
N
= 500'

INQUIRY #: 3772737.5

YEAR: 1953

= 500'

N

INQUIRY #: 3772737.5

YEAR: 1963

= 500'

N


Subject Property
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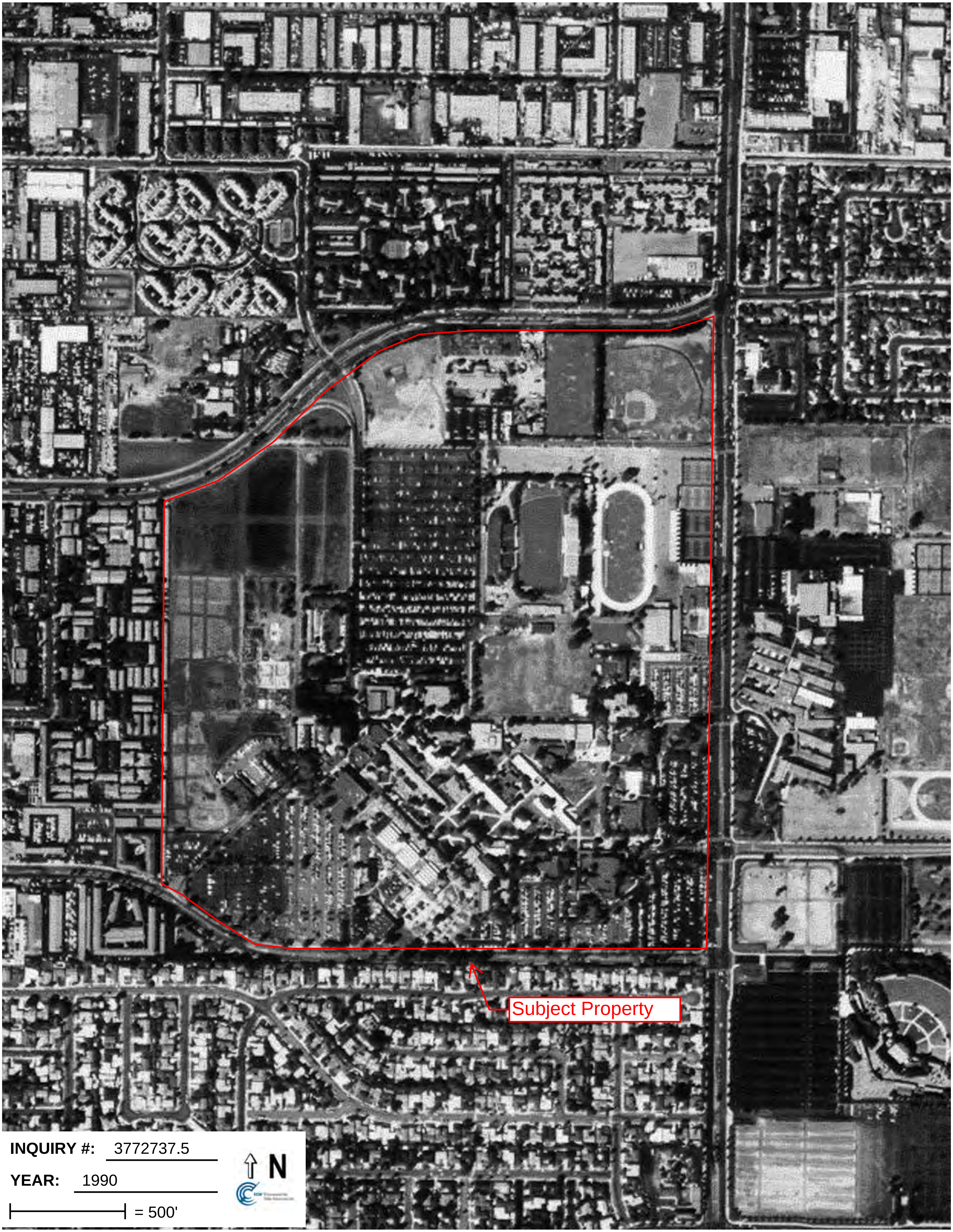
YEAR: 1972
= 500'
N

INQUIRY #: 3772737.5

YEAR: 1977

= 500'

N


Subject Property
INQUIRY #: 3772737.5
YEAR: 1990
= 500'
N

INQUIRY #: 3772737.5

YEAR: 1995

= 500'

N


Subject Property
INQUIRY #: 3772737.5
YEAR: 2005
N
= 500'


Subject Property
INQUIRY #: 3772737.5
YEAR: 2009
= 500'
N


Subject Property
INQUIRY #: 3772737.5
YEAR: 2010
= 500'
N


Subject Property
INQUIRY #: 3772737.5
YEAR: 2012
= 500'
N

Orange Coast College
2701 Fairview Road
Costa Mesa, CA 92626

Inquiry Number: 3772737.4
October 31, 2013

EDR Historical Topographic Map Report

EDR® Environmental Data Resources Inc

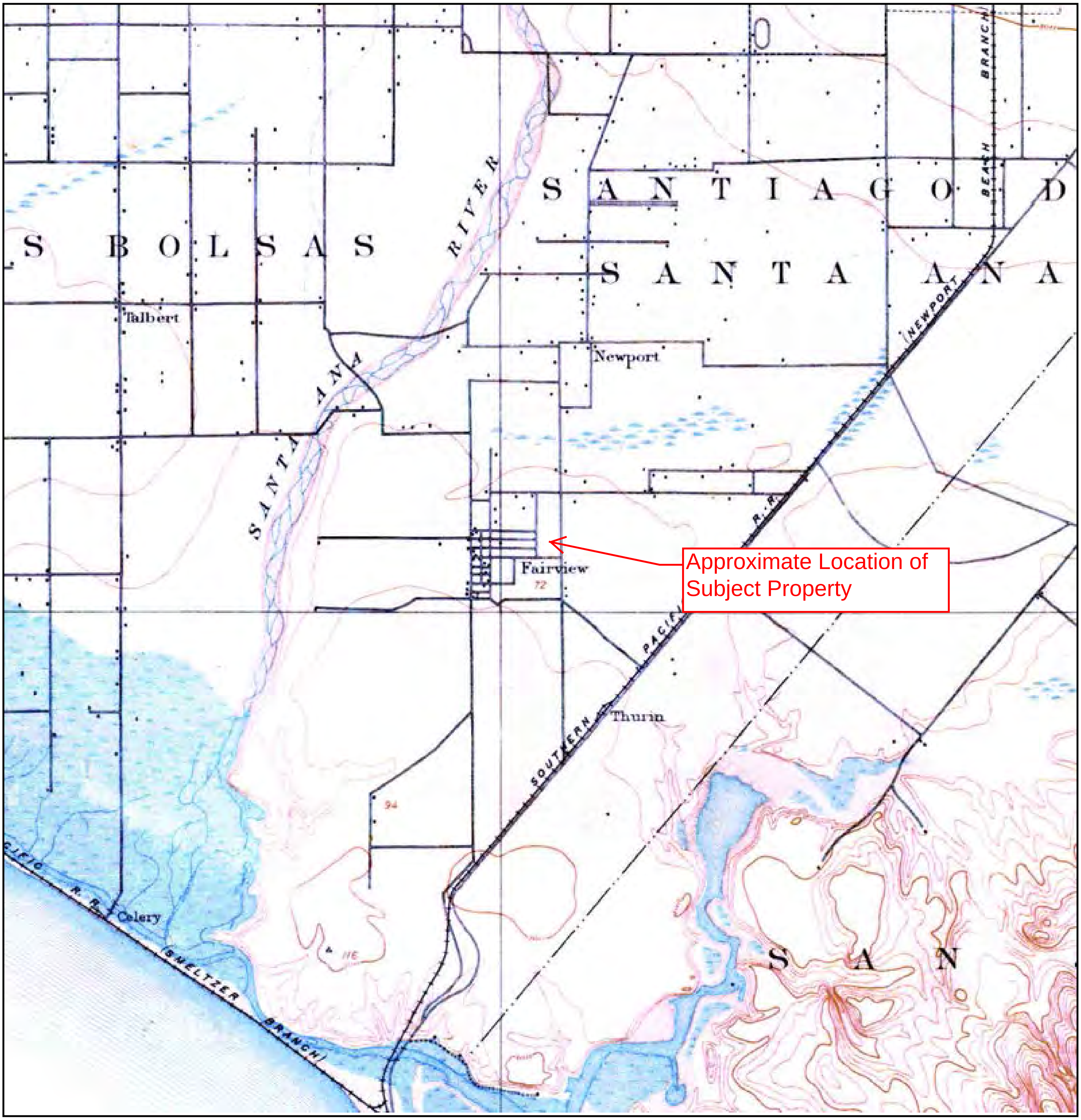
440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

EDR Historical Topographic Map Report

Environmental Data Resources, Inc.s (EDR) Historical Topographic Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topographic Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the early 1900s.

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

Historical Topographic Map



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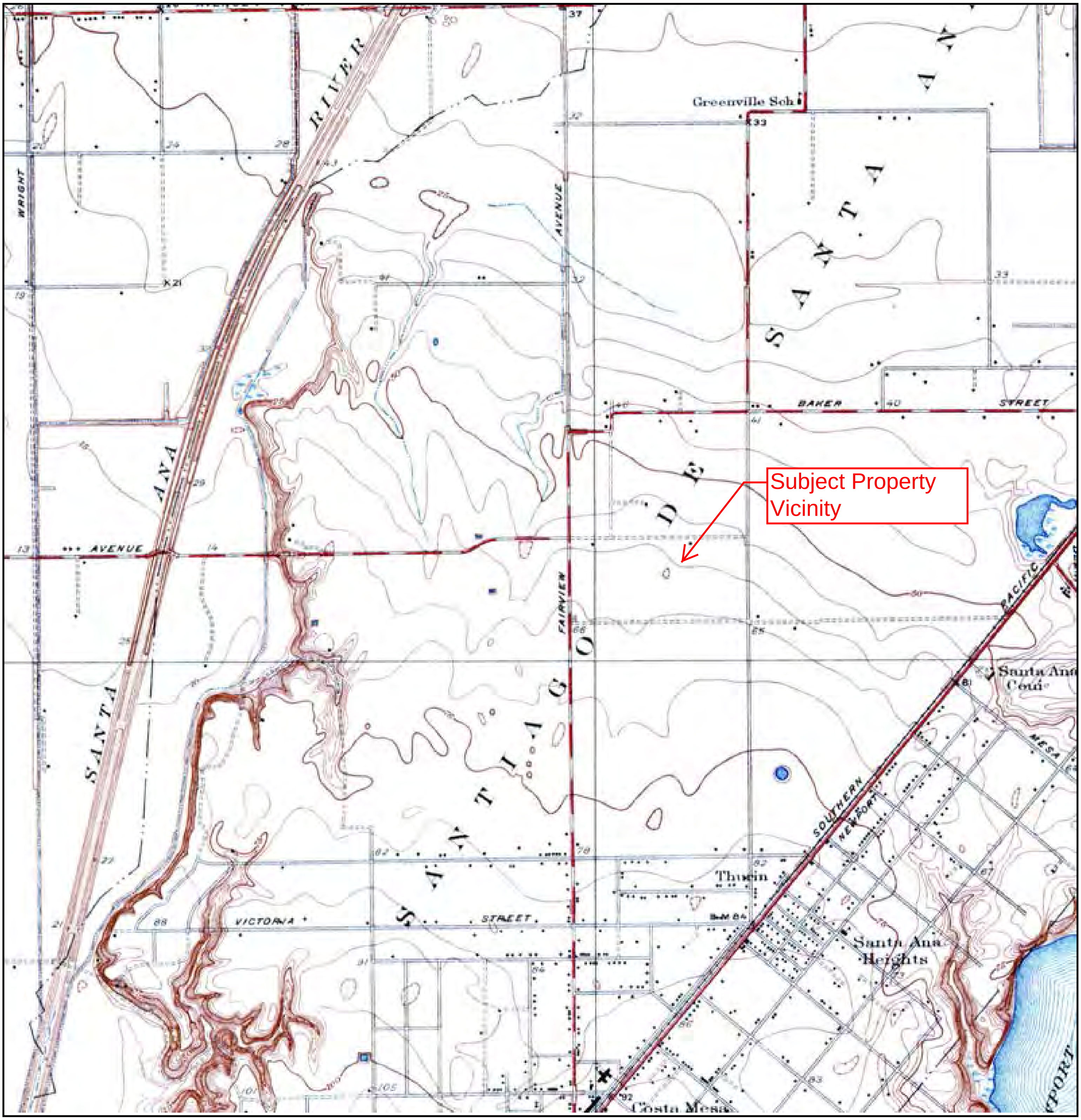
Historical Topographic Map

N	TARGET QUAD		SITE NAME:	Orange Coast College	CLIENT:	Dudek & Associates
	NAME:	SOUTHERN CA SHEET 1	ADDRESS:	2701 Fairview Road	CONTACT:	Laura Roll
	MAP YEAR:	1901		Costa Mesa, CA 92626	INQUIRY#:	3772737.4
			LAT/LONG:	33.672 / -117.9116	RESEARCH DATE:	10/31/2013
	SERIES:	60				
	SCALE:	1:250000				

Historical Topographic Map

N TARGET QUAD NAME: CORONA MAP YEAR: 1902 SERIES: 30 SCALE: 1:125000	SITE NAME: Orange Coast College ADDRESS: 2701 Fairview Road Costa Mesa, CA 92626 LAT/LONG: 33.672 / -117.9116	CLIENT: Dudek & Associates CONTACT: Laura Roll INQUIRY#: 3772737.4 RESEARCH DATE: 10/31/2013

Historical Topographic Map



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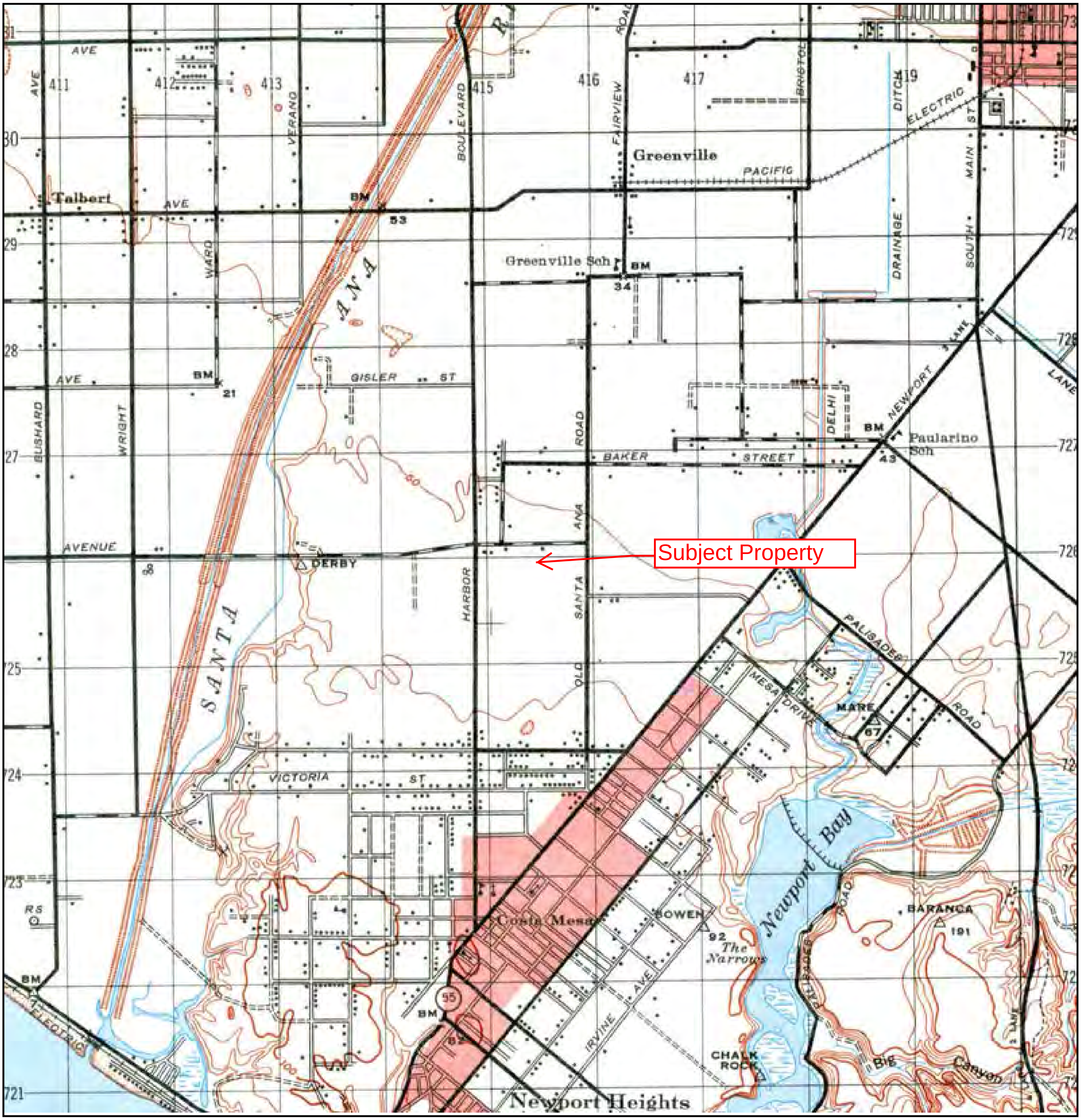
Historical Topographic Map



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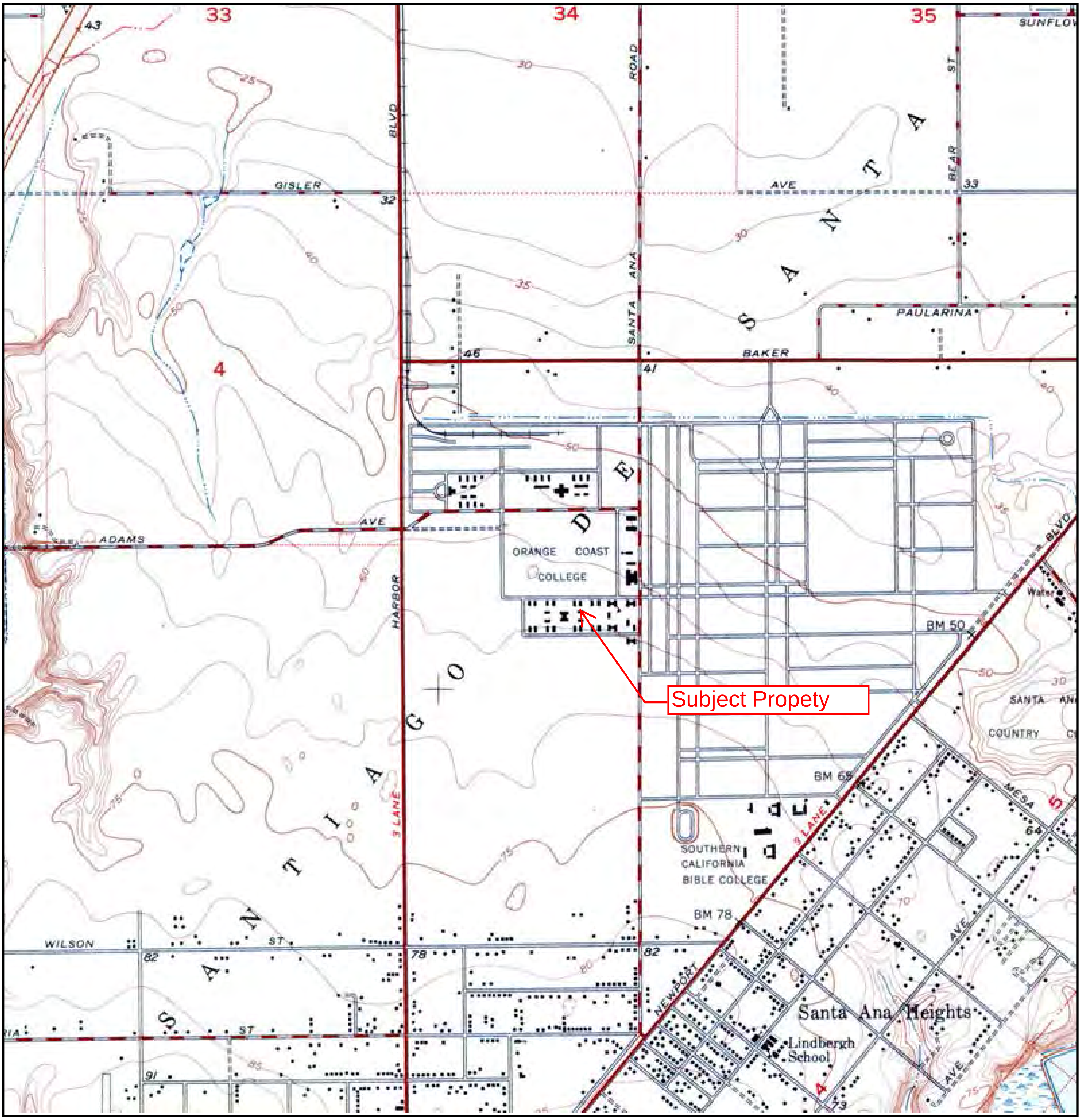
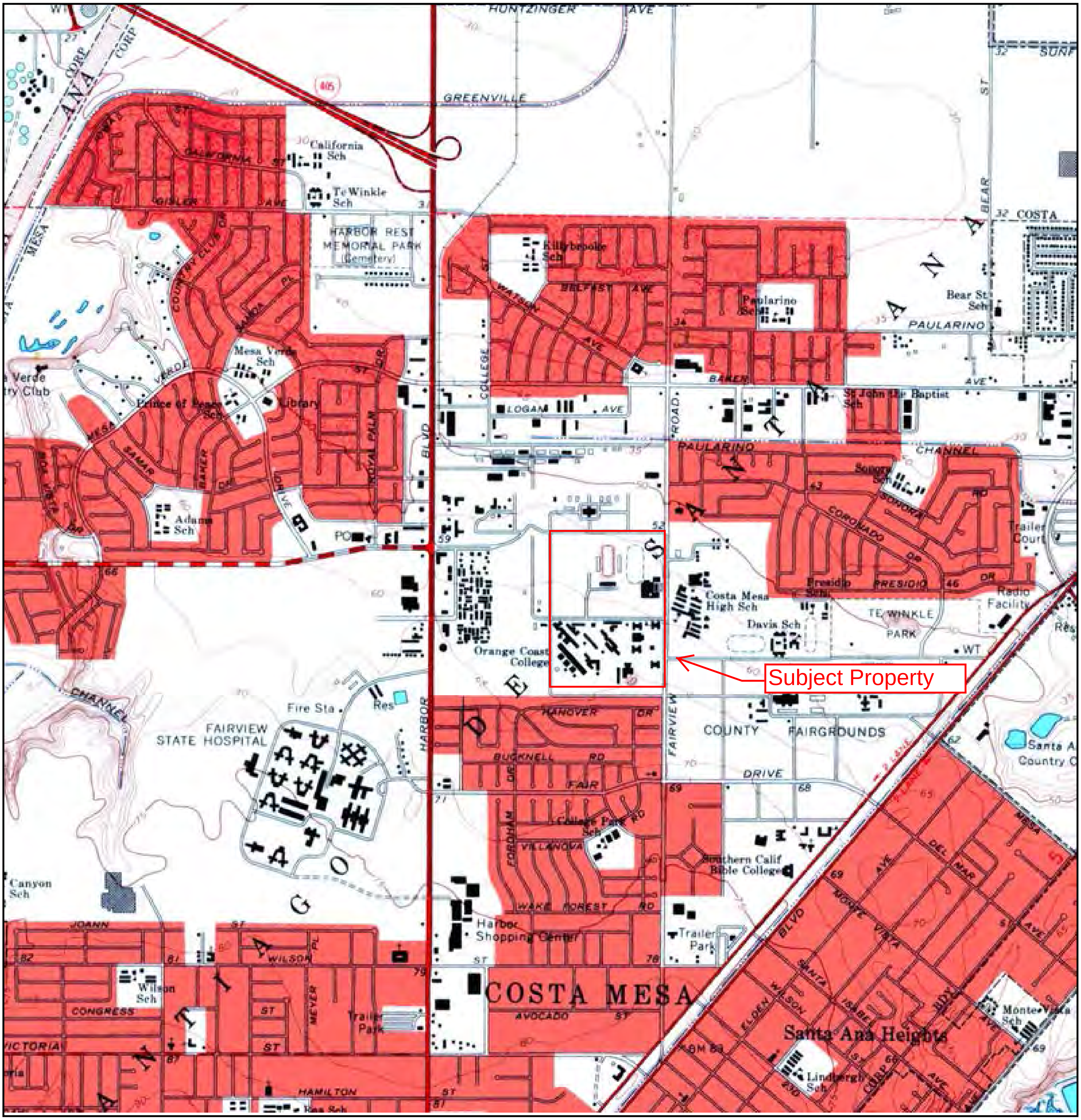
Historical Topographic Map



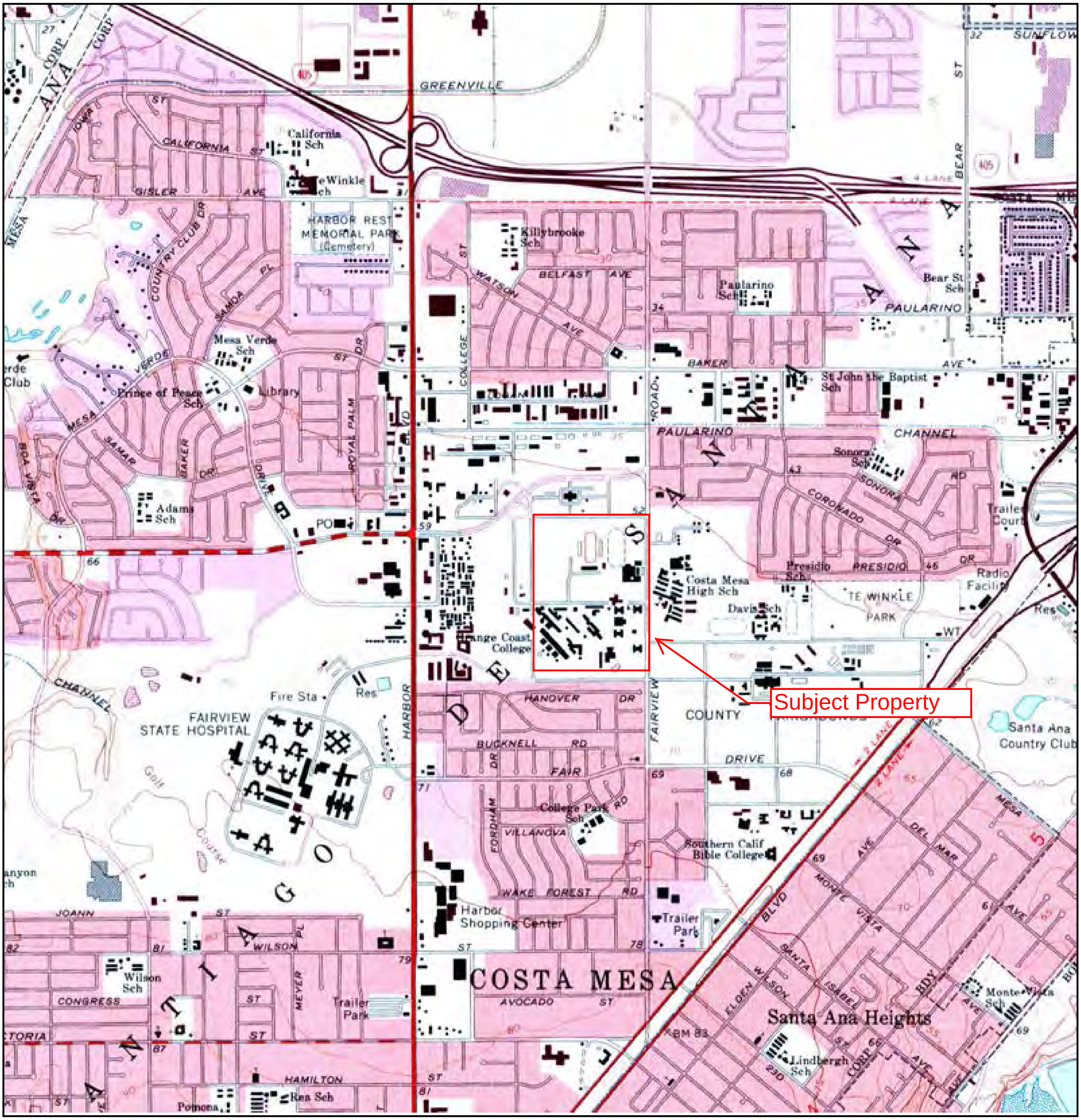
N			
N	TARGET QUAD NAME: NEWPORT BEACH MAP YEAR: 1951 SERIES: 7.5 SCALE: 1:24000	SITE NAME: Orange Coast College ADDRESS: 2701 Fairview Road Costa Mesa, CA 92626 LAT/LONG: 33.672 / -117.9116	CLIENT: Dudek & Associates CONTACT: Laura Roll INQUIRY#: 3772737.4 RESEARCH DATE: 10/31/2013

Historical Topographic Map



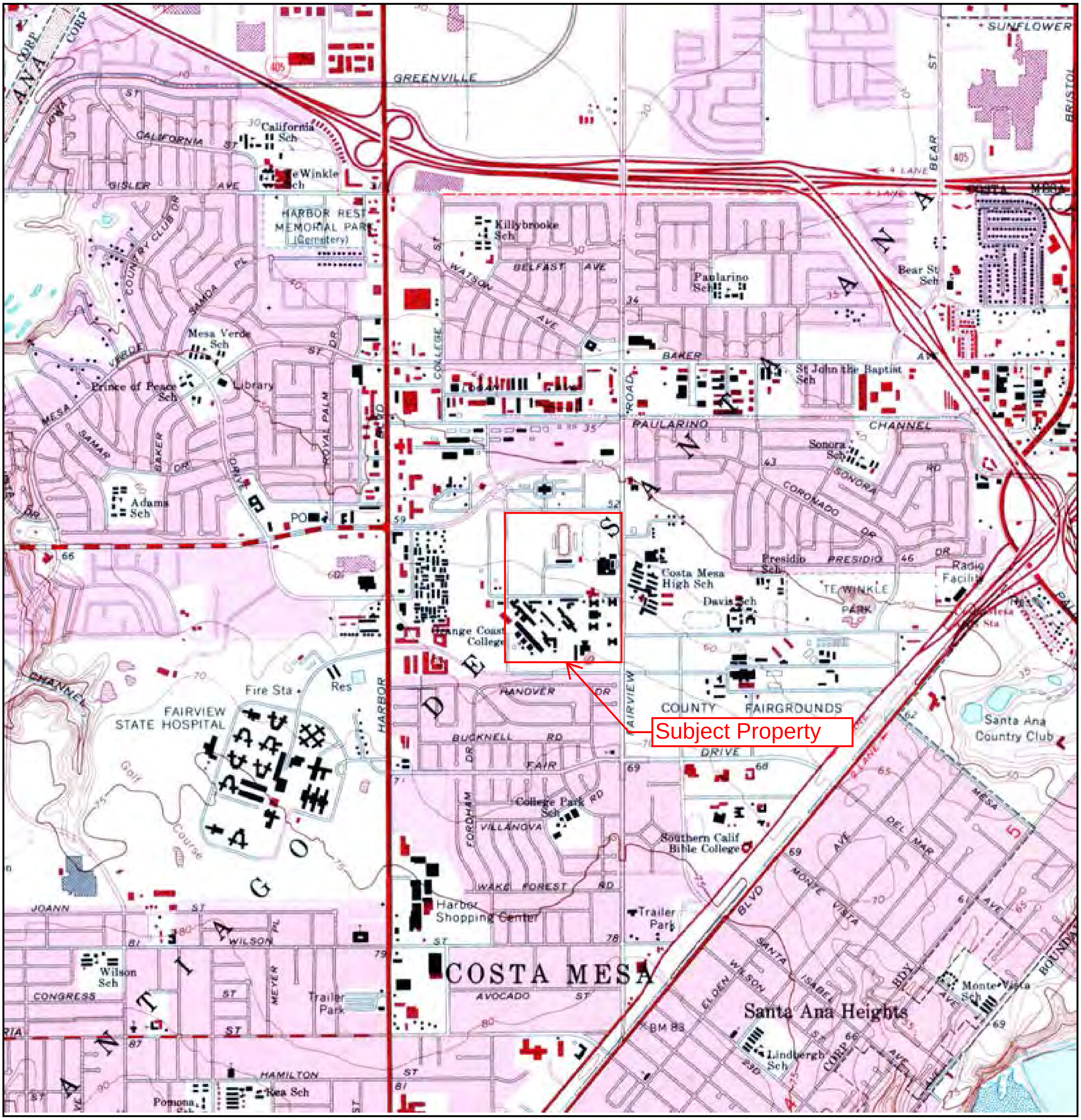
N	TARGET QUAD NAME: NEWPORT BEACH MAP YEAR: 1965 SERIES: 7.5 SCALE: 1:24000	SITE NAME: Orange Coast College ADDRESS: 2701 Fairview Road Costa Mesa, CA 92626 LAT/LONG: 33.672 / -117.9116	CLIENT: Dudek & Associates CONTACT: Laura Roll INQUIRY#: 3772737.4 RESEARCH DATE: 10/31/2013

Historical Topographic Map



N	TARGET QUAD NAME: NEWPORT BEACH MAP YEAR: 1972 PHOTOREVISED FROM :1965 SERIES: 7.5 SCALE: 1:24000	SITE NAME: Orange Coast College ADDRESS: 2701 Fairview Road Costa Mesa, CA 92626 LAT/LONG: 33.672 / -117.9116	CLIENT: Dudek & Associates CONTACT: Laura Roll INQUIRY#: 3772737.4 RESEARCH DATE: 10/31/2013

Historical Topographic Map



N			
N ↑	TARGET QUAD NAME: NEWPORT BEACH MAP YEAR: 1981 PHOTOREVISED FROM :1965 SERIES: 7.5 SCALE: 1:24000	SITE NAME: Orange Coast College ADDRESS: 2701 Fairview Road Costa Mesa, CA 92626 LAT/LONG: 33.672 / -117.9116	CLIENT: Dudek & Associates CONTACT: Laura Roll INQUIRY#: 3772737.4 RESEARCH DATE: 10/31/2013

ATTACHMENT E

Sanborn Fire Maps

Orange Coast College
2701 Fairview Road
Costa Mesa, CA 92626

Inquiry Number: 3772737.3
October 30, 2013

Certified Sanborn® Map Report

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

10/30/13

Site Name:
Orange Coast College
2701 Fairview Road
Costa Mesa, CA 92626

EDR Inquiry # 3772737.3

Client Name:
Dudek & Associates
605 Third Street
Encinitas, CA 92024

Contact: Laura Roll

The complete Sanborn Library collection has been searched by EDR, and fire insurance maps covering the target property location provided by Dudek & Associates were identified for the years listed below. The certified Sanborn Library search results in this report can be authenticated by visiting www.edrnet.com/sanborn and entering the certification number. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by Sanborn Library LLC, the copyright holder for the collection.

Certified Sanborn Results:

Site Name:	Orange Coast College
Address:	2701 Fairview Road
City, State, Zip:	Costa Mesa, CA 92626
Cross Street:	
P.O. #	7910-3
Project:	Orange Coast College
Certification #	697A-4662-822D

Sanborn® Library search results
Certification # 697A-4662-822D

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

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- ✔ Library of Congress
- ✔ University Publications of America
- ✔ EDR Private Collection

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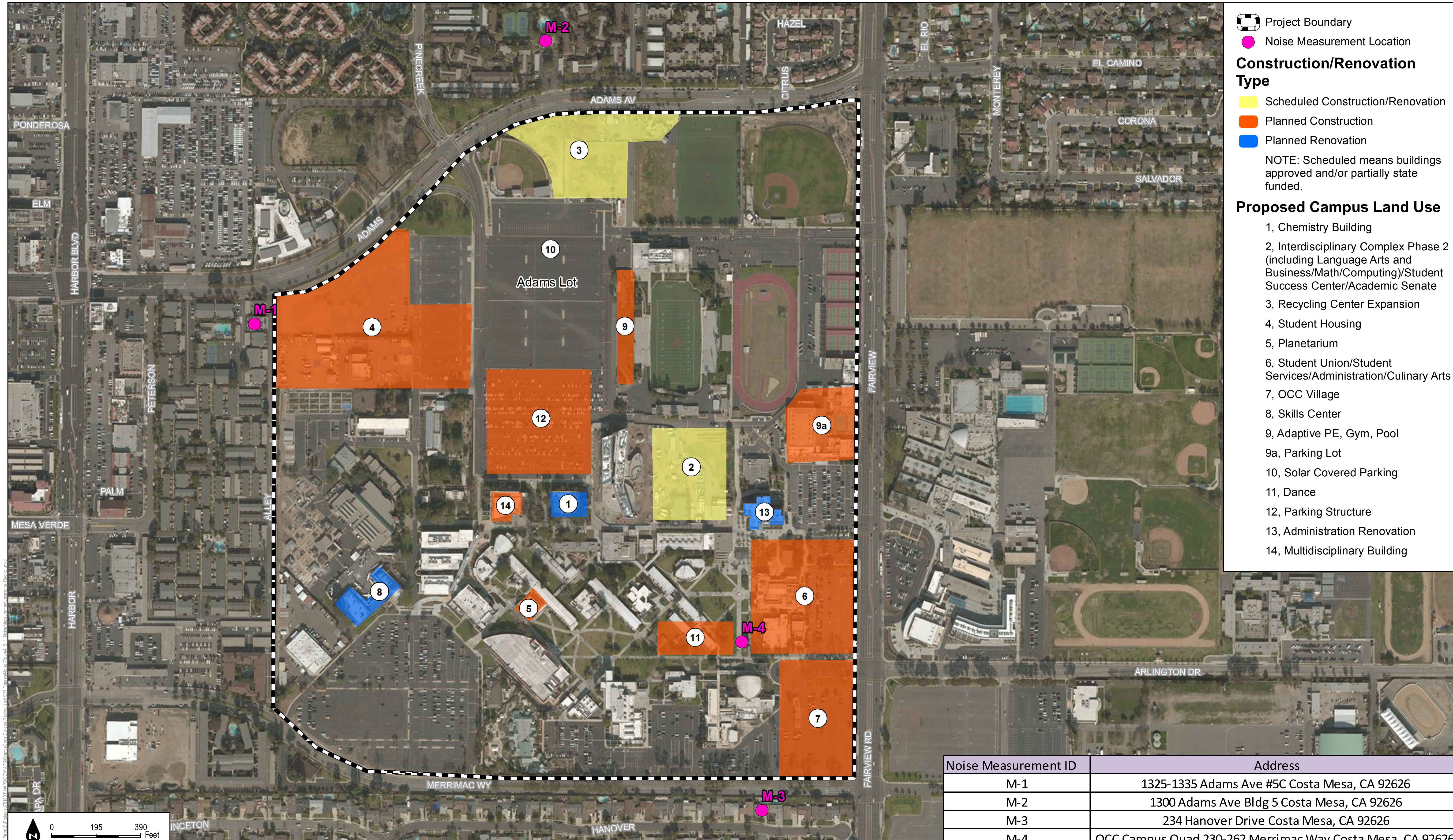
APPENDIX F

Noise Calculations



Noise Measurement ID	Address
M-1	1325-1335 Adams Ave #5C Costa Mesa, CA 92626
M-2	1300 Adams Ave Bldg 5 Costa Mesa, CA 92626
M-3	234 Hanover Drive Costa Mesa, CA 92626
M-4	OCC Campus Quad 230-262 Merrimac Way Costa Mesa, CA 92626

7910

SOURCE: Bing Imagery, 2015, Coast Community College Vision Plan 2012, County of Orange.

FIGURE 4.9-1

Noise Measurement Locations

DUDEK

FIELD NOISE MEASUREMENT DATA

PROJECT: OCCD Vision 2020 Facilities Master Plan IS
PROJECT #: 7910
SITE ID: OCC Site #1
SITE ADDRESS: 1325-1335 Adams Avenue, Costa Mesa CA 92626 Apt # 5c
OBSERVER(S): MG + CM
START DATE: 10-15-13
END DATE: 10-15-13
START TIME:
END TIME: 1:36

METEOROLOGICAL CONDITIONS

TEMP: 84 F
HUMIDITY: 26 % R.H.
WIND: CALM LIGHT MODERATE VARIABLE STEADY GUSTY
WINDSPD: 2-3 MPH
DIR.: N NE S SE S SW W NW
SKY: SUNNY CLEAR OVRCAST PRTLY CLDY FOG RAIN

ACOUSTIC MEASUREMENTS

MEAS. INSTRUMENT: Rion NL-32
TYPE: 1 2
SERIAL #: 01030561
CALIBRATOR: RION NC-74
SERIAL #: 35172709
CALIBRATION CHECK: PRE-TEST 94.1 dBA SPL; POST-TEST 94.1 dBA SPL
WINDSCRN: ✓

SETTINGS: A-WTD SLOW FAST FRONTAL RANDOM ANSI OTHER:

REC. #	BEGIN	END	Leq	Lmax	Lmin	L90	L50	L10	OTHER (SPECIFY METRIC
1			58.2	84.0	47.7	48.3	49.7	56.2	

COMMENTS

SOURCE INFO AND TRAFFIC COUNTS

PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL OTHER: Barking Dog
ROADWAY TYPE:
DIST. TO RDWY C/L OR EOP:
TRAFFIC COUNT DURATION: ___ MIN SPEED ___ MIN SPEED

COUNT 1 (OR RDWY 1)

DIRECTION	NB/EB	SB/WB	NB/EB	SB/WB
AUTOS				
MED TRKS				
HVY TRKS				
BUSES				
MOTRCLS				

IF COUNTING BOTH DIRECTIONS AS ONE, CHECK HERE ___

COUNT 2 (OR RDWY 2)

DIRECTION	NB/EB	SB/WB	NB/EB	SB/WB
AUTOS				
MED TRKS				
HVY TRKS				
BUSES				
MOTRCLS				

SPEEDS ESTIMATED BY: RADAR / DRIVING THE PACE
POSTED SPEED LIMIT SIGNS SAY:

OTHER NOISE SOURCES (BACKGROUND): DIST. AIRCRAFT RUSTLING LEAVES DIST. BARKING DOGS BIRDS DIST. INDUSTRIAL DIST. KIDS PLAYING DIST. CONVRSTNS / YELLING DIST. TRAFFIC (LIST RDWYS BELOW) DISTD GARDENERS/LANDSCAPING NOISE
OTHER: Adams Avenue

DESCRIPTION / SKETCH

TERRAIN: HARD SOFT MIXED FLAT OTHER:
PHOTOS:
OTHER COMMENTS / SKETCH

DUDEK

FIELD NOISE MEASUREMENT DATA

PROJECT OCCD Vision 2020 Facilities Master Plan IS   PROJECT # 7910
SITE ID 1300 Adams Ave, Bldg 5
SITE ADDRESS   OBSERVER(S) CM, MG
START DATE 10/15/13   END DATE 10/15/13
START TIME 1:45   END TIME 2:00

METEOROLOGICAL CONDITIONS
TEMP 84 F   HUMIDITY 26 % R.H.   WIND CALM LIGHT MODERATE
WINDSPD 2-3 MPH   DIR. N NE S SE S SW W NW   VARIABLE STEADY GUSTY
SKY SUNNY CLEAR OVRCAST PRTLY CLDY FOG RAIN

ACOUSTIC MEASUREMENTS
MEAS. INSTRUMENT Rion NL-32   TYPE 1 2   SERIAL # 01030561
CALIBRATOR Rion NC-74   SERIAL # 35125804
CALIBRATION CHECK PRE-TEST 94.1 dBA SPL   POST-TEST ____ dBA SPL   WINDSCRN ✓

SETTINGS A-WTD SLOW FAST FRONTAL RANDOM ANSI OTHER:

REC. #	BEGIN	END	Leq	Lmax	Lmin	L90	L50	L10	OTHER (SPECIFY METRIC
1	1:45 pm	2:00 pm	61.1	72.3	53.4	56.0	60.1	63.6	

COMMENTS Traffic on Adams Ave

SOURCE INFO AND TRAFFIC COUNTS
PRIMARY NOISE SOURCE TRAFFIC AIRCRAFT RAIL INDUSTRIAL OTHER:
ROADWAY TYPE: DIST. TO RDWY C/L OR EOP:
TRAFFIC COUNT DURATION: ___ MIN SPEED   ___ MIN SPEED

COUNT 1 (OR RDWY 1)

DIRECTION	NB/EB	SB/WB	NB/EB	SB/WB
AUTOS	165	194		
MED TRKS	4	10		
HVY TRKS	9	4		
BUSES	1			
MOTRCLS		2		

IF COUNTING BOTH DIRECTIONS AS ONE, CHECK HERE ___

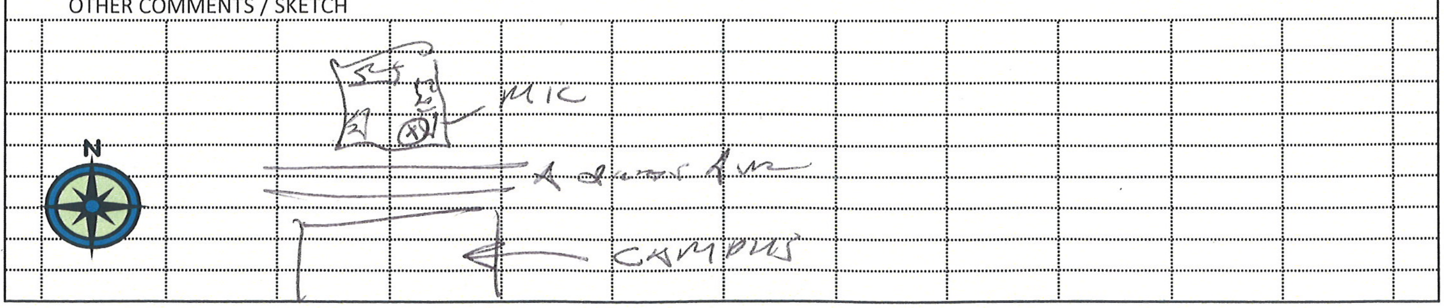
COUNT 2 (OR RDWY 2)

DIRECTION	NB/EB	SB/WB	NB/EB	SB/WB
AUTOS				
MED TRKS				
HVY TRKS				
BUSES				
MOTRCLS				

SPEEDS ESTIMATED BY: RADAR / DRIVING THE PACE
POSTED SPEED LIMIT SIGNS SAY:

OTHER NOISE SOURCES (BACKGROUND): DIST. AIRCRAFT RUSTLING LEAVES DIST. BARKING DOGS BIRDS DIST. INDUSTRIAL DIST. KIDS PLAYING DIST. CONVRSTNS / YELLING DIST. TRAFFIC (LIST RDWYS BELOW) DISTD GARDENERS/LANDSCAPING NOISE
OTHER: Fountain nearby

DESCRIPTION / SKETCH
TERRAIN HARD SOFT MIXED FLAT OTHER:
PHOTOS
OTHER COMMENTS / SKETCH



DUDEK

FIELD NOISE MEASUREMENT DATA

PROJECT OCCD Vision 2020 Facilities Master Plan IS PROJECT # 7910

SITE ID OCC Site # 3

SITE ADDRESS 201-229 Merrimac Way Costa Mesa CA 92626 OBSERVER(S) CM & MG

START DATE 10-15-13 END DATE 10-15-13

START TIME 2:26 pm END TIME 2:41

METEOROLOGICAL CONDITIONS

TEMP 82 F HUMIDITY 30 % R.H. WIND CALM LIGHT MODERATE

WINDSPD 0-1 MPH DIR. N NE S SE S SW W NW VARIABLE STEADY GUSTY

SKY SUNNY CLEAR OVRCAST PRTLY CLDY FOG RAIN

ACOUSTIC MEASUREMENTS

MEAS. INSTRUMENT Rion NL-32 TYPE 1 2 SERIAL # 01030861

CALIBRATOR RION NC-74 SERIAL # 35123809

CALIBRATION CHECK PRE-TEST 94.1 dBA SPL POST-TEST 94.1 dBA SPL WINDSCRN ✓

SETTINGS A-WTD SLOW FAST FRONTAL RANDOM ANSI OTHER:

REC. #	BEGIN	END	Leq	Lmax	Lmin	L90	L50	L10	OTHER (SPECIFY METRIC
1	2:26	2:41	57.8	70.2	53.7	54.2	55.7	60.1	

COMMENTS

SOURCE INFO AND TRAFFIC COUNTS

PRIMARY NOISE SOURCE TRAFFIC AIRCRAFT RAIL INDUSTRIAL OTHER:

ROADWAY TYPE: Merrimac Way DIST. TO RDWY C/L OR EOP:

TRAFFIC COUNT DURATION: MIN SPEED MIN SPEED

COUNT 1 (OR RDWY 1) DIRECTION	NB/EB	SB/WB	NB/EB	SB/WB	IF COUNTING BOTH DIRECTIONS AS ONE, CHECK HERE	COUNT 2 (OR RDWY 2) NB/EB	SB/WB	NB/EB	SB/WB
AUTOS	59	38							
MED TRKS		1							
HVY TRKS									
BUSES	1								
MOTRCLS		3							

SPEEDS ESTIMATED BY: RADAR / DRIVING THE PACE

POSTED SPEED LIMIT SIGNS SAY:

OTHER NOISE SOURCES (BACKGROUND): DIST. AIRCRAFT RUSTLING LEAVES DIST. BARKING DOGS BIRDS DIST. INDUSTRIAL DIST. KIDS PLAYING DIST. CONVRSTNS / YELLING DIST. TRAFFIC (LIST RDWYS BELOW) DISTD GARDENERS/LANDSCAPING NOISE

OTHER: Pool pump

DESCRIPTION / SKETCH

TERRAIN HARD SOFT MIXED FLAT OTHER:

PHOTOS

OTHER COMMENTS / SKETCH

DUDEK

FIELD NOISE MEASUREMENT DATA

PROJECT	OCCD Vision 2020 Facilities Master Plan IS	PROJECT #	7910.001
SITE ID	OCC Campus Loc # 4		
SITE ADDRESS	230-262 Merrimac Way CM, CA 92626	OBSERVER(S)	CM & MG
START DATE	10-15-13	END DATE	10-15-13
START TIME	2:52	END TIME	

METEOROLOGICAL CONDITIONS

TEMP 81 F HUMIDITY 27 % R.H. WIND CALM LIGHT MODERATE

WINDSPD 2-4 MPH DIR. N NE S SE S SW W NW VARIABLE STEADY GUSTY

SKY SUNNY CLEAR OVRCAST PRTLY CLDY FOG RAIN

ACOUSTIC MEASUREMENTS

MEAS. INSTRUMENT Rion NL-32 TYPE 1 2 SERIAL # 01030861

CALIBRATOR Rion NC-74 SERIAL # 37125809

CALIBRATION CHECK PRE-TEST 94.1 dBA SPL POST-TEST ____ dBA SPL WINDSCRN ✓

SETTINGS A-WTD SLOW FAST FRONTAL RANDOM ANSI OTHER:

REC. #	BEGIN	END	Leq	Lmax	Lmin	L90	L50	L10	OTHER (SPECIFY METRIC
1	2:52	3:07	50.3	62.5	46.4	47.5	49.1	52.3	

COMMENTS

SOURCE INFO AND TRAFFIC COUNTS

PRIMARY NOISE SOURCE TRAFFIC AIRCRAFT RAIL INDUSTRIAL OTHER: People

ROADWAY TYPE: DIST. TO RDWY C/L OR EOP:

TRAFFIC COUNT DURATION: ____ MIN SPEED ____ MIN SPEED

COUNT 1 (OR RDWY 1) DIRECTION	NB/EB	SB/WB	NB/EB	SB/WB	IF COUNTING BOTH DIRECTIONS AS ONE, CHECK HERE ____	COUNT 2 (OR RDWY 2) NB/EB	SB/WB	NB/EB	SB/WB
AUTOS									
MED TRKS									
HVY TRKS									
BUSES									
MOTRCLS									

SPEEDS ESTIMATED BY: RADAR / DRIVING THE PACE

POSTED SPEED LIMIT SIGNS SAY:

OTHER NOISE SOURCES (BACKGROUND): DIST. AIRCRAFT RUSTLING LEAVES DIST. BARKING DOGS BIRDS DIST. INDUSTRIAL DIST. KIDS PLAYING DIST. CONVRSTNS / YELLING DIST. TRAFFIC (LIST RDWYS BELOW) DISTD GARDENERS/LANDSCAPING NOISE

OTHER: Merrimac Way DIST. BACKUP ALARMS

DESCRIPTION / SKETCH

TERRAIN HARD SOFT MIXED FLAT OTHER:

PHOTOS

OTHER COMMENTS / SKETCH

N

APPENDIX G

Traffic Impact Analysis

LINSCOTT
LAW &
GREENSPAN
engineers

TRAFFIC IMPACT ANALYSIS REPORT

ORANGE COAST COLLEGE VISION 2020

FACILITIES MASTER PLAN

Costa Mesa , California
June 30, 2015

Prepared for:

DUDEK
31878 Camino Capistrano, Suite 200
San Juan Capistrano, California 92675

LLG Ref. 2-13-3396-1

Prepared by:

Daniel A. Kloos, P.E.
Senior Transportation Engineer

Under the Supervision of:

Paul W. Wilkinson, P.E.
Principal

Linscott, Law & Greenspan, Engineers
2 Executive Circle
Suite 250
Irvine, CA 92614
949.825.6175 T
949.825.6173 F
www.llgengineers.com

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SECTION—FIGURE #		FOLLOWING PAGE

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TRAFFIC IMPACT ANALYSIS REPORT

ORANGE COAST COLLEGE VISION 2020 FACILITIES MASTER PLAN

Costa Mesa, California
June 30, 2015

1.0 INTRODUCTION

This Traffic Impact Analysis report addresses the potential traffic impacts associated with the proposed Orange Coast College Vision 2020 Facilities Master Plan (hereinafter referred to as Project). The approximately 160-acre project site is generally located west of Fairview Road between Adams Avenue and Merrimac Way in the City of Costa Mesa, California. The proposed Project will generally consist of the construction of new campus facilities and the renovation of existing campus facilities to meet the District's instructional needs and to accommodate growth in the student body over the planning horizon and beyond for in-district students and out-of-district students. In addition to the new and/or renovated instructional space, the proposed Project will also consist of the construction of on-campus student housing, the construction of a mixed-use development consisting of conference/education office space, retail and/or food uses, an expansion/renovation to the existing recycling center located on the north end of the campus and the construction of a new parking structure to be located on a portion of the Adams parking lot.

1.1 Scope of Work

This traffic report documents the findings and recommendations of a traffic impact analysis conducted by Linscott, Law & Greenspan, Engineers (LLG) to determine the potential impacts associated with the proposed Project. The traffic analysis evaluates the operating conditions at thirty five (35) key study locations within the project vicinity (including one proposed project driveway to be added along Adams Avenue), estimates the trip generation potential of the proposed Project, superimposes the project-related traffic volumes on the circulation system as it currently exists and forecasts future operating conditions without and with the proposed Project. Where necessary, intersection improvements/mitigation measures are identified.

The project site has been visited and an inventory of adjacent area roadways and intersections was performed. Existing peak hour traffic information has been collected at thirty four (34) key study locations on a "typical" weekday for use in the preparation of intersection level of service calculations. A "typical" weekday constitutes a Tuesday, Wednesday or Thursday and refers to a non-holiday condition when local schools are in session. Information concerning cumulative projects (planned and/or approved) in the vicinity of the proposed Project has been researched at the City of Costa Mesa and the City of Newport Beach. Based on our research, there are seven (7) cumulative projects located in the City of Costa Mesa and one (1) cumulative project located in the City of Newport Beach. These eight (8) cumulative projects were considered in the cumulative traffic analysis for this project.

This traffic report satisfies the traffic impact requirements of the City of Costa Mesa and is consistent with the most current *Congestion Management Program (CMP) for Orange County*. This traffic report analyzes existing and future weekday AM peak hour and PM peak hour traffic conditions for a near-term (Year 2024) traffic setting upon completion of the proposed Project. Peak hour traffic forecasts for the Year 2024 horizon year have been projected by increasing existing (2013 and 2015) traffic volumes by an annual growth rate of one percent (1.0%) per year and adding traffic volumes generated by eight (8) cumulative projects.

1.2 Study Area

A total of thirty five (35) locations, which are all located within the City of Costa Mesa have been selected for evaluation based on review of the existing transportation system surrounding the proposed Project site. Of this total, twenty (20) locations are arterial street signalized intersections, four (4) locations are arterial street/project access point signalized intersections and eleven (11) locations (includes the one proposed project driveway along Adams Avenue) are project access point unsignalized intersections. The thirty five (35) locations listed below provide regional and local access to the study area and define the extent of the boundaries for this traffic impact investigation.

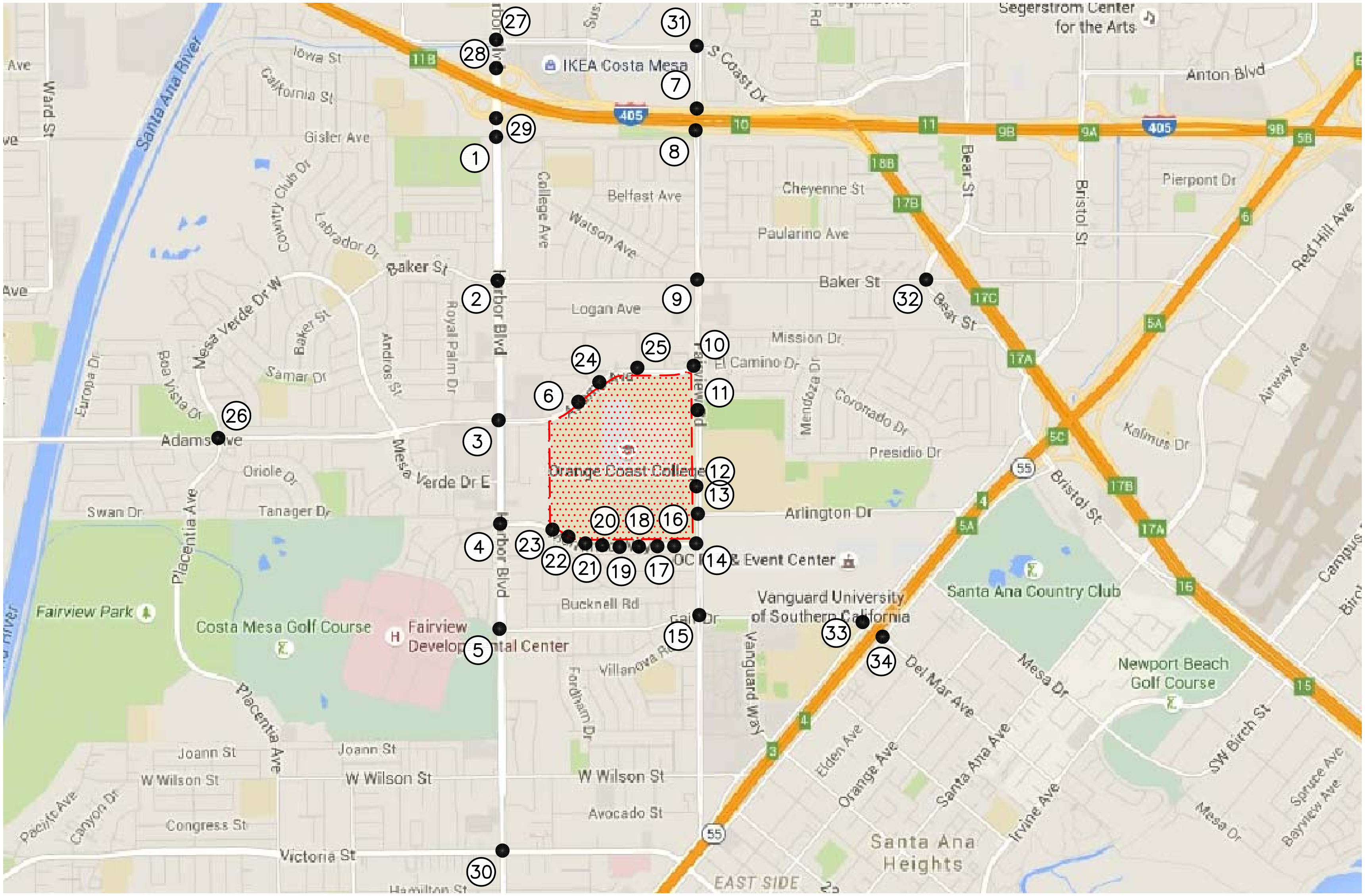
Key Study Intersections

1. Harbor Boulevard at Gisler Avenue
2. Harbor Boulevard at Baker Street
3. Harbor Boulevard at Adams Avenue
4. Harbor Boulevard at Merrimac Way
5. Harbor Boulevard at Fair Drive
6. Pinecreek Drive/S Street at Adams Avenue
7. Fairview Road at I-405 NB Ramps
8. Fairview Road at I-405 SB Ramps
9. Fairview Road at Baker Street
10. Fairview Rd at Adams Ave/El Camino Dr
11. Fairview Road at Monitor Way
12. Fairview Rd at Pirate Way/Mustang Way
13. Fairview Road at Arlington Drive
14. Fairview Road at Merrimac Way
15. Fairview Road at Fair Drive
16. Lot C Driveway at Merrimac Way
17. Lot D Driveway at Merrimac Way
18. Lot D Dwy (Right-In/Out Only) at Merrimac Way
19. Lot D Dwy (Right-In/Out Only) at Merrimac Way
20. Lot E Driveway at Merrimac Way
21. Lot E Driveway (Right-In/Out Only) at Merrimac Way
22. Lot E Driveway/Church Driveway at Merrimac Way
23. Lot E Driveway (Right-In/Out Only) at Merrimac Way
24. Recycling Center Driveway No. 1 at Adams Avenue
25. Recycling Center Driveway No. 2 at Adams Avenue
26. Placentia Avenue/Mesa Verde Drive at Adams Avenue
27. Harbor Boulevard at South Coast Drive
28. Harbor Boulevard at I-405 NB Ramps
29. Harbor Boulevard at I-405 SB Ramps
30. Harbor Boulevard at Victoria Street
31. Fairview Road at South Coast Drive
32. Bear Street at Baker Street
33. Newport Boulevard at SR-55 SB Ramps/Fair Drive
34. Newport Blvd/SR-55 NB Ramps at Fair Drive/Del Mar Ave
35. Project Dwy (near student housing component) at Adams Ave

Figure 1-1 presents a Vicinity Map, which illustrates the general location of the Project and depicts the study locations and surrounding street system. The Volume-Capacity (V/C) and Level of Service (LOS) investigations at these key locations were used to evaluate the potential traffic-related impacts associated with area growth, cumulative projects and the proposed Project. When necessary, this report recommends intersection improvements that may be required to accommodate future traffic volumes and restore/maintain an acceptable Level of Service, and/or mitigates the impact of the project.

Included in this Traffic Impact Analysis are:

- Existing traffic counts,
- Estimated project traffic generation/distribution/assignment,
- Estimated cumulative project traffic generation/distribution/assignment,
- AM and PM peak hour capacity analyses for existing conditions,
- AM and PM peak hour capacity analyses for existing plus project conditions,
- AM and PM peak hour capacity analyses for future near-term (Year 2024) traffic conditions without and with the proposed Project,
- Caltrans Evaluation at applicable locations,
- Recommended Improvements,
- Focused Saturday Evaluation,
- Intersection Queuing Evaluation, and
- Parking Structure Evaluation.



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LINSCOTT LAW & GREENSPAN
engineers

N
NO SCALE

SOURCE: GOOGLE

KEY

(#) = STUDY INTERSECTION

= PROJECT SITE

FIGURE 1–1

VICINITY MAP

ORANGE COAST COLLEGE VISION 2020 FACILITIES MASTER PLAN, COSTA MESA

2.0 PROJECT DESCRIPTION

The approximately 160-acre project site is generally located west of Fairview Road between Adams Avenue and Merrimac Way in the City of Costa Mesa, California. ***Figure 2-1*** presents an aerial depiction of the existing site.

Figure 2-2 presents the proposed site plan for the proposed Project, which shows the locations of the proposed renovations and new construction. As shown, the proposed Project will consist of the construction of new campus facilities and the renovation of existing campus facilities to meet the District's instructional needs and to accommodate growth in the student body over the planning horizon and beyond for in-district students and out-of-district students. In addition to the new and/or renovated instructional space, the proposed Project will also consist of the construction of on-campus student housing, the construction of a mixed-use development consisting of conference/education office space, retail and/or food uses, an expansion/renovation to the existing recycling center and the construction of a new parking structure.

In order to facilitate the development of trip generation forecasts for the proposed Project, the aforementioned project description has been divided amongst four categories. These four categories consist of development related to 1) student growth; 2) the on-campus student housing project; 3) the mixed-use development project and 4) the recycling center expansion project. All project components are expected to be completed by the Year 2024. The following describes each of the four categories in detail.

Student Growth

Orange Coast College has a current baseline student enrollment of 21,410 students. As stated above, the renovation of existing campus facilities and the construction of new campus facilities, including the proposed parking structure to be located on a portion of the Adams parking lot are required to meet the District's instructional needs and to accommodate growth in the student body for in-district students and out-of-district students. At completion of the Master Plan, Orange Coast College is projected to accommodate a future student enrollment of 28,332 students, resulting in a net increase of 6,922 students.

Student Housing

As shown in *Figure 2-2*, the on-campus student housing project component will be generally located on the southwest corner of the intersection of Pinecreek Drive/S Street and Adams Avenue in the northwest corner of campus. The on-campus student housing project component will consist of 818 beds.

Mixed-Use Development

As shown in *Figure 2-2*, the mixed-use development project component will be generally located on the northwest corner of the intersection of Fairview Road and Merrimac Way in the southeast corner of campus. The mixed-use development project component will consist of 89,000 SF of conference/education office space and up to 15,000 SF of retail/fast-casual restaurant space.

Recycling Center Expansion

The recycling center currently exists on the north end of the campus between the athletic fields, with two access points currently provided along Adams Avenue (i.e. one inbound only driveway and one outbound only driveway). As shown in *Figure 2-2,* the recycling center will remain in its current location; however it will be expanded for the purposes of accommodating recycling demand in the City of Costa Mesa. The expanded facility will provide a greater area for visitors to drop off recyclable materials at designated areas, provide more parking for patrons, provide a greater area for equipment storage and provide an area for outdoor instructional space. Access to the expanded facility will remain unchanged with one inbound only driveway and one outbound only driveway to be provided along Adams Avenue. A deceleration lane will also be provided along Adams Avenue at the inbound only driveway. At completion of the proposed recycling center expansion, it is expected that the site would collect triple the amount of waste that is currently collected at the existing facility, thus resulting in triple the amount of visitors to the expanded site.

2.1 Site Access

Vehicular access to the campus would continue to be provided from Adams Avenue, Fairview Road and Merrimac Way. The vehicular entries from Monitor Way, Pirate Way and Arlington Drive would be enhanced with the addition of formal gateways and marked pedestrian drop-off points. The primary entry into Lot E off of Merrimac Way would also be enhanced. A new right-turn in/right-turn out only driveway would also be provided along Adams Avenue, located on the west end of the campus, near the proposed student housing project component (study location #35).

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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

SOURCE: GOOGLE

KEY

= PROJECT SITE

FIGURE 2–1

EXISTING SITE AERIAL

ORANGE COAST COLLEGE VISION 2020 FACILITIES MASTER PLAN, COSTA MESA

3.0 EXISTING CONDITIONS

3.1 Existing Street System

The principal local network of streets serving the project site are Harbor Boulevard, Fairview Road, Adams Avenue and Merrimac Way. The following discussion provides a brief synopsis of these key area streets. The descriptions are based on an inventory of existing roadway conditions.

Harbor Boulevard is an eight-lane, divided roadway between Gisler Avenue and Baker Street, a seven-lane, divided roadway between Baker Street and Adams Avenue and a six-lane, divided roadway south of Adams Avenue, oriented in the north-south direction. The posted speed limit on Harbor Boulevard is 40 miles per hour (mph). On-street parking is generally not permitted along this roadway in the vicinity of the project. Traffic signals control the study intersections of Harbor Boulevard at South Coast Drive, the I-405 NB Ramps, the I-405 SB Ramps, Gisler Avenue, Baker Street, Adams Avenue, Merrimac Way, Fair Drive and Victoria Street.

Fairview Road is generally a six-lane, divided roadway, oriented in the north-south direction. Fairview Road borders the project site to the east and currently provides access to the site via Monitor Way, Pirate Way and Arlington Drive. The posted speed limit on Fairview Road is 40 mph. On-street parking is generally not permitted along this roadway in the vicinity of the project. Traffic signals control the study intersections of Fairview Road at South Coast Drive, the I-405 NB Ramps, the I-405 SB Ramps, Baker Street, Adams Avenue/El Camino Drive, Monitor Way, Pirate Way/Mustang Way, Arlington Drive, Merrimac Way and Fair Drive.

Adams Avenue is a six-lane, divided roadway between Placentia Avenue/Mesa Verde Drive and Pinecreek Drive/S Street and a five-lane, divided roadway between Pinecreek Drive/S Street and Fairview Road, oriented in the east-west direction. Adams Avenue borders the project site to the north and currently provides access to the site via S Street. Access to the recycling center is also provided via one inbound only driveway and one outbound only driveway along Adams Avenue. The posted speed limit on Adams Avenue is 40 mph. On-street parking is generally not permitted along this roadway between Placentia Avenue/Mesa Verde Drive and Pinecreek Drive/S Street. Between Pinecreek Drive/S Street and Fairview Road, on-street parking is permitted on the north side of the street and not permitted on the south side of the street. Traffic signals control the study intersections of Adams Avenue at Placentia Avenue/Mesa Verde Drive, Harbor Boulevard, Pinecreek Drive/S Street and Fairview Road.

Merrimac Way is generally a four-lane, divided roadway, oriented in the east-west direction. Merrimac Way borders the project site to the south and currently provides access to the site via eight unsignalized driveways. The posted speed limit on Merrimac Way is 35 mph. On-street parking is generally not permitted along this roadway in the vicinity of the project. Traffic signals control the study intersections of Merrimac Way at Harbor Boulevard and Fairview Road.

Figure 3-1 presents an inventory of the existing roadway conditions for the arterials and intersections evaluated in this report. This figure identifies the number of travel lanes for key arterials, as well as intersection configurations and controls for the key area study intersections. Please note that this figure, as well as all other subsequent figures contain an “A sheet” and a “B sheet”.

3.2 Existing Traffic Volumes

Thirty-five (35) key study intersections (including one proposed project driveway along Adams Avenue in the vicinity of the proposed student housing component), have been identified as the locations at which to evaluate existing and future traffic operating conditions. Some portion of potential project-related traffic will pass through each of these intersections, and their analysis will reveal the expected relative impacts of the project. Existing AM peak hour and PM peak hour traffic volumes for the key study intersections evaluated in this report were obtained from manual turning movement counts conducted by Transportation Studies Inc. in October 2013, November 2013, January 2015 and February 2015. Since the campus driveways/access points are included in the list of intersections where traffic data was collected, the traffic data at these locations was utilized to establish the existing daily, AM Peak hour and PM peak hour trip generation for the campus. The existing trip generation represents an existing baseline enrollment of 21,410 students. Traffic counts/observations were also conducted at the existing recycling center in February 2014 to help establish the recycling centers existing daily, AM peak hour and PM peak hour trip generation.

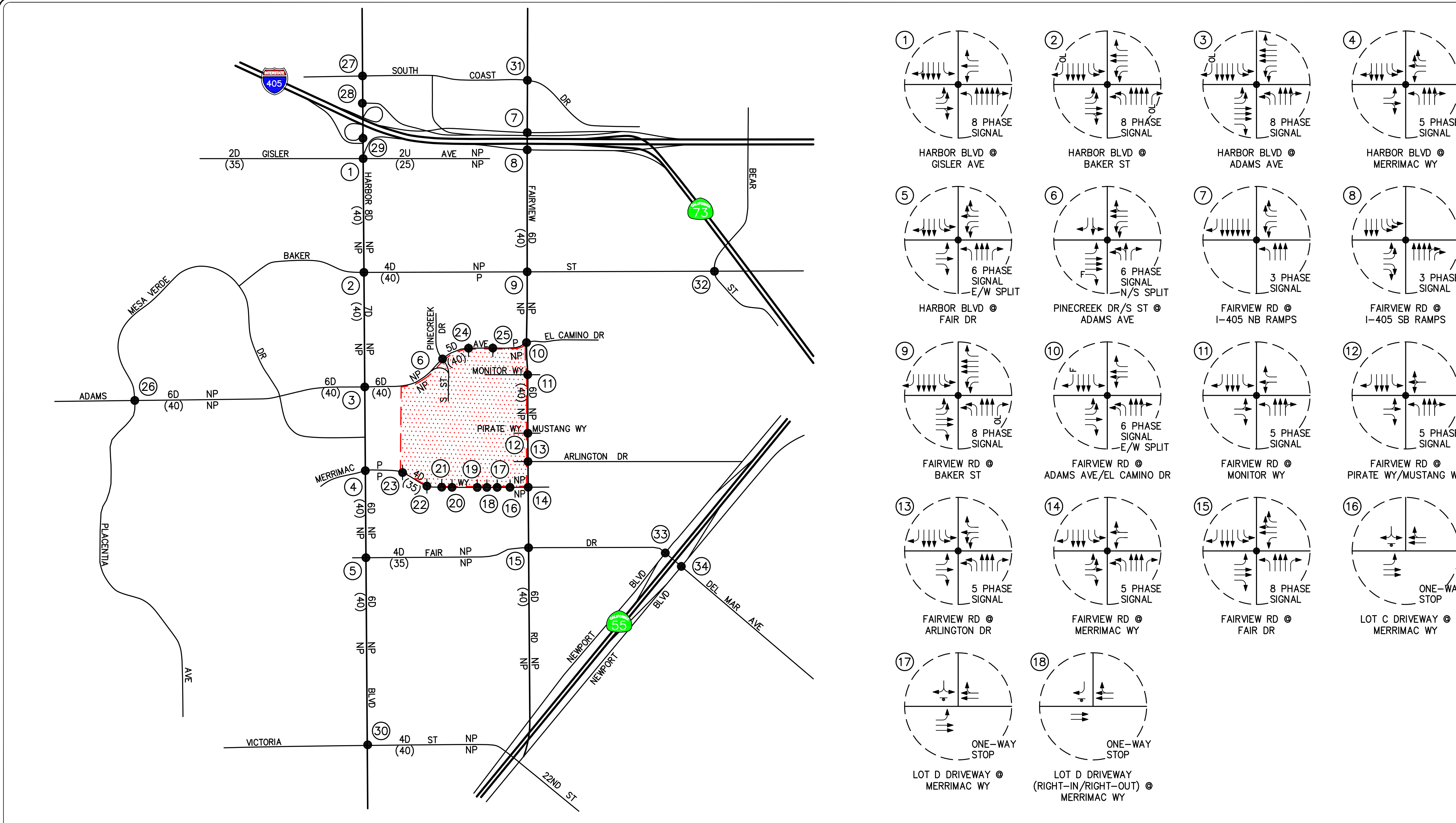
Figures 3-2 and ***3-3*** illustrate the existing AM and PM peak hour traffic volumes at the key study intersections evaluated in this report, respectively. ***Appendix A*** contains the detailed peak hour count sheets for the key intersections evaluated in this report and contains a summary of the existing daily, AM peak hour and PM peak hour trip generation for the campus. *Appendix A* also contains a summary of the recycling center counts/observations.

3.3 Existing Intersection Conditions

Existing AM and PM peak hour operating conditions for the key study intersections were evaluated using the *Intersection Capacity Utilization* (ICU) methodology for signalized intersections and the methodology outlined in Chapter 17 of the *Highway Capacity Manual 2000* (HCM2000) for unsignalized intersections.

3.3.1 *Intersection Capacity Utilization (ICU) Method of Analysis*

In conformance with City of Costa Mesa and Orange County CMP requirements, existing AM and PM peak hour operating conditions for the key signalized study intersections were evaluated using the Intersection Capacity Utilization (ICU) method. The ICU technique is intended for signalized intersection analysis and estimates the volume to capacity (V/C) relationship for an intersection based on the individual V/C ratios for key conflicting traffic movements. The ICU numerical value represents the percent signal (green) time, and thus capacity, required by existing and/or future traffic. It should be noted that the ICU methodology assumes uniform traffic distribution per intersection approach lane and optimal signal timing.



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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

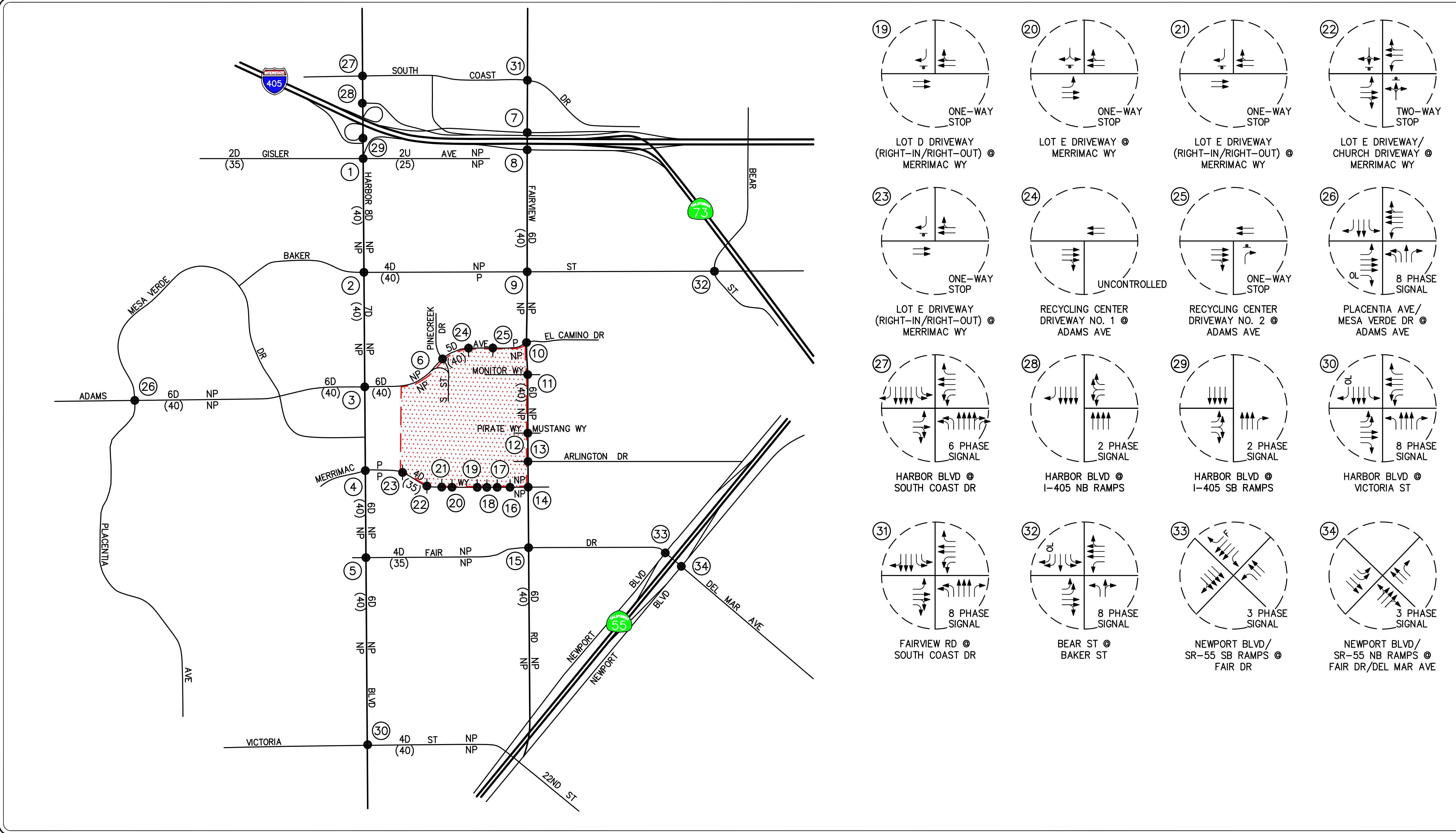
KEY

(#) = STUDY INTERSECTION	2 = NUMBER OF TRAVEL LANES
← = APPROACH LANE ASSIGNMENT	(XX) = POSTED SPEED LIMIT (MPH)
● = TRAFFIC SIGNAL, ┬ = STOP SIGN	OL = OVERLAP
P = PARKING, NP = NO PARKING	F = FREE-RIGHT
U = UNDIVIDED, D = DIVIDED	= PROJECT SITE

FIGURE 3-1A

EXISTING ROADWAY CONDITIONS AND INTERECTION CONTROLS

ORANGE COAST COLLEGE VISION 2020 FACILITIES MASTER PLAN, COSTA MESA



LINSCOTT LAW & GREENSPAN engineers

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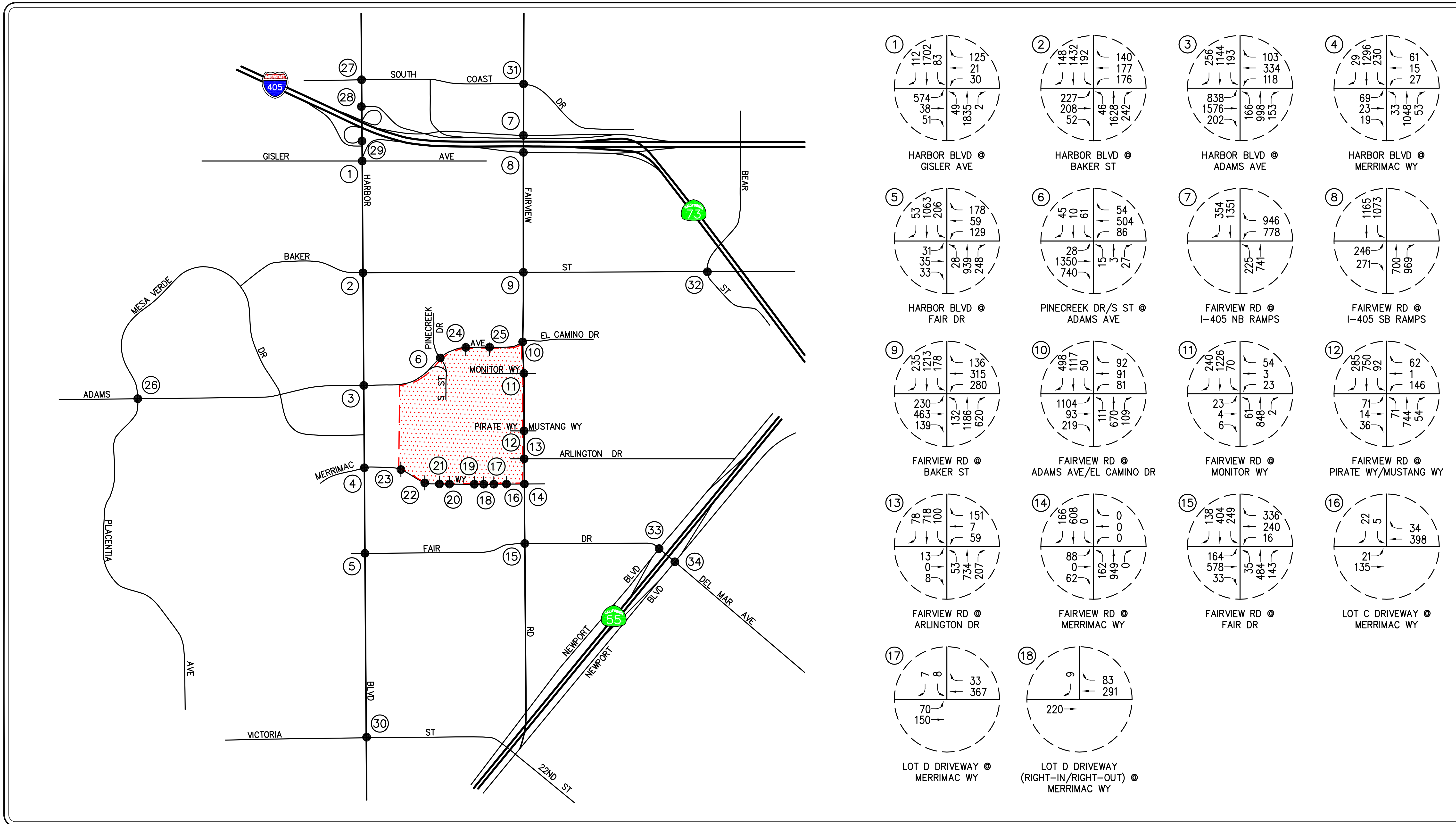
KEY

(#) = STUDY INTERSECTION
← = APPROACH LANE ASSIGNMENT
● = TRAFFIC SIGNAL, ⊤ = STOP SIGN
P = PARKING, NP = NO PARKING
U = UNDIVIDED, D = DIVIDED
2 = NUMBER OF TRAVEL LANES
(XX)= POSTED SPEED LIMIT (MPH)
OL = OVERLAP
F = FREE-RIGHT
= PROJECT SITE

FIGURE 3-1B

EXISTING ROADWAY CONDITIONS AND INTERECTION CONTROLS

ORANGE COAST COLLEGE VISION 2020 FACILITIES MASTER PLAN, COSTA MESA



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KEY

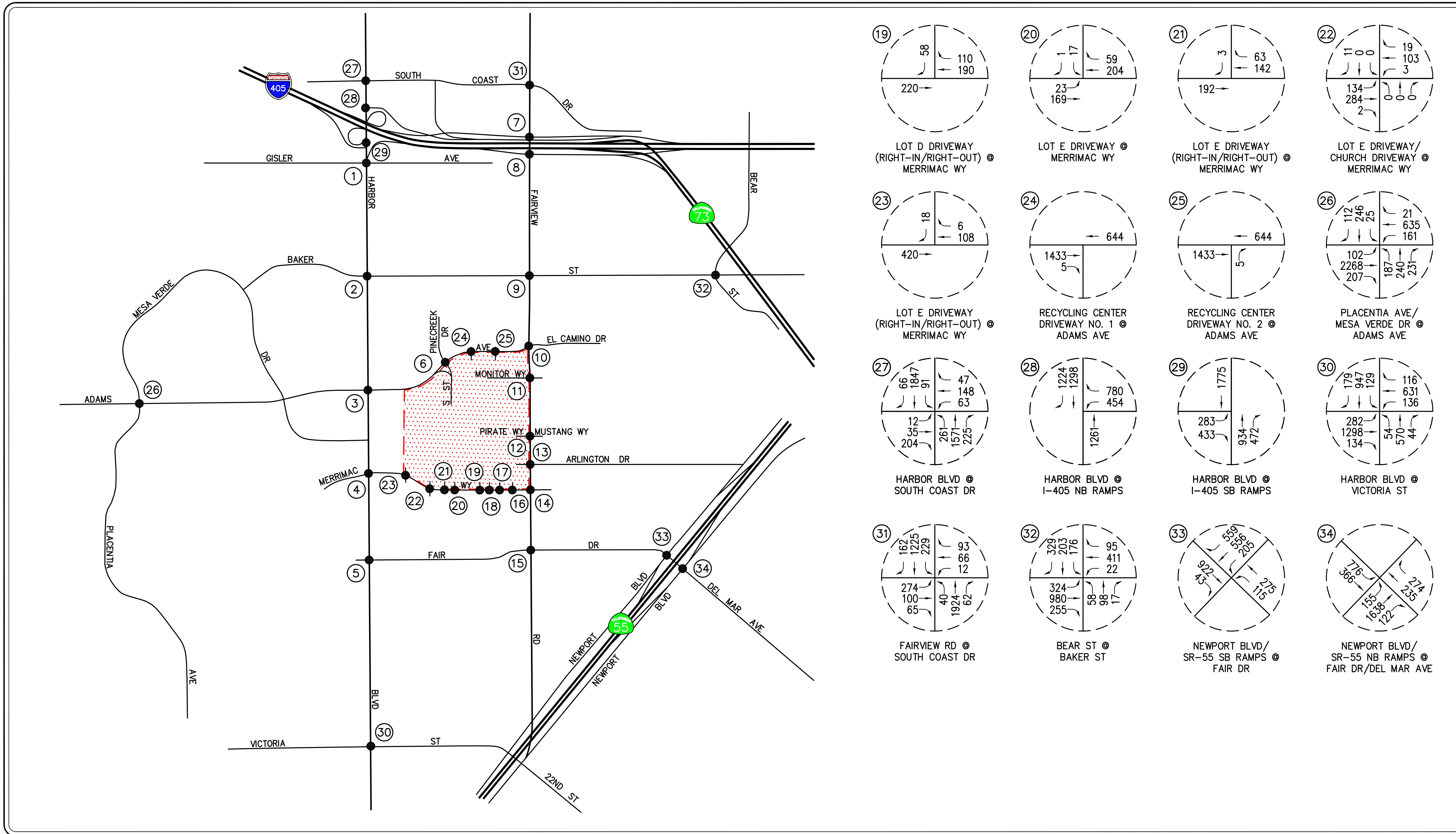
\# = STUDY INTERSECTION

= PROJECT SITE

FIGURE 3–2A

EXISTING AM PEAK HOUR TRAFFIC VOLUMES

ORANGE COAST COLLEGE VISION 2020 FACILITIES MASTER PLAN, COSTA MESA



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LINSCOTT LAW & GREENSPAN engineers

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KEY

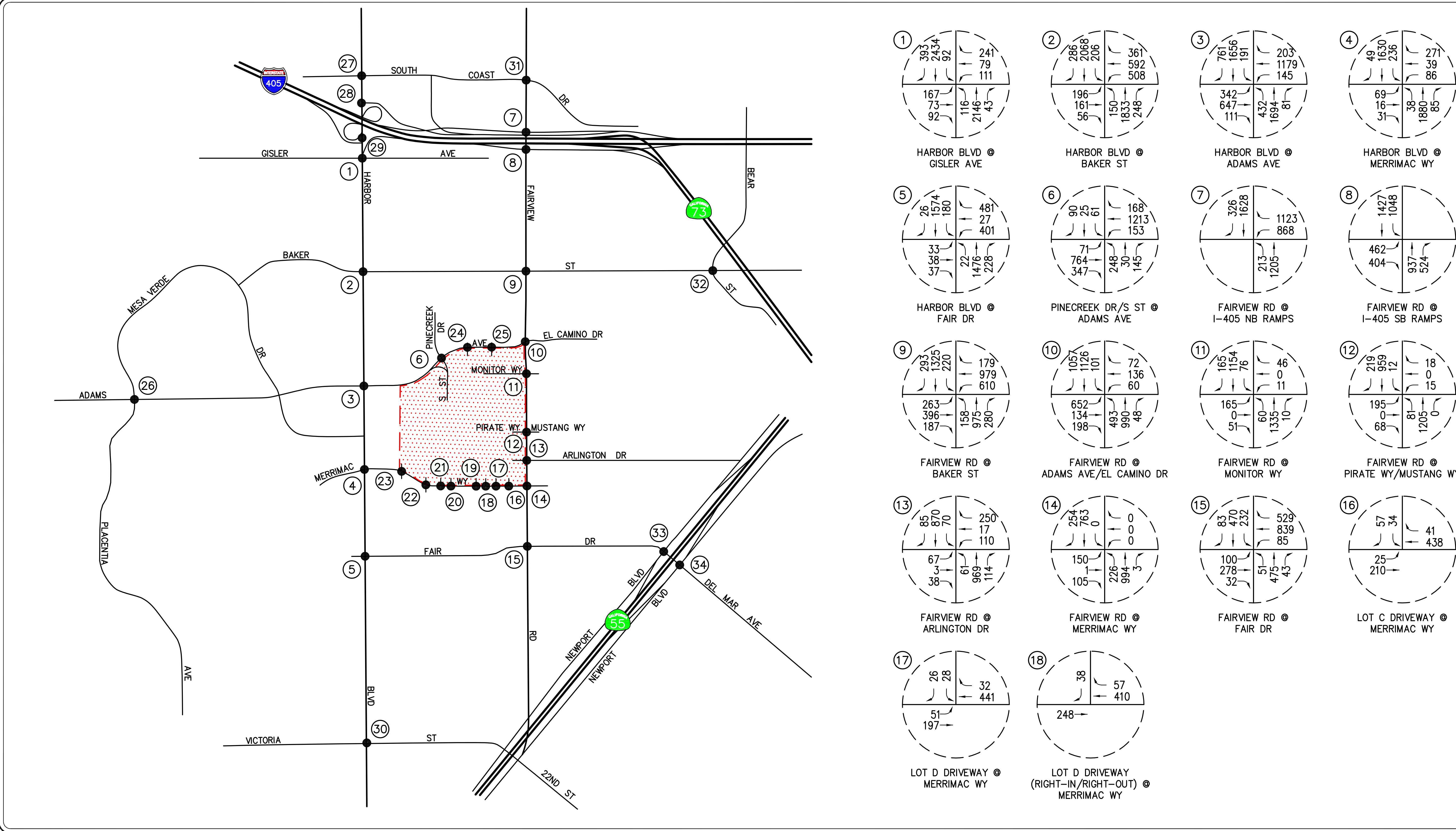
(#) = STUDY INTERSECTION

= PROJECT SITE

FIGURE 3–2B

EXISTING AM PEAK HOUR TRAFFIC VOLUMES

ORANGE COAST COLLEGE VISION 2020 FACILITIES MASTER PLAN, COSTA MESA



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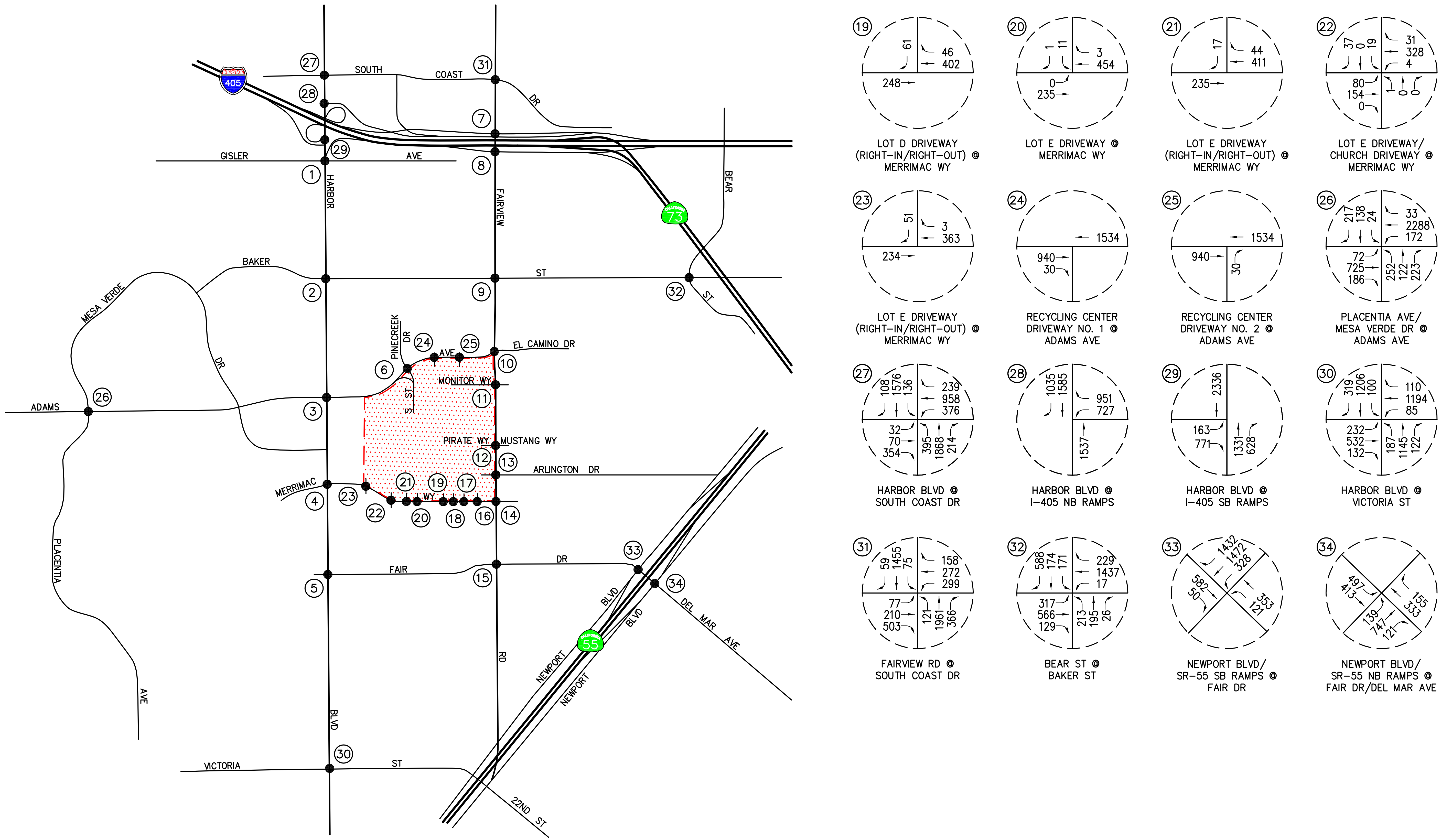
KEY
(#) = STUDY INTERSECTION
= PROJECT SITE

FIGURE 3-3A

EXISTING PM PEAK HOUR TRAFFIC VOLUMES

ORANGE COAST COLLEGE VISION 2020 FACILITIES MASTER PLAN, COSTA MESA



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(#) = STUDY INTERSECTION
= PROJECT SITE

FIGURE 3–3B

EXISTING PM PEAK HOUR TRAFFIC VOLUMES

ORANGE COAST COLLEGE VISION 2020 FACILITIES MASTER PLAN, COSTA MESA

Per City of Costa Mesa requirements, the ICU calculations use a lane capacity of 1,600 vph for left-turn lanes, through lanes and right-turn lanes. The City of Costa Mesa does make adjustments for clearance intervals since the assumed lane capacity reflects the effect of lost time.

The ICU value translates to a Level of Service (LOS) estimate, which is a relative measure of the intersection performance. The ICU value is the sum of the critical volume to capacity ratios at an intersection; it is not intended to be indicative of the LOS of each of the individual turning movements. The six qualitative categories of Level of Service have been defined along with the corresponding ICU value range and are shown in ***Table 3-1***.

3.3.2 *Highway Capacity Manual (HCM) Method of Analysis (Unsignalized Intersections)*

The 2000 HCM unsignalized methodology for stop-controlled intersections was utilized for the analysis of the unsignalized intersections. This methodology estimates the average control delay for each of the subject movements and determines the level of service for each movement. For all-way stop controlled intersections, the overall average control delay measured in seconds per vehicle, and level of service is then calculated for the entire intersection. For one-way and two-way stop-controlled (minor street stop-controlled) intersections, this methodology estimates the worst side street delay, measured in seconds per vehicle and determines the level of service for that approach. The HCM control delay value translates to a Level of Service (LOS) estimate, which is a relative measure of the intersection performance. The six qualitative categories of Level of Service have been defined along with the corresponding HCM control delay value range, as shown in ***Table 3-2***.

3.3.3 *Level of Service Criteria*

According to City of Costa Mesa criteria, LOS D (ICU = 0.801 – 0.900) is the minimum acceptable condition that should be maintained during the morning and evening peak commute hours.

3.4 Existing Level of Service Results

Table 3-3 summarizes the existing peak hour service level calculations for the thirty five (35) key study intersections based on existing traffic volumes and current street geometrics. Review of *Table 3-3* indicates that all key study intersections currently operate at an acceptable service level during the AM and PM peak hours.

It should be noted that *Table 3-3* presents two sets of existing level of service results for the intersection of Harbor Boulevard/Adams Avenue (i.e. without and with recently installed improvements that were identified as part of the Harbor Boulevard/Adams Avenue Intersection Widening Project). As shown in *Table 3-3,* without the recently installed improvements, the intersection of Harbor Boulevard/Adams Avenue operated at LOS B during the AM peak hour and LOS D during the PM peak hour. With the recently installed improvements, the intersection of Harbor Boulevard/Adams Avenue operates at LOS B during the AM peak hour and LOS C during the PM peak hour.

Appendix B presents the ICU/LOS and HCM/LOS calculation worksheets for the key study intersections for the AM peak hour and PM peak hour.

TABLE 3-1

LEVEL OF SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS

Level of Service (LOS)	Intersection Capacity Utilization Value (V/C)	Level of Service Description
A	≤ 0.600	EXCELLENT. No vehicle waits longer than one red light, and no approach phase is fully used.
B	0.601 – 0.700	VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.
C	0.701 – 0.800	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.
D	0.801 – 0.900	FAIR. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.
E	0.901 – 1.000	POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.
F	> 1.000	FAILURE. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Potentially very long delays with continuously increasing queue lengths.

TABLE 3-2

LEVEL OF SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS[1]

Level of Service (LOS)	Highway Capacity Manual Delay Value (sec/veh)	Level of Service Description
A	≤ 10.0	Little or no delay
B	> 10.0 and ≤ 15.0	Short traffic delays
C	> 15.0 and ≤ 25.0	Average traffic delays
D	> 25.0 and ≤ 35.0	Long traffic delays
E	> 35.0 and ≤ 50.0	Very long traffic delays
F	> 50.0	Severe congestion

1 Source: *Highway Capacity Manual 2000*, Chapter 17 (Unsignalized Intersections).

TABLE 3-3
EXISTING PEAK HOUR INTERSECTION CAPACITY ANALYSIS

Key Intersection		Time Period	Control Type	ICU/HCM	LOS
1.	Harbor Boulevard at Gisler Avenue	AM PM	8∅ Traffic Signal	0.572 0.717	A C
2.	Harbor Boulevard at Baker Street	AM PM	8∅ Traffic Signal	0.473 0.657	A B
3.	Harbor Boulevard at Adams Avenue (before 2015)	AM PM	8∅ Traffic Signal	0.665 0.856	B D
	➢ With Recently Installed Improvements [a]	AM PM	8∅ Traffic Signal	0.665 0.746	B C
4.	Harbor Boulevard at Merrimac Way	AM PM	5∅ Traffic Signal	0.368 0.623	A B
5.	Harbor Boulevard at Fair Drive	AM PM	6∅ Traffic Signal	0.356 0.546	A A
6.	Pinecreek Drive/S Street at Adams Avenue	AM PM	6∅ Traffic Signal	0.369 0.623	A B
7.	Fairview Road at I-405 NB Ramps	AM PM	3∅ Traffic Signal	0.658 0.688	B B
8.	Fairview Road at I-405 SB Ramps	AM PM	3∅ Traffic Signal	0.611 0.545	B A
9.	Fairview Road at Baker Street	AM PM	8∅ Traffic Signal	0.588 0.586	A A
10.	Fairview Road at Adams Ave/El Camino Dr	AM PM	6∅ Traffic Signal	0.670 0.654	B B
11.	Fairview Road at Monitor Way	AM PM	5∅ Traffic Signal	0.342 0.460	A A
12.	Fairview Road at Pirate Way/Mustang Way	AM PM	5∅ Traffic Signal	0.399 0.401	A A
13.	Fairview Road at Arlington Drive	AM PM	5∅ Traffic Signal	0.287 0.422	A A

Notes:
- **Bold ICU/LOS** or **HCM/LOS** values indicate adverse service levels based on City of Costa Mesa LOS standards
- sec/veh = seconds per vehicle
- [a] = The recently installed improvements identified as part of the Harbor Boulevard/Adams Avenue Intersection Widening Project consist of a second southbound right-turn lane and a third eastbound left-turn lane.

TABLE 3-3 (CONTINUED)
EXISTING PEAK HOUR INTERSECTION CAPACITY ANALYSIS

Key Intersection		Time Period	Control Type	ICU/HCM	LOS
14.	Fairview Road at Merrimac Way	AM PM	5∅ Traffic Signal	0.236 0.295	A A
15.	Fairview Road at Fair Drive	AM PM	8∅ Traffic Signal	0.401 0.519	A A
16.	Lot C Driveway at Merrimac Way	AM PM	One-Way Stop	10.4 sec/veh 12.6 sec/veh	B B
17.	Lot D Driveway at Merrimac Way	AM PM	One-Way Stop	12.1 sec/veh 13.3 sec/veh	B B
18.	Lot D Dwy (Right-In/Out Only) at Merrimac Way	AM PM	One-Way Stop	9.5 sec/veh 10.0 sec/veh	A A
19.	Lot D Dwy (Right-In/Out Only) at Merrimac Way	AM PM	One-Way Stop	9.5 sec/veh 10.1 sec/veh	A B
20.	Lot E Driveway at Merrimac Way	AM PM	One-Way Stop	11.2 sec/veh 13.2 sec/veh	B B
21.	Lot E Dwy (Right-In/Out Only) at Merrimac Way	AM PM	One-Way Stop	8.9 sec/veh 9.8 sec/veh	A A
22.	Lot E Dwy/Church Dwy at Merrimac Way	AM PM	Two-Way Stop	8.7 sec/veh 13.9 sec/veh	A B
23.	Lot E Dwy (Right-In/Out Only) at Merrimac Way	AM PM	One-Way Stop	8.7 sec/veh 9.7 sec/veh	A A
24.	Recycling Center Dwy No. 1 at Adams Avenue	AM PM	Uncontrolled	0.0 sec/veh 0.0 sec/veh	A A
25.	Recycling Center Dwy No. 2 at Adams Avenue	AM PM	One-Way Stop	12.0 sec/veh 10.6 sec/veh	B B

Notes:
- **Bold ICU/LOS** or **HCM/LOS** values indicate adverse service levels based on City of Costa Mesa LOS standards
- sec/veh = seconds per vehicle

TABLE 3-3 (CONTINUED)
EXISTING PEAK HOUR INTERSECTION CAPACITY ANALYSIS

Key Intersection		Time Period	Control Type	ICU/HCM	LOS
26.	Mesa Verde Dr/Placentia Ave at Adams Avenue	AM PM	8∅ Traffic Signal	0.739 0.743	C C
27.	Harbor Boulevard at South Coast Drive	AM PM	6∅ Traffic Signal	0.465 0.669	A B
28.	Harbor Boulevard at I-405 NB Ramps	AM PM	2∅ Traffic Signal	0.460 0.597	A A
29.	Harbor Boulevard at I-405 SB Ramps	AM PM	2∅ Traffic Signal	0.427 0.606	A B
30.	Harbor Boulevard at Victoria Street	AM PM	8∅ Traffic Signal	0.679 0.814	B D
31.	Fairview Road at South Coast Drive	AM PM	8∅ Traffic Signal	0.702 0.683	C B
32.	Bear Street at Baker Street	AM PM	8∅ Traffic Signal	0.563 0.688	A B
33.	Newport Blvd/SR-55 SB Ramps at Fair Drive	AM PM	3∅ Traffic Signal	0.351 0.481	A A
34.	Newport Blvd/SR-55 NB Ramps at Fair Drive/Del Mar Avenue	AM PM	3∅ Traffic Signal	0.813 0.469	D A
35.	Project Dwy (near proposed student housing component) at Adams Ave	AM PM	One-Way Stop [a]	--- ---	--- ---

Notes:
- **Bold ICU/LOS** or **HCM/LOS** values indicate adverse service levels based on City of Costa Mesa LOS standards
- sec/veh = seconds per vehicle
- [a] = future intersection

4.0 TRAFFIC FORECASTING METHODOLOGY

In order to estimate the traffic impact characteristics of the proposed Project, a multi-step process has been utilized. The first step is traffic generation, which estimates the total arriving and departing traffic on a peak hour and daily basis. The traffic generation potential is forecast by applying the appropriate vehicle trip generation equations or rates to the project development tabulation.

The second step of the forecasting process is traffic distribution, which identifies the origins and destinations of inbound and outbound project traffic. These origins and destinations are typically based on demographics and existing/expected future travel patterns in the study area.

The third step is traffic assignment, which involves the allocation of project traffic to study area streets and intersections. Traffic assignment is typically based on minimization of travel time, which may or may not involve the shortest route, depending on prevailing operating conditions and travel speeds. Traffic distribution patterns are indicated by general percentage orientation, while traffic assignment allocates specific volume forecasts to individual roadway links and intersection turning movements throughout the study area.

With the forecasting process complete and project traffic assignments developed, the impact of the proposed project is isolated by comparing operational (LOS) conditions at selected key intersections using expected future traffic volumes with and without forecast project traffic. The need for site-specific and/or cumulative local area traffic improvements can then be evaluated and the significance of the project's impacts identified.

5.0 PROJECT TRAFFIC CHARACTERISTICS

5.1 Project Traffic Generation

Traffic generation is expressed in vehicle trip ends, defined as one-way vehicular movements, either entering or exiting the generating land use. Generation equations and/or rates used in the traffic forecasting procedure are typically found in the 9th Edition of *Trip Generation*, published by the Institute of Transportation Engineers (ITE) [Washington D.C., 2012].

Table 5-1 summarizes the trip generation rates used in forecasting the vehicular trips generated by the four components of the proposed Project (i.e. student growth, student housing, mixed use development and recycling center expansion). As shown, the trip generation potential of the student growth project component was estimated using the empirical rates developed from the existing driveway counts for an existing baseline enrollment of 21,410 students (refer to *Appendix A* and the footnotes within *Table 5-1* for specific details on the development of the trip rates). The trip generation potential of the mixed use development project component was estimated using ITE Land Use 710: General Office Building trip rates and ITE Land Use 820: Shopping Center trip equations.

For the student housing project component, ITE Land Use 220: Apartment trip rates were considered, however they were deemed not applicable to the proposed student housing project component, as use of apartment trip rates would significantly overstate the project trips. Based on our understanding of the project description, the proposed student housing project will function similar to that of a college dormitory or an on-campus apartment and will only be available to students attending Orange Coast College. Residents of the student housing project component would be located on campus and therefore trips associated with any school activities would likely be walk-based trips. The only trips that need to be accounted for with this project component would be non-school related trips (i.e. student work trips, etc.). To develop the non-school related trips associated with the student housing project component, student housing empirical rates developed as part of the *Chapman University Residence Center Project Traffic Impact Study*, prepared by LLG Irvine (March 2007) were utilized. The *Chapman University Residence Center* rates are deemed more appropriate for use as they fit the description of the proposed student housing project and will correctly forecast the non-school related trips.

The trip generation potential of the recycling center expansion project component will be based on the existing daily and peak hour trip generation data collected at the existing facility, with a multiplier applied to the existing data to account for the trips associated with the expanded facility. Based on information provided by campus staff, at completion of the proposed recycling center expansion, it is expected that the site would collect triple the amount of waste that is currently collected at the existing facility, thus resulting in triple the amount of visitors to the expanded site. Therefore, a multiplier of 3 will be utilized to account for the trips associated with the expanded facility.

TABLE 5-1
PROJECT TRAFFIC GENERATION RATES[2]

Project Description	Daily 2-Way	AM Peak Hour Enter	AM Peak Hour Exit	AM Peak Hour Total	PM Peak Hour Enter	PM Peak Hour Exit	PM Peak Hour Total
Student Growth							
▪ OCC Empirical Rate (TE/Student)[3]	1.271	0.107	0.018	0.125	0.076	0.065	0.141
Mixed Use Development							
▪ 710: General Office Building (TE/1,000 SF)	11.03	1.37	0.19	1.56	0.25	1.24	1.49
▪ 820: Shopping Center (TE/1,000 SF)[4]	131.93	2.00	1.27	3.27	5.40	5.80	11.20
Student Housing							
▪ Student Housing Empirical Rate (TE/Bed)[5]	2.38	0.04	0.03	0.07	0.06	0.09	0.15
Recycling Center Expansion							
▪ Existing Recycling Center Trip Generation[6]	494	5	5	10	30	30	60
➢ Proposed Expansion (3 Times Existing Trips)							

2 Unless otherwise noted, Source: *Trip Generation*, 9th Edition, Institute of Transportation Engineers (ITE), Washington, D.C. (2012).

3 The trip generation rates for the student growth project component were developed based on existing daily, AM peak hour and PM peak hour traffic counts collected at the Orange Coast College driveways in October 2013. The traffic counts revealed that on a typical weekday, the Orange Coast College campus generates 27,203 daily trips, 2,669 AM peak hour trips (2,290 inbound, 379 outbound) and 3,016 PM peak hour trips (1,626 inbound, 1,390 outbound). The aforementioned trips where then divided by the existing number of students (i.e. 21,410 students) to determine the daily, AM peak hour and PM peak hour rates per student.

4 The trip generation rates are based on the following equations.
- Daily: LN (T) = 0.65 LN(X) + 5.83; 50% Enter and 50% Exit
- AM Peak Hour: LN (T) = 0.61 LN(X) + 2.24; 62% Enter and 38% Exit
- PM Peak Hour: LN (T) = 0.67 LN (X) + 3.31, 48% Enter and 52% Exit

5 Source: *Chapman University Residence Center Project Traffic Impact Study*, prepared by LLG Irvine (March 2007).

6 Source: Traffic counts/observations conducted at the existing recycling center in February 2014.

Table 5-2 presents the proposed Project's forecast peak hour and daily traffic volumes. Review of the upper portion of *Table 5-2* shows that the student growth component of the proposed project (i.e. net increase of 6,922 students) is forecast to generate 8,798 daily trips, with 865 trips forecast during the AM peak hour and 976 trips forecast during the PM peak hour. The student housing component of the proposed project (i.e. 818 beds) is forecast to generate 1,947 daily trips, with 58 trips forecast during the AM peak hour and 123 trips forecast during the PM peak hour.

Review of the middle portion of *Table 5-2* shows that the mixed use development component of the proposed project (i.e. 89,000 SF conference/education office space and 15,000 SF shopping center) is forecast to generate 2,763 daily trips, with 188 trips forecast during the AM peak hour and 284 trips forecast during the PM peak hour. Please note that the aforementioned trip generation includes adjustments for pass-by for trips that come directly from the everyday traffic stream on the adjoining streets (i.e. Fairview Road and Merrimac Way). The factors used in this report, which are summarized in the footnotes of *Table 5-2*, are based on information published in the *Trip Generation Handbook*, published by ITE (2014). Per the *Trip Generation Handbook*, a pass-by reduction factor of 34% is recommended for the PM peak hour for shopping center land uses. However, to provide a conservative analysis and remain consistent with City of Costa Mesa requirements, 10% was utilized for the PM peak hour. The daily pass-by percentage was estimated to be 10%, consistent with City of Costa Mesa requirements.

Review of the lower portion of *Table 5-2* shows that the recycling center expansion component of the proposed project is forecast to generate 988 net daily trips, with 20 net trips forecast during the AM peak hour and 120 net trips forecast during the PM peak hour. It should be noted that only the net project trips are evaluated because the recycling center is currently generating traffic and those existing trips are already accounted for in the existing traffic counts.

Overall, as shown at the bottom of *Table 5-2,* the proposed Project is forecast to generate approximately 14,496 daily trips, with 1,131 trips (936 inbound, 195 outbound) produced in the AM peak hour and 1,503 trips (731 inbound, 772 outbound) produced in the PM peak hour on a typical weekday.

5.2 Project Traffic Distribution and Assignment

Figures 5-1, 5-2, 5-3 and ***5-4*** present the traffic distribution patterns for the student growth project component, the student housing project component, the mixed-use development project component and the recycling center expansion project component, respectively. Project traffic volumes both entering and exiting the project site have been distributed and assigned to the adjacent street system based on the following considerations:

- the site's proximity to major traffic carriers (i.e. Harbor Boulevard, Fairview Road, I-405 Freeway, etc.),
- expected localized traffic flow patterns based on adjacent street channelization and presence of traffic signals,
- review of existing peak hour traffic volumes and
- ingress/egress availability at the project site.

TABLE 5-2
PROJECT TRAFFIC GENERATION FORECAST

Project Description	Daily 2-Way	AM Peak Hour Enter	AM Peak Hour Exit	AM Peak Hour Total	PM Peak Hour Enter	PM Peak Hour Exit	PM Peak Hour Total
Student Growth							
▪ Net Increase 6,922 Students	8,798	741	124	865	526	450	976
Student Housing							
▪ Student Housing – 818 Beds	1,947	33	25	58	49	74	123
Mixed Use Development							
▪ 89,000 SF Conference/Education Office Space	982	122	17	139	23	110	133
▪ 15,000 SF Shopping Center	1,979	30	19	49	81	87	168
Pass-By Reduction[7]	-198	--	--	--	-8	-9	-17
Subtotal	1,781	30	19	49	73	78	151
Total Mixed Use Development	***2,763***	***152***	***36***	***188***	***96***	***188***	***284***
Recycling Center Expansion							
▪ Existing Recycling Center Trip Generation	494	5	5	10	30	30	60
▪ With Proposed Expansion Project (3 Times Existing Trips)[8]	1,482	15	15	30	90	90	180
Total Net Recycling Center Expansion Trips (Proposed Minus Existing)	***988***	***10***	***10***	***20***	***60***	***60***	***120***
Total Trip Generation Potential	**14,496**	**936**	**195**	**1,131**	**731**	**772**	**1,503**

7 Pass-by trips are trips made as intermediate stops on the way from an origin to a primary trip destination. Pass-by trips are attracted from traffic passing the site on adjacent streets (i.e. Fairview Road and Merrimac Way), which contain direct access to the generator. Although the *Trip Generation Handbook* recommends a PM peak hour pass-by percentage of 34%, 10% was utilized for the PM peak hour consistent with City of Costa Mesa requirements and to provide a conservative analysis. The daily peak hour pass-by percentage was estimated to be 10%, consistent with City of Costa Mesa requirements.

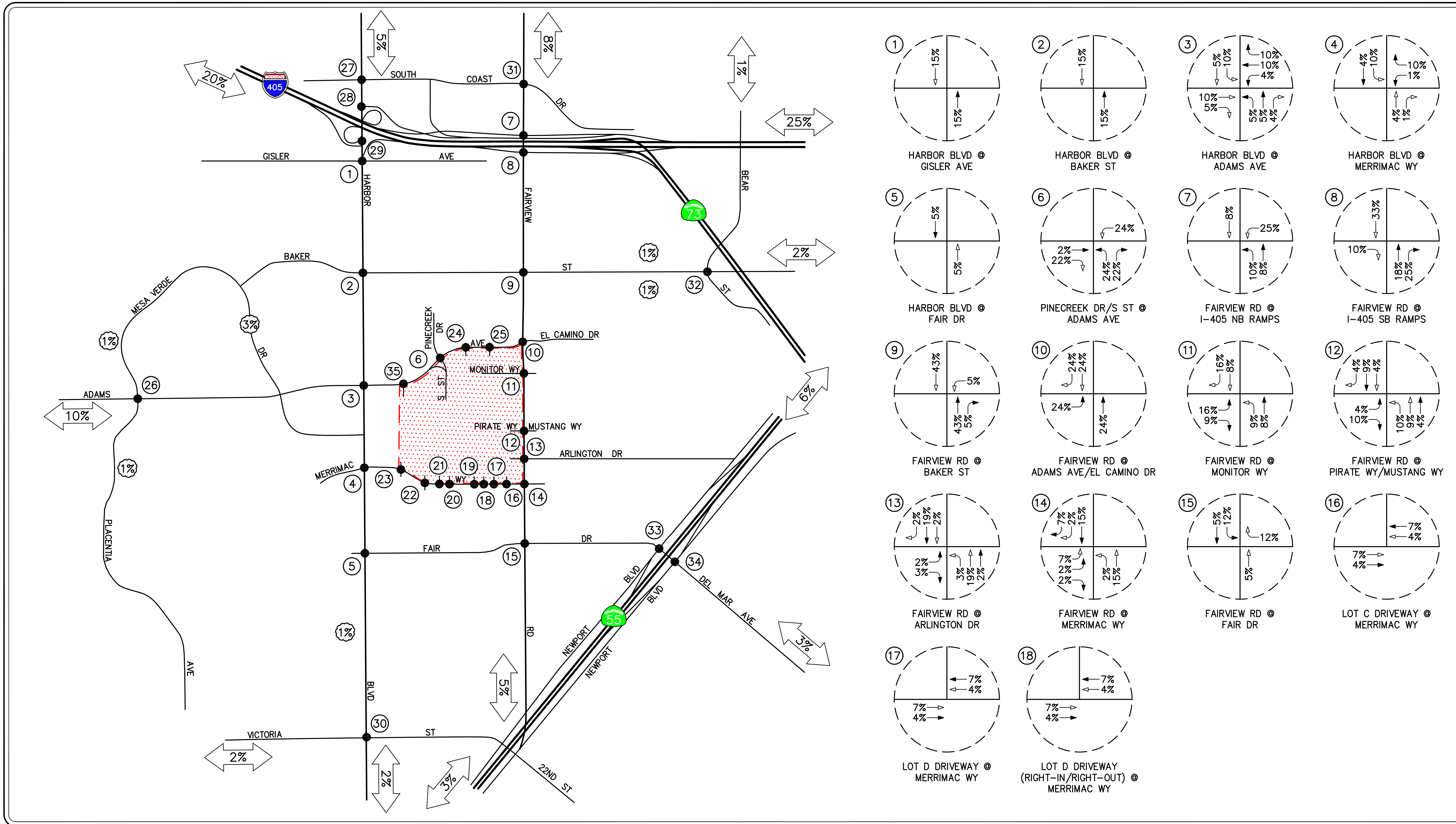
8 At completion of the proposed recycling center expansion, it is expected that the site would collect triple the amount of waste that is currently collected at the existing facility, thus resulting in triple the amount of visitors to the expanded site.

The anticipated AM and PM peak hour project traffic volumes associated with the Project are presented in ***Figures 5-5*** and ***5-6***, respectively. The traffic volume assignments presented in *Figures 5-5* and *5-6* reflect the traffic distribution characteristics shown in *Figures 5-1, 5-2, 5-3* and *5-4* and the traffic generation forecast presented in *Table 5-2.*

5.3 Existing Plus Project Traffic Conditions

The existing plus project traffic conditions have been generated based upon existing conditions and the estimated project traffic. These forecast traffic conditions have been prepared pursuant to the California Environmental Quality Act (CEQA) guidelines, which require that the potential impacts of a Project be evaluated upon the circulation system as it currently exists. This traffic volume scenario and the related intersection capacity analyses will identify the roadway improvements necessary to mitigate the direct traffic impacts of the Project, if any.

Figures 5-7 and ***5-8*** present projected AM and PM peak hour traffic volumes at the thirty five (35) key study locations ("intersections") with the addition of the trips generated by the proposed Project to existing traffic volumes, respectively.



LINSCOTT LAW & GREENSPAN *engineers*

N NO SCALE

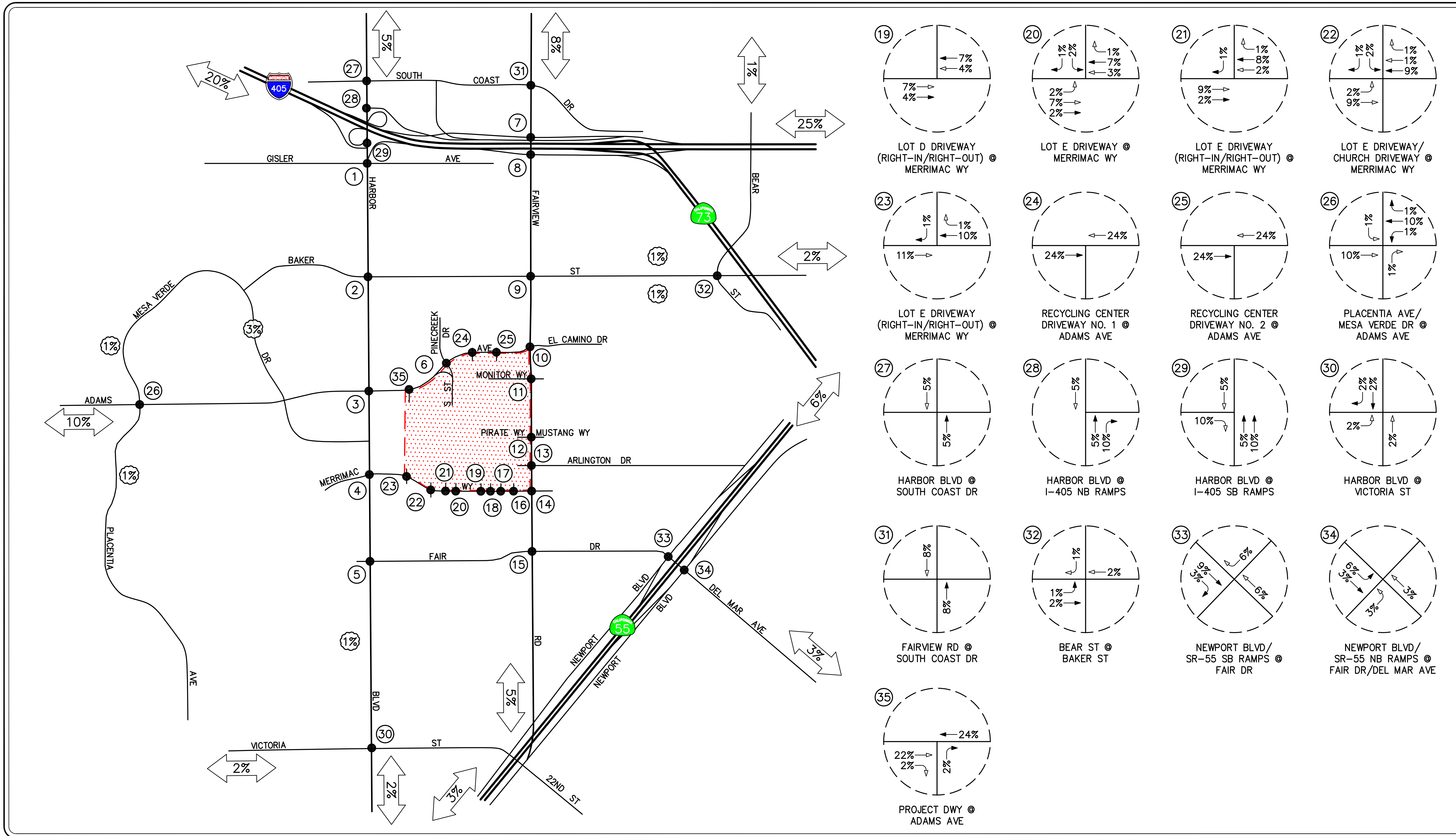
KEY

- = INBOUND PERCENTAGE
- = OUTBOUND PERCENTAGE
- (#) = STUDY INTERSECTION
- = PROJECT SITE

FIGURE 5-1A

PROJECT TRAFFIC DISTRIBUTION PATTERN – STUDENT GROWTH

ORANGE COAST COLLEGE VISION 2020 FACILITIES MASTER PLAN, COSTA MESA



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NO SCALE

KEY

= INBOUND PERCENTAGE

= OUTBOUND PERCENTAGE

(#) = STUDY INTERSECTION

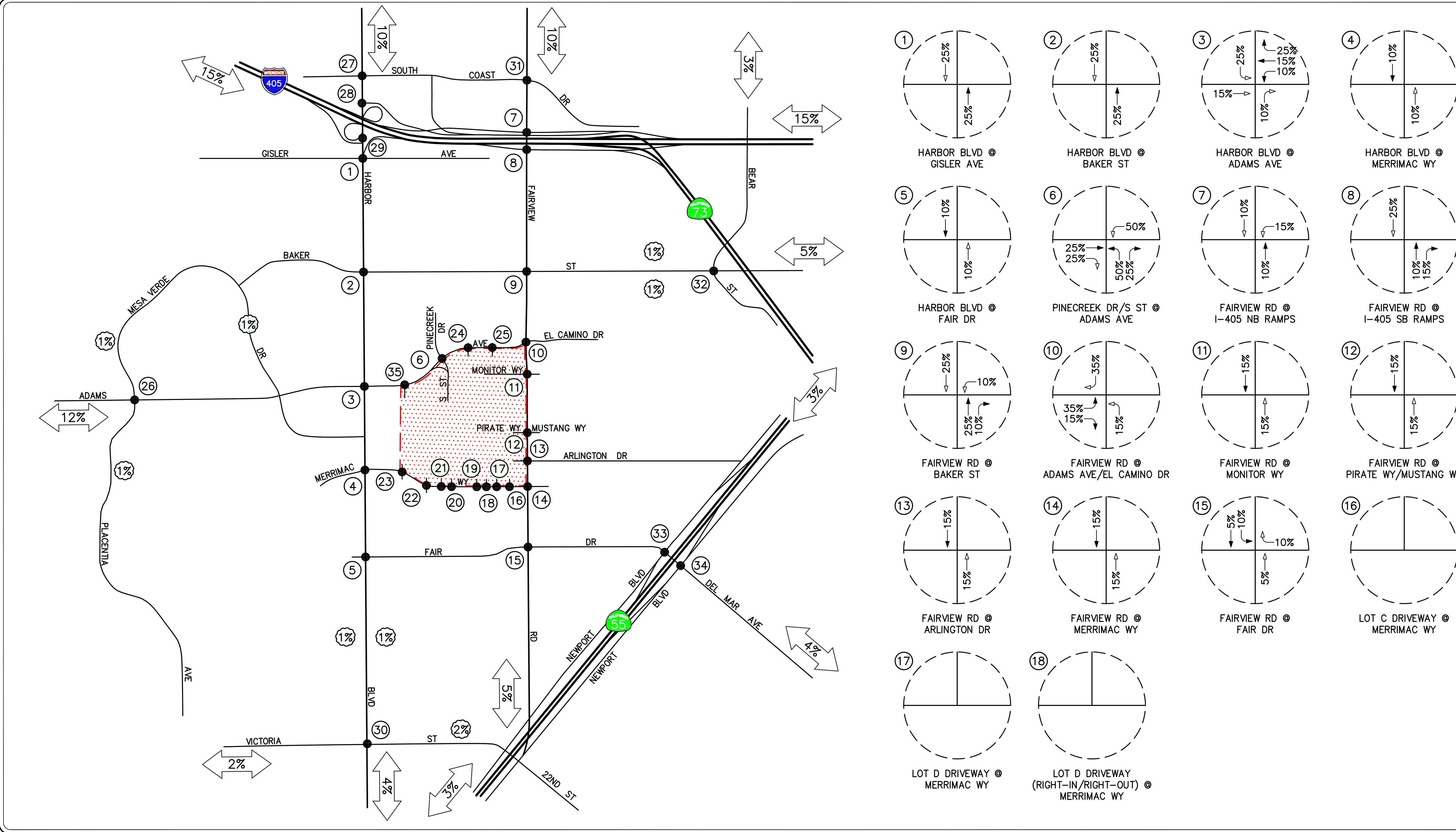
= PROJECT SITE

LINSCOTT LAW & GREENSPAN engineers

FIGURE 5–1B

PROJECT TRAFFIC DISTRIBUTION PATTERN – STUDENT GROWTH

ORANGE COAST COLLEGE VISION 2020 FACILITIES MASTER PLAN, COSTA MESA



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LINSCOTT LAW & GREENSPAN engineers

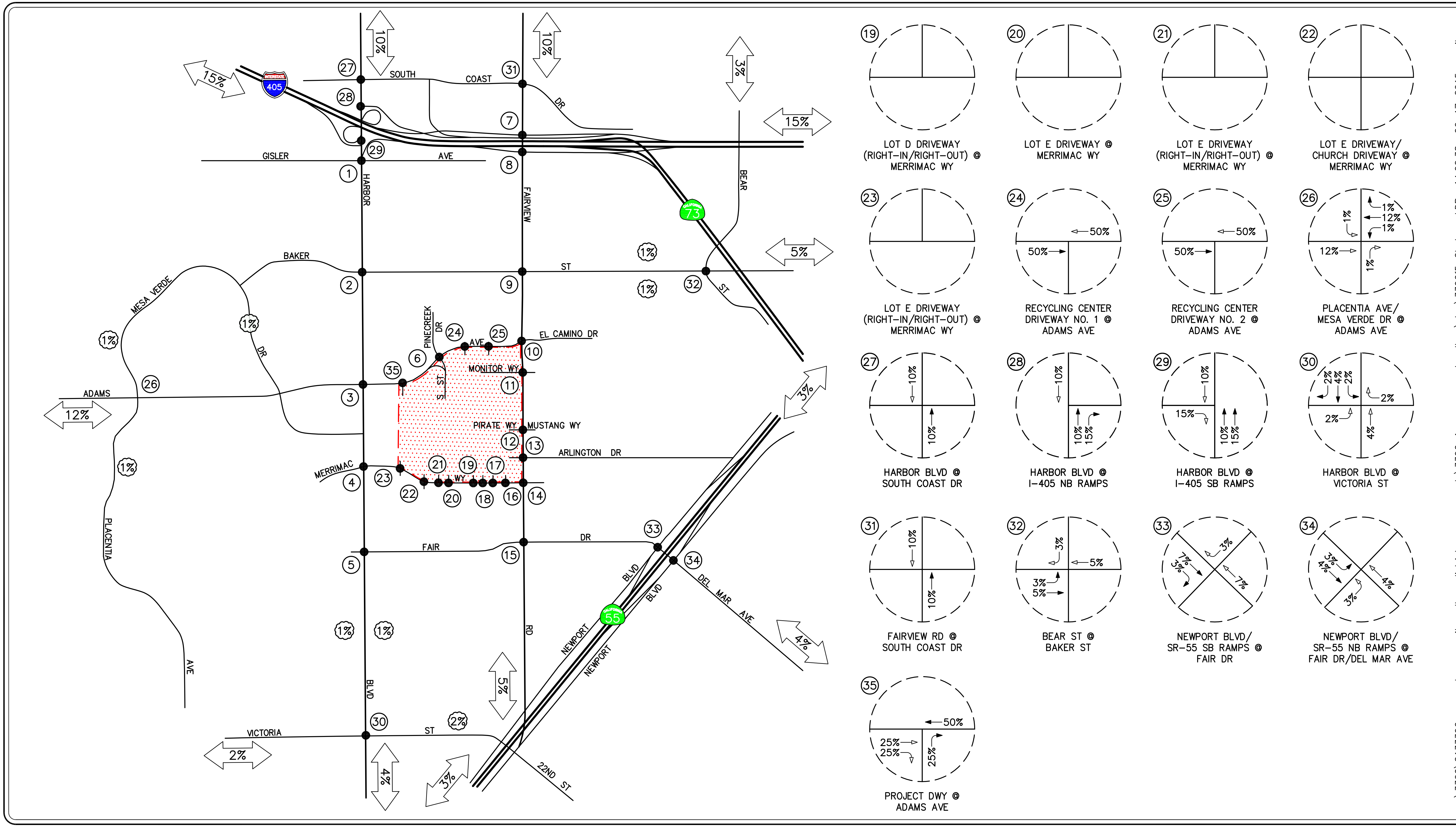
N NO SCALE

KEY
= INBOUND PERCENTAGE
= OUTBOUND PERCENTAGE
= STUDY INTERSECTION
= PROJECT SITE

FIGURE 5-2A

PROJECT TRAFFIC DISTRIBUTION PATTERN – STUDENT HOUSING

ORANGE COAST COLLEGE VISION 2020 FACILITIES MASTER PLAN, COSTA MESA



LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

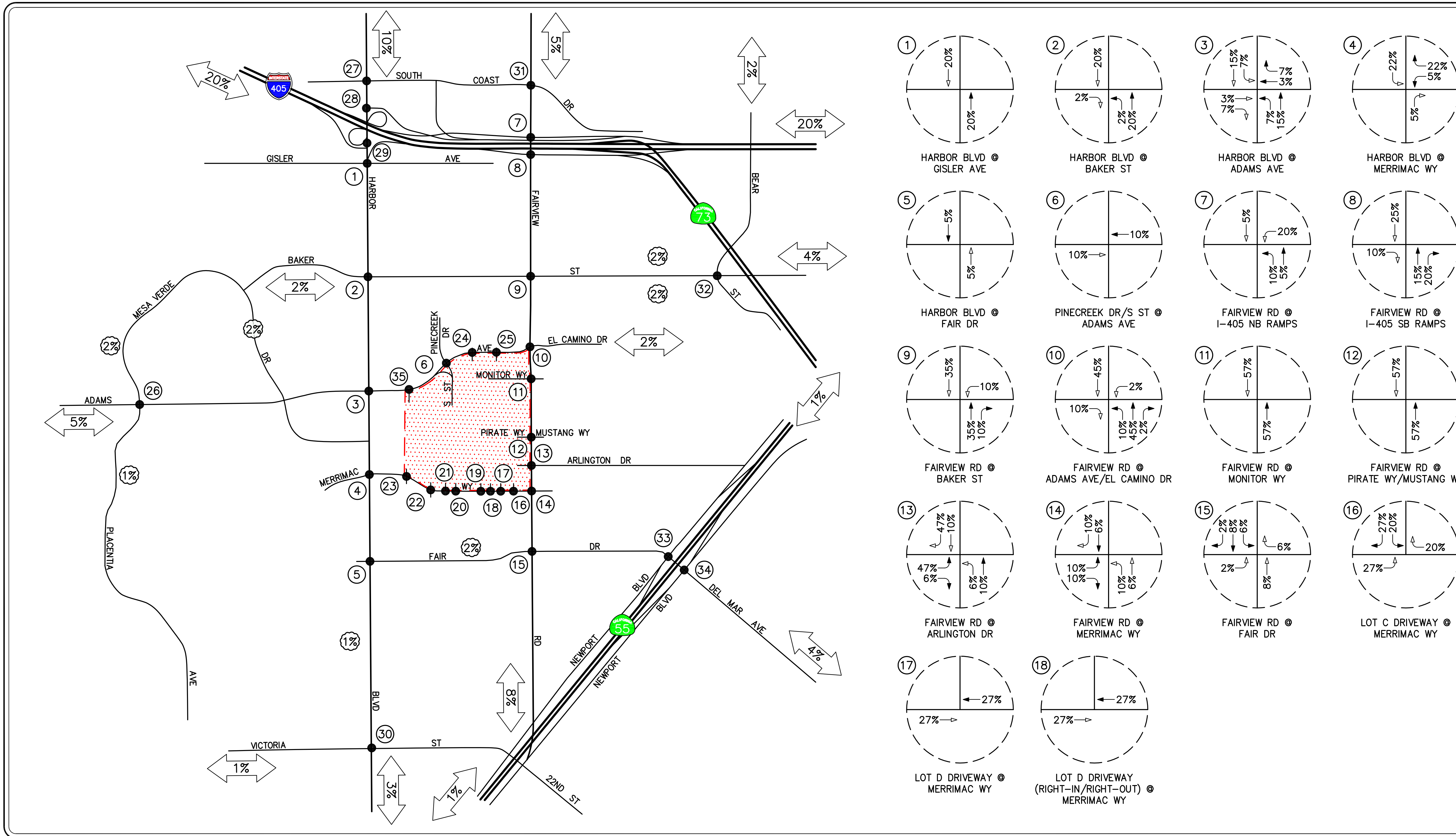
KEY

= INBOUND PERCENTAGE
= OUTBOUND PERCENTAGE
= STUDY INTERSECTION
= PROJECT SITE

FIGURE 5–2B

PROJECT TRAFFIC DISTRIBUTION PATTERN – STUDENT HOUSING

ORANGE COAST COLLEGE VISION 2020 FACILITIES MASTER PLAN, COSTA MESA



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LINSCOTT LAW & GREENSPAN engineers

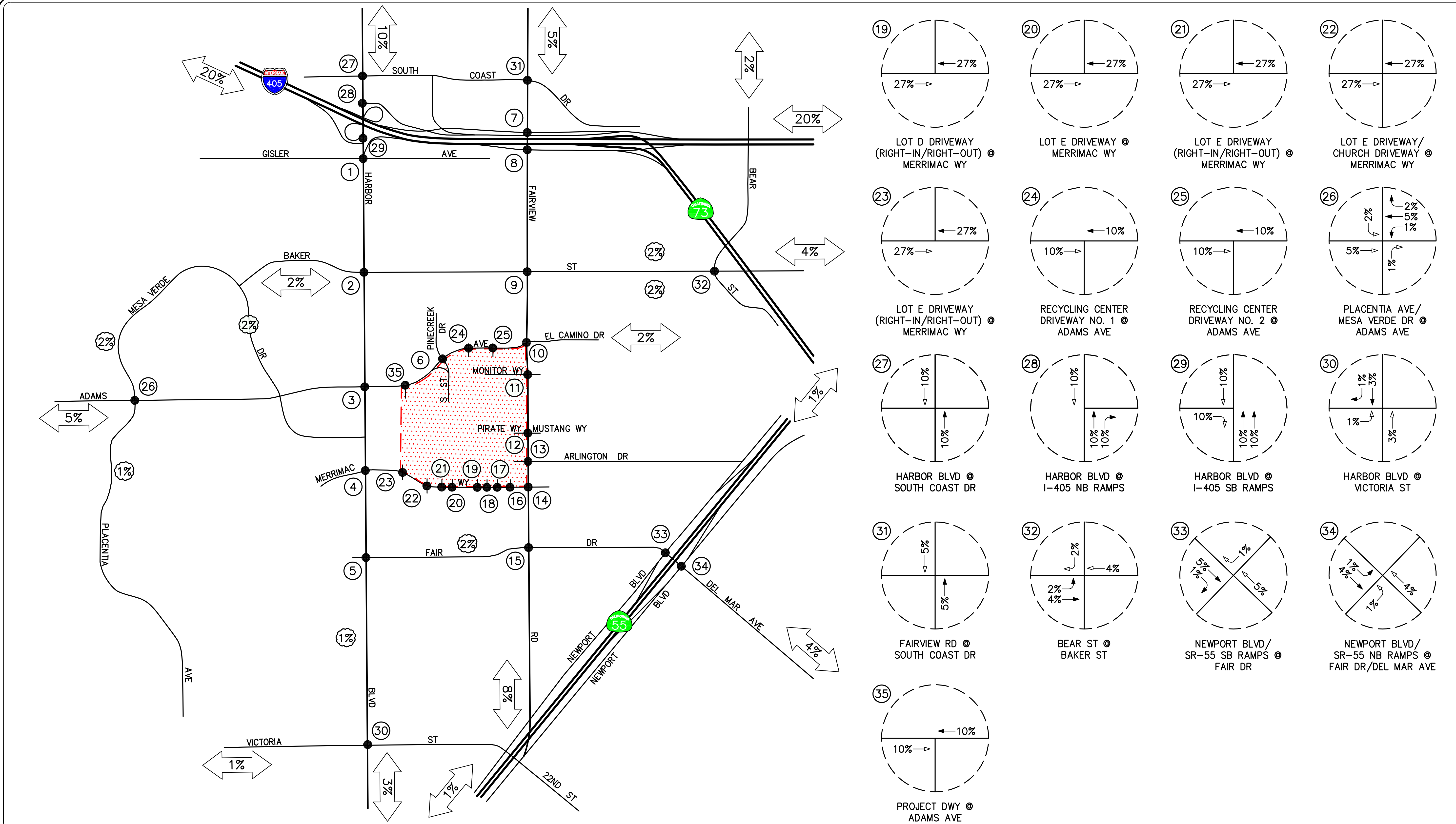
N NO SCALE

KEY
= INBOUND PERCENTAGE
= OUTBOUND PERCENTAGE
(#) = STUDY INTERSECTION
= PROJECT SITE

FIGURE 5-3A

PROJECT TRAFFIC DISTRIBUTION PATTERN – MIXED USE DEVELOPMENT

ORANGE COAST COLLEGE VISION 2020 FACILITIES MASTER PLAN, COSTA MESA



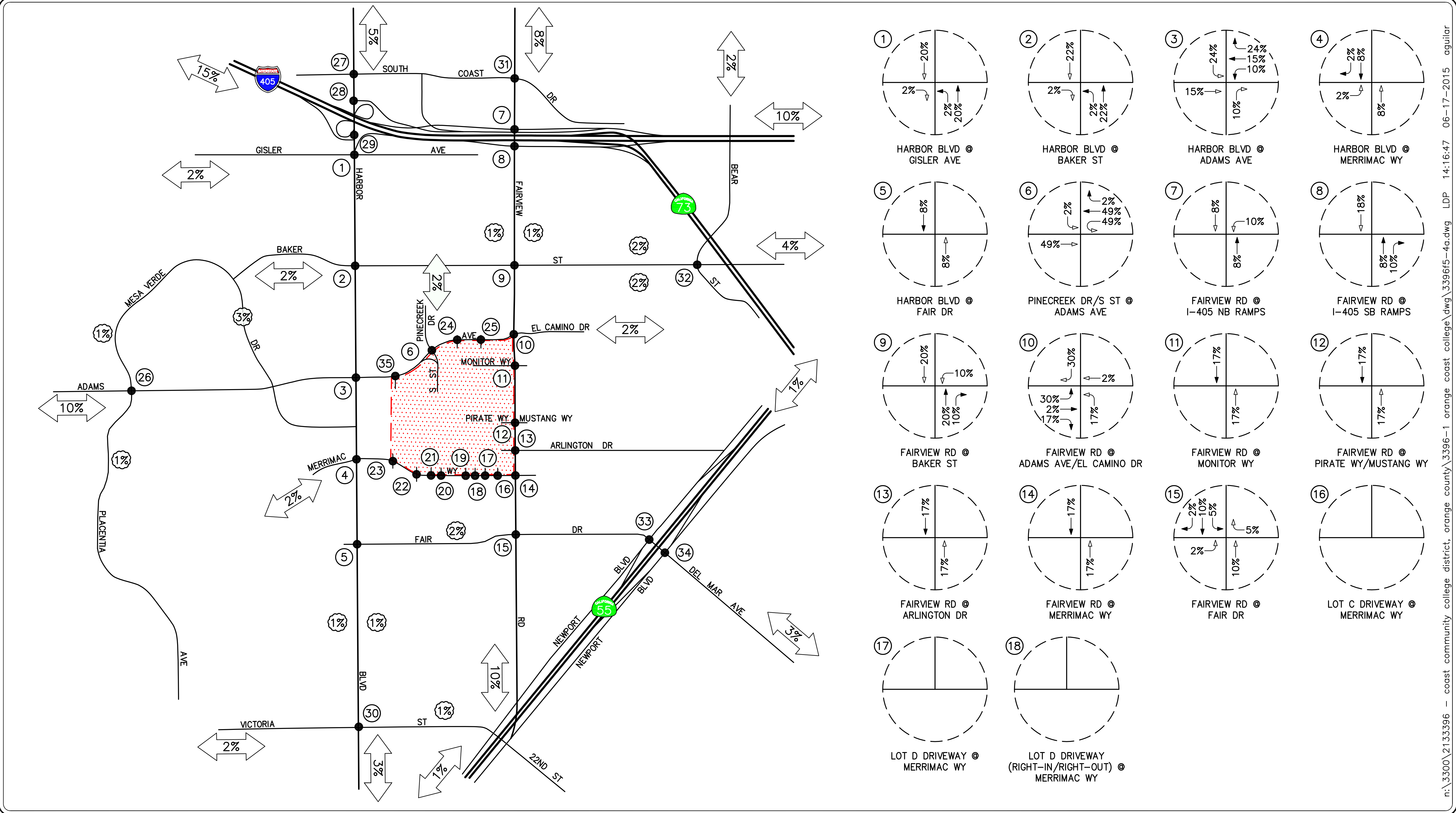
LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY
- ◁—— = INBOUND PERCENTAGE
- ◀—— = OUTBOUND PERCENTAGE
- (#) = STUDY INTERSECTION
- = PROJECT SITE

FIGURE 5-3B

PROJECT TRAFFIC DISTRIBUTION PATTERN – MIXED USED DEVELOPMENT
ORANGE COAST COLLEGE VISION 2020 FACILITIES MASTER PLAN, COSTA MESA



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engineers

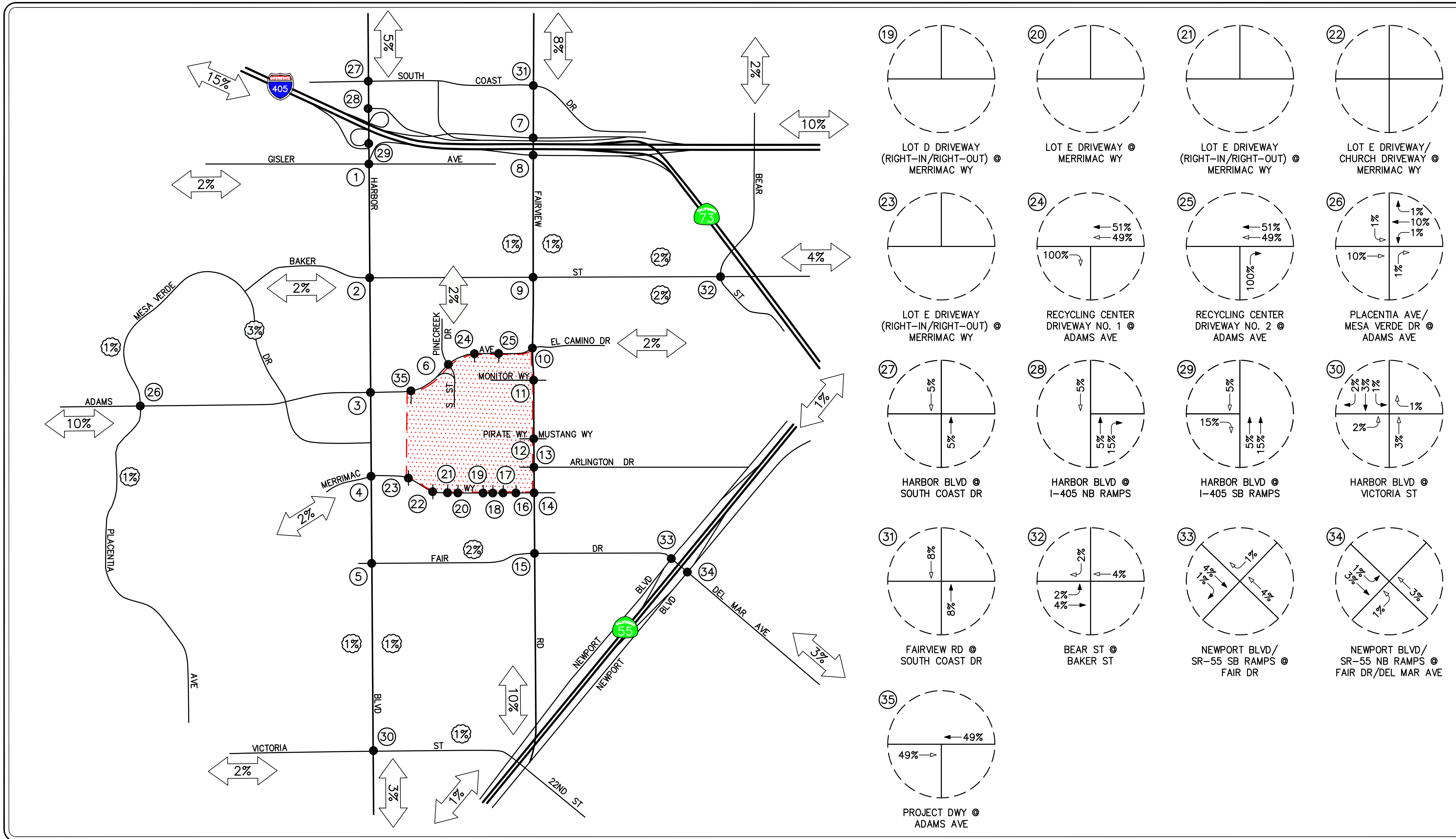
N
NO SCALE

KEY
= INBOUND PERCENTAGE
= OUTBOUND PERCENTAGE
(#) = STUDY INTERSECTION
= PROJECT SITE

FIGURE 5–4A

PROJECT TRAFFIC DISTRIBUTION PATTERN – RECYCLING CENTER EXPANSION

ORANGE COAST COLLEGE VISION 2020 FACILITIES MASTER PLAN, COSTA MESA



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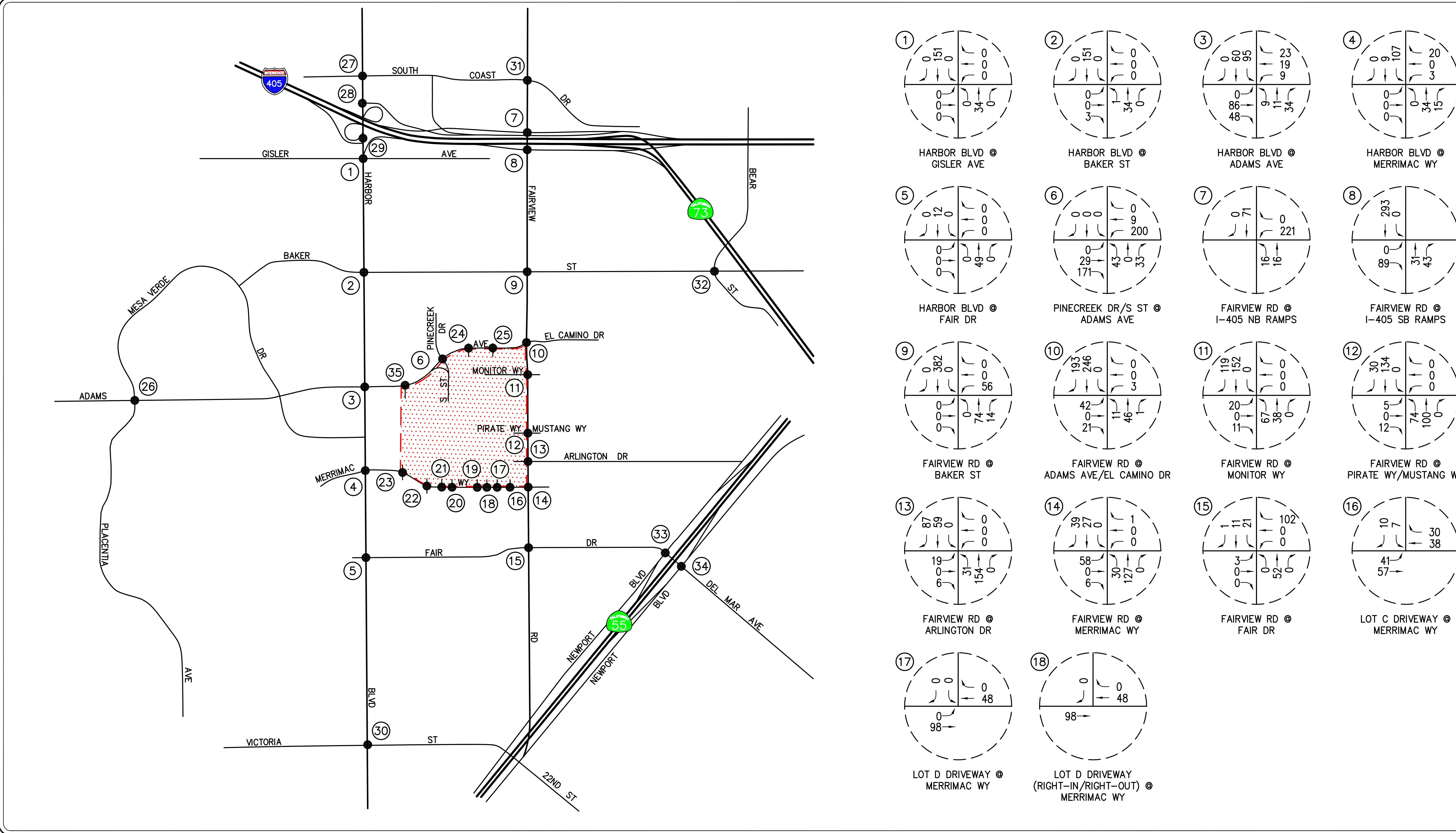
N NO SCALE

KEY
= INBOUND PERCENTAGE
= OUTBOUND PERCENTAGE
= STUDY INTERSECTION
= PROJECT SITE

FIGURE 5–4B

PROJECT TRAFFIC DISTRIBUTION PATTERN – RECYCLING CENTER EXPANSION

ORANGE COAST COLLEGE VISION 2020 FACILITIES MASTER PLAN, COSTA MESA



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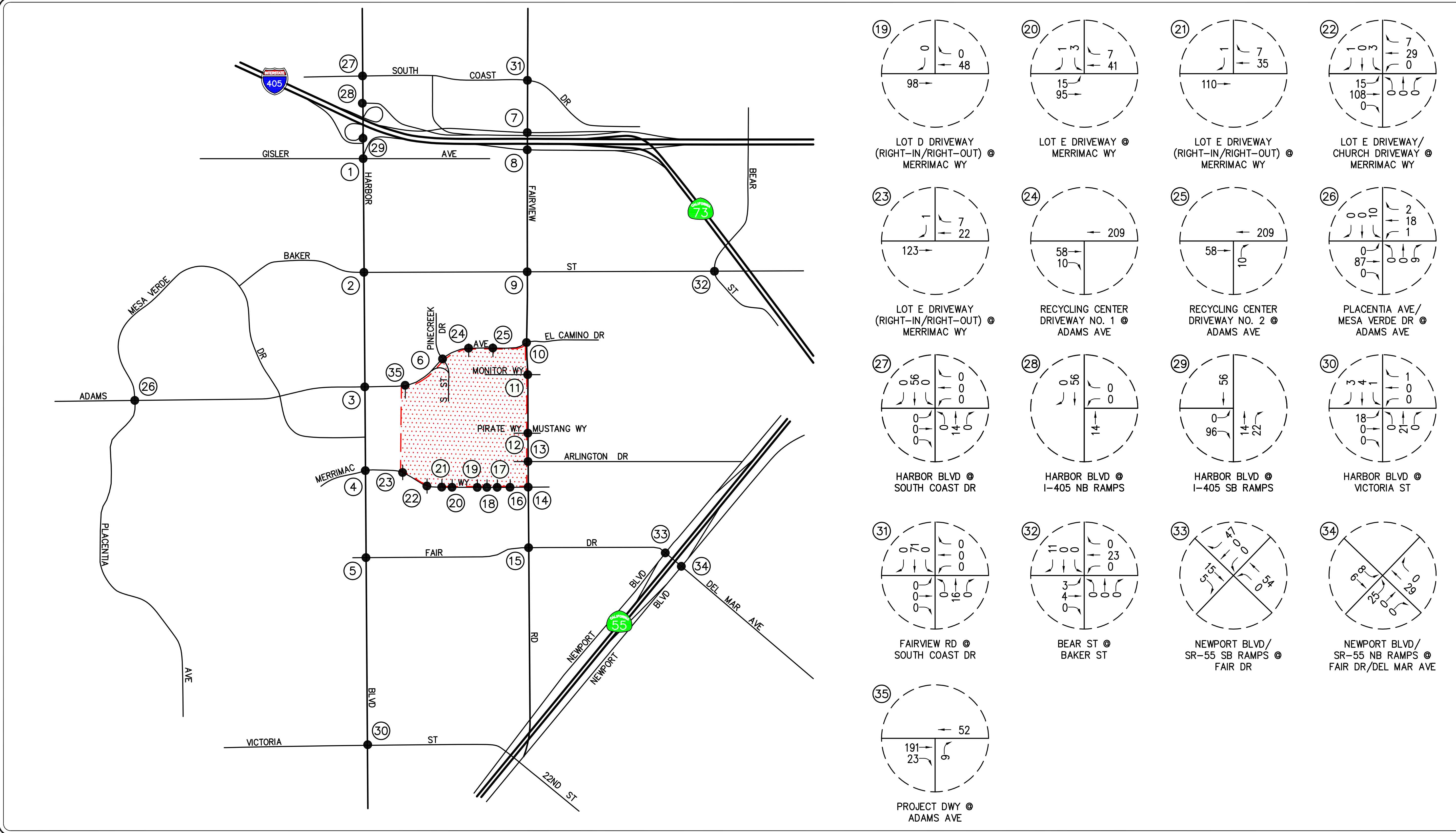
N NO SCALE

KEY
(#) = STUDY INTERSECTION
= PROJECT SITE

FIGURE 5-5A

AM PEAK HOUR PROJECT TRAFFIC VOLUMES

ORANGE COAST COLLEGE VISION 2020 FACILITIES MASTER PLAN, COSTA MESA



LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

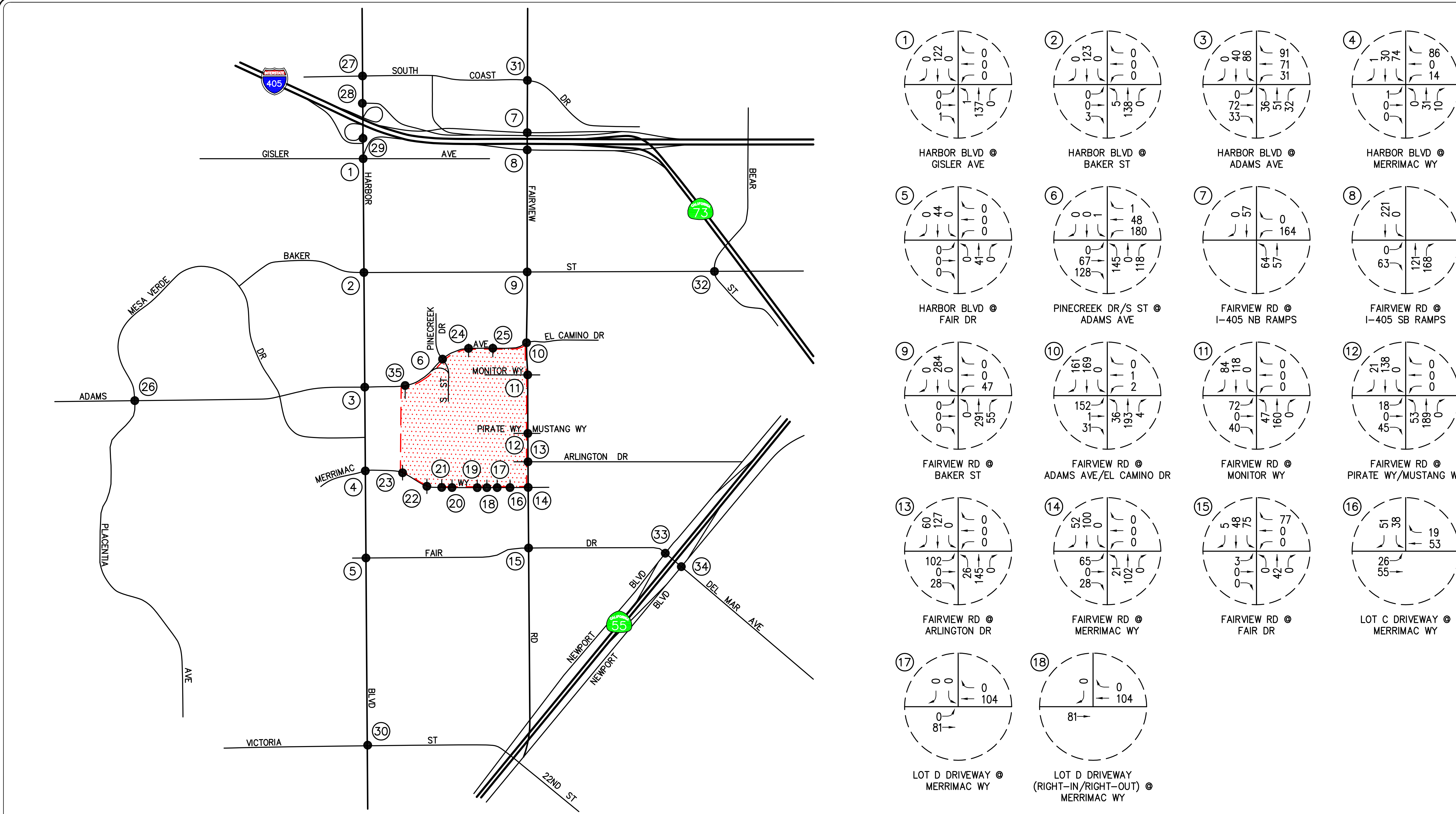
(#) = STUDY INTERSECTION

= PROJECT SITE

FIGURE 5-5B

AM PEAK HOUR PROJECT TRAFFIC VOLUMES

ORANGE COAST COLLEGE VISION 2020 FACILITIES MASTER PLAN, COSTA MESA



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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

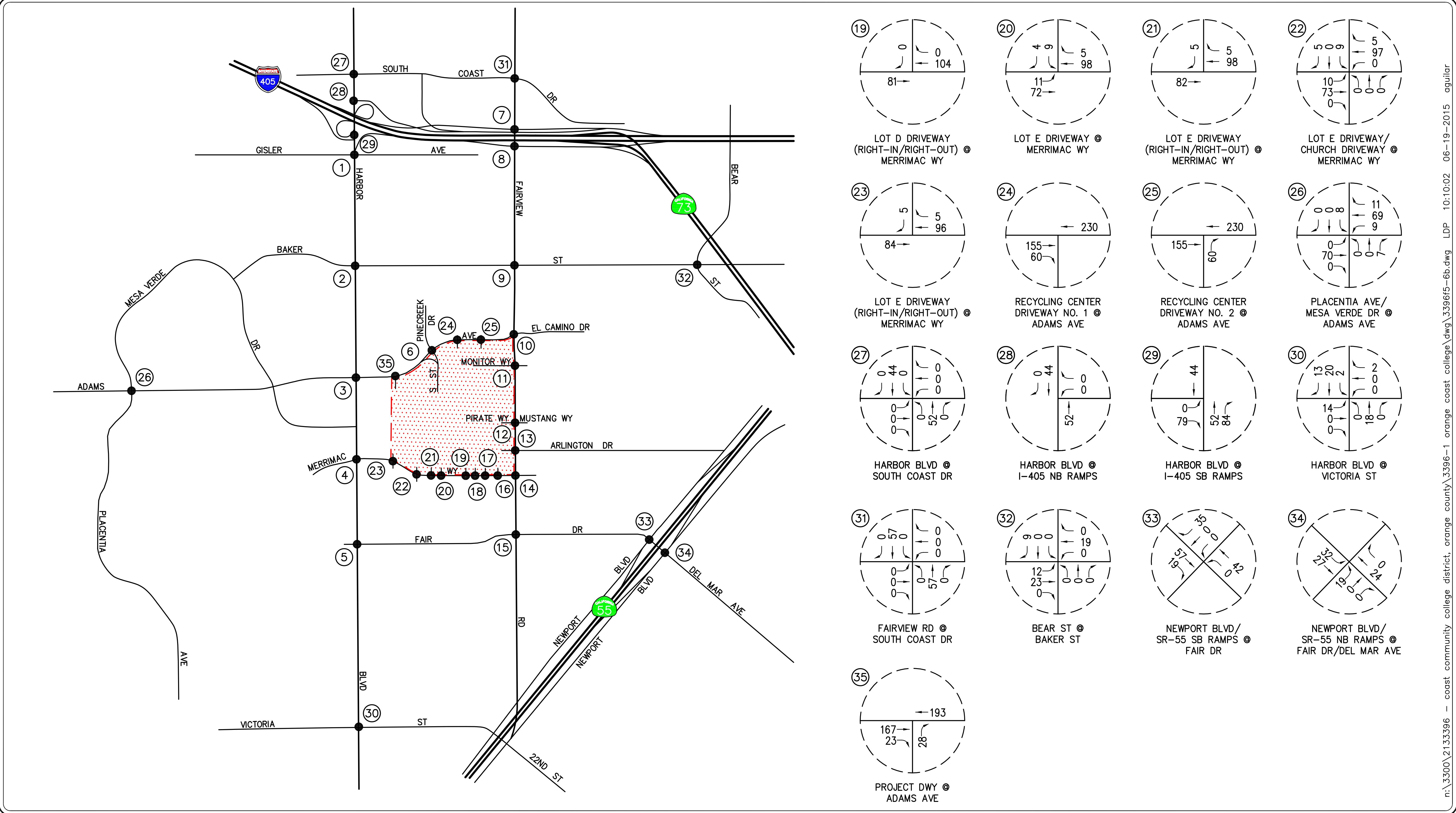
(#) = STUDY INTERSECTION

= PROJECT SITE

FIGURE 5-6A

PM PEAK HOUR PROJECT TRAFFIC VOLUMES

ORANGE COAST COLLEGE VISION 2020 FACILITIES MASTER PLAN, COSTA MESA



LINSCOTT LAW & GREENSPAN engineers

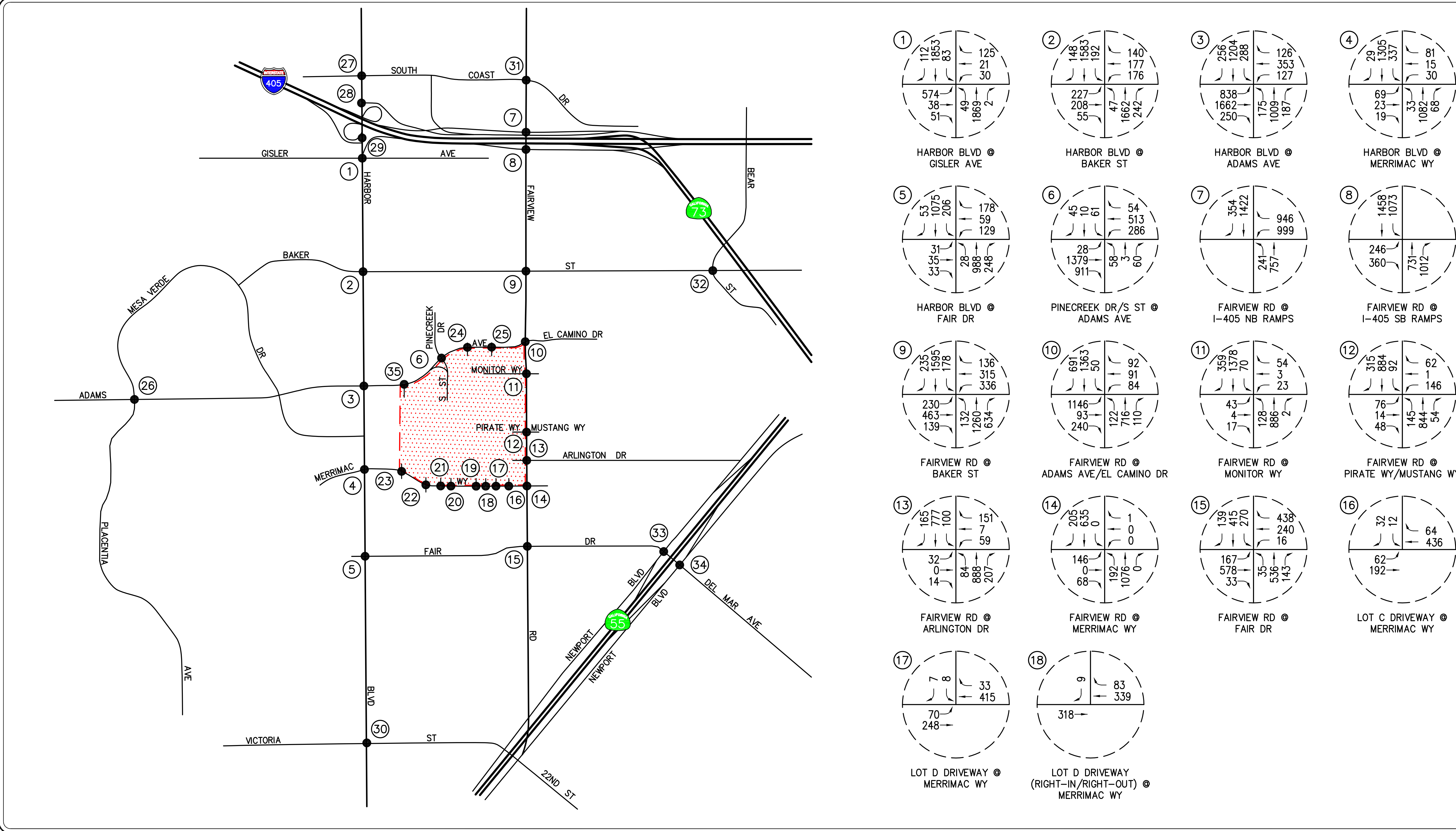
N NO SCALE

KEY
(#) = STUDY INTERSECTION
= PROJECT SITE

FIGURE 5-6B

PM PEAK HOUR PROJECT TRAFFIC VOLUMES

ORANGE COAST COLLEGE VISION 2020 FACILITIES MASTER PLAN, COSTA MESA



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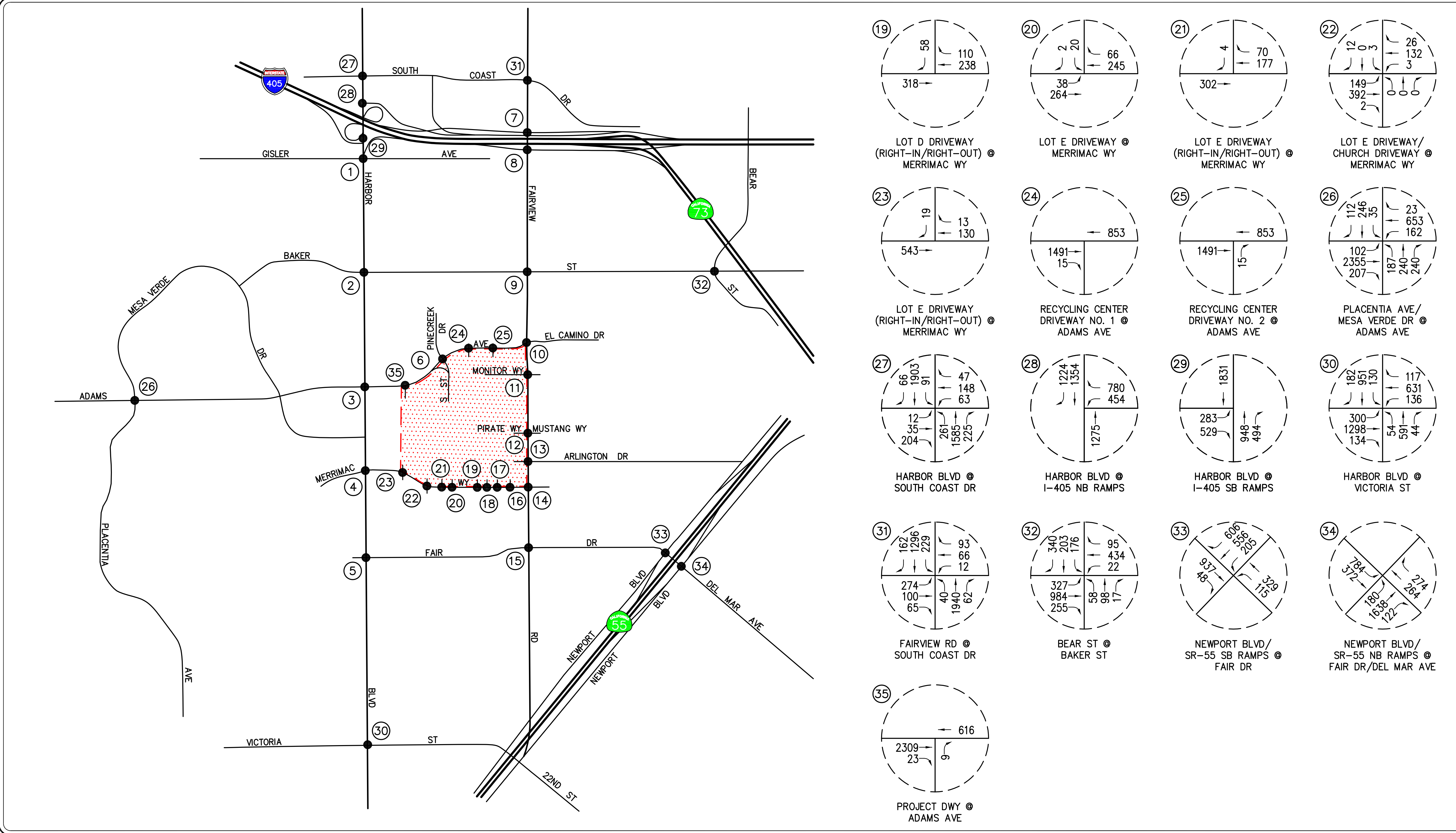
N NO SCALE

KEY
= STUDY INTERSECTION
= PROJECT SITE

FIGURE 5-7A

EXISTING PLUS PROJECT AM PEAK HOUR TRAFFIC VOLUMES
ORANGE COAST COLLEGE VISION 2020 FACILITIES MASTER PLAN, COSTA MESA



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LINSCOTT LAW & GREENSPAN engineers

NO SCALE

KEY

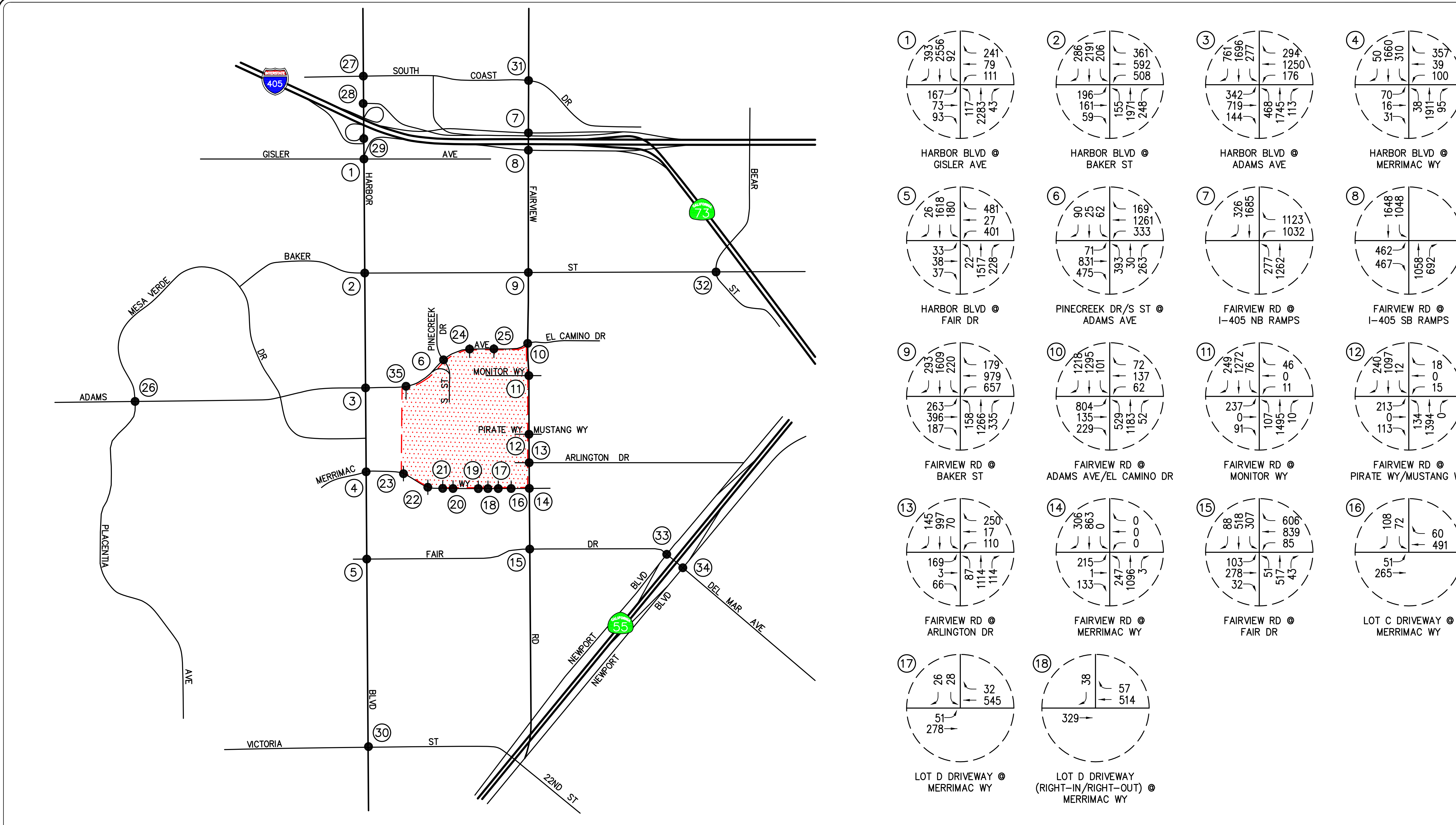
(#) = STUDY INTERSECTION

= PROJECT SITE

FIGURE 5-7B

EXISTING PLUS PROJECT AM PEAK HOUR TRAFFIC VOLUMES

ORANGE COAST COLLEGE VISION 2020 FACILITIES MASTER PLAN, COSTA MESA



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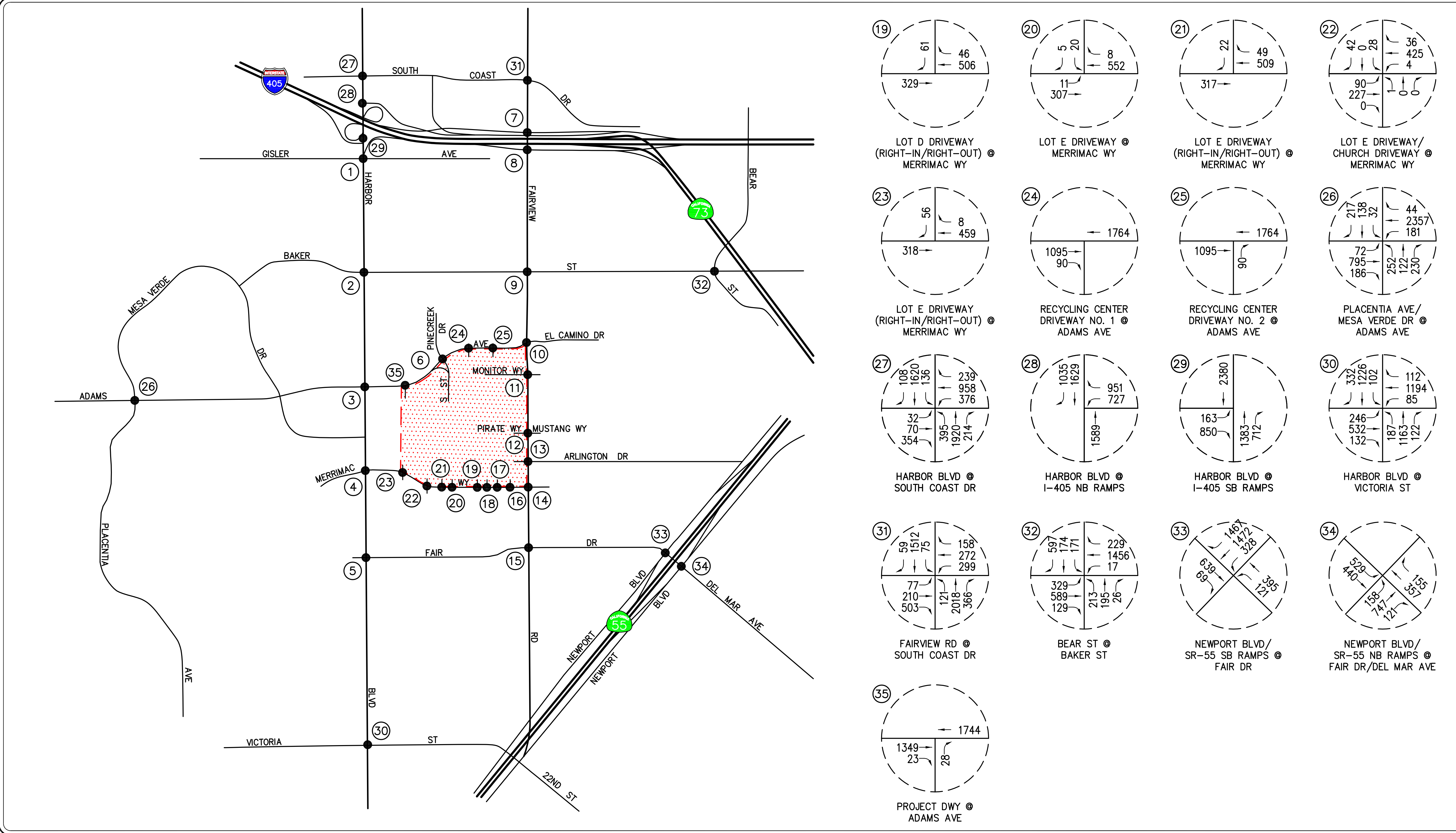
LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY
\# = STUDY INTERSECTION
= PROJECT SITE

FIGURE 5-8A

EXISTING PLUS PROJECT PM PEAK HOUR TRAFFIC VOLUMES
ORANGE COAST COLLEGE VISION 2020 FACILITIES MASTER PLAN, COSTA MESA



KEY

(#) = STUDY INTERSECTION

= PROJECT SITE

LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

FIGURE 5–8B

EXISTING PLUS PROJECT PM PEAK HOUR TRAFFIC VOLUMES

ORANGE COAST COLLEGE VISION 2020 FACILITIES MASTER PLAN, COSTA MESA

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6.0 FUTURE TRAFFIC CONDITIONS

6.1 Ambient Traffic Growth

Horizon year, background traffic growth estimates have been calculated using an ambient traffic growth factor. The ambient traffic growth factor is intended to include unknown and future cumulative projects in the study area, as well as account for regular growth in traffic volumes due to the development of projects outside the study area. The future growth in traffic volumes has been calculated at one percent (1.0%) per year.

6.2 Cumulative Projects Traffic Characteristics

In order to make a realistic estimate of future on-street conditions prior to implementation of the proposed Project, the status of other known development projects (cumulative projects) has been researched at the City of Costa Mesa and the City of Newport Beach. With this information, the potential impact of the proposed Project can be evaluated within the context of the cumulative impact of all ongoing development. Based on our research, there are seven (7) cumulative projects in the City of Costa Mesa and one (1) cumulative project in the City of Newport Beach that have either been built, but not yet fully occupied, or are being processed for approval. These eight (8) cumulative projects have been included as part of the cumulative background setting.

Table 6-1 provides the location and a brief description for each of the eight (8) cumulative projects. ***Figure 6-1*** graphically illustrates the location of the cumulative projects. These cumulative projects are expected to generate vehicular traffic, which may affect the operating conditions of the key study intersections.

Table 6-2 presents the resultant trip generation for the eight (8) cumulative projects. As shown in *Table 6-2*, the eight (8) cumulative projects are forecast to generate a combined total of 6,578 daily trips, with 418 trips (167 inbound and 251 outbound) forecast during the AM peak hour and 607 trips (289 inbound and 318 outbound) forecast during the PM peak hour.

The AM and PM peak hour traffic volumes associated with the eight (8) cumulative projects in the Year 2024 are presented in ***Figures 6-2*** and ***6-3***, respectively.

6.3 Year 2024 Cumulative Traffic Volumes

Figures 6-4 and ***6-5*** present the Year 2024 AM and PM peak hour cumulative traffic volumes at the key study intersections, respectively. Please note that the cumulative traffic volumes represent the accumulation of existing traffic, ambient growth traffic and cumulative projects traffic.

Figures 6-6 and ***6-7*** illustrate the Year 2024 forecast AM and PM peak hour traffic volumes with the inclusion of the trips generated by the proposed Project, respectively.

TABLE 6-1
LOCATION AND DESCRIPTION OF CUMULATIVE PROJECTS[9]

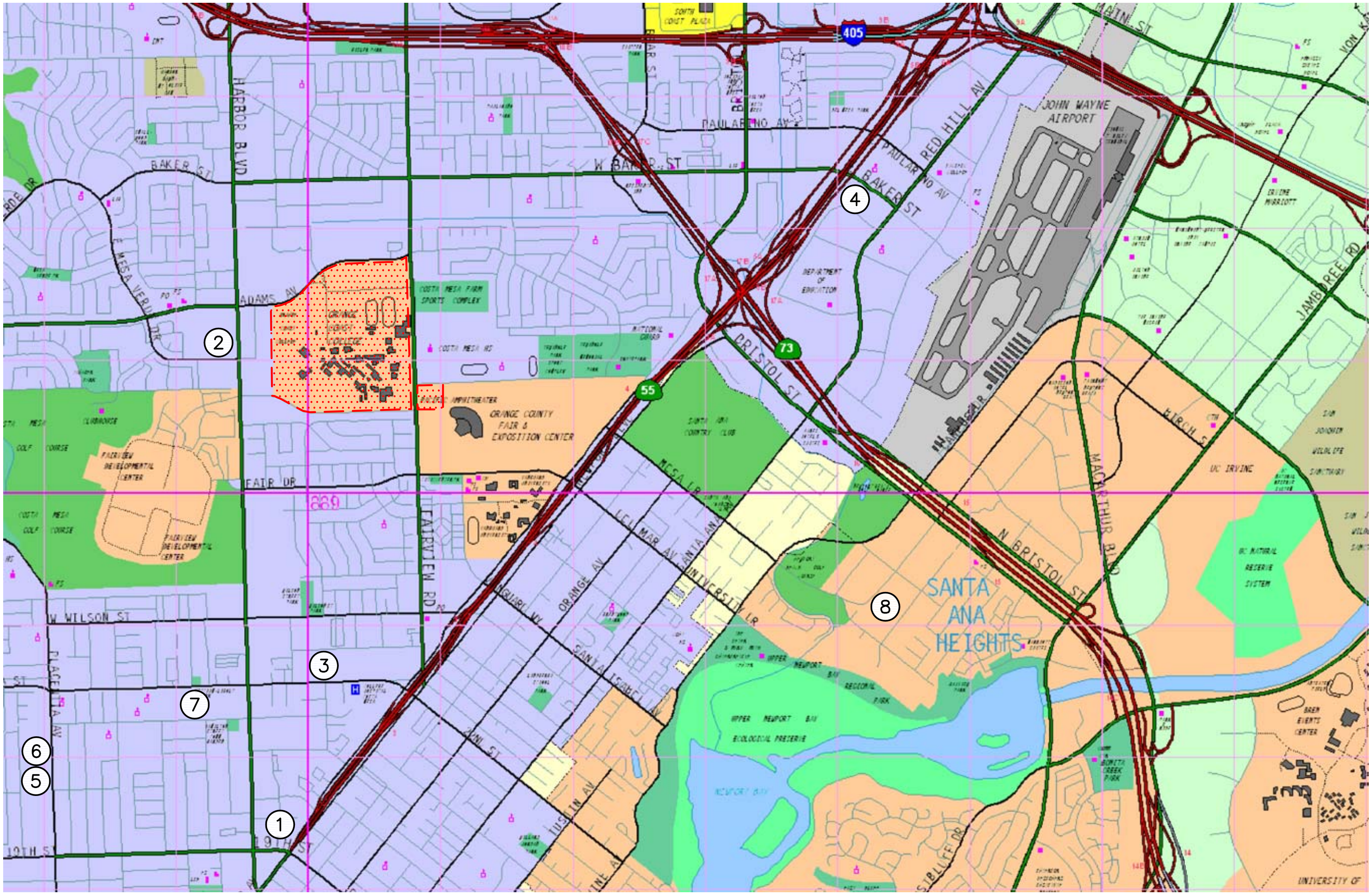
No.	Cumulative Project	Location/Address	Description
City of Costa Mesa Development			
1.	Apartments – 421 Bernard Street	421 Bernard Street	113 Apartments
2.	Senior Apartments – 1500 Mesa Verde Drive	1500 Mesa Verde Drive	224 Senior Apartments
3.	Live/Work Units – 372 Victoria Street	372 Victoria Street	30 Live/Work Units
4.	Apartments – 125 Baker Street	125 Baker Street	240 Apartments
5.	Live/Work Units – 2025 Placentia Avenue	2025 Placentia Avenue	36 Live/Work Units
6.	Live/Work Units – 2075 Placentia Avenue	2075 Placentia Avenue	14 Live/Work Units
7.	Condominiums – 573 Victoria Street	573 Victoria Street	37 Condominiums
City of Newport Beach Development			
8.	Newport Executive Court	20372 Birch Street	64,928 SF Medical Office Building

[9] Source: City of Costa Mesa and City of Newport Beach Planning Department staff.

TABLE 6-2
CUMULATIVE PROJECTS TRAFFIC GENERATION FORECAST[10]

Related Project Description		Daily 2-Way	AM Peak Hour Enter	AM Peak Hour Exit	AM Peak Hour Total	PM Peak Hour Enter	PM Peak Hour Exit	PM Peak Hour Total
1.	Apartments – 421 Bernard Street	751	12	46	58	46	24	70
2.	Senior Apartments – 1500 Mesa Verde Drive	771	15	30	45	30	26	56
3.	Live/Work Units – 372 Victoria Street	174	2	11	13	11	5	16
4.	Apartments – 125 Baker Street[11]	1,090	-29	94	65	74	18	92
5.	Live/Work Units – 2025 Placentia Avenue	209	3	13	16	13	6	19
6.	Live/Work Units – 2075 Placentia Avenue	108	5	5	10	5	5	10
7.	Condominiums – 573 Victoria Street	215	3	13	16	13	6	19
8.	Newport Executive Court[12]	3,260	156	39	195	97	228	325
Cumulative Projects Trip Generation Potential		**6,578**	**167**	**251**	**418**	**289**	**318**	**607**

10 Unless otherwise noted, Source: *Trip Generation, 9th Edition*, Institute of Transportation Engineers, (ITE) [Washington, D.C. (2012)].
11 Source: *Traffic Impact Analysis Report for 125 Baker Street Apartments*, prepared by LLG Irvine (July 2013).
12 Source: *Traffic Impact Analysis Report for Newport Executive Court*, prepared by Kimley-Horn and Associates.



LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

SOURCE: THOMAS BROS

KEY

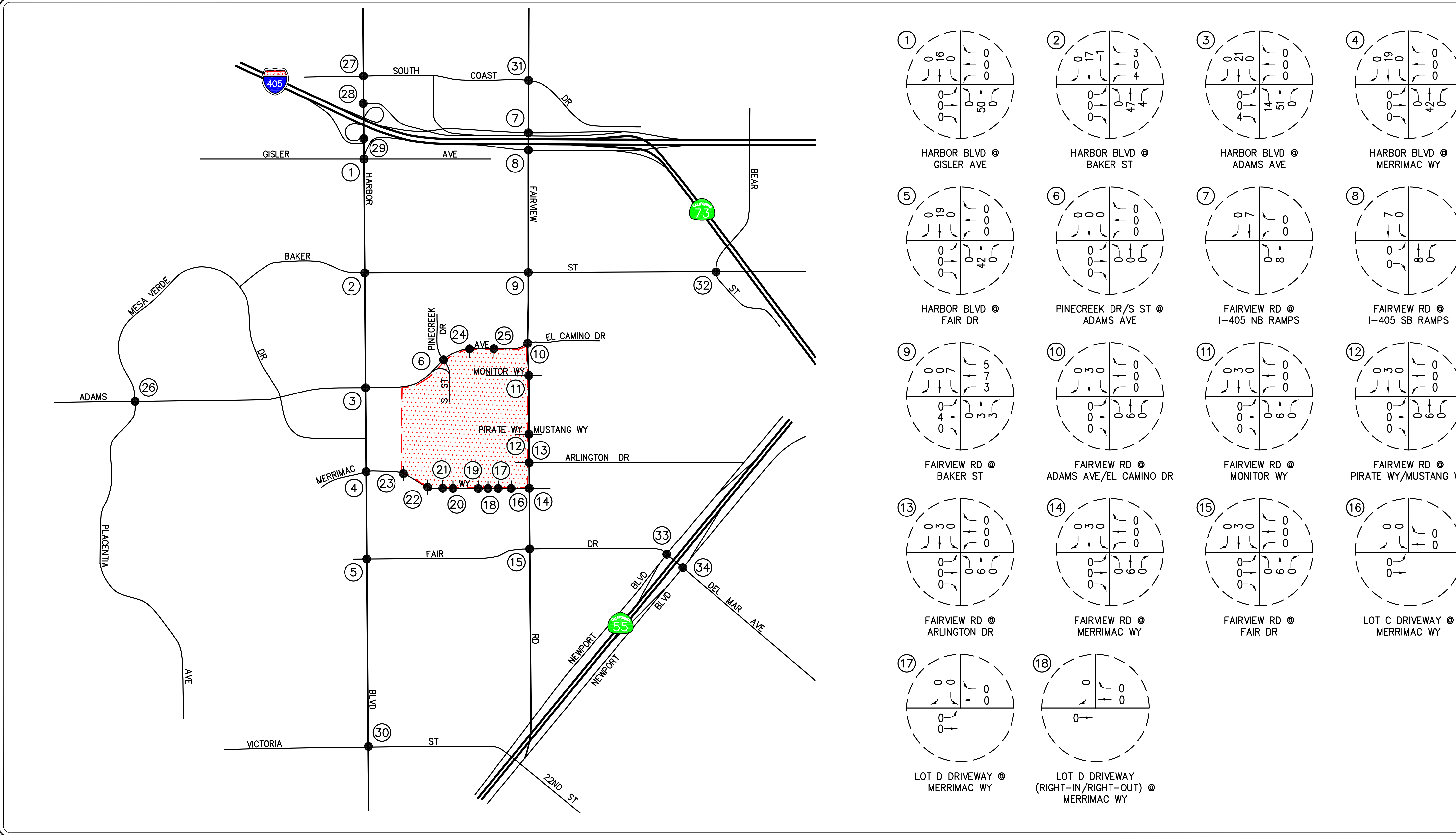
(#) = RELATED PROJECT LOCATION

= PROJECT SITE

FIGURE 6–1

LOCATION OF CUMULATIVE PROJECTS

ORANGE COAST COLLEGE VISION 2020 FACILITIES MASTER PLAN, COSTA MESA



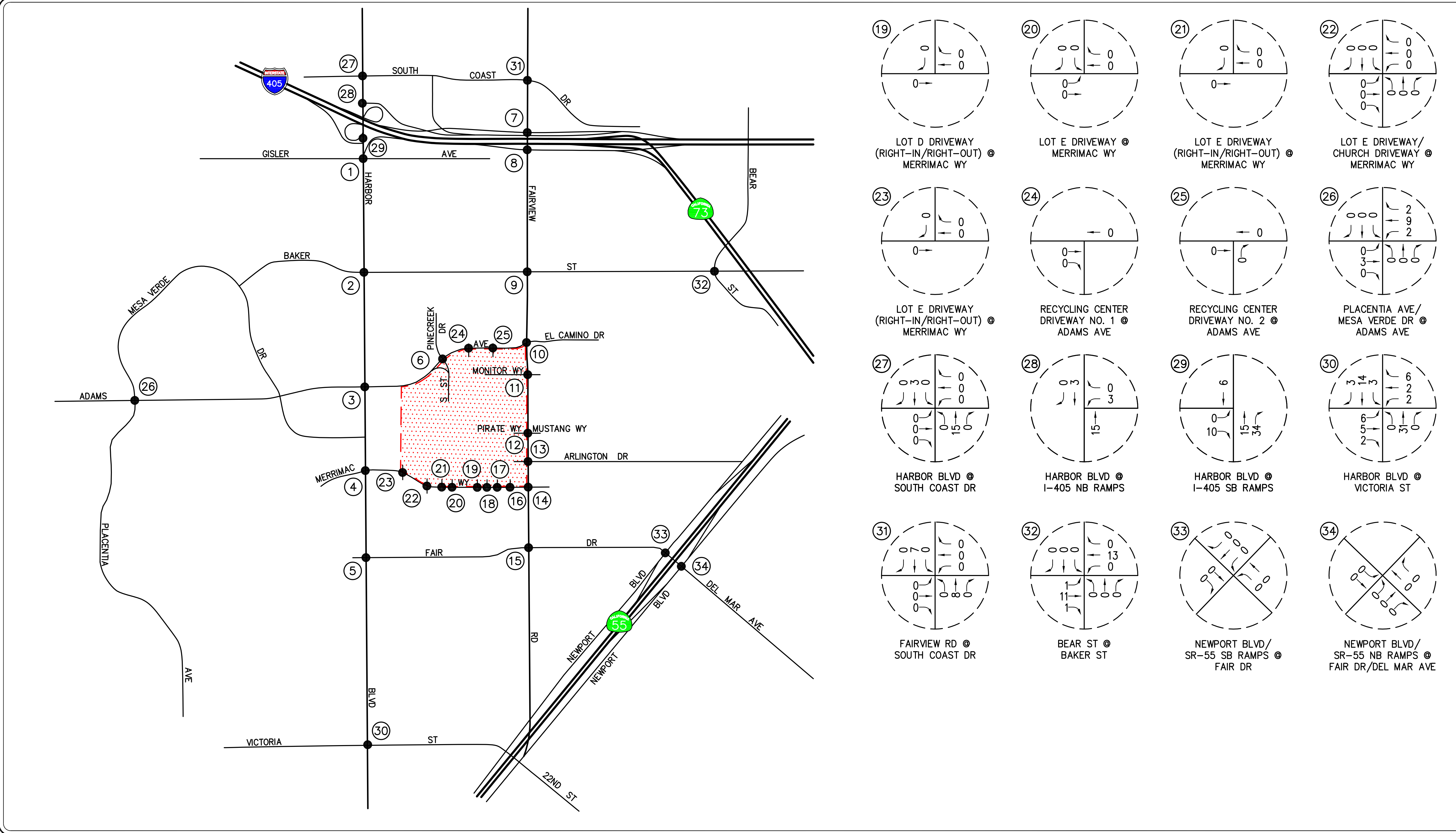
LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY
(#) = STUDY INTERSECTION
= PROJECT SITE

FIGURE 6-2A

AM PEAK HOUR CUMULATIVE PROJECT TRAFFIC VOLUMES
ORANGE COAST COLLEGE VISION 2020 FACILITIES MASTER PLAN, COSTA MESA



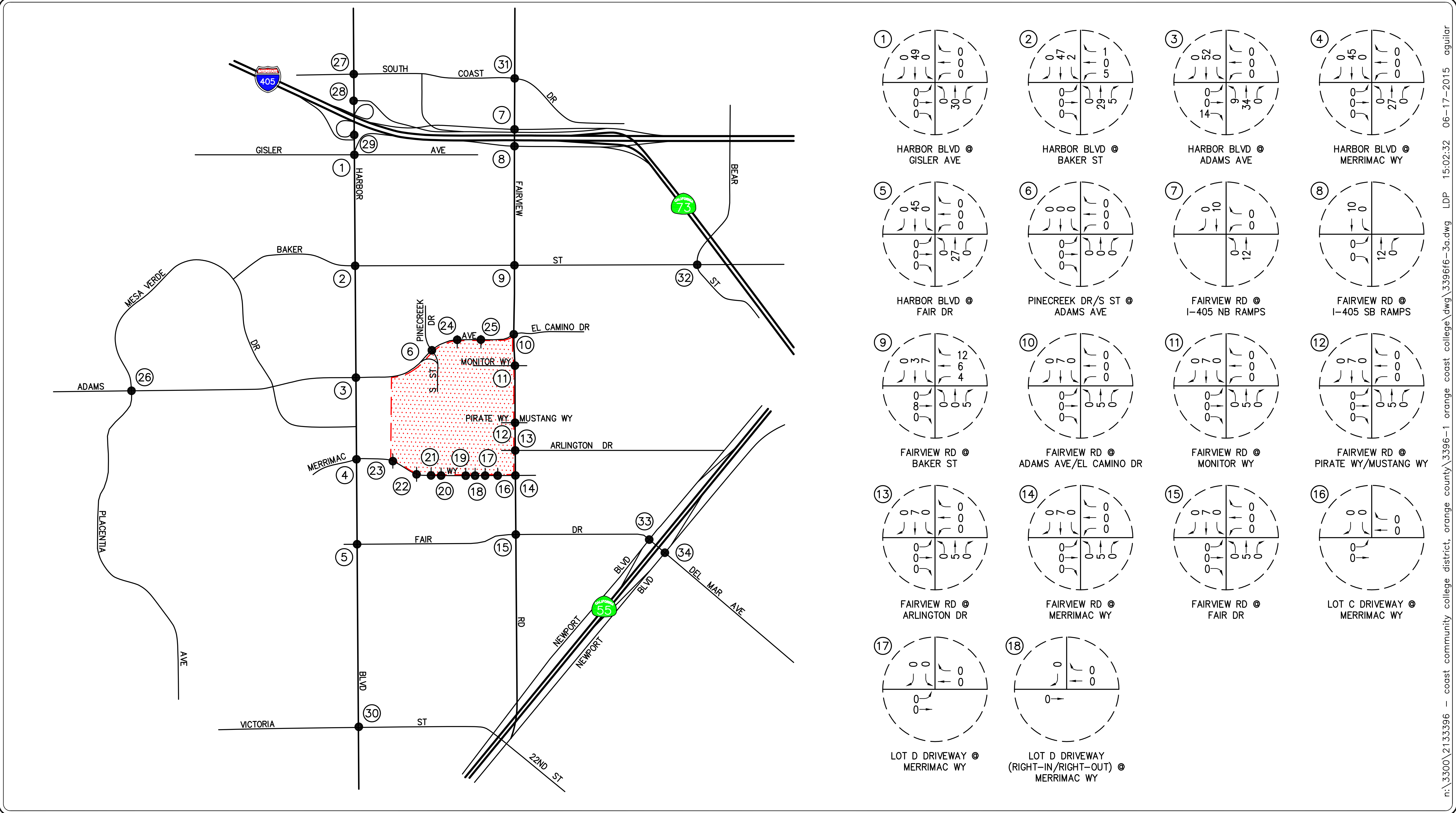
LINSCOTT LAW & GREENSPAN engineers

NO SCALE

KEY
(#) = STUDY INTERSECTION
= PROJECT SITE

FIGURE 6–2B

AM PEAK HOUR CUMULATIVE PROJECT TRAFFIC VOLUMES
ORANGE COAST COLLEGE VISION 2020 FACILITIES MASTER PLAN, COSTA MESA



LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

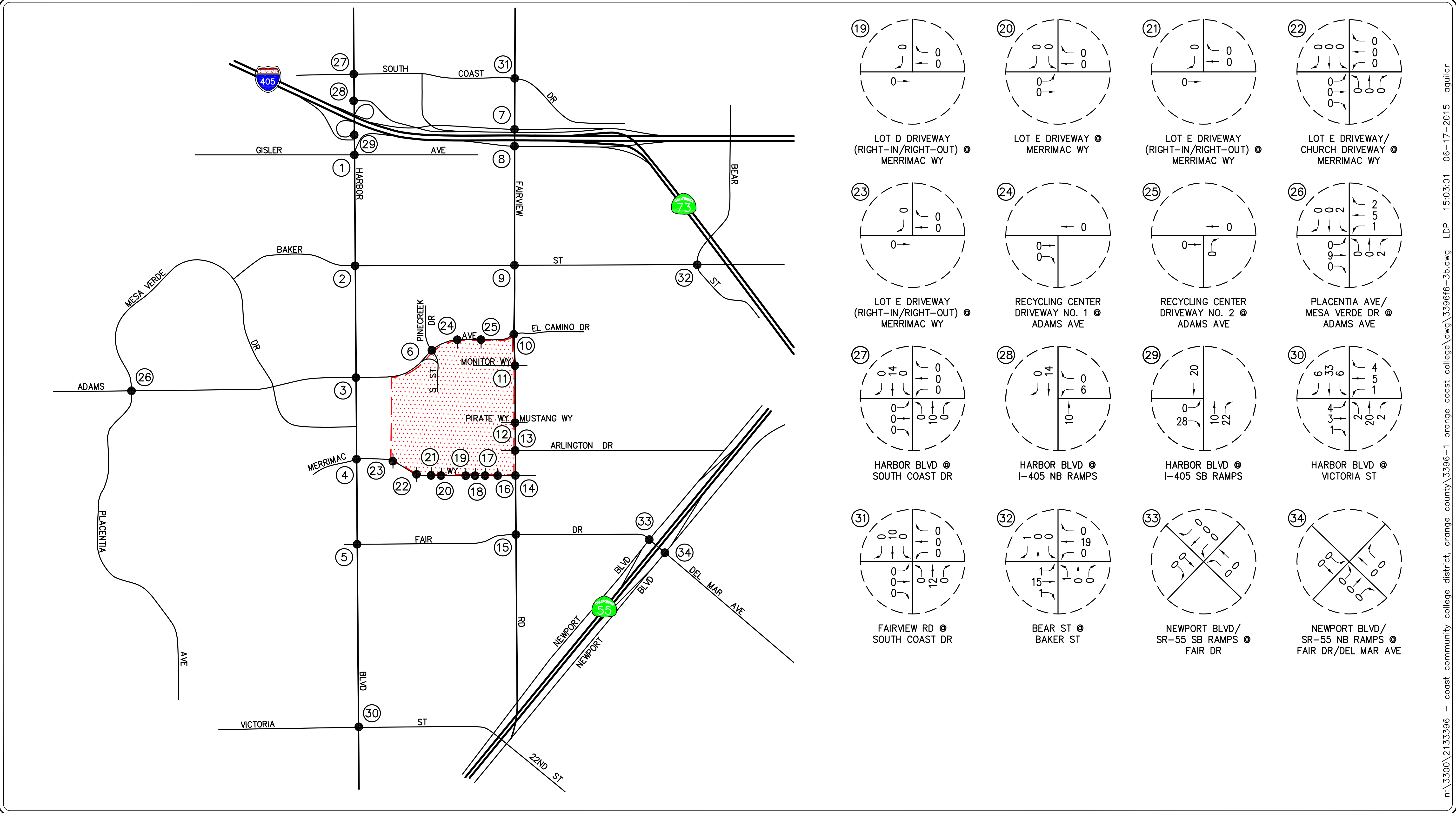
= STUDY INTERSECTION

= PROJECT SITE

FIGURE 6-3A

PM PEAK HOUR CUMULATIVE PROJECT TRAFFIC VOLUMES

ORANGE COAST COLLEGE VISION 2020 FACILITIES MASTER PLAN, COSTA MESA



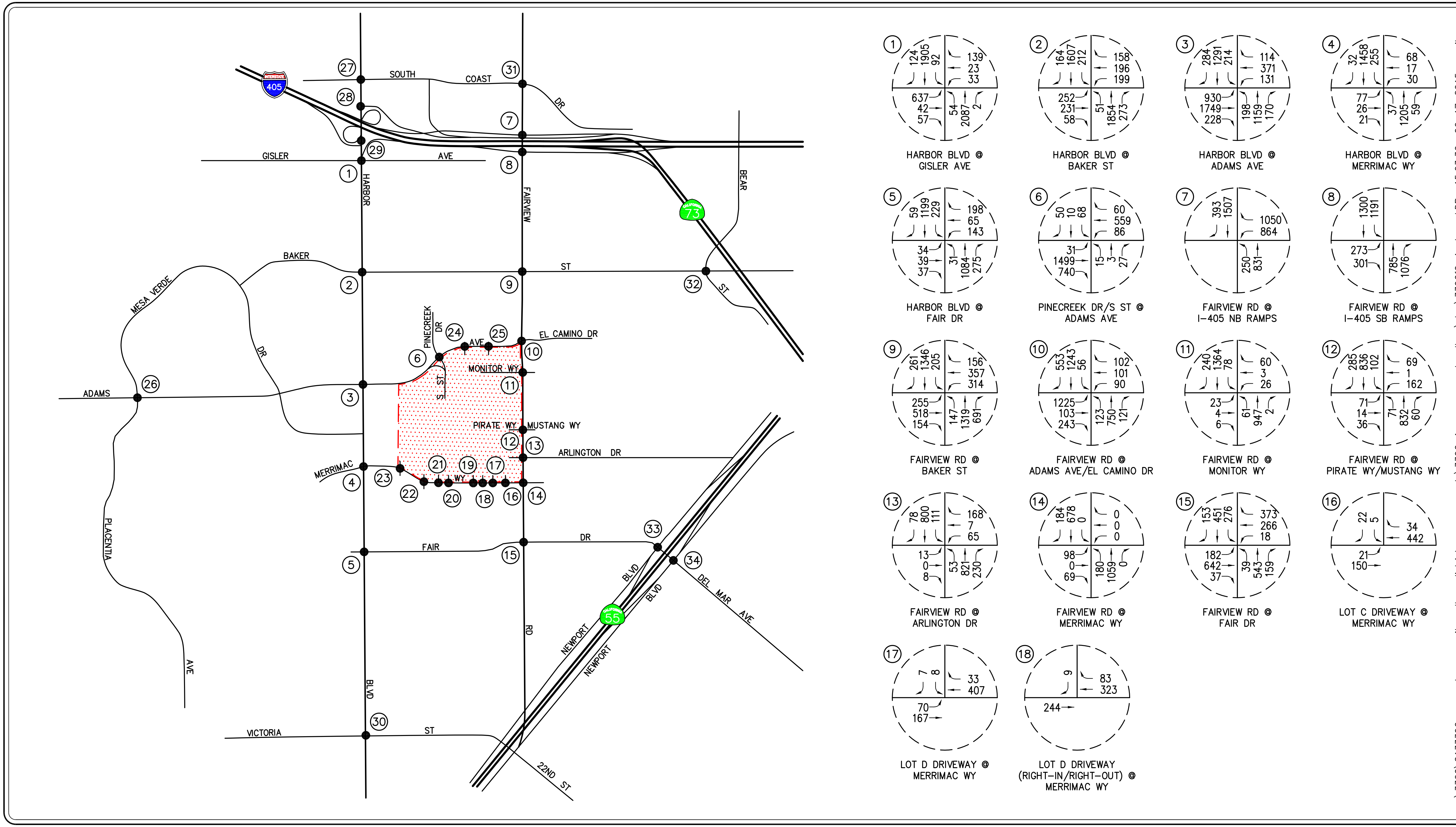
LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY
(#) = STUDY INTERSECTION
= PROJECT SITE

FIGURE 6–3B

PM PEAK HOUR CUMULATIVE PROJECT TRAFFIC VOLUMES
ORANGE COAST COLLEGE VISION 2020 FACILITIES MASTER PLAN, COSTA MESA



LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

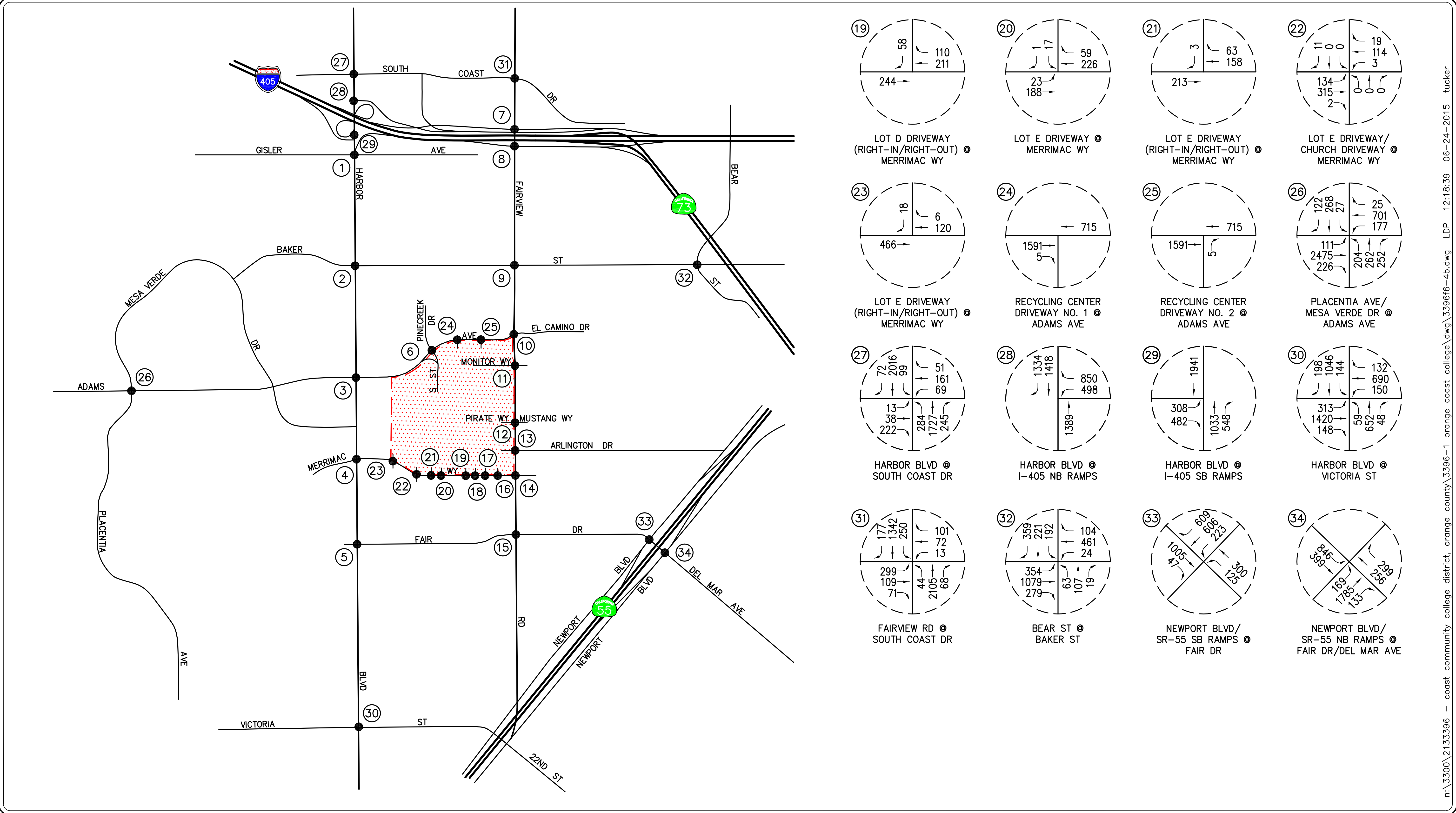
(#) = STUDY INTERSECTION

= PROJECT SITE

FIGURE 6-4A

YEAR 2024 CUMULATIVE AM PEAK HOUR TRAFFIC VOLUMES

ORANGE COAST COLLEGE VISION 2020 FACILITIES MASTER PLAN, COSTA MESA



LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

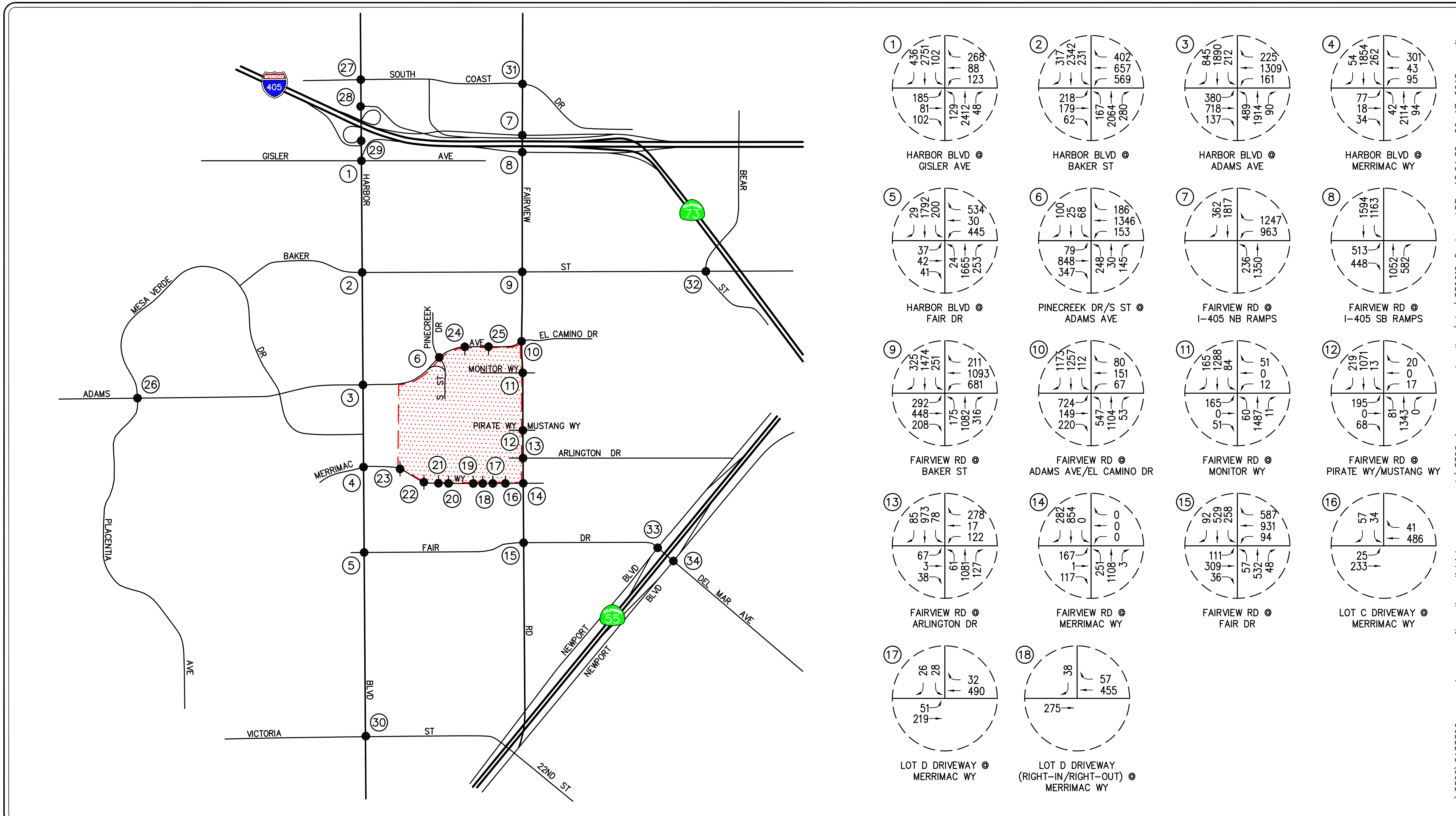
(#) = STUDY INTERSECTION

= PROJECT SITE

FIGURE 6-4B

YEAR 2024 CUMULATIVE AM PEAK HOUR TRAFFIC VOLUMES

ORANGE COAST COLLEGE VISION 2020 FACILITIES MASTER PLAN, COSTA MESA



LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

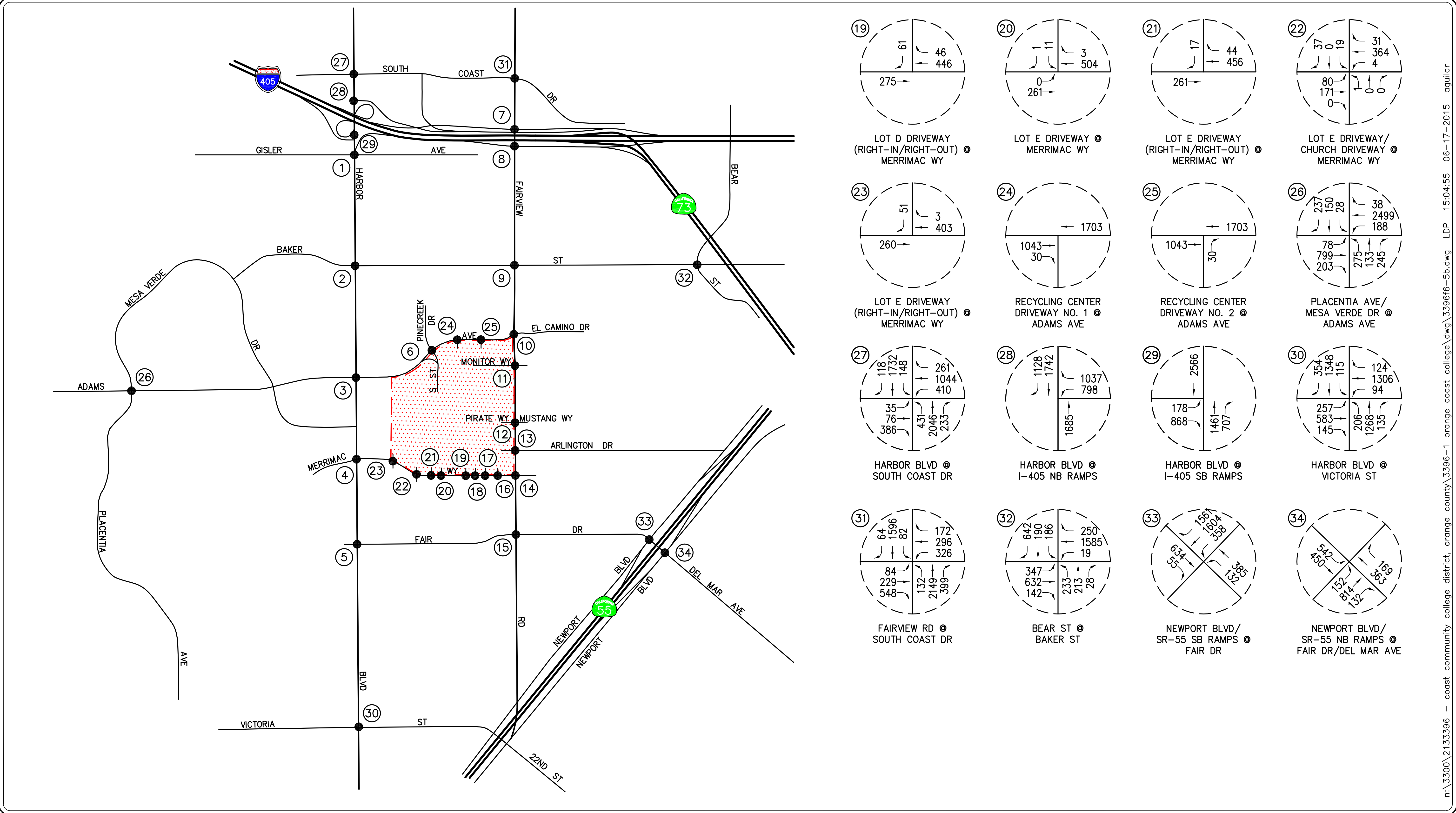
= STUDY INTERSECTION

= PROJECT SITE

FIGURE 6-5A

YEAR 2024 CUMULATIVE PM PEAK HOUR TRAFFIC VOLUMES

ORANGE COAST COLLEGE VISION 2020 FACILITIES MASTER PLAN, COSTA MESA



LINSCOTT LAW & GREENSPAN engineers

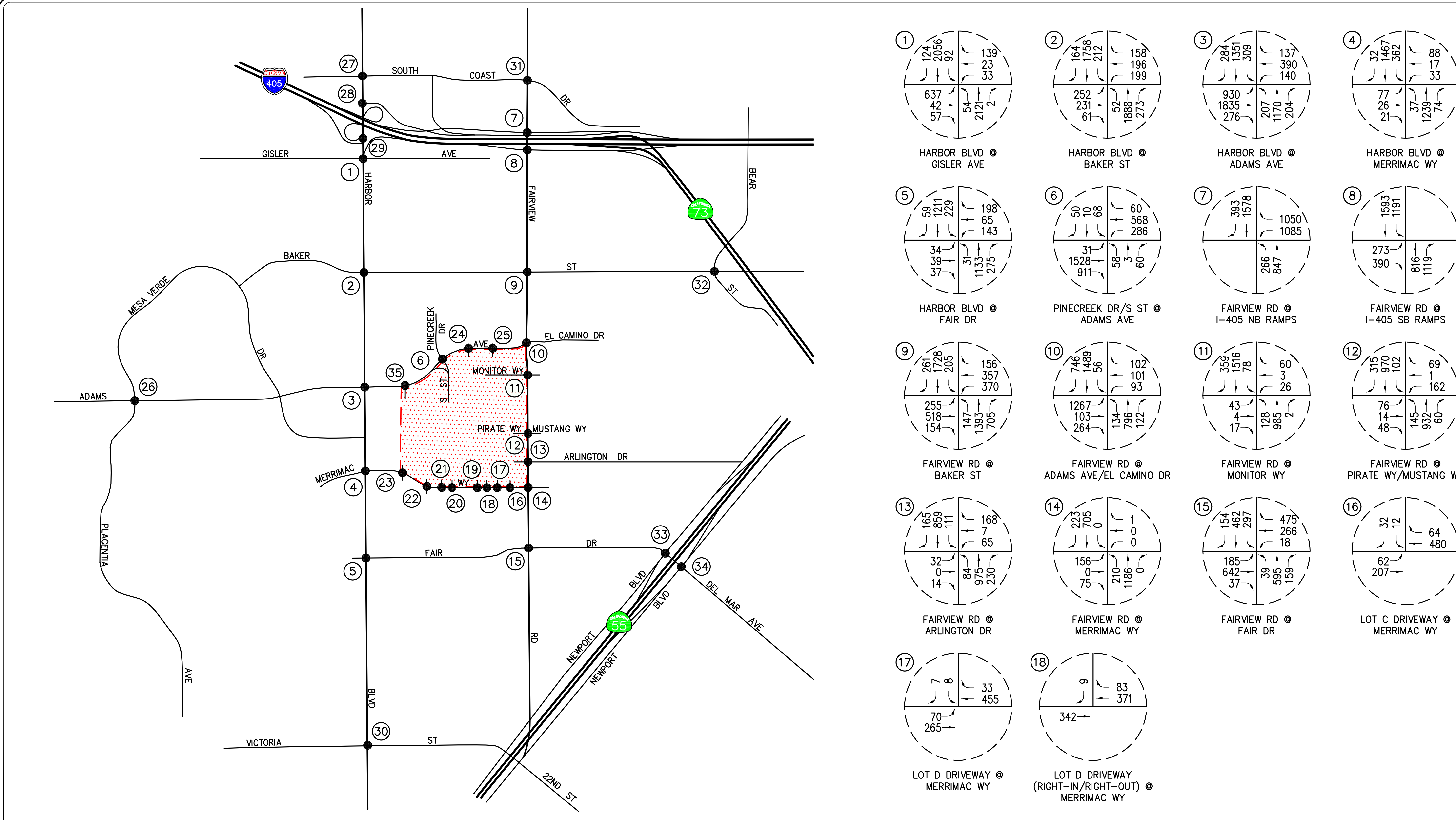
N NO SCALE

KEY
(#) = STUDY INTERSECTION
= PROJECT SITE

FIGURE 6-5B

YEAR 2024 CUMULATIVE PM PEAK HOUR TRAFFIC VOLUMES

ORANGE COAST COLLEGE VISION 2020 FACILITIES MASTER PLAN, COSTA MESA



LINSCOTT LAW & GREENSPAN engineers

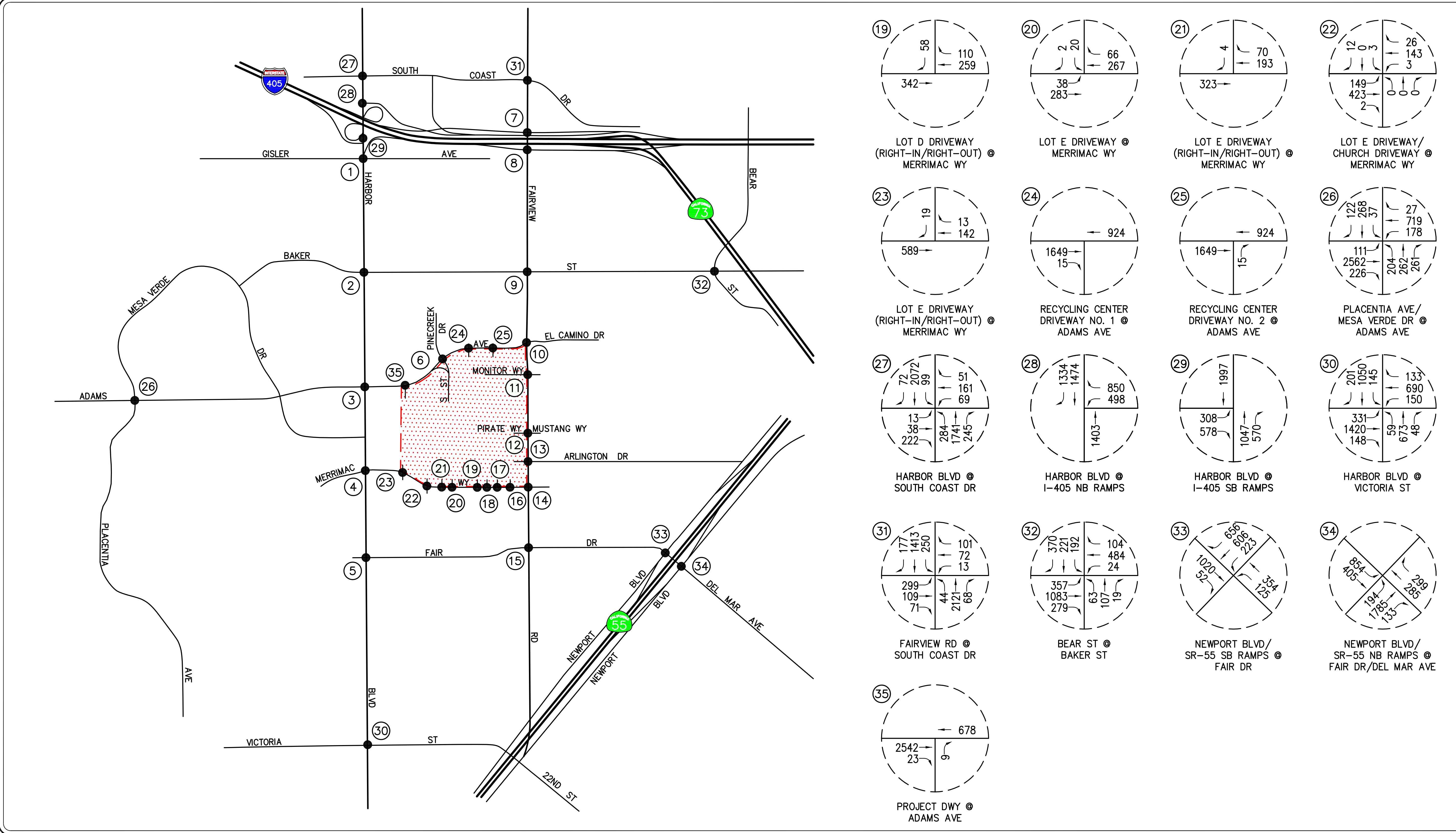
N NO SCALE

KEY
(#) = STUDY INTERSECTION
= PROJECT SITE

FIGURE 6-6A

YEAR 2024 CUMULATIVE PLUS PROJECT AM PEAK HOUR TRAFFIC VOLUMES

ORANGE COAST COLLEGE VISION 2020 FACILITIES MASTER PLAN, COSTA MESA



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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

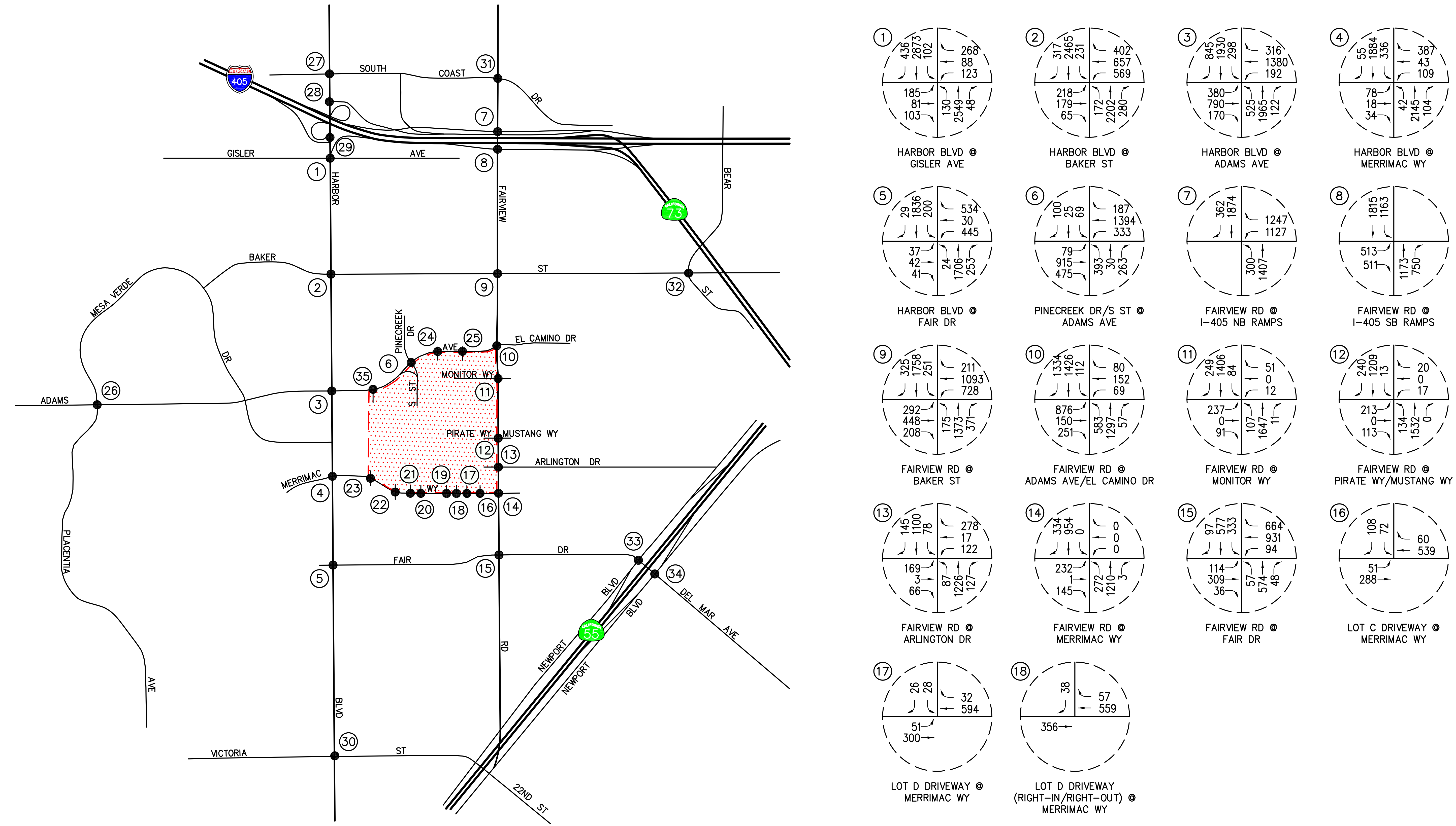
(#) = STUDY INTERSECTION

= PROJECT SITE

FIGURE 6–6B

YEAR 2024 CUMULATIVE PLUS PROJECT AM PEAK HOUR TRAFFIC VOLUMES

ORANGE COAST COLLEGE VISION 2020 FACILITIES MASTER PLAN, COSTA MESA



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LINSCOTT LAW & GREENSPAN engineers

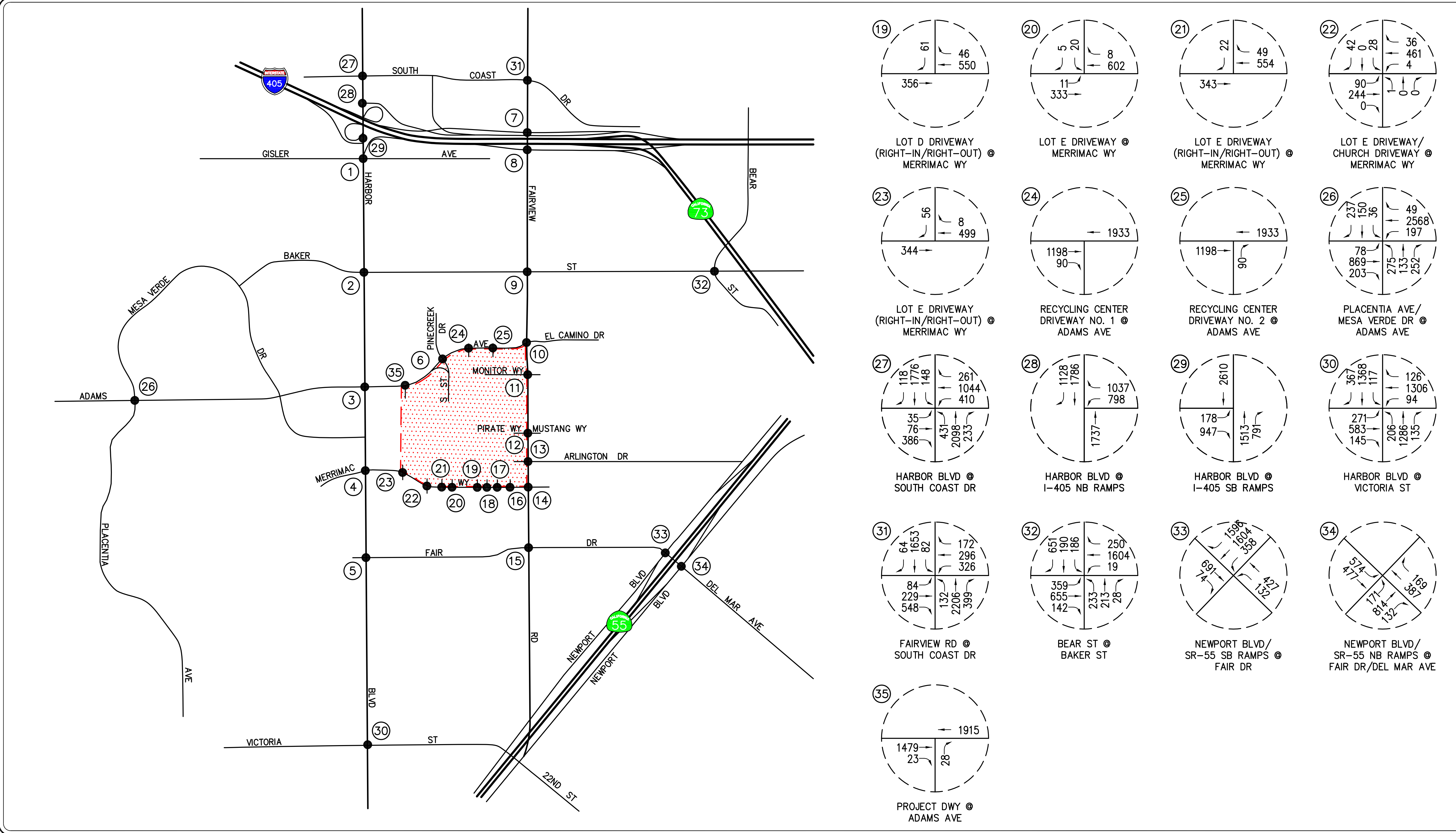
N NO SCALE

KEY
(#) = STUDY INTERSECTION
= PROJECT SITE

FIGURE 6-7A

YEAR 2024 CUMULATIVE PLUS PROJECT PM PEAK HOUR TRAFFIC VOLUMES

ORANGE COAST COLLEGE VISION 2020 FACILITIES MASTER PLAN, COSTA MESA



LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY
(#) = STUDY INTERSECTION
= PROJECT SITE

FIGURE 6–7B

YEAR 2024 CUMULATIVE PLUS PROJECT PM PEAK HOUR TRAFFIC VOLUMES

ORANGE COAST COLLEGE VISION 2020 FACILITIES MASTER PLAN, COSTA MESA

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7.0 Traffic Impact Analysis Methodology

The relative impact of the proposed Project during the AM peak hour and PM peak hour was evaluated based on analysis of future operating conditions at the thirty five (35) key study intersections, without, then with, the proposed Project. The previously discussed capacity analysis procedures were utilized to investigate the future volume-to-capacity relationships and service level characteristics at each study intersection. The significance of the potential impacts of the Project at each key intersection was then evaluated using the following traffic impact criteria.

7.1 Impact Criteria and Thresholds

Impacts to local and regional transportation systems are considered significant if:

- An unacceptable peak hour Level of Service (LOS) (i.e. LOS E or F) at any of the key intersections is projected. The City of Costa Mesa considers LOS D (ICU = 0.801 - 0.900) to be the minimum acceptable LOS for all intersections. For the City of Costa Mesa, the current LOS, if worse than LOS D (i.e. LOS E or F), should also be maintained; and

- The project increases traffic demand at the study intersection by 1% of capacity (ICU increase ≥ 0.010), causing or worsening LOS E or F (ICU > 0.901).

7.2 Traffic Impact Analysis Scenarios

The following scenarios are those for which volume/capacity calculations have been performed at the thirty five (35) key study intersections for existing plus project and Year 2024 traffic conditions:

A. Existing Traffic Conditions;
B. Existing Plus Project Traffic Conditions;
C. Scenario (B) with Improvements, if necessary;
D. Year 2024 Cumulative Traffic Conditions,
E. Year 2024 Cumulative Plus Project Traffic Conditions; and
F. Scenario (E) with Improvements, if necessary.

8.0 Peak Hour Intersection Capacity Analysis

8.1 Existing Plus Project Analysis

Table 8-1 summarizes the peak hour Level of Service results at the thirty five (35) key study intersections for existing plus project traffic conditions. The first column (1) of ICU/LOS values and HCM/LOS values in *Table 8-1* presents a summary of existing AM and PM peak hour traffic conditions (which were also presented in *Table 3-3*). The second column (2) lists existing plus project traffic conditions. The third column (3) shows the increase in ICU value and/or HCM value due to the added peak hour Project trips and indicates whether the traffic associated with the Project will have a significant impact based on the LOS standards and significant impact criteria defined in this report.

8.1.1 *Existing Plus Project Traffic Conditions*

Review of Columns 2 and 3 of *Table 8-1* indicates that traffic associated with the proposed Project ***<u>will not</u>*** significantly impact any of the thirty five (35) key study intersections, when compared to the LOS standards and significant impact criteria specified in this report. The thirty five (35) key study intersections currently operate and are forecast to continue to operate at an acceptable service level during the AM and PM peak hours with the addition of Project generated traffic to existing traffic.

Appendix B presents the existing plus project ICU/LOS and HCM/LOS calculations for the thirty five (35) key study intersections.

8.2 Year 2024 Traffic Conditions

Table 8-2 summarizes the peak hour Level of Service results at the thirty five (35) key study intersections for the Year 2024 horizon year. The first column (1) of ICU/LOS and HCM/LOS values in *Table 8-2* presents a summary of existing AM and PM peak hour traffic conditions (which were also presented in *Table 3-3*). The second column (2) lists projected cumulative traffic conditions (existing plus ambient plus cumulative projects traffic) based on existing intersection geometry, but without any traffic generated from the proposed Project. The third column (3) presents forecast Year 2024 traffic conditions with the addition of Project traffic. The fourth column (4) shows the increase in ICU value and/or HCM value due to the added peak hour Project trips and indicates whether the traffic associated with the Project will have a significant impact based on the LOS standards and significant impact criteria defined in this report. The fifth column (5) indicates the anticipated level of service with planned and/or recommended improvements.

8.2.1 *Year 2024 Cumulative Traffic Conditions*

An analysis of future (Year 2024) cumulative traffic conditions indicates that the addition of ambient traffic growth and cumulative projects traffic will not adversely impact any of the key study intersections. The key study intersections are forecast to continue to operate at acceptable levels of service during the AM and PM peak hours with the addition of ambient traffic growth and cumulative projects traffic.

TABLE 8-1

EXISTING PLUS PROJECT PEAK HOUR INTERSECTION CAPACITY ANALYSIS

Key Intersection		Time Period	(1) Existing Traffic Conditions		(2) Existing Plus Project Traffic Conditions		(3) Significant Impact	
			ICU/HCM	LOS	ICU/HCM	LOS	Increase	Yes/No
1.	Harbor Boulevard at Gisler Avenue	AM PM	0.572 0.717	A C	0.595 0.737	A C	0.023 0.020	No No
2.	Harbor Boulevard at Baker Street	AM PM	0.473 0.657	A B	0.478 0.678	A B	0.005 0.021	No No
3.	Harbor Boulevard at Adams Avenue [a]	AM PM	0.665 0.746	B C	0.725 0.805	C D	0.060 0.059	No No
4.	Harbor Boulevard at Merrimac Way	AM PM	0.368 0.623	A B	0.418 0.682	A B	0.050 0.059	No No
5.	Harbor Boulevard at Fair Drive	AM PM	0.356 0.546	A A	0.366 0.555	A A	0.010 0.009	No No
6.	Pinecreek Drive/S Street at Adams Avenue	AM PM	0.369 0.623	A B	0.459 0.712	A C	0.090 0.089	No No
7.	Fairview Road at I-405 NB Ramps	AM PM	0.658 0.688	B B	0.684 0.728	B C	0.026 0.040	No No
8.	Fairview Road at I-405 SB Ramps	AM PM	0.611 0.545	B A	0.652 0.583	B A	0.041 0.038	No No
9.	Fairview Road at Baker Street	AM PM	0.588 0.586	A A	0.597 0.662	A B	0.009 0.076	No No
10.	Fairview Road at Adams Ave/El Camino Dr	AM PM	0.670 0.654	B B	0.738 0.749	C C	0.068 0.095	No No
11.	Fairview Road at Monitor Way	AM PM	0.342 0.460	A A	0.428 0.538	A A	0.086 0.078	No No
12.	Fairview Road at Pirate Way/Mustang Way	AM PM	0.399 0.401	A A	0.466 0.466	A A	0.067 0.065	No No
13.	Fairview Road at Arlington Drive	AM PM	0.287 0.422	A A	0.331 0.516	A A	0.044 0.094	No No

Notes:

- **Bold ICU/LOS** or **HCM/LOS** values indicate adverse service levels based on City of Costa Mesa LOS standards
- s/v = seconds per vehicle
- [a] = The LOS results for this key study intersection include the recently installed improvements identified as part of the Harbor Boulevard/Adams Avenue Intersection Widening Project. The improvements consist of a second southbound right-turn lane and a third eastbound left-turn lane.

TABLE 8-1 (CONTINUED)
EXISTING PLUS PROJECT PEAK HOUR INTERSECTION CAPACITY ANALYSIS

Key Intersection		Time Period	(1) Existing Traffic Conditions ICU/HCM	(1) LOS	(2) Existing Plus Project Traffic Conditions ICU/HCM	(2) LOS	(3) Significant Impact Increase	(3) Yes/No
14.	Fairview Road at Merrimac Way	AM PM	0.236 0.295	A A	0.270 0.352	A A	0.034 0.057	No No
15.	Fairview Road at Fair Drive	AM PM	0.401 0.519	A A	0.442 0.569	A A	0.041 0.050	No No
16.	Lot C Driveway at Merrimac Way	AM PM	10.4 s/v 12.6 s/v	B B	11.9 s/v 17.6 s/v	B C	1.5 s/v 5.0 s/v	No No
17.	Lot D Driveway at Merrimac Way	AM PM	12.1 s/v 13.3 s/v	B B	13.1 s/v 15.3 s/v	B C	1.0 s/v 2.0 s/v	No No
18.	Lot D Dwy (Right-In/Out Only) at Merrimac Way	AM PM	9.5 s/v 10.0 s/v	A A	9.6 s/v 10.4 s/v	A B	0.1 s/v 0.4 s/v	No No
19.	Lot D Dwy (Right-In/Out Only) at Merrimac Way	AM PM	9.5 s/v 10.1 s/v	A B	9.7 s/v 10.6 s/v	A B	0.2 s/v 0.5 s/v	No No
20.	Lot E Driveway at Merrimac Way	AM PM	11.2 s/v 13.2 s/v	B B	12.5 s/v 15.2 s/v	B C	1.3 s/v 2.0 s/v	No No
21.	Lot E Dwy (Right-In/Out Only) at Merrimac Way	AM PM	8.9 s/v 9.8 s/v	A A	9.0 s/v 10.3 s/v	A B	0.1 s/v 0.5 s/v	No No
22.	Lot E Dwy/Church Dwy at Merrimac Way	AM PM	8.7 s/v 13.9 s/v	A B	10.1 s/v 16.7 s/v	B C	1.4 s/v 2.8 s/v	No No
23.	Lot E Dwy (Right-In/Out Only) at Merrimac Way	AM PM	8.7 s/v 9.7 s/v	A A	8.8 s/v 10.1 s/v	A B	0.1 s/v 0.4 s/v	No No
24.	Recycling Center Dwy No. 1 at Adams Avenue	AM PM	0.0 s/v 0.0 s/v	A A	0.0 s/v 0.0 s/v	A A	0.0 s/v 0.0 s/v	No No
25.	Recycling Center Dwy No. 2 at Adams Avenue	AM PM	12.0 s/v 10.6 s/v	B B	12.4 s/v 11.9 s/v	B B	0.4 s/v 1.3 s/v	No No

Notes:

- **Bold ICU/LOS** or **HCM/LOS** values indicate adverse service levels based on City of Costa Mesa LOS standards
- s/v = seconds per vehicle

TABLE 8-1 (CONTINUED)
EXISTING PLUS PROJECT PEAK HOUR INTERSECTION CAPACITY ANALYSIS

Key Intersection		Time Period	(1) Existing Traffic Conditions		(2) Existing Plus Project Traffic Conditions		(3) Significant Impact	
			ICU/HCM	LOS	ICU/HCM	LOS	Increase	Yes/No
26.	Mesa Verde Dr/Placentia Ave at Adams Avenue	AM PM	0.739 0.743	C C	0.764 0.760	C C	0.025 0.017	No No
27.	Harbor Boulevard at South Coast Drive	AM PM	0.465 0.669	A B	0.473 0.676	A B	0.008 0.007	No No
28.	Harbor Boulevard at I-405 NB Ramps	AM PM	0.460 0.597	A A	0.469 0.604	A B	0.009 0.007	No No
29.	Harbor Boulevard at I-405 SB Ramps	AM PM	0.427 0.606	A B	0.455 0.637	A B	0.028 0.031	No No
30.	Harbor Boulevard at Victoria Street	AM PM	0.679 0.814	B D	0.680 0.822	B D	0.001 0.008	No No
31.	Fairview Road at South Coast Drive	AM PM	0.702 0.683	C B	0.705 0.694	C B	0.003 0.011	No No
32.	Bear Street at Baker Street	AM PM	0.563 0.688	A B	0.564 0.696	A B	0.001 0.008	No No
33.	Newport Blvd/SR-55 SB Ramps at Fair Drive	AM PM	0.351 0.481	A A	0.354 0.493	A A	0.003 0.012	No No
34.	Newport Blvd/SR-55 NB Ramps at Fair Drive/Del Mar Avenue	AM PM	0.813 0.469	D A	0.820 0.491	D A	0.007 0.022	No No
35.	Project Dwy (near proposed student housing component) at Adams Ave	AM PM	--- ---	--- ---	16.5 s/v 12.1 s/v	C B	--- ---	No No

Notes:
- **Bold ICU/LOS** or **HCM/LOS** values indicate adverse service levels based on City of Costa Mesa LOS standards
- s/v = seconds per vehicle

TABLE 8-2

YEAR 2024 PEAK HOUR INTERSECTION CAPACITY ANALYSIS

Key Intersection	Time Period	(1) Existing Traffic Conditions		(2) Year 2024 Cumulative Traffic Conditions		(3) Year 2024 Cumulative Plus Project Traffic Conditions		(4) Significant Impact		(5) With Improvements	
		ICU/HCM	LOS	ICU/HCM	LOS	ICU/HCM	LOS	Increase	Yes/No	ICU/HCM	LOS
1. Harbor Boulevard at Gisler Avenue	AM	0.572	A	0.637	B	0.660	B	0.023	No	---	---
	PM	0.717	C	0.804	D	0.824	D	0.020	No	---	---
2. Harbor Boulevard at Baker Street	AM	0.473	A	0.533	A	0.539	A	0.006	No	---	---
	PM	0.657	B	0.738	C	0.758	C	0.020	No	---	---
3. Harbor Boulevard at Adams Avenue [a]	AM	0.665	B	0.749	C	0.809	D	0.060	No	---	---
	PM	0.746	C	0.836	D	0.895	D	0.059	No	---	---
4. Harbor Boulevard at Merrimac Way	AM	0.368	A	0.418	A	0.468	A	0.050	No	---	---
	PM	0.623	B	0.698	B	0.757	C	0.059	No	---	---
5. Harbor Boulevard at Fair Drive	AM	0.356	A	0.404	A	0.414	A	0.010	No	---	---
	PM	0.546	A	0.612	B	0.620	B	0.008	No	---	---
6. Pinecreek Drive/S Street at Adams Avenue	AM	0.369	A	0.405	A	0.494	A	0.089	No	---	---
	PM	0.623	B	0.681	B	0.770	C	0.089	No	---	---
7. Fairview Road at I-405 NB Ramps	AM	0.658	B	0.730	C	0.751	C	0.021	No	---	---
	PM	0.688	B	0.763	C	0.803	D	0.040	No	---	---
8. Fairview Road at I-405 SB Ramps	AM	0.611	B	0.678	B	0.720	C	0.042	No	---	---
	PM	0.545	A	0.607	B	0.643	B	0.036	No	---	---
9. Fairview Road at Baker Street	AM	0.588	A	0.658	B	0.667	B	0.009	No	---	---
	PM	0.586	A	0.657	B	0.732	C	0.075	No	---	---

Notes:
- **Bold ICU/LOS** or **HCM/LOS** values indicate adverse service levels based on the City of Costa Mesa LOS standards
- s/v = seconds per vehicle
- [a] = The LOS results for this key study intersection include the recently installed improvements identified as part of the Harbor Boulevard/Adams Avenue Intersection Widening Project. The improvements consist of a second southbound right-turn lane and a third eastbound left-turn lane.

TABLE 8-2 (CONTINUED)

YEAR 2024 PEAK HOUR INTERSECTION CAPACITY ANALYSIS

Key Intersection		Time Period	(1) Existing Traffic Conditions		(2) Year 2024 Cumulative Traffic Conditions		(3) Year 2024 Cumulative Plus Project Traffic Conditions		(4) Significant Impact		(5) With Improvements	
			ICU/HCM	LOS	ICU/HCM	LOS	ICU/HCM	LOS	Increase	Yes/No	ICU/HCM	LOS
10.	Fairview Road at	AM	0.670	B	0.744	C	0.812	D	0.068	No	---	---
	Adams Ave/El Camino Dr	PM	0.654	B	0.727	C	0.822	D	0.095	No	---	---
11.	Fairview Road at	AM	0.342	A	0.374	A	0.460	A	0.086	No	---	---
	Monitor Way	PM	0.460	A	0.500	A	0.578	A	0.078	No	---	---
12.	Fairview Road at	AM	0.399	A	0.439	A	0.485	A	0.046	No	---	---
	Pirate Way/Mustang Way	PM	0.401	A	0.433	A	0.492	A	0.059	No	---	---
13.	Fairview Road at	AM	0.287	A	0.319	A	0.363	A	0.044	No	---	---
	Arlington Drive	PM	0.422	A	0.465	A	0.559	A	0.094	No	---	---
14.	Fairview Road at	AM	0.236	A	0.264	A	0.296	A	0.032	No	---	---
	Merrimac Way	PM	0.295	A	0.329	A	0.384	A	0.055	No	---	---
15.	Fairview Road at	AM	0.401	A	0.446	A	0.487	A	0.041	No	---	---
	Fair Drive	PM	0.519	A	0.577	A	0.627	B	0.050	No	---	---
16.	Lot C Driveway at	AM	10.4 s/v	B	10.7 s/v	B	12.4 s/v	B	1.7 s/v	No	---	---
	Merrimac Way	PM	12.6 s/v	B	13.3 s/v	B	19.2 s/v	C	5.9 s/v	No	---	---
17.	Lot D Driveway at	AM	12.1 s/v	B	12.6 s/v	B	13.6 s/v	B	1.0 s/v	No	---	---
	Merrimac Way	PM	13.3 s/v	B	14.1 s/v	B	16.3 s/v	C	2.2 s/v	No	---	---

Notes:

- **Bold ICU/LOS** or **HCM/LOS** values indicate adverse service levels based on the City of Costa Mesa LOS standards
- s/v = seconds per vehicle

TABLE 8-2 (CONTINUED)
YEAR 2024 PEAK HOUR INTERSECTION CAPACITY ANALYSIS

Key Intersection		Time Period	(1) Existing Traffic Conditions		(2) Year 2024 Cumulative Traffic Conditions		(3) Year 2024 Cumulative Plus Project Traffic Conditions		(4) Significant Impact		(5) With Improvements	
			ICU/HCM	LOS	ICU/HCM	LOS	ICU/HCM	LOS	Increase	Yes/No	ICU/HCM	LOS
18.	Lot D Dwy (Right-In/Out Only) at Merrimac Way	AM PM	9.5 s/v 10.0 s/v	A A	9.6 s/v 10.2 s/v	A B	9.7 s/v 10.6 s/v	A B	0.1 s/v 0.4 s/v	No No	--- ---	--- ---
19.	Lot D Dwy (Right-In/Out Only) at Merrimac Way	AM PM	9.5 s/v 10.1 s/v	A B	9.6 s/v 10.3 s/v	A B	9.7 s/v 10.8 s/v	A B	0.1 s/v 0.5 s/v	No No	--- ---	--- ---
20.	Lot E Driveway at Merrimac Way	AM PM	11.2 s/v 13.2 s/v	B B	11.5 s/v 14.0 s/v	B B	12.9 s/v 16.3 s/v	B C	1.4 s/v 2.3 s/v	No No	--- ---	--- ---
21.	Lot E Dwy (Right-In/Out Only) at Merrimac Way	AM PM	8.9 s/v 9.8 s/v	A A	8.9 s/v 10.0 s/v	A A	9.1 s/v 10.4 s/v	A B	0.2 s/v 0.4 s/v	No No	--- ---	--- ---
22.	Lot E Dwy/Church Dwy at Merrimac Way	AM PM	8.7 s/v 13.9 s/v	A B	8.7 s/v 14.5 s/v	A B	10.2 s/v 17.5 s/v	B C	1.5 s/v 3.0 s/v	No No	--- ---	--- ---
23.	Lot E Dwy (Right-In/Out Only) at Merrimac Way	AM PM	8.7 s/v 9.7 s/v	A A	8.7 s/v 9.8 s/v	A A	8.8 s/v 10.3 s/v	A B	0.1 s/v 0.5 s/v	No No	--- ---	--- ---
24.	Recycling Center Dwy No. 1 at Adams Avenue	AM PM	0.0 s/v 0.0 s/v	A A	0.0 s/v 0.0 s/v	A A	0.0 s/v 0.0 s/v	A A	0.0 s/v 0.0 s/v	No No	--- ---	--- ---
25.	Recycling Center Dwy No. 2 at Adams Avenue	AM PM	12.0 s/v 10.6 s/v	B B	12.6 s/v 10.9 s/v	B B	13.0 s/v 12.3 s/v	B B	0.4 s/v 1.4 s/v	No No	--- ---	--- ---
26.	Mesa Verde Dr/Placentia Ave at Adams Avenue	AM PM	0.739 0.743	C C	0.807 0.811	D D	0.832 0.828	D D	0.025 0.017	No No	--- ---	--- ---

Notes:
- **Bold ICU/LOS** or **HCM/LOS** values indicate adverse service levels based on the City of Costa Mesa LOS standards
- s/v = seconds per vehicle

TABLE 8-2 (CONTINUED)

YEAR 2024 PEAK HOUR INTERSECTION CAPACITY ANALYSIS

Key Intersection		Time Period	(1) Existing Traffic Conditions		(2) Year 2024 Cumulative Traffic Conditions		(3) Year 2024 Cumulative Plus Project Traffic Conditions		(4) Significant Impact		(5) With Improvements	
			ICU/HCM	LOS	ICU/HCM	LOS	ICU/HCM	LOS	Increase	Yes/No	ICU/HCM	LOS
27.	Harbor Boulevard at South Coast Drive	AM PM	0.465 0.669	A B	0.507 0.732	A C	0.515 0.738	A C	0.008 0.006	No No	--- ---	--- ---
28.	Harbor Boulevard at I-405 NB Ramps	AM PM	0.460 0.597	A A	0.502 0.654	A B	0.511 0.661	A B	0.009 0.007	No No	--- ---	--- ---
29.	Harbor Boulevard at I-405 SB Ramps	AM PM	0.427 0.606	A B	0.468 0.672	A B	0.497 0.704	A C	0.029 0.032	No No	--- ---	--- ---
30.	Harbor Boulevard at Victoria Street	AM PM	0.679 0.814	B D	0.745 0.898	C D	0.746 **0.907**	C **E**	0.001 0.009	No No	--- ---	--- ---
31.	Fairview Road at South Coast Drive	AM PM	0.702 0.683	C B	0.767 0.746	C C	0.770 0.758	C C	0.003 0.012	No No	--- ---	--- ---
32.	Bear Street at Baker Street	AM PM	0.563 0.688	A B	0.617 0.755	B C	0.618 0.763	B C	0.001 0.008	No No	--- ---	--- ---
33.	Newport Blvd/SR-55 SB Ramps at Fair Drive	AM PM	0.351 0.481	A A	0.382 0.524	A A	0.385 0.536	A A	0.003 0.012	No No	--- ---	--- ---
34.	Newport Blvd/SR-55 NB Ramps at Fair Drive/Del Mar Avenue	AM PM	0.813 0.469	D A	0.886 0.512	D A	0.894 0.533	D A	0.008 0.021	No No	--- ---	--- ---
35.	Project Dwy (near proposed student housing component) at Adams Ave	AM PM	--- ---	--- ---	--- ---	--- ---	18.1 s/v 12.7 s/v	C B	--- ---	No No	--- ---	--- ---

Notes:

- **Bold ICU/LOS** or **HCM/LOS** values indicate adverse service levels based on the City of Costa Mesa LOS standards
- s/v = seconds per vehicle

8.2.2 *Year 2024 Cumulative Plus Project Conditions*

Review of Columns 3 and 4 of *Table 8-2* indicates that traffic associated with the proposed Project ***will not*** significantly impact any of the thirty five (35) key study intersections, when compared to the LOS standards and significant impact criteria specified in this report. Although the intersection of Harbor Boulevard at Victoria Street is forecast to operate at unacceptable LOS E during the PM peak hour with the addition of project traffic, the proposed Project is expected to add less than 0.010 to the ICU value. The remaining thirty four key study intersections are forecast to continue to operate at an acceptable service level during the AM and PM peak hours with the addition of Project generated traffic to existing traffic, ambient growth traffic and cumulative projects traffic.

Appendix B also presents the Year 2024 plus project ICU/LOS and HCM/LOS calculations for the thirty five (35) key study intersections.

9.0 STATE OF CALIFORNIA (CALTRANS) METHODOLOGY

In conformance with the current Caltrans *Guide for the Preparation of Traffic Impact Studies*, existing and projected AM and PM peak hour operating conditions at the six (6) state-controlled study intersections within the study area have been evaluated using the *Highway Capacity Manual 2000* (HCM 2000 for signalized intersections) operations method of analysis. These state-controlled locations include the following six of the thirty five study intersections:

7. Fairview Road at I-405 NB Ramps
8. Fairview Road at I-405 SB Ramps
28. Harbor Boulevard at I-405 NB Ramps
29. Harbor Boulevard at I-405 SB Ramps
33. Newport Boulevard/SR-55 SB Ramps at Fair Drive
34. Newport Blvd/SR-55 NB Ramps at Fair Drive/Del Mar Ave

Caltrans "endeavors to maintain a target LOS at the transition between LOS "C" and LOS "D" on State highway facilities"; it does not require that LOS "D" (shall) be maintained. However, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS. For this analysis, LOS D is the target level of service standard and will be utilized to assess the project impacts at the state-controlled study intersections.

9.1 Highway Capacity Manual (HCM) Method of Analysis (Signalized Intersections)

Based on the HCM operations method of analysis, level of service for signalized intersections is defined in terms of control delay, which is a measure of driver discomfort, frustration, fuel consumption, and lost travel time. The delay experienced by a motorist is made up of a number of factors that relate to control, geometries, traffic, and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during ideal conditions: in the absence of traffic control, in the absence of geometric delay, in the absence of any incidents, and when there are no other vehicles on the road.

In Chapter 16 of the HCM, only the portion of total delay attributed to the control facility is quantified. This delay is called *control delay.* Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. In contrast, in previous versions of the HCM (1994 and earlier), delay included only stopped delay.

Specifically, LOS criteria for traffic signals are stated in terms of the average control delay per vehicle. The six qualitative categories of Level of Service that have been defined along with the corresponding HCM control delay value range for signalized intersections are shown in ***Table 9-1***.

9.2 Existing Plus Project Traffic Conditions

Table 9-2 summarizes the existing plus project peak hour HCM level of service results at the six (6) state-controlled study intersections within the study area. The first column (1) of HCM/LOS values in *Table 9-2* presents a summary of existing traffic conditions. The second column (2) presents existing plus project traffic conditions. The third column (3) indicates whether the traffic associated with the Project will have a significant impact based on the LOS standards defined in this report.

TABLE 9-1

LEVEL OF SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS (HCM METHODOLOGY)[13]

Level of Service (LOS)	Control Delay Per Vehicle (seconds/vehicle)	Level of Service Description
A	≤ 10.0	This level of service occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.
B	> 10.0 and ≤ 20.0	This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of average delay.
C	> 20.0 and ≤ 35.0	Average traffic delays. These higher delays may result from fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.
D	> 35.0 and ≤ 55.0	Long traffic delays At level D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high *v/c* ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.
E	> 55.0 and ≤ 80.0	Very long traffic delays This level is considered by many agencies (i.e. SANBAG) to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high *v/c* ratios. Individual cycle failures are frequent occurrences.
F	≥ 80.0	Severe congestion This level, considered to be unacceptable to most drivers, often occurs with over saturation, that is, when arrival flow rates exceed the capacity of the intersection. It may also occur at high *v/c* ratios below 1.0 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing factors to such delay levels.

13 Source: *Highway Capacity Manual 2000*, Chapter 16 (Signalized Intersections).

9.2.1 *Existing Traffic Conditions*

Review of Column 1 of *Table 9-2* indicates that the six (6) state-controlled study intersections currently operate at acceptable LOS D or better during the AM and PM peak hours.

9.2.2 *Existing Plus Project Traffic Conditions*

Review of Columns 2 and 3 of *Table 9-2* indicates that traffic associated with the proposed Project ***will not*** significantly impact any of the six (6) state-controlled study intersections, when compared to the LOS standards specified in this report. The six (6) state-controlled study intersections are forecast to continue to operate at acceptable LOS D or better with the addition of Project generated traffic to existing traffic.

9.3 Year 2024 Traffic Conditions

Table 9-3 summarizes the Year 2024 peak hour HCM level of service results at the six (6) state-controlled study intersections within the study area. The first column (1) of HCM/LOS values in *Table 9-3* presents a summary of existing traffic conditions. The second column (2) presents Year 2024 cumulative traffic conditions based on existing intersection geometry, but without any project generated traffic. The third column (3) presents future forecast traffic conditions with the addition of Project traffic. Column four (4) indicates whether the traffic associated with the Project will have a significant impact based on the LOS standards defined in this report.

9.3.1 *Year 2024 Cumulative Traffic Conditions*

An analysis of future (Year 2024) cumulative traffic conditions indicates that the addition of ambient traffic growth and cumulative projects traffic *will not* adversely impact any of the six (6) state-controlled study intersections. The six (6) state-controlled study intersections are forecast to operate at acceptable LOS D or better during the AM and PM peak hours with the addition of ambient traffic growth and cumulative projects traffic.

9.3.2 *Year 2024 Cumulative Plus Project Traffic Conditions*

Review of Columns 3 and 4 of *Table 9-3* indicates that traffic associated with the proposed Project ***will not*** significantly impact any of the six (6) state-controlled study intersections, when compared to the LOS standards specified in this report. The six (6) state-controlled study intersections are forecast to continue to operate at acceptable LOS D or better with the addition of project generated traffic in the Year 2024.

Appendix C presents the existing plus project and Year 2024 plus project HCM/LOS calculations for the six (6) state-controlled study intersections.

9.4 Recommended Improvements – Caltrans Analysis

The results of the Caltrans analyses presented previously in *Tables 9-2* and *9-3* indicate that the proposed Project will not significantly impact any of the six (6) state-controlled study intersections under "Existing Plus Project" and "Year 2024 Cumulative Plus Project" traffic conditions. As there are no significant impacts, no traffic mitigation measures are required or recommended for the six (6) state-controlled study intersections.

TABLE 9-2
EXISTING PLUS PROJECT PEAK HOUR INTERSECTION CAPACITY ANALYSIS – CALTRANS

Key Intersection		Time Period	(1) Existing Traffic Conditions		(2) Existing Plus Project Traffic Conditions		(3) Significant Impact
			HCM	LOS	HCM	LOS	Yes/No
7.	Fairview Road at I-405 NB Ramps	AM	26.7 s/v	C	27.6 s/v	C	No
		PM	28.7 s/v	C	31.2 s/v	C	No
8.	Fairview Road at I-405 SB Ramps	AM	20.9 s/v	C	21.8 s/v	C	No
		PM	22.6 s/v	C	23.4 s/v	C	No
28.	Harbor Boulevard at I-405 NB Ramps	AM	19.6 s/v	B	19.5 s/v	B	No
		PM	21.3 s/v	C	21.4 s/v	C	No
29.	Harbor Boulevard at I-405 SB Ramps	AM	13.8 s/v	B	15.2 s/v	B	No
		PM	17.4 s/v	B	18.6 s/v	B	No
33.	Newport Blvd/SR-55 SB Ramps at Fair Drive	AM	21.4 s/v	C	21.3 s/v	C	No
		PM	19.9 s/v	B	20.4 s/v	C	No
34.	Newport Blvd/SR-55 NB Ramps at Fair Drive/Del Mar Avenue	AM	37.6 s/v	D	38.6 s/v	D	No
		PM	24.0 s/v	C	24.3 s/v	C	No

Notes:
- s/v = seconds per vehicle

TABLE 9-3
YEAR 2024 PEAK HOUR INTERSECTION CAPACITY ANALYSIS – CALTRANS

Key Intersection		Time Period	(1) Existing Traffic Conditions		(2) Year 2024 Cumulative Traffic Conditions		(3) Year 2024 Cumulative Plus Project Traffic Conditions		(4) Significant Impact
			HCM	LOS	HCM	LOS	HCM	LOS	Yes/No
7.	Fairview Road at I-405 NB Ramps	AM	26.7 s/v	C	30.4 s/v	C	31.6 s/v	C	No
		PM	28.7 s/v	C	34.1 s/v	C	38.4 s/v	D	No
8.	Fairview Road at I-405 SB Ramps	AM	20.9 s/v	C	22.5 s/v	C	24.1 s/v	C	No
		PM	22.6 s/v	C	23.6 s/v	C	24.7 s/v	C	No
28.	Harbor Boulevard at I-405 NB Ramps	AM	19.6 s/v	B	20.2 s/v	C	20.1 s/v	C	No
		PM	21.3 s/v	C	22.4 s/v	C	22.6 s/v	C	No
29.	Harbor Boulevard at I-405 SB Ramps	AM	13.8 s/v	B	14.4 s/v	B	15.7 s/v	B	No
		PM	17.4 s/v	B	18.8 s/v	B	20.2 s/v	C	No
33.	Newport Blvd/SR-55 SB Ramps at Fair Drive	AM	21.4 s/v	C	21.7 s/v	C	21.6 s/v	C	No
		PM	19.9 s/v	B	20.5 s/v	C	21.0 s/v	C	No
34.	Newport Blvd/SR-55 NB Ramps at Fair Drive/Del Mar Avenue	AM	37.6 s/v	D	51.8 s/v	D	53.6 s/v	D	No
		PM	24.0 s/v	C	24.6 s/v	C	25.0 s/v	C	No

Notes:
- s/v = seconds per vehicle

10.0 RECOMMENDED IMPROVEMENTS

For those intersections where projected Project traffic volumes are expected to result in unacceptable operating conditions, traffic impact studies of this type typically recommend (identify) improvement measures that change the intersection geometry to increase capacity. These capacity improvements involve roadway widening and/or re-striping to reconfigure (add lanes) to specific approaches of a key intersection. The identified improvements are expected to:

- mitigate the impact of existing traffic, Project traffic and future non-project (ambient traffic growth and cumulative project) traffic and
- improve Levels of Service to an acceptable range and/or to pre-project conditions.

10.1 Existing Plus Project Traffic Conditions

The results of the intersection capacity analysis presented previously in *Table 8-1* show that the proposed Project will not significantly impact any of the thirty five (35) key study intersections under the “Existing Plus Project” traffic scenario. Given that there are no significant project impacts, no improvements are required to address this traffic scenario.

10.2 Year 2024 Plus Project Traffic Conditions

The results of the intersection capacity analysis presented previously in *Table 8-2* show that the proposed Project will not significantly impact any of the thirty five (35) key study intersections under the “Year 2024 Plus Project” traffic scenario. Given that there are no significant project impacts, no improvements are required to address this traffic scenario.

11.0 FOCUSED SATURDAY EVALUATION

In collaboration with City of Costa Mesa staff, six (6) of the thirty five (35) key study intersections have been selected for Saturday evaluation. The six (6) key study intersections consist of the following:

6. Pinecreek Drive/S Street at Adams Avenue
10. Fairview Road at Adams Avenue/El Camino Drive
11. Fairview Road at Monitor Way
12. Fairview Road at Pirate Way/Mustang Way
13. Fairview Road at Arlington Drive
14. Fairview Road at Merrimac Way

11.1 Saturday Project Trip Generation

Table 11-1 summarizes the trip generation rates used in forecasting the Saturday daily and peak hour vehicular trips generated by the four components of the proposed Project (i.e. student growth, student housing, mixed use development and recycling center expansion).

Table 11-2 presents the proposed Project's forecast Saturday peak hour and daily traffic volumes. Review of the upper portion of *Table 11-2* shows that the student growth component of the proposed project (i.e. net increase of 6,922 students) is forecast to generate 2,907 daily Saturday trips with 346 Saturday trips forecast during the Midday peak hour. The student housing component of the proposed project (i.e. 818 beds) is forecast to generate 1,947 daily Saturday trips with 147 Saturday trips forecast during the Midday peak hour.

Review of the middle portion of *Table 11-2* shows that the mixed use development component of the proposed project (i.e. 89,000 SF conference/education office space and 15,000 SF shopping center) is forecast to generate 2,735 daily Saturday trips with 268 Saturday trips forecast during the Midday peak hour. Review of the lower portion of *Table 11-2* shows that the recycling center expansion component of the proposed project is forecast to generate 1,296 net daily Saturday trips with 216 net Saturday trips forecast during the Midday peak hour.

Overall, as shown at the bottom of *Table 11-2,* the proposed Project is forecast to generate approximately 8,885 daily Saturday trips with 977 Saturday trips (529 inbound, 448 outbound) produced in the Midday peak hour.

11.2 Saturday Traffic Volumes

Existing Saturday Midday peak hour traffic volumes for the six (6) key study intersections were obtained from manual peak hour turning movement counts conducted by Transportation Studies, Inc. on March 7, 2015 between 11:00 AM and 2:00 PM. The counts were targeted for this period with the intent to capture the greatest two-way (inbound plus outbound) Saturday hourly volume of the existing campus setting. It should be noted that the Saturday traffic count time period was approved by City of Costa Mesa staff.

TABLE 11-1
SATURDAY PROJECT TRAFFIC GENERATION RATES[14]

Project Description	Daily 2-Way	Midday Peak Hour Enter	Midday Peak Hour Exit	Midday Peak Hour Total
Student Growth				
▪ 540: Junior College (TE/Student)	0.42	0.03	0.02	0.05
Mixed Use Development				
▪ 710: General Office Building (TE/1,000 SF)	2.46	0.23	0.20	0.43
▪ 820: Shopping Center (TE/1,000 SF)[15]	186.40	8.84	8.16	17.00
Student Housing				
▪ Student Housing Empirical Rate (TE/Bed)	2.38	0.09	0.09	0.18
Recycling Center Expansion				
▪ Existing Recycling Center Trip Generation[16]	648	54	54	108
➢ Proposed Expansion (3 Times Existing Trips)				

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14 Unless otherwise noted, Source: *Trip Generation*, 9th Edition, Institute of Transportation Engineers (ITE), Washington, D.C. (2012).

15 The trip generation rates are based on the following equations.
- Saturday Daily: LN (T) = 0.63 LN(X) + 6.23; 50% Enter and 50% Exit
- Saturday Midday Peak Hour: LN (T) = 0.65 LN(X) + 3.78; 52% Enter and 48% Exit

16 Source: Traffic counts/observations conducted at the existing recycling center in March 2015.

TABLE 11-2
SATURDAY PROJECT TRAFFIC GENERATION FORECAST

Project Description	Daily 2-Way	Midday Peak Hour		
		Enter	Exit	Total
Student Growth				
▪ Net Increase 6,922 Students	2,907	208	138	346
Student Housing				
▪ Student Housing – 818 Beds	1,947	73	74	147
Mixed Use Development				
▪ 89,000 SF Conference/Education Office Space	219	20	18	38
▪ 15,000 SF Shopping Center	2,796	133	122	255
Pass-By Reduction[17]	-280	-13	-12	-25
Subtotal	2,516	120	110	230
Total Mixed Use Development	***2,735***	***140***	***128***	***268***
Recycling Center Expansion				
▪ Existing Recycling Center Trip Generation	648	54	54	108
▪ With Proposed Expansion Project (3 Times Existing Trips)[18]	1,944	162	162	324
Total Net Recycling Center Expansion Trips (Proposed Minus Existing)	***1,296***	***108***	***108***	***216***
Total Trip Generation Potential	**8,885**	**529**	**448**	**977**

17 Pass-by trips are trips made as intermediate stops on the way from an origin to a primary trip destination. Pass-by trips are attracted from traffic passing the site on adjacent streets (i.e. Fairview Road and Merrimac Way), which contain direct access to the generator. Although the *Trip Generation Handbook* recommends a Saturday Midday peak hour pass-by percentage of 26%, 10% was utilized for the Saturday Midday peak hour consistent with City of Costa Mesa requirements and to provide a conservative analysis. The daily peak hour pass-by percentage was estimated to be 10%, consistent with City of Costa Mesa requirements.

18 At completion of the proposed recycling center expansion, it is expected that the site would collect triple the amount of waste that is currently collected at the existing facility, thus resulting in triple the amount of visitors to the expanded site.

Figure 11-1 illustrates the existing Saturday Midday peak hour traffic volumes at the six (6) key study intersections evaluated as part of the focused Saturday evaluation.

Existing plus project Saturday traffic volumes, Year 2024 cumulative Saturday traffic volumes and Year 2024 cumulative plus project Saturday traffic volumes were developed utilizing the new counts combined with Saturday cumulative project information and Saturday project trip generation information. Project traffic assignments are consistent with the project traffic distribution patterns discussed previously in Section 5.2 of this report.

The anticipated Saturday Midday peak hour project traffic volumes associated with the Project are presented in ***Figure 11-2***. ***Figure 11-3*** presents projected Saturday Midday peak hour traffic volumes at the six (6) key study intersections with the addition of the trips generated by the proposed Project to existing traffic volumes.

Figure 11-4 presents the Year 2024 Saturday Midday peak hour cumulative traffic volumes at the six (6) key study intersections. ***Figure 11-5*** illustrates the Year 2024 forecast Saturday Midday peak hour traffic volumes with the inclusion of the trips generated by the proposed Project.

11.3 Saturday Traffic Assessment

An existing plus project Saturday analysis and a Year 2024 Saturday analysis was prepared for the six (6) key study intersections. The following summarizes the results of the Saturday analyses.

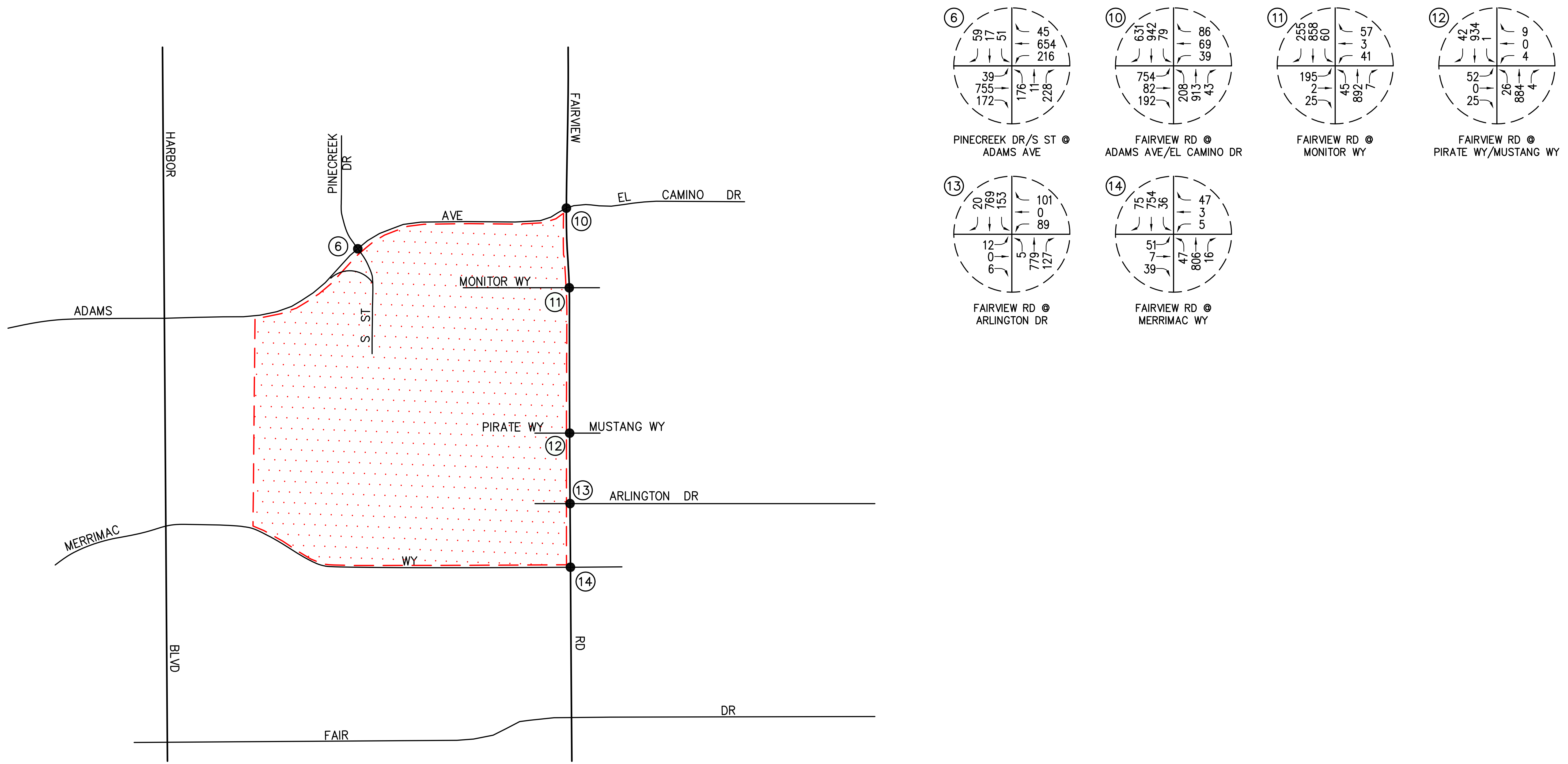
11.3.1 *Existing Plus Project Saturday Traffic Conditions*

Table 11-3 summarizes the peak hour Level of Service results at the six (6) key study intersections for existing plus project Saturday traffic conditions. The first column (1) of ICU/LOS values in *Table 11-3* presents a summary of existing Saturday Midday peak hour traffic conditions. The second column (2) lists existing plus project Saturday traffic conditions. The third column (3) shows the increase in ICU value due to the added peak hour Project trips and indicates whether the traffic associated with the Project will have a significant impact based on the City's LOS standards and significant impact criteria.

Review of Columns 2 and 3 of *Table 11-3* indicates that traffic associated with the proposed Project ***will not*** significantly impact any of the six (6) key study intersections. The six (6) key study intersections currently operate and are forecast to continue to operate at an acceptable service level during the Saturday Midday peak hour with the addition of Project generated traffic to existing traffic.

11.3.2 *Year 2024 Plus Project Saturday Traffic Conditions*

Table 11-4 summarizes the Saturday peak hour Level of Service results at the six (6) key study intersections for the Year 2024 horizon year. The first column (1) of ICU/LOS values in *Table 11-4* presents a summary of existing Saturday Midday peak hour traffic conditions. The second column (2) lists projected Saturday cumulative traffic conditions (existing plus ambient plus cumulative projects traffic) based on existing intersection geometry, but without any traffic generated from the



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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

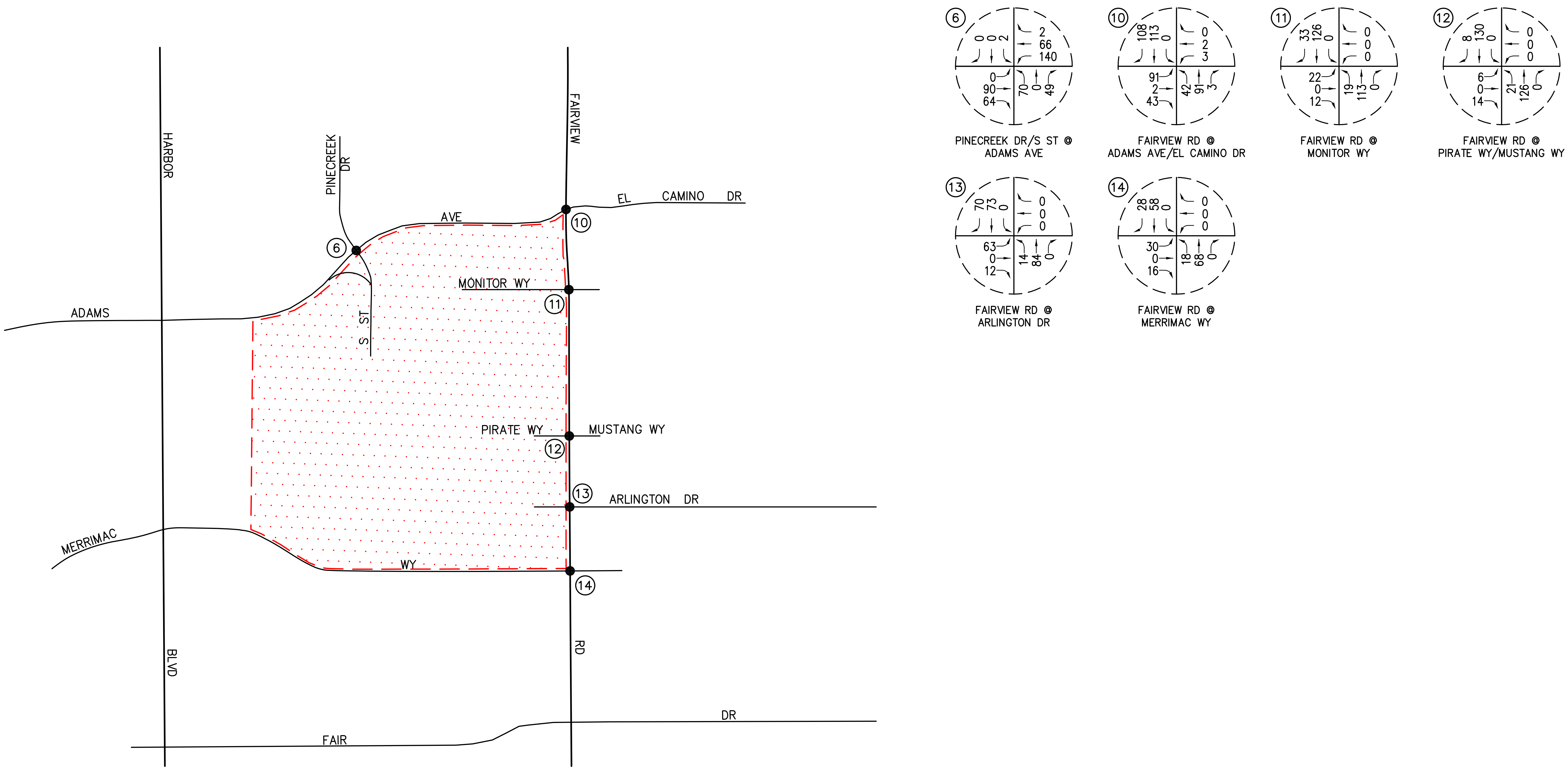
(#) = STUDY INTERSECTION

= PROJECT SITE

FIGURE 11–1

EXISTING SATURDAY MIDDAY PEAK HOUR TRAFFIC VOLUMES

ORANGE COAST COLLEGE VISION 2020 FACILITIES MASTER PLAN, COSTA MESA



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LINSCOTT LAW & GREENSPAN engineers

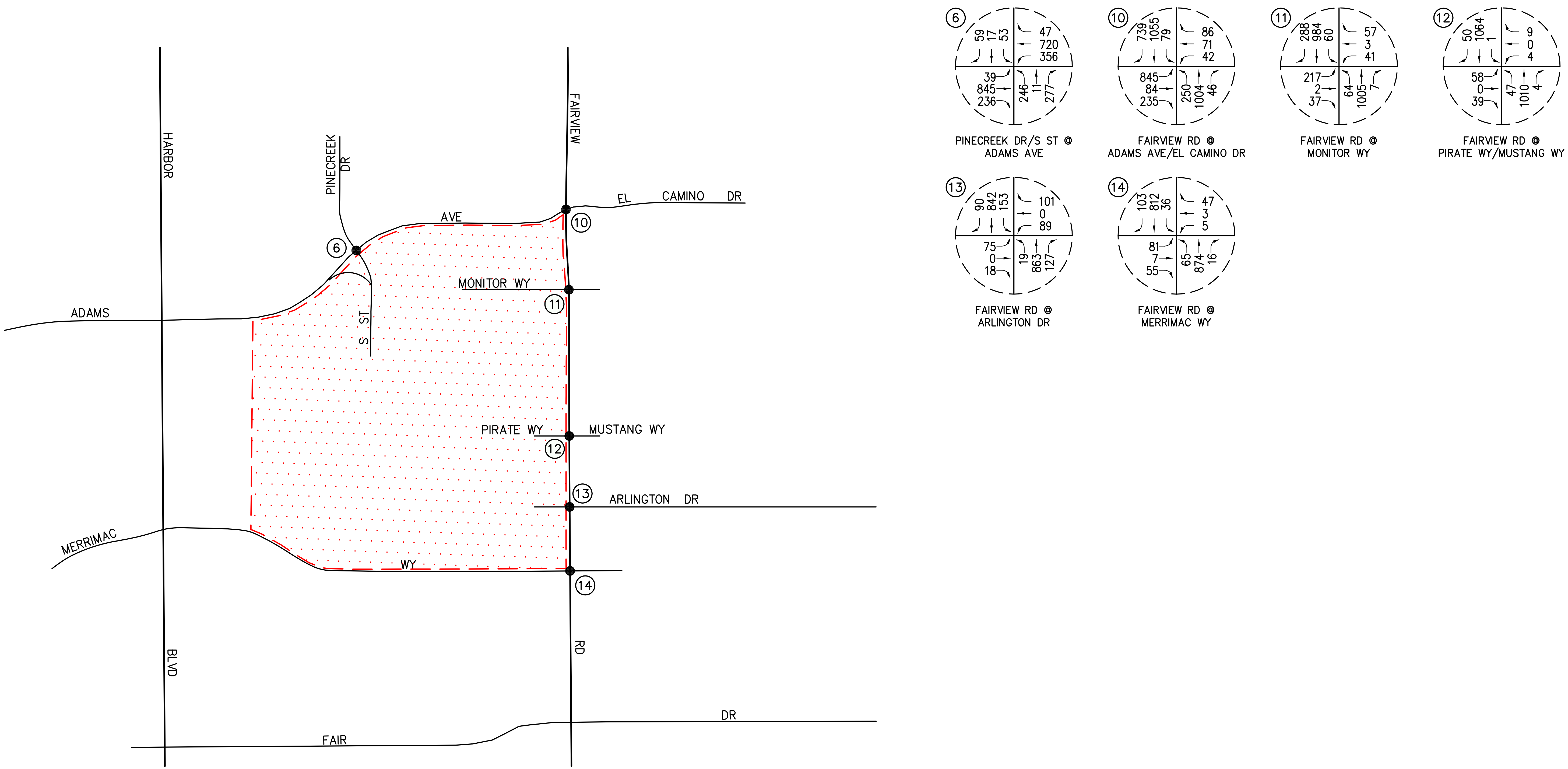
N NO SCALE

KEY
(#) = STUDY INTERSECTION
= PROJECT SITE

FIGURE 11–2

SATURDAY MIDDAY PEAK HOUR PROJECT TRAFFIC VOLUMES

ORANGE COAST COLLEGE VISION 2020 FACILITIES MASTER PLAN, COSTA MESA



LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

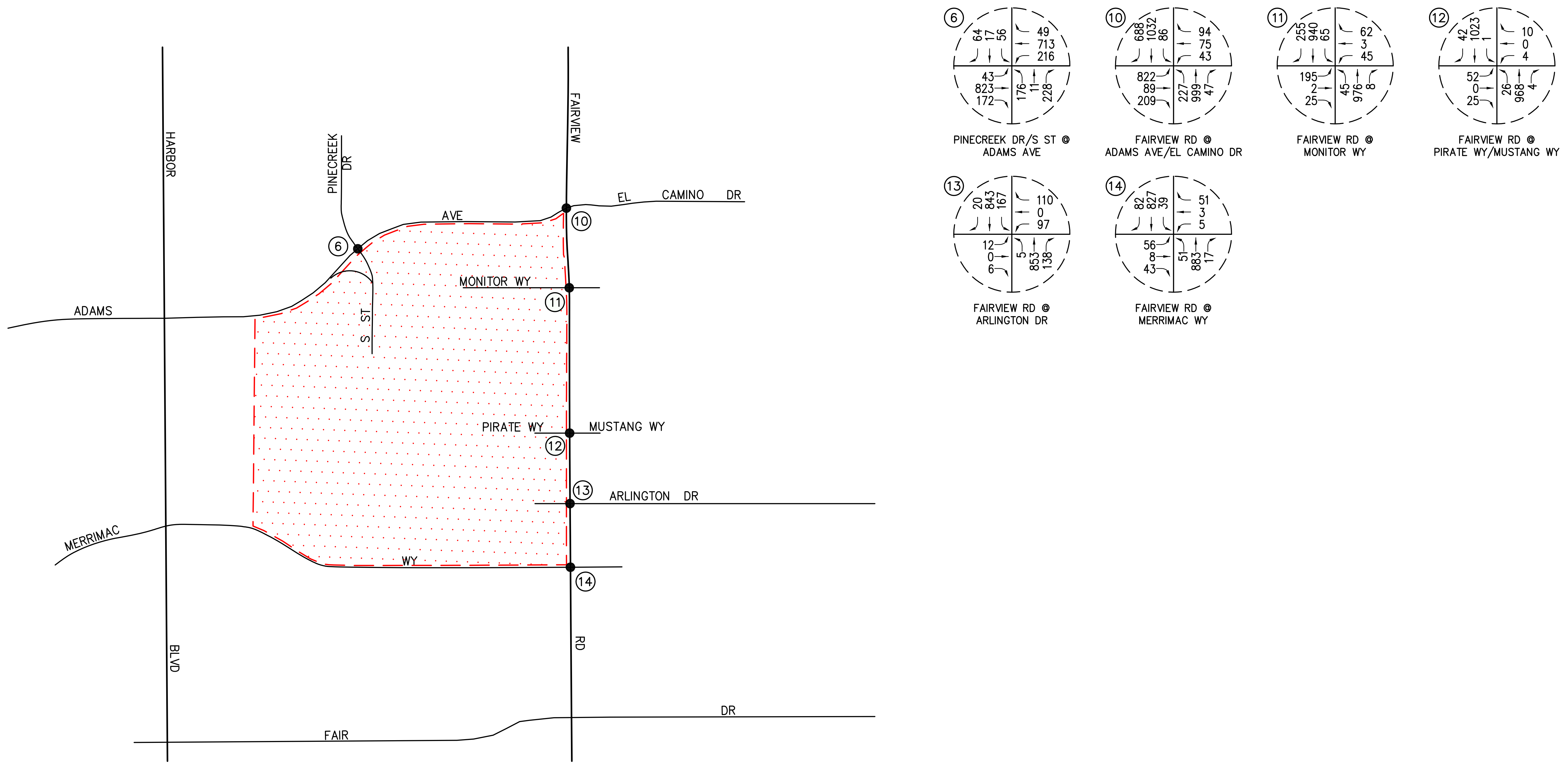
(#) = STUDY INTERSECTION

= PROJECT SITE

FIGURE 11–3

EXISTING PLUS PROJECT SATURDAY MIDDAY PEAK HOUR TRAFFIC VOLUMES

ORANGE COAST COLLEGE VISION 2020 FACILITIES MASTER PLAN, COSTA MESA



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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

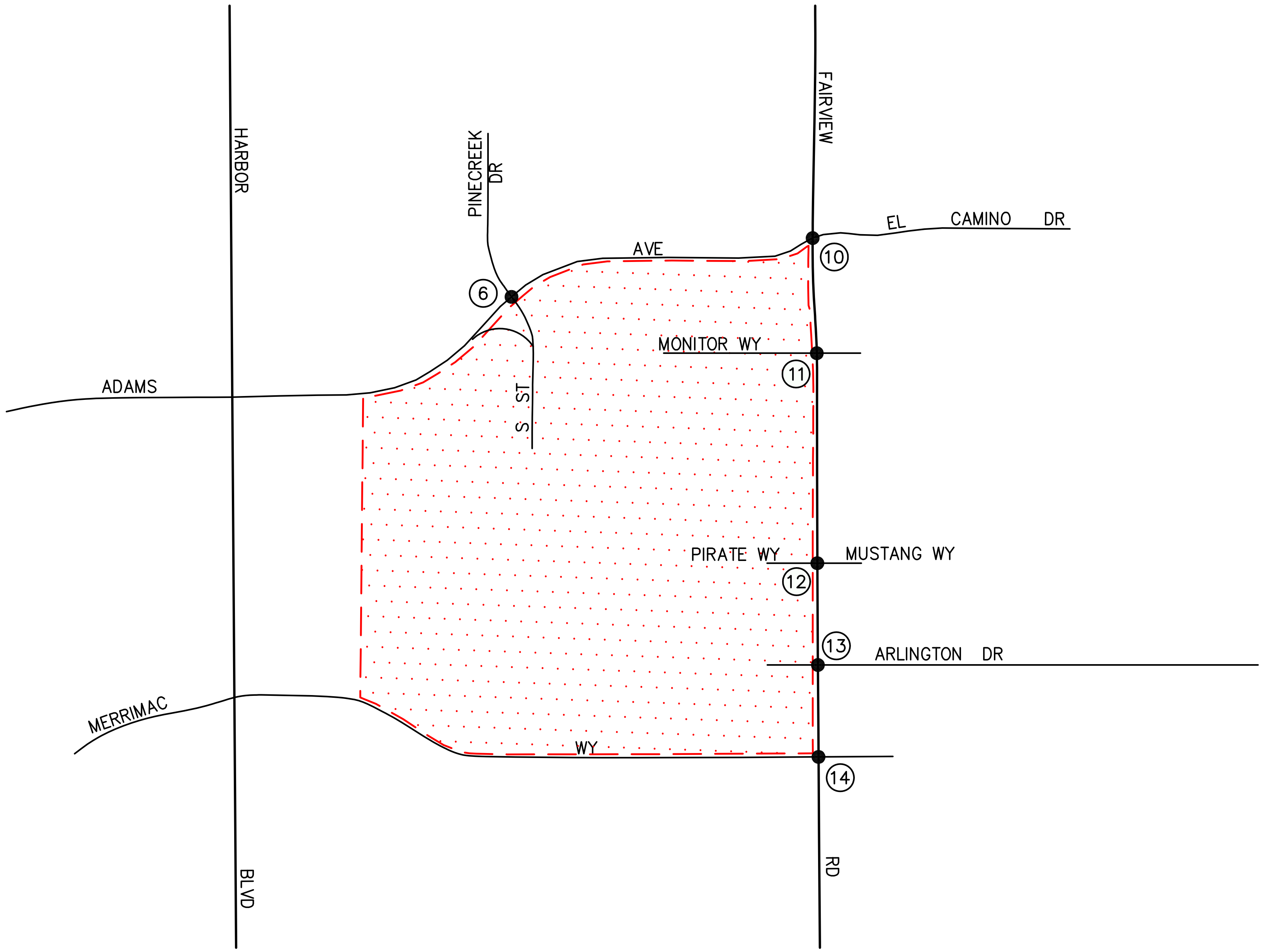
(#) = STUDY INTERSECTION

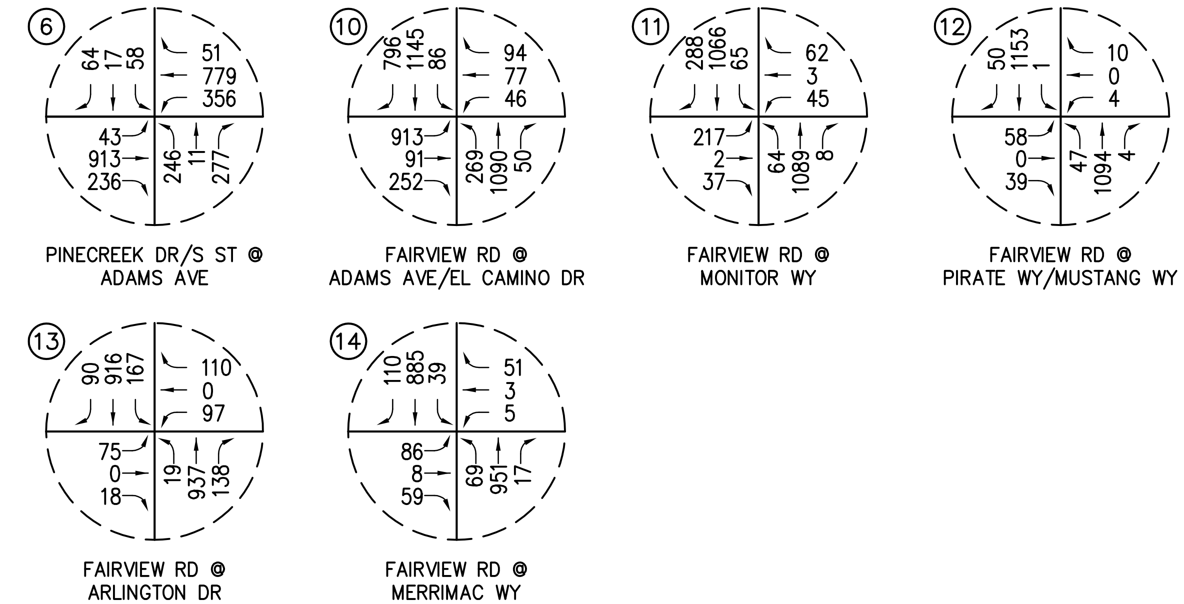
= PROJECT SITE

FIGURE 11–4

YEAR 2024 CUMULATIVE SATURDAY MIDDAY PEAK HOUR TRAFFIC VOLUMES

ORANGE COAST COLLEGE VISION 2020 FACILITIES MASTER PLAN, COSTA MESA





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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY
(#) = STUDY INTERSECTION
= PROJECT SITE

FIGURE 11–5

YEAR 2024 CUMULATIVE PLUS PROJECT
SATURDAY MIDDAY PEAK HOUR TRAFFIC VOLUMES

ORANGE COAST COLLEGE VISION 2020 FACILITIES MASTER PLAN, COSTA MESA

proposed Project. The third column (3) presents forecast Year 2024 Saturday traffic conditions with the addition of Project traffic. The fourth column (4) shows the increase in ICU value due to the added peak hour Project trips and indicates whether the traffic associated with the Project will have a significant impact based on the City's LOS standards and significant impact criteria.

Review of Columns 3 and 4 of *Table 11-4* indicates that traffic associated with the proposed Project ***will not*** significantly impact any of the six (6) key study intersections. The six (6) key study intersections are forecast to continue to operate at an acceptable service level (based on the City's criteria) during the Saturday Midday peak hour with the addition of Project generated traffic to existing traffic, ambient growth traffic and cumulative projects traffic.

Appendix D presents the Saturday existing plus project and Saturday Year 2024 plus project ICU/LOS calculations for the six (6) key study intersections.

11.4 Conclusion

The results of the above analyses indicate that, based on City criteria for overall intersection operation, the proposed Project ***will not*** significantly impact any of the six (6) key study intersections under existing plus project Saturday traffic conditions or under Year 2024 plus project Saturday traffic conditions. Given that there are no significant project impacts, no capacity-enhancing improvements are required.

TABLE 11-3
EXISTING PLUS PROJECT SATURDAY PEAK HOUR INTERSECTION CAPACITY ANALYSIS

Key Intersection		Time Period	(1) Existing Traffic Conditions		(2) Existing Plus Project Traffic Conditions		(3) Significant Impact	
			ICU	LOS	ICU	LOS	Increase	Yes/No
6.	Pinecreek Drive/S Street at Adams Avenue	Saturday Midday	0.428	A	0.504	A	0.076	No
10.	Fairview Road at Adams Ave/El Camino Dr	Saturday Midday	0.551	A	0.616	B	0.065	No
11.	Fairview Road at Monitor Way	Saturday Midday	0.382	A	0.420	A	0.038	No
12.	Fairview Road at Pirate Way/Mustang Way	Saturday Midday	0.251	A	0.295	A	0.044	No
13.	Fairview Road at Arlington Drive	Saturday Midday	0.281	A	0.338	A	0.057	No
14.	Fairview Road at Merrimac Way	Saturday Midday	0.229	A	0.248	A	0.019	No

Notes:
Bold ICU/LOS values indicate adverse service levels based on City of Costa Mesa LOS standards

TABLE 11-4
YEAR 2024 SATURDAY PEAK HOUR INTERSECTION CAPACITY ANALYSIS

Key Intersection		Time Period	(1) Existing Traffic Conditions		(2) Year 2024 Cumulative Traffic Conditions		(3) Year 2024 Cumulative Plus Project Traffic Conditions		(4) Significant Impact	
			ICU	LOS	ICU	LOS	ICU	LOS	Increase	Yes/No
6.	Pinecreek Drive/S Street at Adams Avenue	Saturday Midday	0.428	A	0.453	A	0.521	A	0.068	No
10.	Fairview Road at Adams Ave/El Camino Dr	Saturday Midday	0.551	A	0.602	B	0.667	B	0.065	No
11.	Fairview Road at Monitor Way	Saturday Midday	0.382	A	0.406	A	0.444	A	0.038	No
12.	Fairview Road at Pirate Way/Mustang Way	Saturday Midday	0.251	A	0.271	A	0.315	A	0.044	No
13.	Fairview Road at Arlington Drive	Saturday Midday	0.281	A	0.306	A	0.363	A	0.057	No
14.	Fairview Road at Merrimac Way	Saturday Midday	0.229	A	0.242	A	0.273	A	0.031	No

Notes:

- **Bold ICU/LOS** values indicate adverse service levels based on the City of Costa Mesa LOS standards

12.0 INTERSECTION LEFT-TURN QUEUING ANALYSIS

This section of the report addresses City staff concerns regarding weekday peak hour left-turn stacking/storage lengths for various intersections in the immediate vicinity of the project site. Specifically, City staff has concerns with the following left-turn pocket storage capabilities:

- Harbor Boulevard at Merrimac Way (southbound left-turn)
- Pinecreek Drive/S Street at Adams Avenue (westbound left-turn)
- Fairview Road at Monitor Way (northbound left-turn)
- Fairview Road at Pirate Way/Mustang Way (northbound left-turn)
- Fairview Road at Arlington Drive (northbound left-turn)
- Fairview Road at Merrimac Way (northbound left-turn)

A queuing evaluation was prepared for the identified left turn pockets at the six aforementioned intersections. The queuing evaluation was conducted based on projected Year 2024 peak hour traffic volumes and the Highway Capacity Manual (HCM) signalized methodology. ***Table 12-1*** presents the Year 2024 left-turn queuing analysis results for the aforementioned six key study intersections. It should be noted that this table presents results for the average queue, 70th percentile queue, 85th percentile queue and the 95th percentile queue. Column (1) presents Year 2024 cumulative traffic conditions and column (2) presents Year 2024 cumulative plus project traffic conditions.

Review of *Table 12-1* shows that adequate storage is provided for the aforementioned left-turn pockets at four of the six intersections during the AM and PM peak hours. The average queue, 70th percentile queue, 85th percentile queue and 95th percentile queue are satisfied for the aforementioned left-turn pockets at the intersections of Fairview Road/Monitor Way, Fairview Road/Pirate Way-Mustang Way, Fairview Road/Arlington Drive and Fairview Road/Merrimac Way in the Year 2024 without and with the proposed Project.

For the intersection of Harbor Boulevard/Merrimac Way, the existing storage for the dual southbound left-turn lanes can accommodate the average queue during the AM and PM peak hours in the Year 2024 with the proposed Project. The 70th percentile queue is also accommodated except during the PM peak hour. However, the 24 feet (240 - 264) that exceeds the existing storage during the PM peak hour can be accommodated within the transition area in advance of the pocket itself. The existing storage is exceeded during the AM and PM peak hours for the 85th and 95th percentile queues. However, with a cycle length of 120 seconds, the 85th and 95th percentile queues can be expected to occur only during a few signal cycles within the peak hours, which may cause some vehicles to intermittently queue into the number 1 through travel lane. During all other time periods, the queues will be accommodated within the existing turn pockets. It should be noted that the southbound left-turn pocket lengths are currently at their maximum feasible formalized storage length and lengthening them is not considered feasible.

For the intersection of Pinecreek Drive/S Street at Adams Avenue, the existing storage for the dual westbound left-turn lanes is exceeded with the proposed Project in the Year 2024 during the AM and PM peak hours for all reported queues. It should be noted that the average queue is calculated to exceed the existing pocket storage by 14 feet during the AM and PM peak hours, and can be accommodated within the transition area in advance of the formalized pocket. With a cycle length of 120 seconds, the 70th, 85th and 95th percentile queues can be expected to occur only during a few signal cycles within the peak hours, which may cause some vehicles to intermittently queue into the number 1 through travel lane. During all other time periods, the queues will be accommodated within the existing turn pockets. It should be noted that the westbound left-turn pocket lengths are currently at their maximum feasible formalized storage length and lengthening them is not considered feasible.

Appendix E presents the Year 2024 left-turn queuing calculation worksheets.

TABLE 12-1
YEAR 2024 PEAK HOUR INTERSECTION LEFT-TURN QUEUING ANALYSIS

	(1) Year 2024 Cumulative Traffic Conditions					(2) Year 2024 Cumulative Plus Project Traffic Conditions				
		AM Peak Hour		PM Peak Hour			AM Peak Hour		PM Peak Hour	
	Storage Provided (ft.)	Max. Queue (ft.)	Adequate Storage Yes / No	Max Queue (ft.)	Adequate Storage Yes / No	Storage Provided (ft.)	Max. Queue (ft.)	Adequate Storage Yes / No	Max. Queue (ft.)	Adequate Storage Yes / No
4. Harbor Boulevard at Merrimac Way (Southbound Left-Turn)										
▪ Average Queue	240	110	Yes	176	Yes	240	176	Yes	220	Yes
▪ 70th Percentile Queue	240	132	Yes	198	Yes	240	198	Yes	**264**	**No**
▪ 85th Percentile Queue	240	176	Yes	**264**	**No**	240	**264**	**No**	**330**	**No**
▪ 95th Percentile Queue	240	**242**	**No**	**330**	**No**	240	**308**	**No**	**418**	**No**
6. Pinecreek Drive/S Street at Adams Avenue (Westbound Left-Turn)										
▪ Average Queue	140	44	Yes	66	Yes	140	**154**	**No**	**154**	**No**
▪ 70th Percentile Queue	140	66	Yes	88	Yes	140	**198**	**No**	**176**	**No**
▪ 85th Percentile Queue	140	88	Yes	110	Yes	140	**242**	**No**	**220**	**No**
▪ 95th Percentile Queue	140	110	Yes	132	Yes	140	**308**	**No**	**286**	**No**
11. Fairview Road at Monitor Way (Northbound Left-Turn)										
▪ Average Queue	135	22	Yes	22	Yes	135	44	Yes	44	Yes
▪ 70th Percentile Queue	135	22	Yes	22	Yes	135	44	Yes	66	Yes
▪ 85th Percentile Queue	135	22	Yes	44	Yes	135	66	Yes	88	Yes
▪ 95th Percentile Queue	135	44	Yes	44	Yes	135	66	Yes	110	Yes

TABLE 12-1 (CONTINUED)
YEAR 2024 PEAK HOUR INTERSECTION LEFT-TURN QUEUING ANALYSIS

	(1) Year 2024 Cumulative Traffic Conditions					(2) Year 2024 Cumulative Plus Project Traffic Conditions				
		AM Peak Hour		PM Peak Hour			AM Peak Hour		PM Peak Hour	
	Storage Provided (ft.)	Max. Queue (ft.)	Adequate Storage Yes / No	Max Queue (ft.)	Adequate Storage Yes / No	Storage Provided (ft.)	Max. Queue (ft.)	Adequate Storage Yes / No	Max. Queue (ft.)	Adequate Storage Yes / No
12. Fairview Road at Pirate Way/Mustang Way (Northbound Left-Turn)										
▪ Average Queue	235	66	Yes	66	Yes	235	110	Yes	110	Yes
▪ 70th Percentile Queue	235	66	Yes	88	Yes	235	132	Yes	132	Yes
▪ 85th Percentile Queue	235	88	Yes	110	Yes	235	154	Yes	176	Yes
▪ 95th Percentile Queue	235	110	Yes	132	Yes	235	198	Yes	220	Yes
13. Fairview Road at Arlington Drive (Northbound Left-Turn)										
▪ Average Queue	220	22	Yes	22	Yes	220	44	Yes	44	Yes
▪ 70th Percentile Queue	220	22	Yes	22	Yes	220	44	Yes	44	Yes
▪ 85th Percentile Queue	220	22	Yes	44	Yes	220	44	Yes	66	Yes
▪ 95th Percentile Queue	220	44	Yes	44	Yes	220	66	Yes	66	Yes
14. Fairview Road at Merrimac Way (Northbound Left-Turn)										
▪ Average Queue	350	44	Yes	88	Yes	350	66	Yes	88	Yes
▪ 70th Percentile Queue	350	66	Yes	88	Yes	350	88	Yes	110	Yes
▪ 85th Percentile Queue	350	88	Yes	132	Yes	350	110	Yes	132	Yes
▪ 95th Percentile Queue	350	110	Yes	154	Yes	350	132	Yes	176	Yes

13.0 Parking Structure Evaluation

The prior project plan proposed a parking structure located at the intersection of Fairview Road/Arlington Drive that would be a shared use between Orange Coast College and the Fairgrounds during events at the Fairgrounds and/or Amphitheater. However, the plan as currently proposed has removed that parking structure from the plan and instead includes a new parking structure located within a portion of the Adams parking lot. This structure, as currently proposed, would not be shared with the Fairgrounds based on coordination with Orange Coast College administration staff. Nonetheless the following summarizes typical yearly special events at the Fairgrounds relative to activity at Orange Coast College, to address prior City of Costa Mesa comments.

13.1 Fairgrounds Events

Information was obtained from Fairgrounds administration staff regarding their typical yearly special events. The table below summarizes those typical yearly special events. The name of the event and the event schedule (i.e. days of the week the event occurs on) are listed.

Fairgrounds Special Event Summary Table

Event Name	Event Schedule
Amphitheater Concerts	Wednesday, Thursday, Friday, Saturday or Sunday in July and August
Orange County Fair	Wednesday – Sunday in July and August
MUSINK	Friday – Sunday in March
SCOTSFEST	Saturday and Sunday in May
Sand Sports Super Show	Friday – Sunday in September
Pet Expo	Friday – Sunday in April
Gem Fair	Friday – Sunday in February
Gun Show	Saturday and Sunday in May

As shown in the above table, the typical yearly cycle of special events occur on a Friday, Saturday or Sunday. The exceptions are Amphitheater Concerts and the Orange County Fair, which also occur on a Wednesday or Thursday. Even though these two events also occur on a Wednesday or Thursday, they both occur during the summer months (i.e. July and August) when Orange Coast College is in "summer session" and operating well below its normal peak that occurs during the school year (i.e. during fall semester and winter/spring semester).

Based on the above, it can be qualitatively concluded that events at the Fairgrounds and/or Amphitheater generally occur outside the peak operating times of Orange Coast College. As such, the traffic analysis contained within Section 8.0 of this report addressed the most conservative "worse case" traffic scenario.

14.0 SUMMARY OF FINDINGS AND CONCLUSIONS

- ***Project Description*** **–** The approximately 160-acre project site is generally located west of Fairview Road between Adams Avenue and Merrimac Way in the City of Costa Mesa, California. The proposed Project will consist of the construction of new campus facilities and the renovation of existing campus facilities to meet the District's instructional needs and to accommodate growth in the student body over the planning horizon and beyond for in-district students and out-of-district students. In addition to the new and/or renovated instructional space, the proposed Project will also consist of the construction of on-campus student housing, the construction of a mixed-use development consisting of conference/education office space, retail and/or food uses, an expansion/renovation to the existing recycling center and the construction of a new parking structure.

  In order to facilitate the development of trip generation forecasts for the proposed Project, the aforementioned project description has been divided amongst four categories. These four categories consist of development related to 1) student growth; 2) the on-campus student housing project; 3) the mixed-use development project and 4) the recycling center expansion project. All project components are expected to be completed by the Year 2024. The following describes each of the four categories in detail.

  - <u>Student Growth</u>: Orange Coast College has a current student enrollment of 21,410 students. As stated above, the renovation of existing campus facilities and the construction of new campus facilities, including the proposed parking structure to be located on a portion of the Adams parking lot are required to meet the District's instructional needs and to accommodate growth in the student body for in-district students and out-of-district students. At completion of the Master Plan, Orange Coast College is projected to accommodate a future student enrollment of 28,332 students, resulting in a net increase of 6,922 students.

  - <u>Student Housing</u>: The on-campus student housing project component will be generally located on the southwest corner of the intersection of Pinecreek Drive/S Street and Adams Avenue in the northwest corner of campus. The on-campus student housing project component will consist of 818 beds.

  - <u>Mixed-Use Development:</u> The mixed-use development project component will be generally located on the northwest corner of the intersection of Fairview Road and Merrimac Way in the southeast corner of campus. The mixed-use development project component will consist of 89,000 SF of conference/education office space and up to 15,000 SF of retail/fast-casual restaurant space.

  - <u>Recycling Center Expansion:</u> The recycling center currently exists on the north end of the campus between the athletic fields, with two access points currently provided along Adams Avenue (i.e. one inbound only driveway and one outbound only driveway). As shown in *Figure 2-2,* the recycling center will remain in its current location; however it will be expanded for the purposes of accommodating recycling demand in the City of Costa Mesa. The expanded facility will provide a greater area for visitors to drop off recyclable materials at designated areas, provide more parking for patrons, provide a greater area for equipment storage and provide an area for outdoor instructional space. Access to the expanded facility will remain unchanged with one inbound only driveway and one outbound only driveway to be provided along Adams Avenue. A deceleration lane will also be provided along Adams Avenue at the inbound only driveway. At completion of the proposed recycling center expansion, it is expected that the site would collect triple the amount of waste that is currently collected at the existing facility, thus resulting in triple the amount of visitors to the expanded site.

Vehicular access to the campus would continue to be provided from Adams Avenue, Fairview Road and Merrimac Way. The vehicular entries from Monitor Way, Pirate Way and Arlington Drive would be enhanced with the addition of formal gateways and marked pedestrian drop-off points. The primary entry into Lot E off of Merrimac Way would also be enhanced. A new right-turn in/right-turn out only driveway would also be provided along Adams Avenue, located on the west end of the campus, near the proposed student housing project component (study location #35).

- ***Study Scope*** **–** The thirty five (35) key study intersections were selected for detailed peak hour level of service analyses under Existing Traffic Conditions, Existing Plus Project Traffic Conditions, Year 2024 Cumulative Traffic Conditions and Year 2024 Cumulative plus Project Traffic Conditions.

Key Study Intersections

1. Harbor Boulevard at Gisler Avenue
2. Harbor Boulevard at Baker Street
3. Harbor Boulevard at Adams Avenue
4. Harbor Boulevard at Merrimac Way
5. Harbor Boulevard at Fair Drive
6. Pinecreek Drive/S Street at Adams Avenue
7. Fairview Road at I-405 NB Ramps
8. Fairview Road at I-405 SB Ramps
9. Fairview Road at Baker Street
10. Fairview Rd at Adams Ave/El Camino Dr
11. Fairview Road at Monitor Way
12. Fairview Rd at Pirate Way/Mustang Way
13. Fairview Road at Arlington Drive
14. Fairview Road at Merrimac Way
15. Fairview Road at Fair Drive
16. Lot C Driveway at Merrimac Way
17. Lot D Driveway at Merrimac Way
18. Lot D Dwy (Right-In/Out Only) at Merrimac Way
19. Lot D Dwy (Right-In/Out Only) at Merrimac Way
20. Lot E Driveway at Merrimac Way
21. Lot E Driveway (Right-In/Out Only) at Merrimac Way
22. Lot E Driveway/Church Driveway at Merrimac Way
23. Lot E Driveway (Right-In/Out Only) at Merrimac Way
24. Recycling Center Driveway No. 1 at Adams Avenue
25. Recycling Center Driveway No. 2 at Adams Avenue
26. Placentia Avenue/Mesa Verde Drive at Adams Avenue
27. Harbor Boulevard at South Coast Drive
28. Harbor Boulevard at I-405 NB Ramps
29. Harbor Boulevard at I-405 SB Ramps
30. Harbor Boulevard at Victoria Street
31. Fairview Road at South Coast Drive
32. Bear Street at Baker Street
33. Newport Boulevard at SR-55 SB Ramps/Fair Drive
34. Newport Blvd/SR-55 NB Ramps at Fair Drive/Del Mar Ave
35. Project Dwy (near student housing component) at Adams Ave

- ***Existing Traffic Conditions*** – All key study intersections currently operate at an acceptable service level during the AM and PM peak hours.

- ***Project Trip Generation*** – The student growth component of the proposed project (i.e. net increase of 6,922 students) is forecast to generate 8,798 daily trips, with 865 trips forecast during the AM peak hour and 976 trips forecast during the PM peak hour. The student housing component of the proposed project (i.e. 818 beds) is forecast to generate 1,947 daily trips, with 58 trips forecast during the AM peak hour and 123 trips forecast during the PM peak hour. The mixed use development component of the proposed project (i.e. 89,000 SF conference/education office space and 15,000 SF shopping center) is forecast to generate 2,763 daily trips, with 188 trips forecast during the AM peak hour and 284 trips forecast during the PM peak hour. The recycling center expansion component of the proposed project is forecast to generate 988 net daily trips, with 20 net trips forecast during the AM peak hour and 120 net trips forecast during the PM peak hour. Overall, as shown at the bottom of *Table 5-2*, the proposed Project is forecast to generate approximately 14,496 daily trips, with 1,131 trips (936 inbound, 195 outbound) produced in the AM peak hour and 1,503 trips (731 inbound, 772 outbound) produced in the PM peak hour on a typical weekday.

- ***Cumulative Projects Traffic Characteristics*** **–** The eight (8) cumulative projects are forecast to generate a combined total of 6,578 daily trips, with 418 trips (167 inbound and 251 outbound) forecast during the AM peak hour and 607 trips (289 inbound and 318 outbound) forecast during the PM peak hour.

- ***Existing Plus Project Traffic Conditions*** **–** The proposed Project ***will not*** significantly impact any of the thirty five (35) key study intersections, when compared to the LOS standards and significant impact criteria specified in this report. The thirty five (35) key study intersections currently operate and are forecast to continue to operate at an acceptable service level during the AM and PM peak hours with the addition of Project generated traffic to existing traffic.

- ***Year 2024 Cumulative Plus Project Traffic Conditions*** – The proposed Project ***will not*** significantly impact any of the thirty five (35) key study intersections, when compared to the LOS standards and significant impact criteria specified in this report. Although the intersection of Harbor Boulevard at Victoria Street is forecast to operate at unacceptable LOS E during the PM peak hour with the addition of project traffic, the proposed Project is expected to add less than 0.010 to the ICU value. The remaining thirty four key study intersections are forecast to continue to operate at an acceptable service level during the AM and PM peak hours with the addition of Project generated traffic to existing traffic, ambient growth traffic and cumulative projects traffic.

- ***State of California (Caltrans) Methodology*** **–** The results of the "Existing Plus Project" and "Year 2024 Plus Project" traffic analyses using the State of California (Caltrans) Methodology indicate that the proposed Project will not significantly impact the six (6) state-controlled study intersections. As there are no significant impacts, no traffic mitigation measures are required or recommended for the six (6) state-controlled study intersections.

- ***Recommended Existing Plus Project Improvements –*** The results of the intersection capacity analysis presented previously in *Table 8-1* shows that the proposed Project will not significantly impact any of the thirty five (35) key study intersections under the "Existing Plus Project" traffic scenario. Given that there are no significant project impacts, no improvements are required to address this traffic scenario.

- ***Recommended Year 2024 Plus Project Improvements –*** The results of the intersection capacity analysis presented previously in *Table 8-2* shows that the proposed Project will not significantly impact any of the thirty five (35) key study intersections under the "Year 2024 Plus Project" traffic scenario. Given that there are no significant project impacts, no improvements are required to address this traffic scenario.

- ***Focused Saturday Evaluation –*** The results of the focused Saturday evaluation indicates that the proposed Project ***will not*** significantly impact any of the six (6) key study intersections under existing plus project Saturday traffic conditions or under Year 2024 plus project Saturday traffic conditions. Given that there are no significant project impacts, no improvements are required.

- ***Intersection Left-Turn Queuing Analysis –*** Adequate storage is provided for the identified left-turn pockets at four of the six intersections during the AM and PM peak hours. The average queue, 70th percentile queue, 85th percentile queue and 95th percentile queue are satisfied for the identified left-turn pockets at the intersections of Fairview Road/Monitor Way, Fairview Road/Pirate Way-Mustang Way, Fairview Road/Arlington Drive and Fairview Road/Merrimac Way in the Year 2024 without and with the proposed Project.

  For the intersection of Harbor Boulevard/Merrimac Way, the existing storage for the dual southbound left-turn lanes can accommodate the average queue during the AM and PM peak hours in the Year 2024 with the proposed Project. The 70th percentile queue is also accommodated except during the PM peak hour. However, the 24 feet (240 - 264) that exceeds the existing storage during the PM peak hour can be accommodated within the transition area in advance of the pocket itself. The existing storage is exceeded during the AM and PM peak hours for the 85th and 95th percentile queues. However, with a cycle length of 120 seconds, the 85th and 95th percentile queues can be expected to occur only during a few signal cycles within the peak hours, which may cause some vehicles to intermittently queue into the number 1 through travel lane. During all other time periods, the queues will be accommodated within the existing turn pockets. It should be noted that the southbound left-turn pocket lengths are currently at their maximum feasible formalized storage length and lengthening them is not considered feasible.

  For the intersection of Pinecreek Drive/S Street at Adams Avenue, the existing storage for the dual westbound left-turn lanes is exceeded with the proposed Project in the Year 2024 during the AM and PM peak hours for all reported queues. It should be noted that the average queue is calculated to exceed the existing pocket storage by 14 feet during the AM and PM peak hours, and can be accommodated within the transition area in advance of the formalized pocket. With a cycle length of 120 seconds, the 70th, 85th and 95th percentile queues can be expected to occur only during a few signal cycles within the peak hours, which may cause some vehicles to intermittently queue into the number 1 through travel lane. During all other time periods, the queues will be accommodated within the existing turn pockets. It should be noted that the westbound left-turn pocket lengths are currently at their maximum feasible formalized storage length and lengthening them is not considered feasible.

- ***Parking Structure Evaluation –*** The typical yearly cycle of special events at the Fairgrounds occur on a Friday, Saturday or Sunday. The exceptions are Amphitheater Concerts and the Orange County Fair, which also occur on a Wednesday or Thursday. Even though these two events also occur on a Wednesday or Thursday, they both occur during the summer months (i.e. July and August) when Orange Coast College is in "summer session" and operating well below its normal peak that occurs during the school year (i.e. during fall semester and winter/spring semester). Based on the above, it can be qualitatively concluded that events at the Fairgrounds and/or Amphitheater generally occur outside the peak operating times of Orange Coast College. As such, the traffic analysis contained within Section 8.0 of this report addressed the most conservative "worse case" traffic scenario.

APPENDIX A

EXISTING TRAFFIC COUNT DATA

#1

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: HARBOR BOULEVARD
E-W Direction: GISLER AVENUE

File Name : h1311086
Site Code : 00000000
Start Date : 11/19/2013
Page No : 1

Groups Printed- Turning Movments

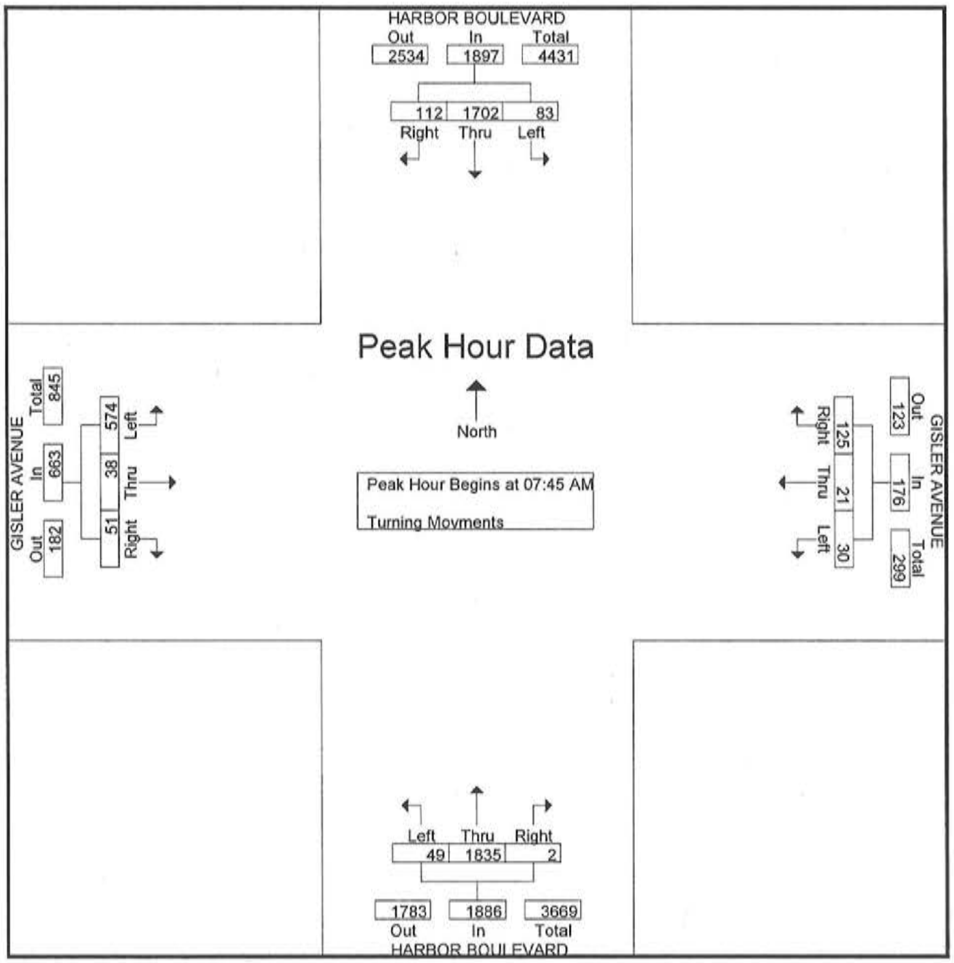
	HARBOR BOULEVARD Southbound			GISLER AVENUE Westbound			HARBOR BOULEVARD Northbound			GISLER AVENUE Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00 AM	28	279	11	27	2	7	3	397	7	10	6	114	891
07:15 AM	25	314	17	24	4	5	0	412	5	13	7	119	945
07:30 AM	22	399	14	27	3	4	1	446	10	13	5	148	1092
07:45 AM	32	426	21	30	2	5	0	478	8	14	8	153	1177
Total	107	1418	63	108	11	21	4	1733	30	50	26	534	4105
08:00 AM	30	445	20	32	8	7	2	451	13	12	11	147	1178
08:15 AM	24	433	22	29	5	10	0	447	12	14	7	140	1143
08:30 AM	26	398	20	34	6	8	0	459	16	11	12	134	1124
08:45 AM	22	403	18	37	9	7	2	462	18	15	10	126	1129
Total	102	1679	80	132	28	32	4	1819	59	52	40	547	4574
*** BREAK ***													
04:00 PM	94	454	18	50	6	19	3	507	12	14	14	19	1210
04:15 PM	88	481	24	47	9	15	7	521	16	18	11	28	1265
04:30 PM	102	544	19	52	14	22	6	542	20	19	21	39	1400
04:45 PM	110	631	23	54	19	25	10	549	22	24	16	39	1522
Total	394	2110	84	203	48	81	26	2119	70	75	62	125	5397
05:00 PM	100	604	16	59	16	29	7	508	29	19	12	48	1447
05:15 PM	94	615	25	66	23	31	12	527	34	29	22	38	1516
05:30 PM	89	584	28	62	21	26	14	562	31	20	23	42	1502
05:45 PM	86	543	19	59	17	28	9	573	33	16	16	37	1436
Total	369	2346	88	246	77	114	42	2170	127	84	73	165	5901
Grand Total	972	7553	315	689	164	248	76	7841	286	261	201	1371	19977
Apprch %	11	85.4	3.6	62.6	14.9	22.5	0.9	95.6	3.5	14.2	11	74.8	
Total %	4.9	37.8	1.6	3.4	0.8	1.2	0.4	39.3	1.4	1.3	1	6.9	

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: HARBOR BOULEVARD
E-W Direction: GISLER AVENUE

File Name : h1311086
Site Code : 00000000
Start Date : 11/19/2013
Page No : 2

	HARBOR BOULEVARD Southbound				GISLER AVENUE Westbound				HARBOR BOULEVARD Northbound				GISLER AVENUE Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	32	426	21	479	30	2	5	37	0	478	8	486	14	8	153	175	1177
08:00 AM	30	445	20	495	32	8	7	47	2	451	13	466	12	11	147	170	1178
08:15 AM	24	433	22	479	29	5	10	44	0	447	12	459	14	7	140	161	1143
08:30 AM	26	398	20	444	34	6	8	48	0	459	16	475	11	12	134	157	1124
Total Volume	112	1702	83	1897	125	21	30	176	2	1835	49	1886	51	38	574	663	4622
% App. Total	5.9	89.7	4.4		71	11.9	17		0.1	97.3	2.6		7.7	5.7	86.6		
PHF	.875	.956	.943	.958	.919	.656	.750	.917	.250	.960	.766	.970	.911	.792	.938	.947	.981

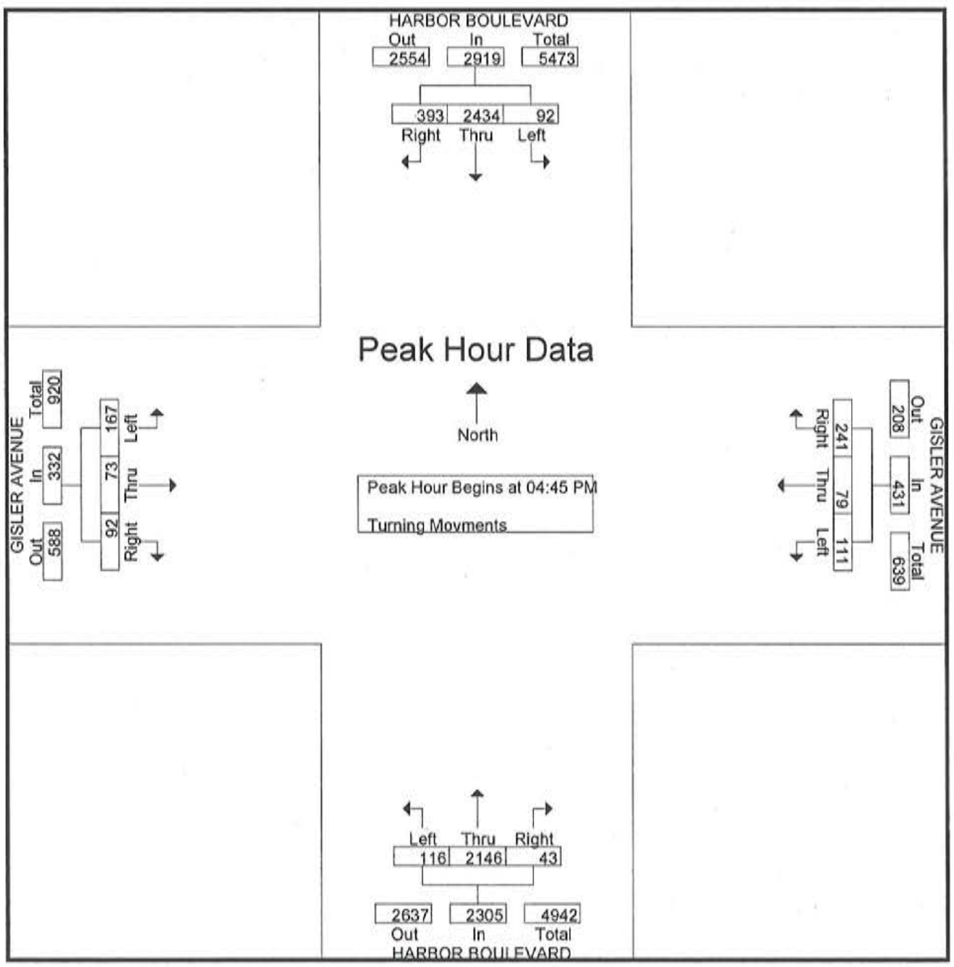


Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: HARBOR BOULEVARD
E-W Direction: GISLER AVENUE

File Name : h1311086
Site Code : 00000000
Start Date : 11/19/2013
Page No : 3

	HARBOR BOULEVARD Southbound				GISLER AVENUE Westbound				HARBOR BOULEVARD Northbound				GISLER AVENUE Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**110**	**631**	23	**764**	54	19	25	98	10	549	22	581	24	16	39	79	**1522**
05:00 PM	100	604	16	720	59	16	29	104	7	508	29	544	19	12	**48**	79	1447
05:15 PM	94	615	25	734	**66**	**23**	**31**	**120**	12	527	**34**	573	**29**	22	38	**89**	1516
05:30 PM	89	584	**28**	701	62	21	26	109	**14**	**562**	31	**607**	20	**23**	42	85	1502
Total Volume	393	2434	92	2919	241	79	111	431	43	2146	116	2305	92	73	167	332	5987
% App. Total	13.5	83.4	3.2		55.9	18.3	25.8		1.9	93.1	5		27.7	22	50.3		
PHF	.893	.964	.821	.955	.913	.859	.895	.898	.768	.955	.853	.949	.793	.793	.870	.933	.983



Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

(nt)

City: COSTA MESA
N-S Direction: HARBOR BOULEVARD
E-W Direction: BAKER STREET

File Name : H1311087
Site Code : 00005060
Start Date : 11/19/2013
Page No : 1

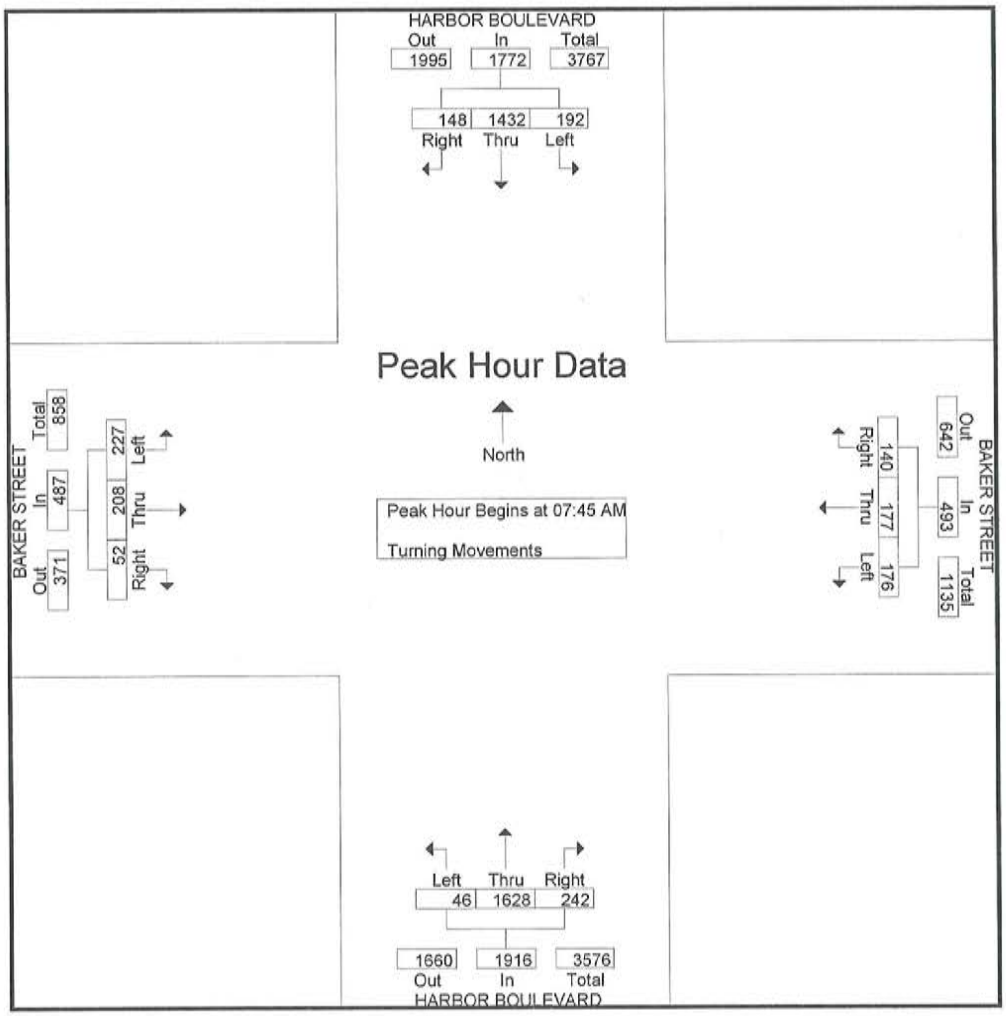
Groups Printed- Turning Movements

	HARBOR BOULEVARD Southbound			BAKER STREET Westbound			HARBOR BOULEVARD Northbound			BAKER STREET Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00 AM	19	241	32	12	17	31	34	301	2	2	21	40	752
07:15 AM	30	299	32	14	25	21	18	333	3	9	32	40	856
07:30 AM	12	317	24	34	21	29	29	392	7	11	51	50	977
07:45 AM	26	406	55	32	34	25	64	472	5	15	65	56	1255
Total	87	1263	143	92	97	106	145	1498	17	37	169	186	3840
08:00 AM	36	386	53	37	41	49	43	416	21	13	36	54	1185
08:15 AM	48	352	50	38	47	40	69	379	11	12	59	50	1155
08:30 AM	38	288	34	33	55	62	66	361	9	12	48	67	1073
08:45 AM	41	334	57	36	46	41	39	388	9	14	50	49	1104
Total	163	1360	194	144	189	192	217	1544	50	51	193	220	4517
*** BREAK ***													
04:00 PM	66	444	52	82	96	73	70	425	71	19	39	61	1498
04:15 PM	61	439	53	77	119	76	61	410	37	12	59	57	1461
04:30 PM	61	459	52	67	150	58	69	431	23	9	28	60	1467
04:45 PM	68	463	55	64	136	100	60	493	22	11	44	51	1567
Total	256	1805	212	290	501	307	260	1759	153	51	170	229	5993
05:00 PM	72	473	50	77	123	143	44	474	28	12	26	50	1572
05:15 PM	75	553	63	108	168	124	67	471	40	18	50	46	1783
05:30 PM	65	550	43	82	158	126	62	450	37	13	57	56	1699
05:45 PM	74	492	50	94	143	115	75	438	45	13	28	44	1611
Total	286	2068	206	361	592	508	248	1833	150	56	161	196	6665
Grand Total	792	6496	755	887	1379	1113	870	6634	370	195	693	831	21015
Apprch %	9.8	80.8	9.4	26.3	40.8	32.9	11	84.3	4.7	11.3	40.3	48.3	
Total %	3.8	30.9	3.6	4.2	6.6	5.3	4.1	31.6	1.8	0.9	3.3	4	

City: COSTA MESA
N-S Direction: HARBOR BOULEVARD
E-W Direction: BAKER STREET

File Name : H1311087
Site Code : 00005060
Start Date : 11/19/2013
Page No : 2

	HARBOR BOULEVARD Southbound				BAKER STREET Westbound				HARBOR BOULEVARD Northbound				BAKER STREET Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	26	**406**	**55**	**487**	32	34	25	91	64	**472**	5	**541**	**15**	**65**	56	**136**	**1255**
08:00 AM	36	386	53	475	37	41	49	127	43	416	**21**	480	13	36	54	103	1185
08:15 AM	**48**	352	50	450	**38**	47	40	125	**69**	379	11	459	12	59	50	121	1155
08:30 AM	38	288	34	360	33	**55**	**62**	**150**	66	361	9	436	12	48	**67**	127	1073
Total Volume	148	1432	192	1772	140	177	176	493	242	1628	46	1916	52	208	227	487	4668
% App. Total	8.4	80.8	10.8		28.4	35.9	35.7		12.6	85	2.4		10.7	42.7	46.6		
PHF	.771	.882	.873	.910	.921	.805	.710	.822	.877	.862	.548	.885	.867	.800	.847	.895	.930

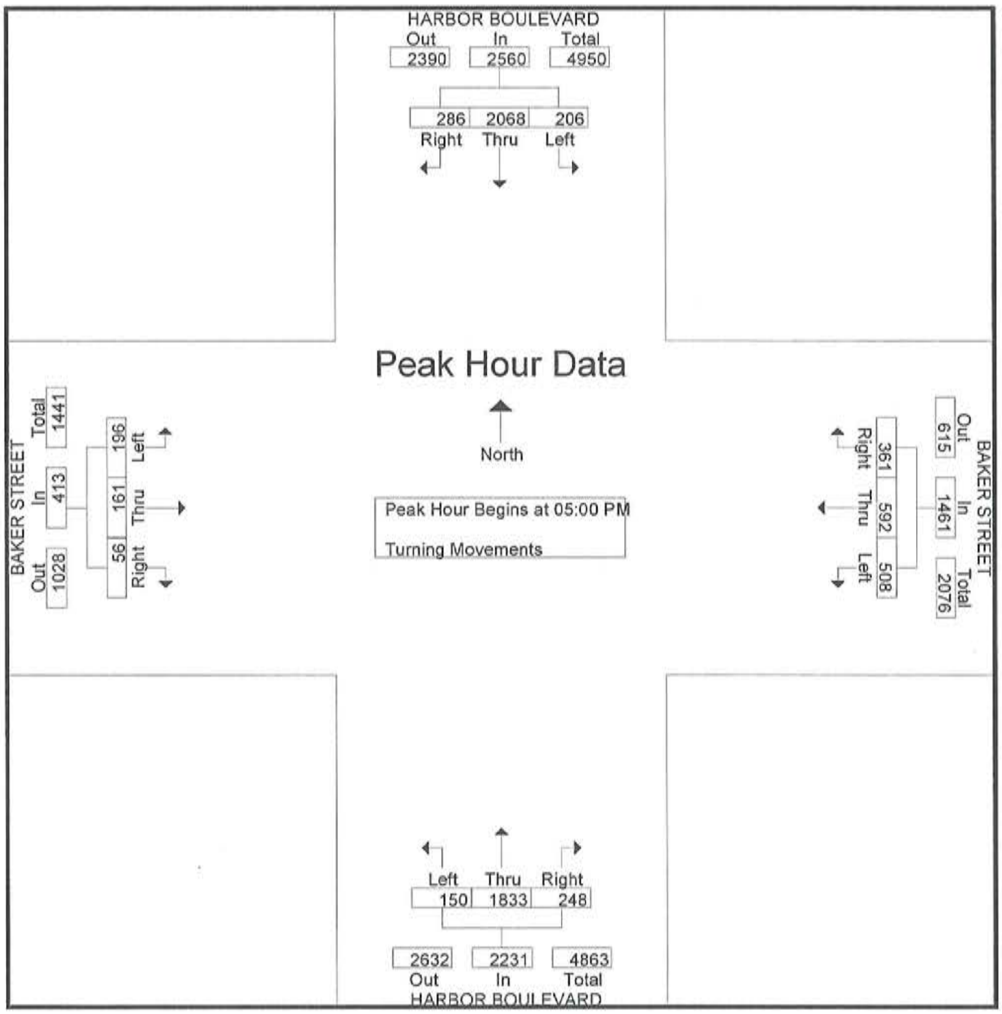


Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: HARBOR BOULEVARD
E-W Direction: BAKER STREET

File Name : H1311087
Site Code : 00005060
Start Date : 11/19/2013
Page No : 3

	HARBOR BOULEVARD Southbound				BAKER STREET Westbound				HARBOR BOULEVARD Northbound				BAKER STREET Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	72	473	50	595	77	123	**143**	343	44	**474**	28	546	12	26	50	88	1572
05:15 PM	**75**	**553**	**63**	**691**	**108**	**168**	124	**400**	67	471	40	**578**	**18**	50	46	114	**1783**
05:30 PM	65	550	43	658	82	158	126	366	62	450	37	549	13	**57**	**56**	**126**	1699
05:45 PM	74	492	50	616	94	143	115	352	**75**	438	**45**	558	13	28	44	85	1611
Total Volume	286	2068	206	2560	361	592	508	1461	248	1833	150	2231	56	161	196	413	6665
% App. Total	11.2	80.8	8		24.7	40.5	34.8		11.1	82.2	6.7		13.6	39	47.5		
PHF	.953	.935	.817	.926	.836	.881	.888	.913	.827	.967	.833	.965	.778	.706	.875	.819	.935



Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

#3

City: COSTA MESA
N-S Direction: HARBOR BOULEVARD
E-W Direction: ADAMS AVENUE

File Name : H1311088
Site Code : 00005060
Start Date : 11/19/2013
Page No : 1

Groups Printed- Turning Movements

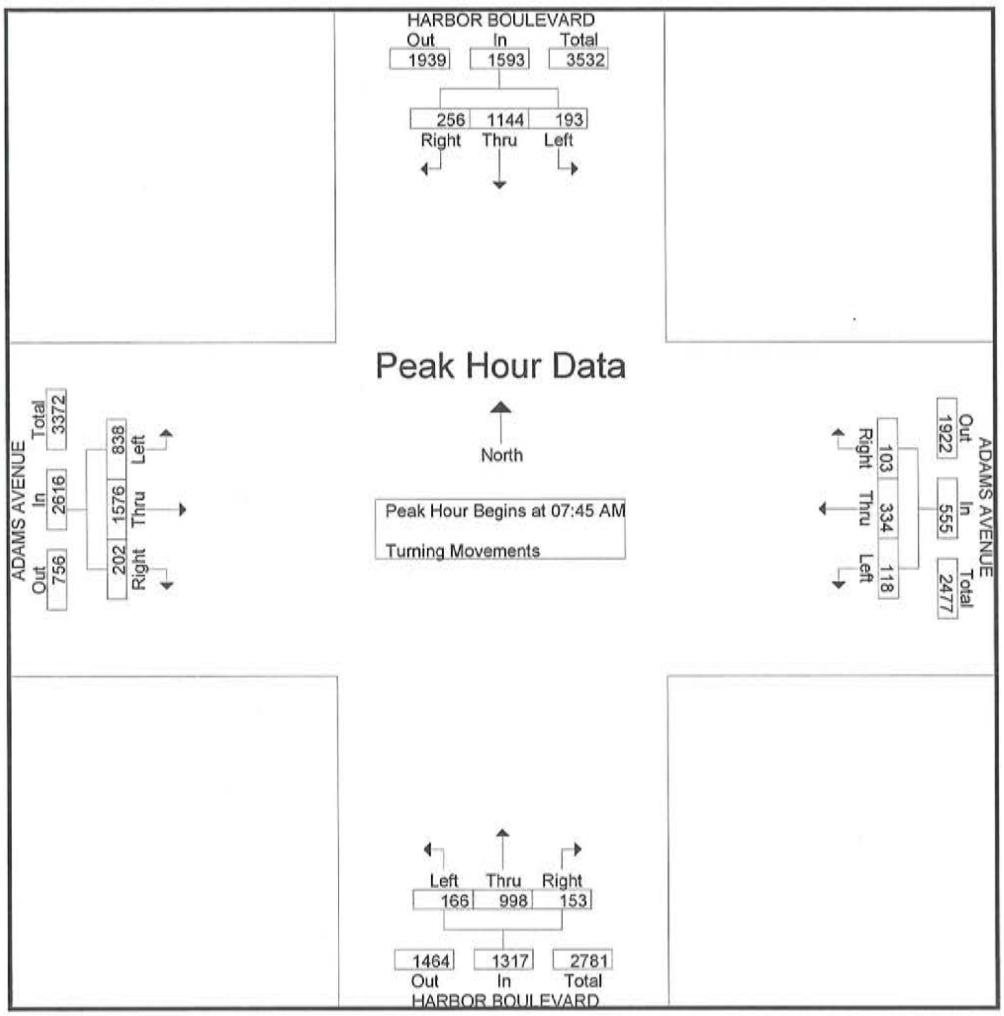
	HARBOR BOULEVARD Southbound			ADAMS AVENUE Westbound			HARBOR BOULEVARD Northbound			ADAMS AVENUE Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00 AM	40	209	9	8	41	14	10	156	16	20	151	138	812
07:15 AM	40	213	18	17	36	18	5	174	25	27	280	157	1010
07:30 AM	58	274	58	12	55	15	10	202	35	33	296	240	1288
07:45 AM	68	280	74	31	75	29	19	261	36	47	475	267	1662
Total	206	976	159	68	207	76	44	793	112	127	1202	802	4772
08:00 AM	76	297	62	24	83	26	28	267	43	51	376	206	1539
08:15 AM	67	258	31	21	111	39	84	197	48	55	378	156	1445
08:30 AM	45	309	26	27	65	24	22	273	39	49	347	209	1435
08:45 AM	57	323	52	19	107	16	15	202	40	53	265	212	1361
Total	245	1187	171	91	366	105	149	939	170	208	1366	783	5780
*** BREAK ***													
04:00 PM	153	334	51	50	260	39	35	434	79	38	137	93	1703
04:15 PM	153	348	42	43	222	50	49	484	82	29	60	96	1658
04:30 PM	171	322	37	51	270	42	24	389	85	30	140	84	1645
04:45 PM	176	321	41	56	310	49	35	396	87	30	147	88	1736
Total	653	1325	171	200	1062	180	143	1703	333	127	484	361	6742
05:00 PM	205	374	32	49	271	41	27	425	84	23	163	90	1784
05:15 PM	190	408	48	37	313	44	22	417	126	40	159	87	1891
05:30 PM	191	460	57	25	319	29	20	442	119	24	158	92	1936
05:45 PM	175	414	54	92	276	31	12	410	103	24	167	73	1831
Total	761	1656	191	203	1179	145	81	1694	432	111	647	342	7442
Grand Total	1865	5144	692	562	2814	506	417	5129	1047	573	3699	2288	24736
Apprch %	24.2	66.8	9	14.5	72.5	13	6.3	77.8	15.9	8.7	56.4	34.9	
Total %	7.5	20.8	2.8	2.3	11.4	2	1.7	20.7	4.2	2.3	15	9.2	

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: HARBOR BOULEVARD
E-W Direction: ADAMS AVENUE

File Name : H1311088
Site Code : 00005060
Start Date : 11/19/2013
Page No : 2

	HARBOR BOULEVARD Southbound				ADAMS AVENUE Westbound				HARBOR BOULEVARD Northbound				ADAMS AVENUE Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	68	280	**74**	422	**31**	75	29	135	19	261	36	316	47	**475**	**267**	**789**	**1662**
08:00 AM	**76**	297	62	**435**	24	83	26	133	28	267	43	**338**	51	376	206	633	1539
08:15 AM	67	258	31	356	21	**111**	**39**	**171**	**84**	197	**48**	329	**55**	378	156	589	1445
08:30 AM	45	**309**	26	380	27	65	24	116	22	**273**	39	334	49	347	209	605	1435
Total Volume	256	1144	193	1593	103	334	118	555	153	998	166	1317	202	1576	838	2616	6081
% App. Total	16.1	71.8	12.1		18.6	60.2	21.3		11.6	75.8	12.6		7.7	60.2	32		
PHF	.842	.926	.652	.916	.831	.752	.756	.811	.455	.914	.865	.974	.918	.829	.785	.829	.915

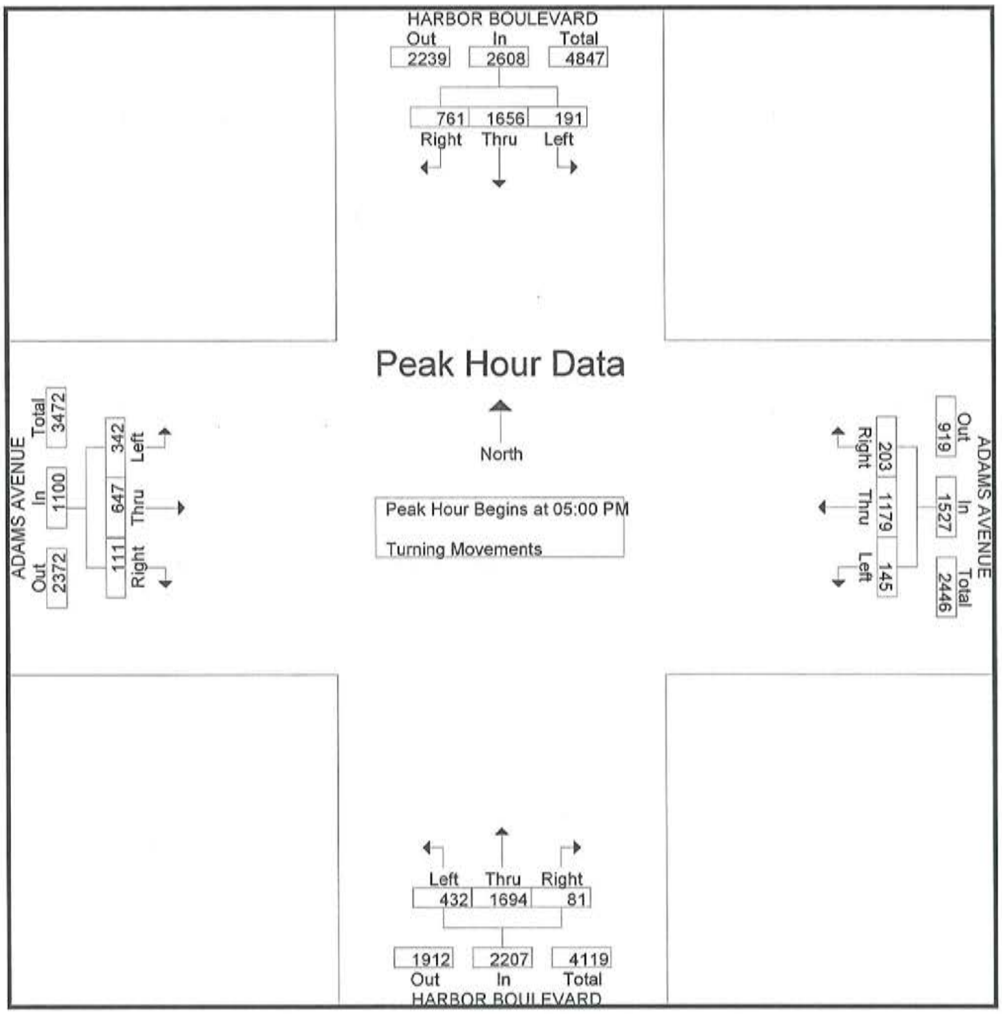


Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: HARBOR BOULEVARD
E-W Direction: ADAMS AVENUE

File Name : H1311088
Site Code : 00005060
Start Date : 11/19/2013
Page No : 3

	HARBOR BOULEVARD Southbound				ADAMS AVENUE Westbound				HARBOR BOULEVARD Northbound				ADAMS AVENUE Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**205**	374	32	611	49	271	41	361	**27**	425	84	536	23	163	90	276	1784
05:15 PM	190	408	48	646	37	313	**44**	394	22	417	**126**	565	**40**	159	87	**286**	1891
05:30 PM	191	**460**	**57**	**708**	25	**319**	29	373	20	**442**	119	**581**	24	158	**92**	274	**1936**
05:45 PM	175	414	54	643	**92**	276	31	**399**	12	410	103	525	24	**167**	73	264	1831
Total Volume	761	1656	191	2608	203	1179	145	1527	81	1694	432	2207	111	647	342	1100	7442
% App. Total	29.2	63.5	7.3		13.3	77.2	9.5		3.7	76.8	19.6		10.1	58.8	31.1		
PHF	.928	.900	.838	.921	.552	.924	.824	.957	.750	.958	.857	.950	.694	.969	.929	.962	.961



Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

B-4

City: COSTA MESA
N-S Direction: HARBOR BOULEVARD
E-W Direction: MERRIMAC WAY

File Name : h1311089
Site Code : 00000000
Start Date : 11/19/2013
Page No : 1

Groups Printed- Turning Movements

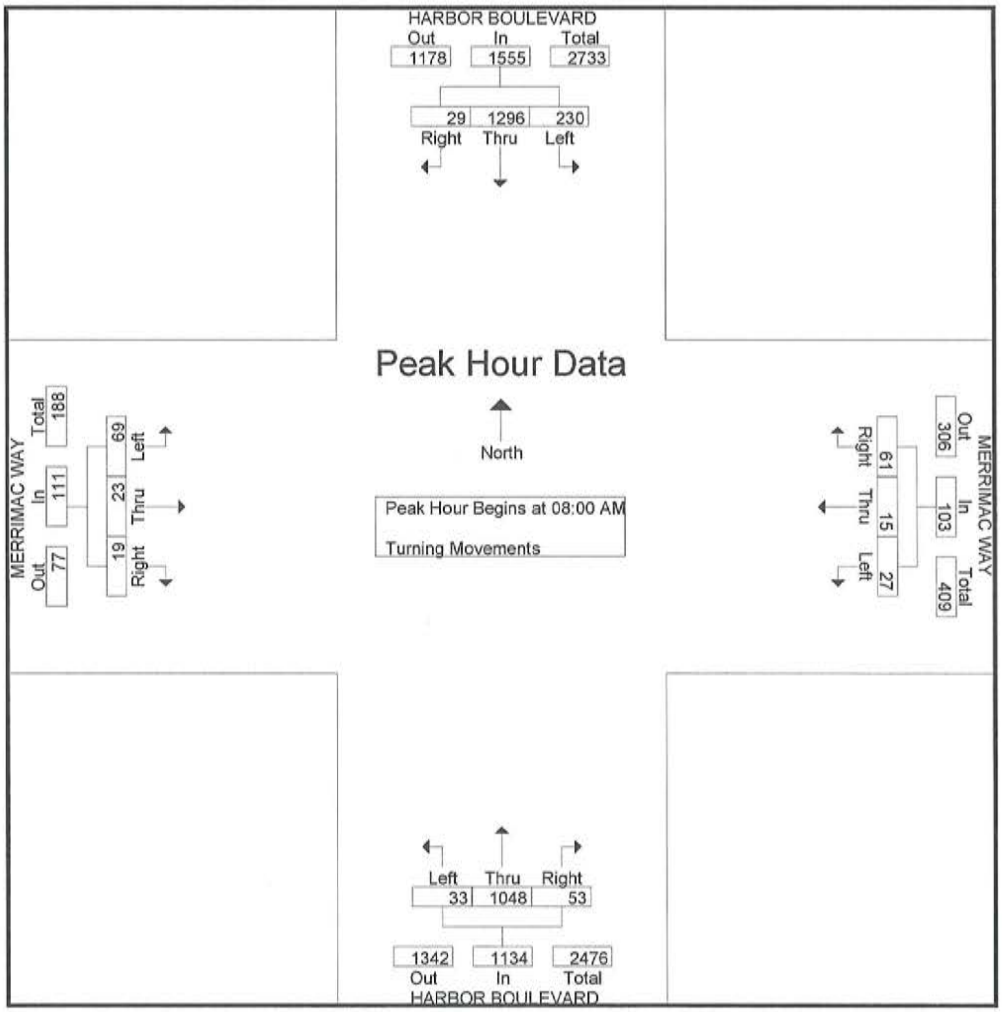
	HARBOR BOULEVARD Southbound			MERRIMAC WAY Westbound			HARBOR BOULEVARD Northbound			MERRIMAC WAY Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00 AM	13	210	34	7	3	1	2	189	9	12	3	17	500
07:15 AM	10	219	41	9	1	2	4	194	5	10	1	12	508
07:30 AM	8	206	36	2	1	1	1	204	3	5	1	7	475
07:45 AM	7	304	29	11	1	2	18	250	7	9	7	16	661
Total	38	939	140	29	6	6	25	837	24	36	12	52	2144
08:00 AM	6	309	32	12	0	2	4	279	5	4	2	9	664
08:15 AM	11	347	62	11	9	13	19	269	14	5	11	26	797
08:30 AM	9	331	56	14	4	6	12	253	9	7	5	22	728
08:45 AM	3	309	80	24	2	6	18	247	5	3	5	12	714
Total	29	1296	230	61	15	27	53	1048	33	19	23	69	2903
*** BREAK ***													
04:00 PM	12	393	33	73	13	29	27	496	6	9	7	20	1118
04:15 PM	5	307	47	62	6	34	12	368	10	2	4	32	889
04:30 PM	8	325	36	73	9	19	12	434	8	8	6	16	954
04:45 PM	15	412	43	78	10	26	9	429	8	6	4	14	1054
Total	40	1437	159	286	38	108	60	1727	32	25	21	82	4015
05:00 PM	22	419	59	68	10	11	21	454	5	10	4	19	1102
05:15 PM	4	432	69	92	8	30	20	494	10	6	3	20	1188
05:30 PM	9	413	37	57	11	21	21	445	16	11	7	11	1059
05:45 PM	14	366	71	54	10	24	23	487	7	4	2	19	1081
Total	49	1630	236	271	39	86	85	1880	38	31	16	69	4430
Grand Total	156	5302	765	647	98	227	223	5492	127	111	72	272	13492
Apprch %	2.5	85.2	12.3	66.6	10.1	23.4	3.8	94	2.2	24.4	15.8	59.8	
Total %	1.2	39.3	5.7	4.8	0.7	1.7	1.7	40.7	0.9	0.8	0.5	2	

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: HARBOR BOULEVARD
E-W Direction: MERRIMAC WAY

File Name : h1311089
Site Code : 00000000
Start Date : 11/19/2013
Page No : 2

	HARBOR BOULEVARD Southbound				MERRIMAC WAY Westbound				HARBOR BOULEVARD Northbound				MERRIMAC WAY Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	6	309	32	347	12	0	2	14	4	**279**	5	288	4	2	9	15	664
08:15 AM	**11**	**347**	62	**420**	11	**9**	**13**	**33**	**19**	269	**14**	**302**	5	**11**	**26**	**42**	**797**
08:30 AM	9	331	56	396	14	4	6	24	12	253	9	274	**7**	5	22	34	728
08:45 AM	3	309	**80**	392	**24**	2	6	32	18	247	5	270	3	5	12	20	714
Total Volume	29	1296	230	1555	61	15	27	103	53	1048	33	1134	19	23	69	111	2903
% App. Total	1.9	83.3	14.8		59.2	14.6	26.2		4.7	92.4	2.9		17.1	20.7	62.2		
PHF	.659	.934	.719	.926	.635	.417	.519	.780	.697	.939	.589	.939	.679	.523	.663	.661	.911

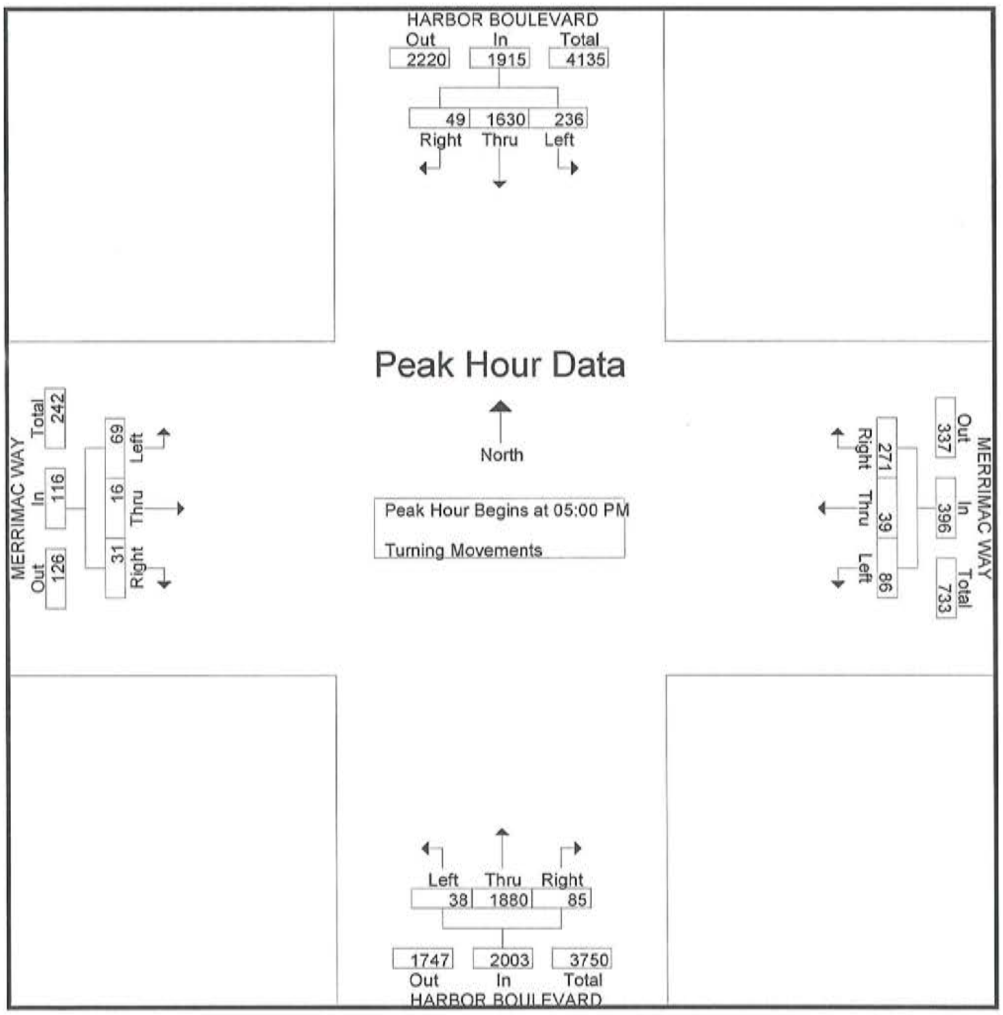


Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: HARBOR BOULEVARD
E-W Direction: MERRIMAC WAY

File Name : h1311089
Site Code : 00000000
Start Date : 11/19/2013
Page No : 3

	HARBOR BOULEVARD Southbound				MERRIMAC WAY Westbound				HARBOR BOULEVARD Northbound				MERRIMAC WAY Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**22**	419	59	500	68	10	11	89	21	454	5	480	10	4	19	**33**	1102
05:15 PM	4	**432**	69	**505**	**92**	8	**30**	**130**	20	**494**	10	**524**	6	3	**20**	29	**1188**
05:30 PM	9	413	37	459	57	**11**	21	89	21	445	**16**	482	**11**	**7**	11	29	1059
05:45 PM	14	366	**71**	451	54	10	24	88	**23**	487	7	517	4	2	19	25	1081
Total Volume	49	1630	236	1915	271	39	86	396	85	1880	38	2003	31	16	69	116	4430
% App. Total	2.6	85.1	12.3		68.4	9.8	21.7		4.2	93.9	1.9		26.7	13.8	59.5		
PHF	.557	.943	.831	.948	.736	.886	.717	.762	.924	.951	.594	.956	.705	.571	.863	.879	.932



ns

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: HARBOR BOULEVARD
E-W Direction: FAIR DRIVE

File Name : H1311090
Site Code : 00000571
Start Date : 11/19/2013
Page No : 1

Groups Printed- Turning Movements

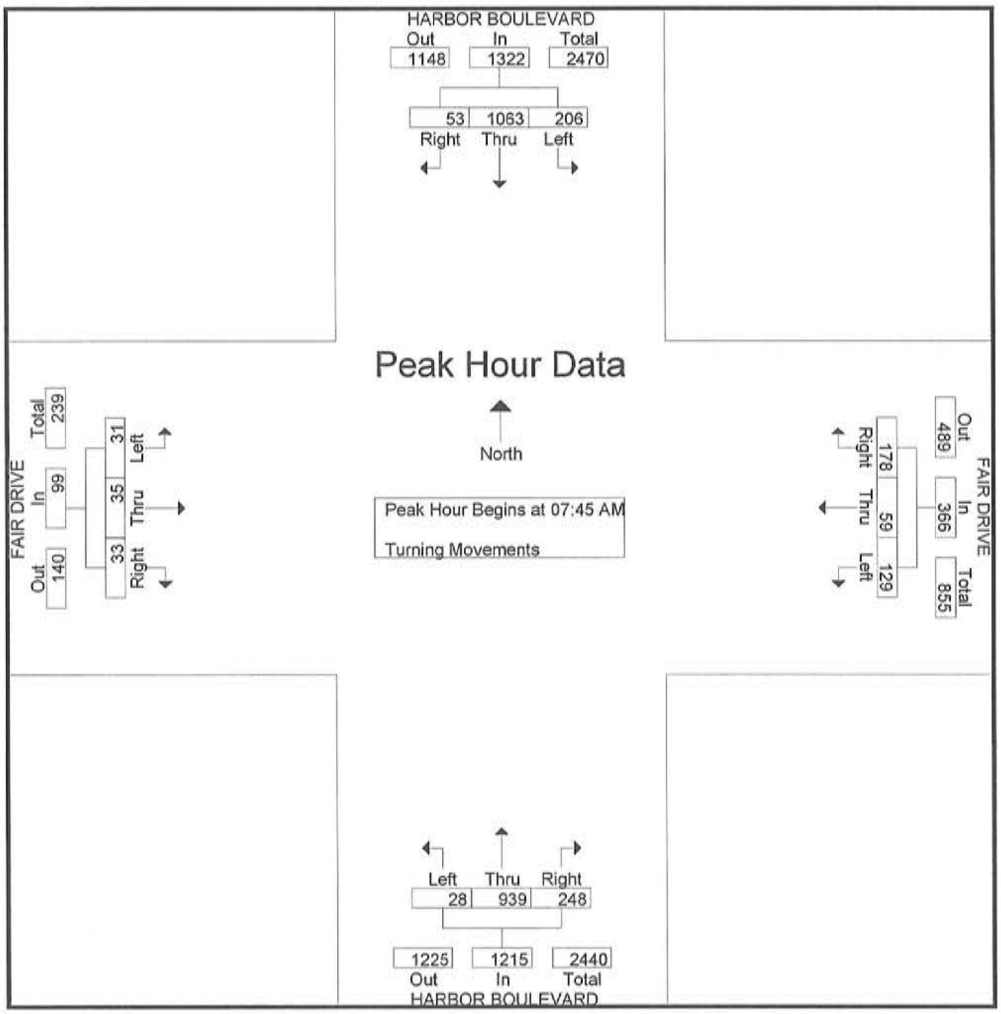
	HARBOR BOULEVARD Southbound			FAIR DRIVE Westbound			HARBOR BOULEVARD Northbound			FAIR DRIVE Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00 AM	13	125	27	24	14	22	35	125	7	7	6	2	407
07:15 AM	24	175	46	32	19	34	29	140	9	6	14	10	538
07:30 AM	18	179	84	48	22	33	74	181	7	10	15	11	682
07:45 AM	18	259	67	59	20	26	74	232	8	6	11	11	791
Total	73	738	224	163	75	115	212	678	31	29	46	34	2418
08:00 AM	21	242	53	48	15	29	73	228	14	10	8	5	746
08:15 AM	5	294	47	39	12	40	59	240	3	9	10	6	764
08:30 AM	9	268	39	32	12	34	42	239	3	8	6	9	701
08:45 AM	9	299	44	46	4	33	48	238	3	3	7	8	742
Total	44	1103	183	165	43	136	222	945	23	30	31	28	2953
*** BREAK ***													
04:00 PM	5	342	49	81	4	48	51	329	1	8	17	10	945
04:15 PM	7	295	51	79	5	75	61	375	12	8	15	9	992
04:30 PM	3	312	50	82	10	83	50	337	6	17	16	14	980
04:45 PM	9	423	34	88	3	101	65	392	7	14	11	9	1156
Total	24	1372	184	330	22	307	227	1433	26	47	59	42	4073
05:00 PM	5	388	33	119	6	106	52	364	3	5	15	12	1108
05:15 PM	7	381	60	142	11	95	61	383	3	11	7	3	1164
05:30 PM	5	382	53	132	7	99	50	337	9	7	5	9	1095
05:45 PM	9	334	43	120	14	93	52	378	9	3	5	7	1067
Total	26	1485	189	513	38	393	215	1462	24	26	32	31	4434
Grand Total	167	4698	780	1171	178	951	876	4518	104	132	168	135	13878
Apprch %	3	83.2	13.8	50.9	7.7	41.3	15.9	82.2	1.9	30.3	38.6	31	
Total %	1.2	33.9	5.6	8.4	1.3	6.9	6.3	32.6	0.7	1	1.2	1	

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: HARBOR BOULEVARD
E-W Direction: FAIR DRIVE

File Name : H1311090
Site Code : 00000571
Start Date : 11/19/2013
Page No : 2

	HARBOR BOULEVARD Southbound				FAIR DRIVE Westbound				HARBOR BOULEVARD Northbound				FAIR DRIVE Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	18	259	**67**	344	**59**	**20**	26	**105**	**74**	232	8	314	6	**11**	**11**	**28**	**791**
08:00 AM	**21**	242	53	316	48	15	29	92	73	228	**14**	**315**	**10**	8	5	23	746
08:15 AM	5	**294**	47	**346**	39	12	**40**	91	59	**240**	3	302	9	10	6	25	764
08:30 AM	9	268	39	316	32	12	34	78	42	239	3	284	8	6	9	23	701
Total Volume	53	1063	206	1322	178	59	129	366	248	939	28	1215	33	35	31	99	3002
% App. Total	4	80.4	15.6		48.6	16.1	35.2		20.4	77.3	2.3		33.3	35.4	31.3		
PHF	.631	.904	.769	.955	.754	.738	.806	.871	.838	.978	.500	.964	.825	.795	.705	.884	.949

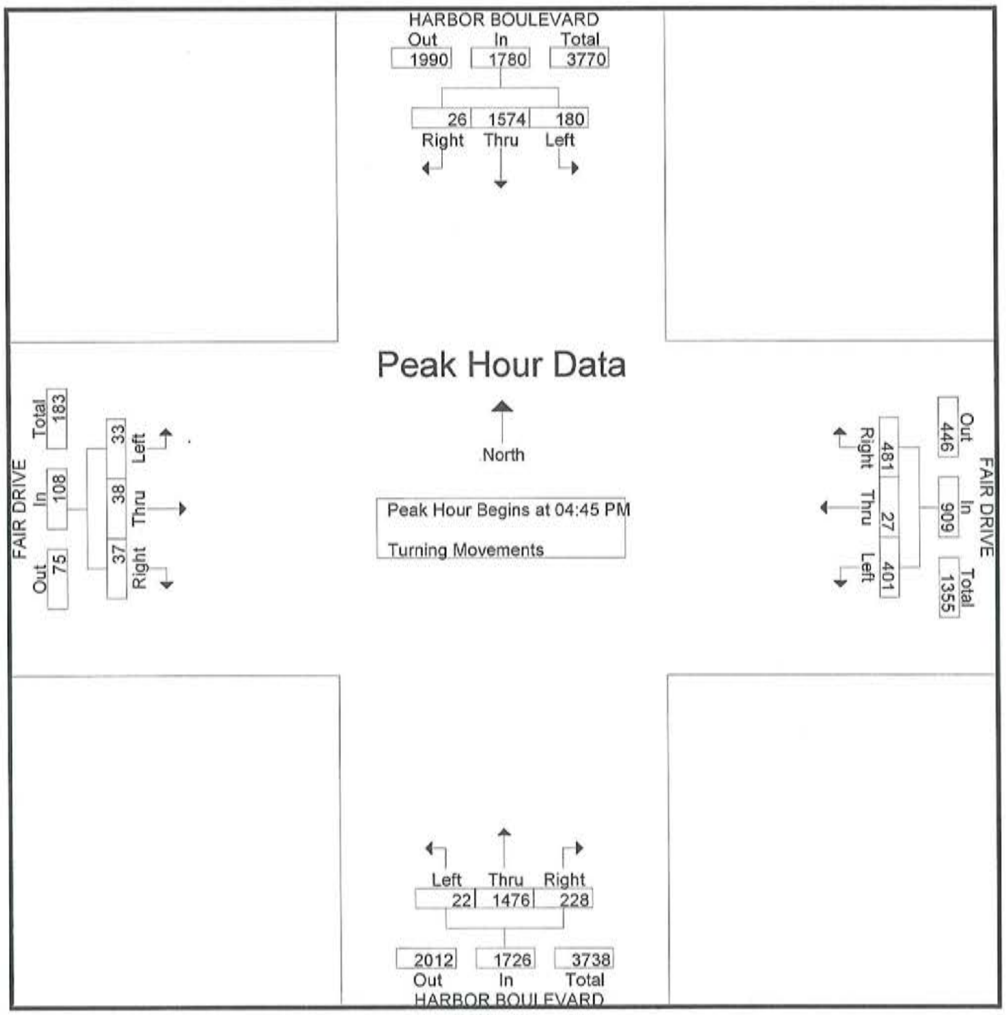


Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: HARBOR BOULEVARD
E-W Direction: FAIR DRIVE

File Name : H1311090
Site Code : 00000571
Start Date : 11/19/2013
Page No : 3

	HARBOR BOULEVARD Southbound				FAIR DRIVE Westbound				HARBOR BOULEVARD Northbound				FAIR DRIVE Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**9**	**423**	34	**466**	88	3	101	192	**65**	**392**	7	**464**	**14**	11	9	**34**	1156
05:00 PM	5	388	33	426	119	6	**106**	231	52	364	3	419	5	**15**	**12**	32	1108
05:15 PM	7	381	**60**	448	**142**	**11**	95	**248**	61	383	3	447	11	7	3	21	**1164**
05:30 PM	5	382	53	440	132	7	99	238	50	337	**9**	396	7	5	9	21	1095
Total Volume	26	1574	180	1780	481	27	401	909	228	1476	22	1726	37	38	33	108	4523
% App. Total	1.5	88.4	10.1		52.9	3	44.1		13.2	85.5	1.3		34.3	35.2	30.6		
PHF	.722	.930	.750	.955	.847	.614	.946	.916	.877	.941	.611	.930	.661	.633	.688	.794	.971



Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: PINECREEK DRIVE
E-W Direction: ADAMS AVENUE

File Name : h1311017
Site Code : 00003873
Start Date : 10/29/2013
Page No : 1

Groups Printed- Turning Movements

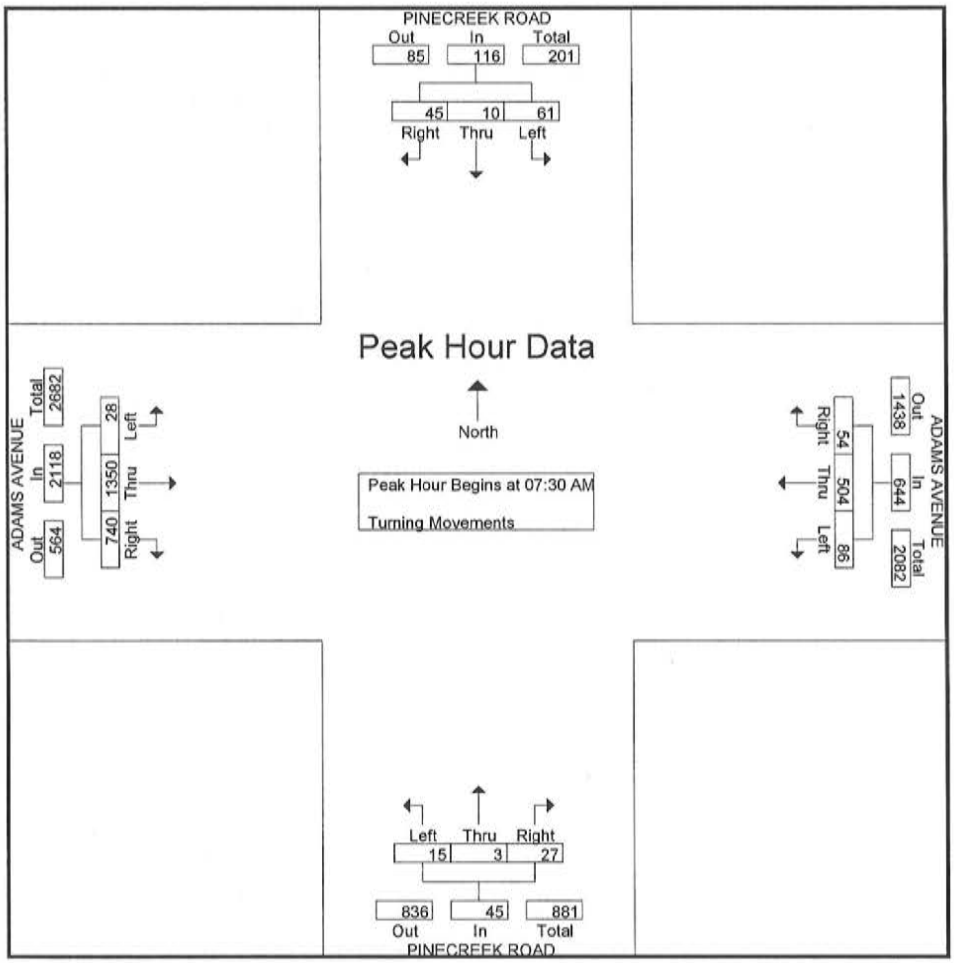
	PINECREEK ROAD Southbound			ADAMS AVENUE Westbound			PINECREEK ROAD Northbound			ADAMS AVENUE Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00 AM	4	0	6	4	88	6	1	0	1	30	237	6	383
07:15 AM	10	0	11	7	98	6	3	0	1	86	280	1	503
07:30 AM	13	1	28	13	100	11	4	2	1	228	316	3	720
07:45 AM	8	3	16	8	155	41	9	0	7	296	336	7	886
Total	35	4	61	32	441	64	17	2	10	640	1169	17	2492
08:00 AM	15	4	5	18	110	15	9	0	5	142	342	9	674
08:15 AM	9	2	12	15	139	19	5	1	2	74	356	9	643
08:30 AM	15	2	17	11	132	18	5	1	7	76	326	13	623
08:45 AM	26	4	17	5	126	31	11	0	11	111	290	6	638
Total	65	12	51	49	507	83	30	2	25	403	1314	37	2578
*** BREAK ***													
04:00 PM	18	1	15	15	262	17	50	4	76	32	134	7	631
04:15 PM	17	1	16	28	258	27	43	6	85	24	161	13	679
04:30 PM	21	1	15	20	309	18	42	3	47	36	159	15	686
04:45 PM	27	4	13	25	324	23	40	1	58	33	177	15	740
Total	83	7	59	88	1153	85	175	14	266	125	631	50	2736
05:00 PM	25	6	20	35	327	30	53	11	68	47	159	18	799
05:15 PM	21	4	12	70	281	38	41	8	66	74	207	21	843
05:30 PM	19	8	13	31	292	37	31	5	71	117	224	19	867
05:45 PM	25	7	16	32	313	48	20	6	43	109	174	13	806
Total	90	25	61	168	1213	153	145	30	248	347	764	71	3315
Grand Total	273	48	232	337	3314	385	367	48	549	1515	3878	175	11121
Apprch %	49.4	8.7	42	8.3	82.1	9.5	38.1	5	57	27.2	69.6	3.1	
Total %	2.5	0.4	2.1	3	29.8	3.5	3.3	0.4	4.9	13.6	34.9	1.6	

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: PINECREEK DRIVE
E-W Direction: ADAMS AVENUE

File Name : h1311017
Site Code : 00003873
Start Date : 10/29/2013
Page No : 2

	PINECREEK ROAD Southbound				ADAMS AVENUE Westbound				PINECREEK ROAD Northbound				ADAMS AVENUE Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	13	1	**28**	**42**	13	100	11	124	4	**2**	1	7	228	316	3	547	720
07:45 AM	8	3	16	27	8	**155**	**41**	**204**	**9**	0	**7**	**16**	**296**	336	7	**639**	**886**
08:00 AM	**15**	**4**	5	24	**18**	110	15	143	9	0	5	14	142	342	**9**	493	674
08:15 AM	9	2	12	23	15	139	19	173	5	1	2	8	74	**356**	9	439	643
Total Volume	45	10	61	116	54	504	86	644	27	3	15	45	740	1350	28	2118	2923
% App. Total	38.8	8.6	52.6		8.4	78.3	13.4		60	6.7	33.3		34.9	63.7	1.3		
PHF	.750	.625	.545	.690	.750	.813	.524	.789	.750	.375	.536	.703	.625	.948	.778	.829	.825

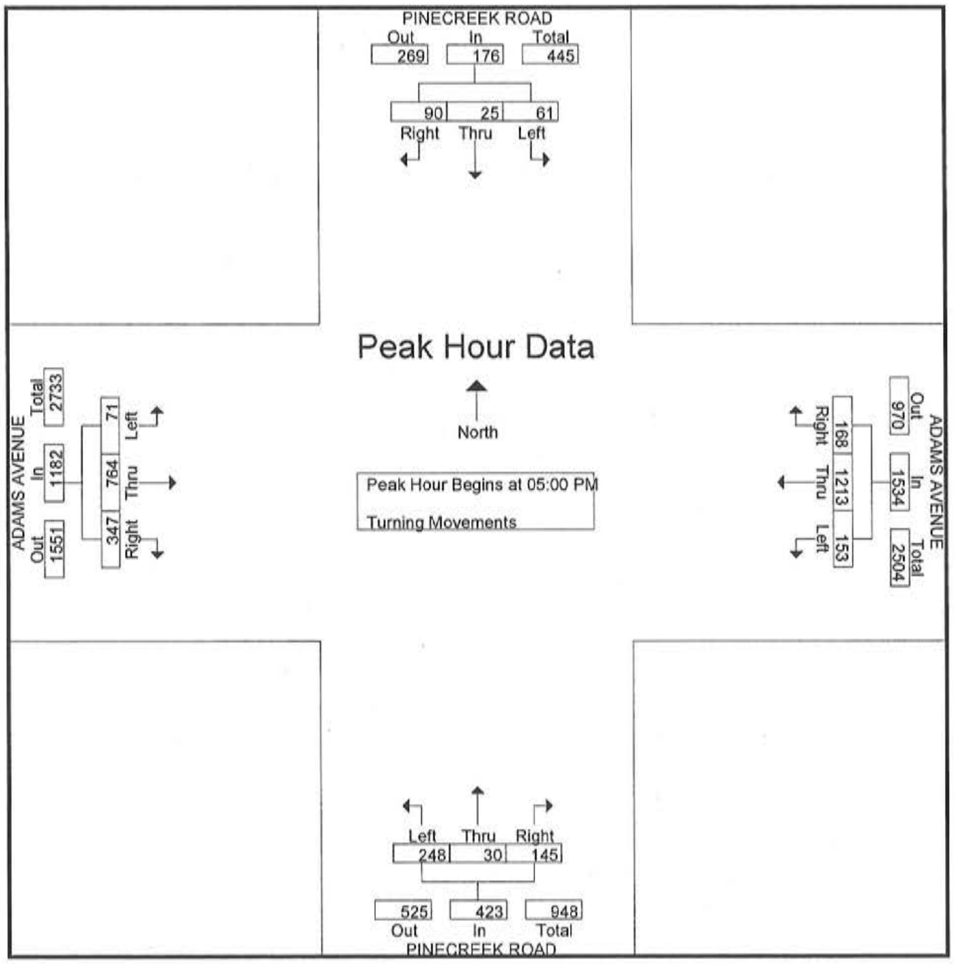


Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: PINECREEK DRIVE
E-W Direction: ADAMS AVENUE

File Name : h1311017
Site Code : 00003873
Start Date : 10/29/2013
Page No : 3

	PINECREEK ROAD Southbound				ADAMS AVENUE Westbound				PINECREEK ROAD Northbound				ADAMS AVENUE Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**25**	6	**20**	**51**	35	**327**	30	392	**53**	**11**	68	**132**	47	159	18	224	799
05:15 PM	21	4	12	37	**70**	281	38	389	41	8	66	115	74	207	**21**	302	843
05:30 PM	19	**8**	13	40	31	292	37	360	31	5	**71**	107	**117**	**224**	19	**360**	**867**
05:45 PM	25	7	16	48	32	313	**48**	**393**	20	6	43	69	109	174	13	296	806
Total Volume	90	25	61	176	168	1213	153	1534	145	30	248	423	347	764	71	1182	3315
% App. Total	51.1	14.2	34.7		11	79.1	10		34.3	7.1	58.6		29.4	64.6	6		
PHF	.900	.781	.763	.863	.600	.927	.797	.976	.684	.682	.873	.801	.741	.853	.845	.821	.956



#7

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: FAIRVIEW ROAD
E-W Direction: I-405 NB RAMPS

File Name : H1311091
Site Code : 00000571
Start Date : 11/19/2013
Page No : 1

Groups Printed- Turning Movements

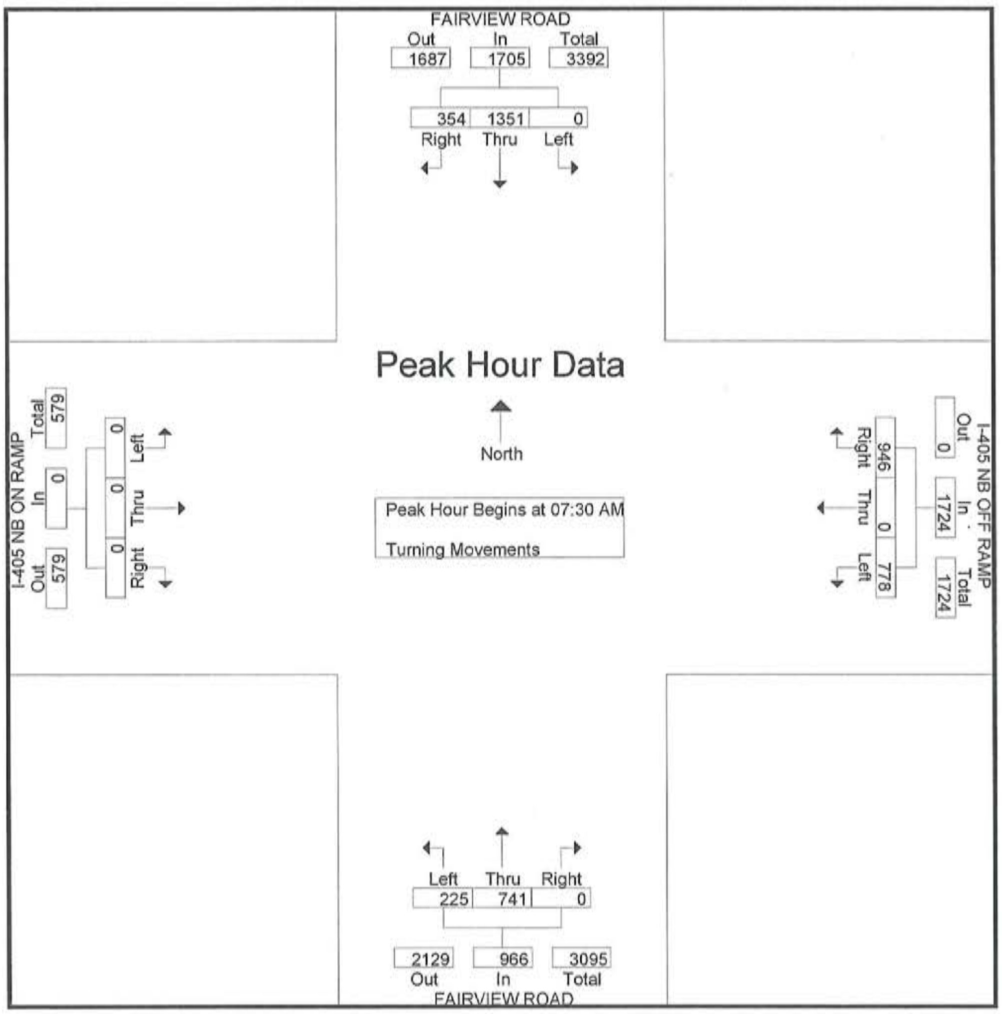
	FAIRVIEW ROAD Southbound			I-405 NB OFF RAMP Westbound			FAIRVIEW ROAD Northbound			I-405 NB ON RAMP Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00 AM	79	385	0	178	0	108	0	115	39	0	0	0	904
07:15 AM	96	275	0	229	0	168	0	114	54	0	0	0	936
07:30 AM	98	276	0	273	0	204	0	173	53	0	0	0	1077
07:45 AM	96	373	0	276	0	238	0	209	63	0	0	0	1255
Total	369	1309	0	956	0	718	0	611	209	0	0	0	4172
08:00 AM	90	354	0	214	0	183	0	180	57	0	0	0	1078
08:15 AM	70	348	0	183	0	153	0	179	52	0	0	0	985
08:30 AM	48	273	0	199	0	122	0	151	40	0	0	0	833
08:45 AM	75	296	0	166	0	179	0	161	40	0	0	0	917
Total	283	1271	0	762	0	637	0	671	189	0	0	0	3813
*** BREAK ***													
04:00 PM	57	297	0	270	0	199	0	270	88	0	0	0	1181
04:15 PM	56	340	0	260	0	183	0	302	70	0	0	0	1211
04:30 PM	69	362	0	240	0	190	0	323	57	0	0	0	1241
04:45 PM	70	450	0	291	0	221	0	305	43	0	0	0	1380
Total	252	1449	0	1061	0	793	0	1200	258	0	0	0	5013
05:00 PM	72	350	0	255	0	189	0	299	55	0	0	0	1220
05:15 PM	94	467	0	290	0	226	0	303	58	0	0	0	1438
05:30 PM	90	361	0	287	0	232	0	298	57	0	0	0	1325
05:45 PM	71	359	0	297	0	281	0	270	44	0	0	0	1322
Total	327	1537	0	1129	0	928	0	1170	214	0	0	0	5305
Grand Total	1231	5566	0	3908	0	3076	0	3652	870	0	0	0	18303
Apprch %	18.1	81.9	0	56	0	44	0	80.8	19.2	0	0	0	
Total %	6.7	30.4	0	21.4	0	16.8	0	20	4.8	0	0	0	

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: FAIRVIEW ROAD
E-W Direction: I-405 NB RAMPS

File Name : H1311091
Site Code : 00000571
Start Date : 11/19/2013
Page No : 2

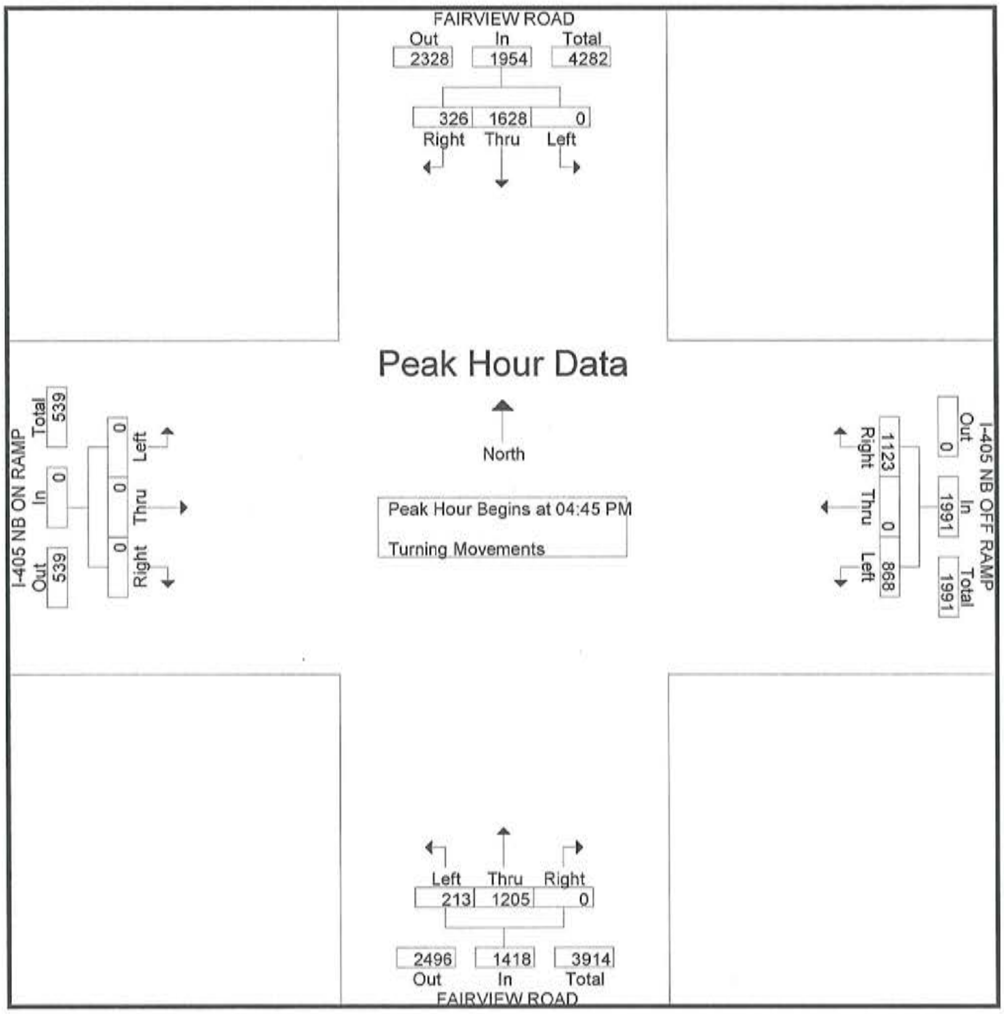
	FAIRVIEW ROAD Southbound				I-405 NB OFF RAMP Westbound				FAIRVIEW ROAD Northbound				I-405 NB ON RAMP Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	**98**	276	0	374	273	0	204	477	0	173	53	226	0	0	0	0	1077
07:45 AM	96	**373**	0	**469**	**276**	0	**238**	**514**	0	**209**	**63**	**272**	0	0	0	0	**1255**
08:00 AM	90	354	0	444	214	0	183	397	0	180	57	237	0	0	0	0	1078
08:15 AM	70	348	0	418	183	0	153	336	0	179	52	231	0	0	0	0	985
Total Volume	354	1351	0	1705	946	0	778	1724	0	741	225	966	0	0	0	0	4395
% App. Total	20.8	79.2	0		54.9	0	45.1		0	76.7	23.3		0	0	0		
PHF	.903	.905	.000	.909	.857	.000	.817	.839	.000	.886	.893	.888	.000	.000	.000	.000	.875



City: COSTA MESA
N-S Direction: FAIRVIEW ROAD
E-W Direction: I-405 NB RAMPS

File Name : H1311091
Site Code : 00000571
Start Date : 11/19/2013
Page No : 3

	FAIRVIEW ROAD Southbound				I-405 NB OFF RAMP Westbound				FAIRVIEW ROAD Northbound				I-405 NB ON RAMP Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	70	450	0	520	**291**	0	221	512	0	**305**	43	348	0	0	0	0	1380
05:00 PM	72	350	0	422	255	0	189	444	0	299	55	354	0	0	0	0	1220
05:15 PM	**94**	**467**	0	**561**	290	0	226	516	0	303	**58**	**361**	0	0	0	0	**1438**
05:30 PM	90	361	0	451	287	0	**232**	**519**	0	298	57	355	0	0	0	0	1325
Total Volume	326	1628	0	1954	1123	0	868	1991	0	1205	213	1418	0	0	0	0	5363
% App. Total	16.7	83.3	0		56.4	0	43.6		0	85	15		0	0	0		
PHF	.867	.872	.000	.871	.965	.000	.935	.959	.000	.988	.918	.982	.000	.000	.000	.000	.932



#8

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: FAIRVIEW ROAD
E-W Direction: I-405 SB RAMPS

File Name : H1311092
Site Code : 00001944
Start Date : 11/19/2013
Page No : 1

Groups Printed- Turning Movements

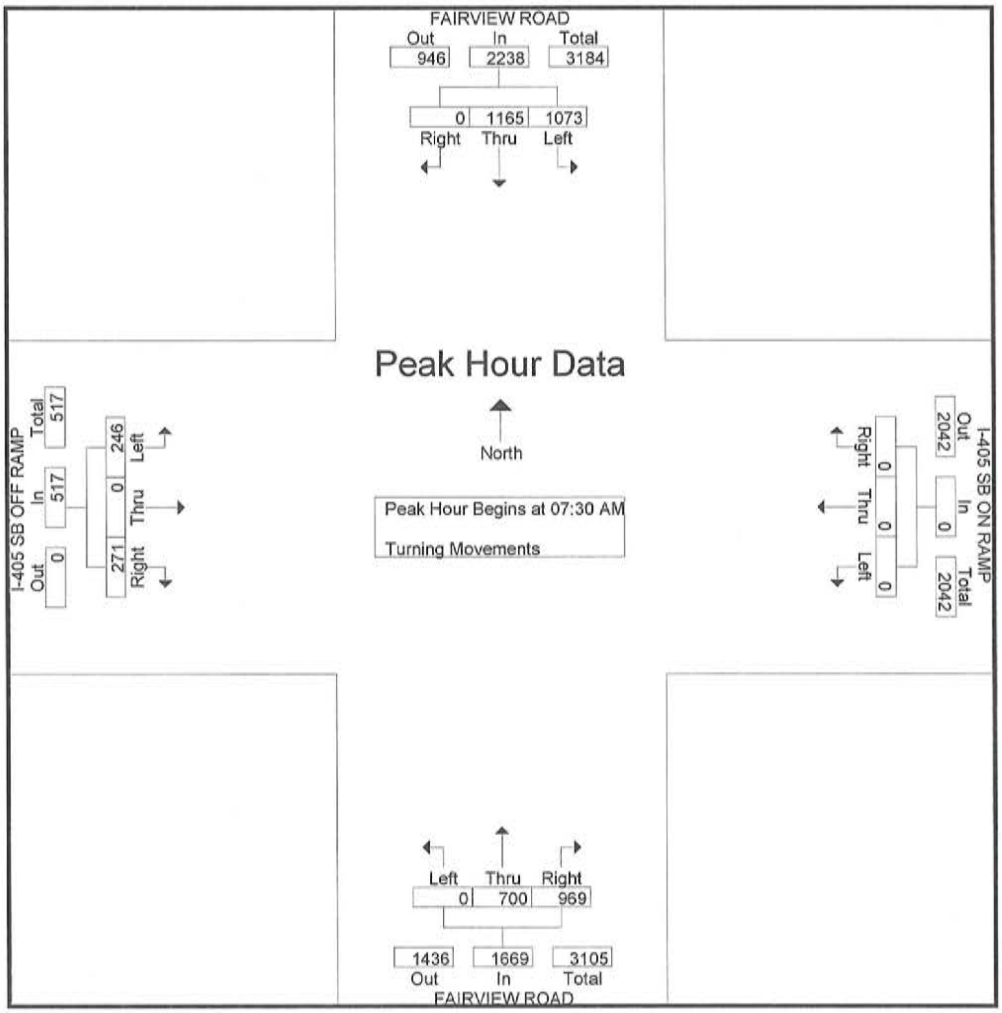
	FAIRVIEW ROAD Southbound			I-405 SB ON RAMP Westbound			FAIRVIEW ROAD Northbound			I-405 SB OFF RAMP Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00 AM	0	217	212	0	0	0	189	111	0	52	0	51	832
07:15 AM	0	192	185	0	0	0	167	106	0	74	0	52	776
07:30 AM	0	320	274	0	0	0	264	181	0	85	0	50	1174
07:45 AM	0	338	304	0	0	0	210	193	0	69	0	63	1177
Total	0	1067	975	0	0	0	830	591	0	280	0	216	3959
08:00 AM	0	261	265	0	0	0	222	158	0	66	0	70	1042
08:15 AM	0	246	230	0	0	0	273	168	0	51	0	63	1031
08:30 AM	0	241	237	0	0	0	279	151	0	67	0	64	1039
08:45 AM	0	235	205	0	0	0	201	121	0	85	0	82	929
Total	0	983	937	0	0	0	975	598	0	269	0	279	4041
*** BREAK ***													
04:00 PM	0	285	249	0	0	0	138	235	0	82	0	107	1096
04:15 PM	0	317	236	0	0	0	136	238	0	105	0	135	1167
04:30 PM	0	297	242	0	0	0	132	243	0	75	0	118	1107
04:45 PM	0	306	277	0	0	0	127	224	0	99	0	135	1168
Total	0	1205	1004	0	0	0	533	940	0	361	0	495	4538
05:00 PM	0	334	271	0	0	0	132	264	0	83	0	128	1212
05:15 PM	0	345	288	0	0	0	136	224	0	81	0	123	1197
05:30 PM	0	355	268	0	0	0	113	209	0	137	0	100	1182
05:45 PM	0	393	221	0	0	0	143	240	0	103	0	111	1211
Total	0	1427	1048	0	0	0	524	937	0	404	0	462	4802
Grand Total	0	4682	3964	0	0	0	2862	3066	0	1314	0	1452	17340
Apprch %	0	54.2	45.8	0	0	0	48.3	51.7	0	47.5	0	52.5	
Total %	0	27	22.9	0	0	0	16.5	17.7	0	7.6	0	8.4	

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: FAIRVIEW ROAD
E-W Direction: I-405 SB RAMPS

File Name : H1311092
Site Code : 00001944
Start Date : 11/19/2013
Page No : 2

	FAIRVIEW ROAD Southbound				I-405 SB ON RAMP Westbound				FAIRVIEW ROAD Northbound				I-405 SB OFF RAMP Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	320	274	594	0	0	0	0	264	181	0	**445**	**85**	0	50	135	1174
07:45 AM	0	**338**	**304**	**642**	0	0	0	0	210	**193**	0	403	69	0	63	132	**1177**
08:00 AM	0	261	265	526	0	0	0	0	222	158	0	380	66	0	**70**	**136**	1042
08:15 AM	0	246	230	476	0	0	0	0	**273**	168	0	441	51	0	63	114	1031
Total Volume	0	1165	1073	2238	0	0	0	0	969	700	0	1669	271	0	246	517	4424
% App. Total	0	52.1	47.9		0	0	0		58.1	41.9	0		52.4	0	47.6		
PHF	.000	.862	.882	.871	.000	.000	.000	.000	.887	.907	.000	.938	.797	.000	.879	.950	.940

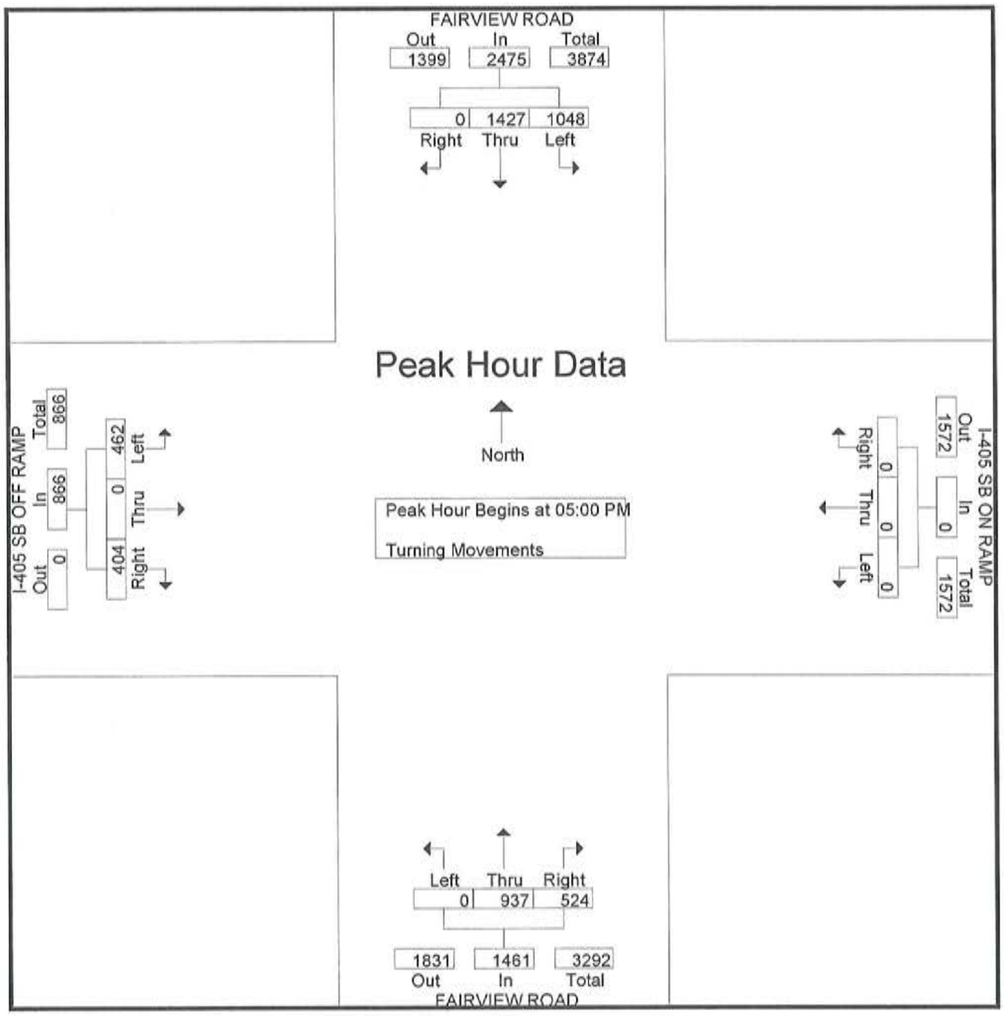


Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: FAIRVIEW ROAD
E-W Direction: I-405 SB RAMPS

File Name : H1311092
Site Code : 00001944
Start Date : 11/19/2013

	FAIRVIEW ROAD Southbound				I-405 SB ON RAMP Westbound				FAIRVIEW ROAD Northbound				I-405 SB OFF RAMP Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	334	271	605	0	0	0	0	132	**264**	0	**396**	83	0	**128**	211	**1212**
05:15 PM	0	345	**288**	**633**	0	0	0	0	136	224	0	360	81	0	123	204	1197
05:30 PM	0	355	268	623	0	0	0	0	113	209	0	322	**137**	0	100	**237**	1182
05:45 PM	0	**393**	221	614	0	0	0	0	**143**	240	0	383	103	0	111	214	1211
Total Volume	0	1427	1048	2475	0	0	0	0	524	937	0	1461	404	0	462	866	4802
% App. Total	0	57.7	42.3		0	0	0		35.9	64.1	0		46.7	0	53.3		
PHF	.000	.908	.910	.977	.000	.000	.000	.000	.916	.887	.000	.922	.737	.000	.902	.914	.991



Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

49

City: COSTA MESA
N-S Direction: FAIRVIEW ROAD
E-W Direction: BAKER STREET

File Name : H1311093
Site Code : 00000554
Start Date : 11/19/2013
Page No : 1

Groups Printed- Turning Movements

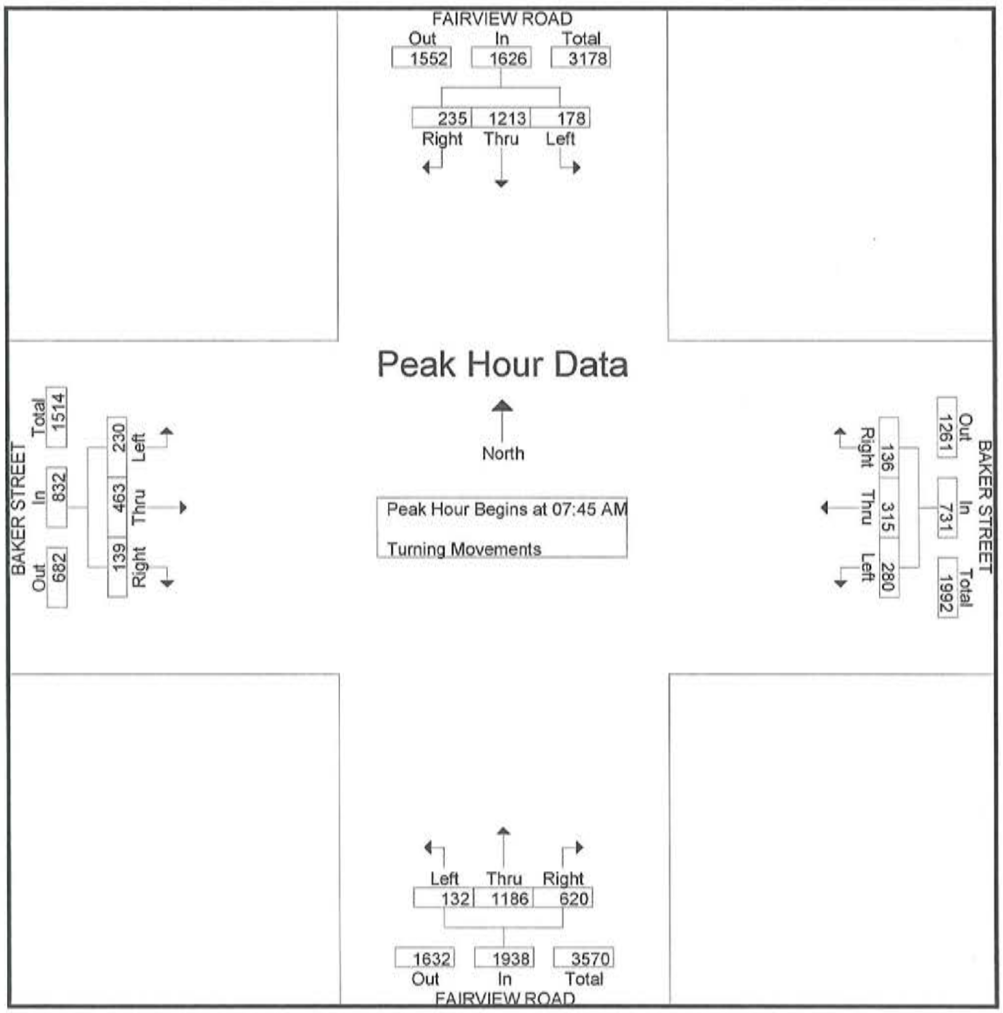
	FAIRVIEW ROAD Southbound			BAKER STREET Westbound			FAIRVIEW ROAD Northbound			BAKER STREET Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00 AM	39	84	47	12	30	36	69	182	6	8	55	43	611
07:15 AM	50	216	38	33	44	42	104	250	5	16	79	40	917
07:30 AM	46	287	64	40	67	63	130	262	14	20	106	51	1150
07:45 AM	45	350	51	51	71	66	156	293	21	25	149	58	1336
Total	180	937	200	136	212	207	459	987	46	69	389	192	4014
08:00 AM	78	307	47	29	98	62	124	284	32	41	89	56	1247
08:15 AM	63	292	36	22	78	72	163	305	37	34	124	52	1278
08:30 AM	49	264	44	34	68	80	177	304	42	39	101	64	1266
08:45 AM	43	268	51	32	80	59	151	273	52	26	122	53	1210
Total	233	1131	178	117	324	273	615	1166	163	140	436	225	5001
*** BREAK ***													
04:00 PM	59	266	45	36	174	102	80	254	36	36	101	69	1258
04:15 PM	64	247	41	45	205	126	76	250	53	35	104	55	1301
04:30 PM	69	291	54	37	201	167	34	237	30	40	99	67	1326
04:45 PM	66	280	50	42	238	146	84	239	35	34	106	60	1380
Total	258	1084	190	160	818	541	274	980	154	145	410	251	5265
05:00 PM	73	303	64	30	212	132	67	229	29	52	91	75	1357
05:15 PM	68	348	52	54	257	158	63	265	35	58	115	81	1554
05:30 PM	76	332	62	50	253	157	80	248	34	40	86	58	1476
05:45 PM	76	342	42	45	257	163	70	233	60	37	104	49	1478
Total	293	1325	220	179	979	610	280	975	158	187	396	263	5865
Grand Total	964	4477	788	592	2333	1631	1628	4108	521	541	1631	931	20145
Apprch %	15.5	71.9	12.7	13	51.2	35.8	26	65.7	8.3	17.4	52.6	30	
Total %	4.8	22.2	3.9	2.9	11.6	8.1	8.1	20.4	2.6	2.7	8.1	4.6	

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: FAIRVIEW ROAD
E-W Direction: BAKER STREET

File Name : H1311093
Site Code : 00000554
Start Date : 11/19/2013
Page No : 2

	FAIRVIEW ROAD Southbound				BAKER STREET Westbound				FAIRVIEW ROAD Northbound				BAKER STREET Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	45	**350**	**51**	**446**	**51**	71	66	188	156	293	21	470	25	**149**	58	**232**	**1336**
08:00 AM	**78**	307	47	432	29	**98**	62	**189**	124	284	32	440	**41**	89	56	186	1247
08:15 AM	63	292	36	391	22	78	72	172	163	**305**	37	505	34	124	52	210	1278
08:30 AM	49	264	44	357	34	68	**80**	182	**177**	304	**42**	**523**	39	101	**64**	204	1266
Total Volume	235	1213	178	1626	136	315	280	731	620	1186	132	1938	139	463	230	832	5127
% App. Total	14.5	74.6	10.9		18.6	43.1	38.3		32	61.2	6.8		16.7	55.6	27.6		
PHF	.753	.866	.873	.911	.667	.804	.875	.967	.876	.972	.786	.926	.848	.777	.898	.897	.959

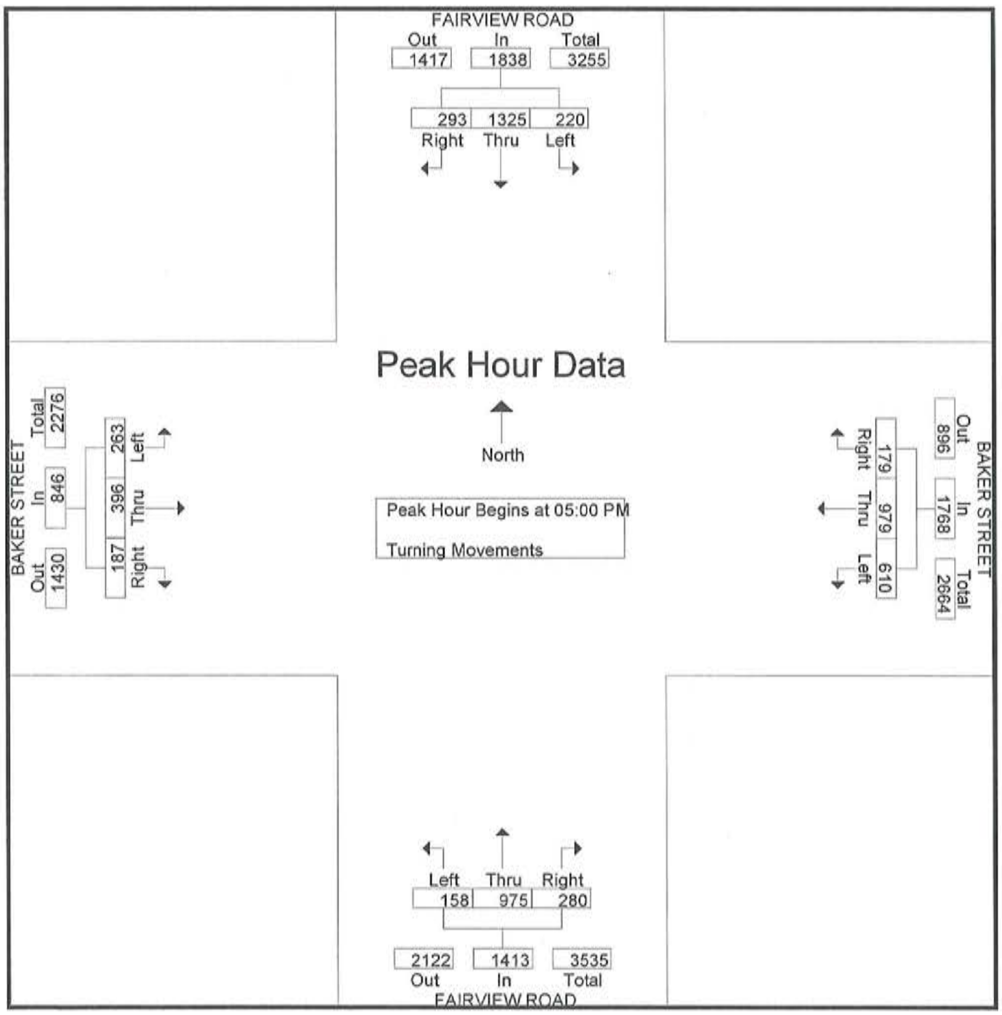


Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: FAIRVIEW ROAD
E-W Direction: BAKER STREET

File Name : H1311093
Site Code : 00000554
Start Date : 11/19/2013
Page No : 3

	FAIRVIEW ROAD Southbound				BAKER STREET Westbound				FAIRVIEW ROAD Northbound				BAKER STREET Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	73	303	**64**	440	30	212	132	374	67	229	29	325	52	91	75	218	1357
05:15 PM	68	**348**	52	468	**54**	**257**	158	**469**	63	**265**	35	**363**	**58**	**115**	**81**	**254**	**1554**
05:30 PM	**76**	332	62	**470**	50	253	157	460	**80**	248	34	362	40	86	58	184	1476
05:45 PM	76	342	42	460	45	257	**163**	465	70	233	**60**	363	37	104	49	190	1478
Total Volume	293	1325	220	1838	179	979	610	1768	280	975	158	1413	187	396	263	846	5865
% App. Total	15.9	72.1	12		10.1	55.4	34.5		19.8	69	11.2		22.1	46.8	31.1		
PHF	.964	.952	.859	.978	.829	.952	.936	.942	.875	.920	.658	.973	.806	.861	.812	.833	.944



#10

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: FAIRVIEW ROAD
E-W Direction: ADAMS AVENUE

File Name : H1311018
Site Code : 00003873
Start Date : 10/29/2013
Page No : 1

Groups Printed- Turning Movements

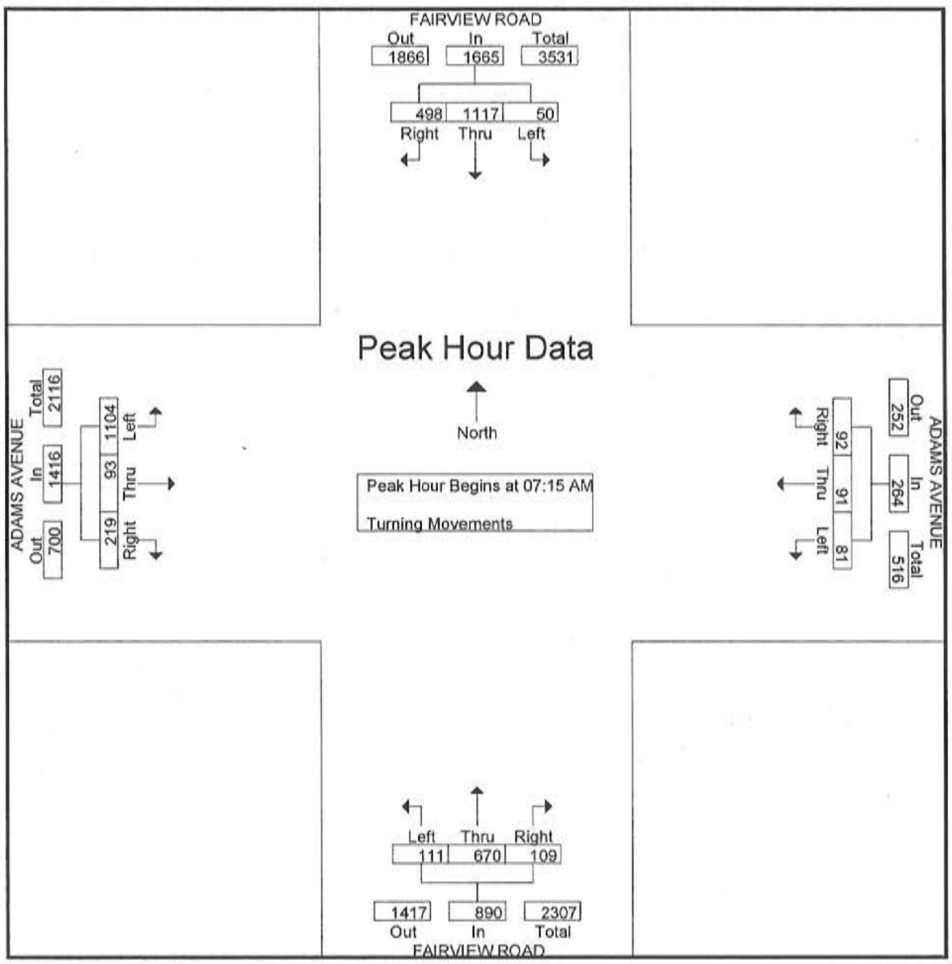
	FAIRVIEW ROAD Southbound			ADAMS AVENUE Westbound			FAIRVIEW ROAD Northbound			ADAMS AVENUE Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00 AM	45	165	4	14	6	10	8	105	9	29	12	187	594
07:15 AM	84	259	7	20	13	14	9	135	16	49	12	228	846
07:30 AM	125	306	13	29	21	34	44	236	44	58	21	275	1206
07:45 AM	140	324	11	20	31	22	48	157	28	58	26	292	1157
Total	394	1054	35	83	71	80	109	633	97	194	71	982	3803
08:00 AM	149	228	19	23	26	11	8	142	23	54	34	309	1026
08:15 AM	120	183	7	16	22	7	6	99	13	37	56	223	789
08:30 AM	111	179	3	21	22	5	8	100	20	44	24	311	848
08:45 AM	113	262	10	18	10	8	5	106	27	33	7	259	858
Total	493	852	39	78	80	31	27	447	83	168	121	1102	3521
*** BREAK ***													
04:00 PM	218	194	17	12	29	13	22	260	50	39	33	137	1024
04:15 PM	194	190	14	17	33	14	31	236	57	35	29	131	981
04:30 PM	242	207	27	13	30	12	27	265	62	55	47	122	1109
04:45 PM	263	232	15	10	27	8	12	239	81	41	29	177	1134
Total	917	823	73	52	119	47	92	1000	250	170	138	567	4248
05:00 PM	219	224	21	14	27	14	19	260	112	46	48	158	1162
05:15 PM	270	275	41	12	37	19	9	237	121	43	37	201	1302
05:30 PM	286	298	22	18	47	7	12	284	128	66	18	177	1363
05:45 PM	282	329	17	28	25	20	8	209	132	43	31	116	1240
Total	1057	1126	101	72	136	60	48	990	493	198	134	652	5067
Grand Total	2861	3855	248	285	406	218	276	3070	923	730	464	3303	16639
Apprch %	41.1	55.4	3.6	31.4	44.7	24	6.5	71.9	21.6	16.2	10.3	73.4	
Total %	17.2	23.2	1.5	1.7	2.4	1.3	1.7	18.5	5.5	4.4	2.8	19.9	

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: FAIRVIEW ROAD
E-W Direction: ADAMS AVENUE

File Name : H1311018
Site Code : 00003873
Start Date : 10/29/2013
Page No : 2

	FAIRVIEW ROAD Southbound				ADAMS AVENUE Westbound				FAIRVIEW ROAD Northbound				ADAMS AVENUE Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	84	259	7	350	20	13	14	47	9	135	16	160	49	12	228	289	846
07:30 AM	125	306	13	444	**29**	21	**34**	**84**	44	**236**	**44**	**324**	**58**	21	275	354	**1206**
07:45 AM	140	**324**	11	**475**	20	**31**	22	73	**48**	157	28	233	58	26	292	376	1157
08:00 AM	**149**	228	**19**	396	23	26	11	60	8	142	23	173	54	**34**	**309**	**397**	1026
Total Volume	498	1117	50	1665	92	91	81	264	109	670	111	890	219	93	1104	1416	4235
% App. Total	29.9	67.1	3		34.8	34.5	30.7		12.2	75.3	12.5		15.5	6.6	78		
PHF	.836	.862	.658	.876	.793	.734	.596	.786	.568	.710	.631	.687	.944	.684	.893	.892	.878

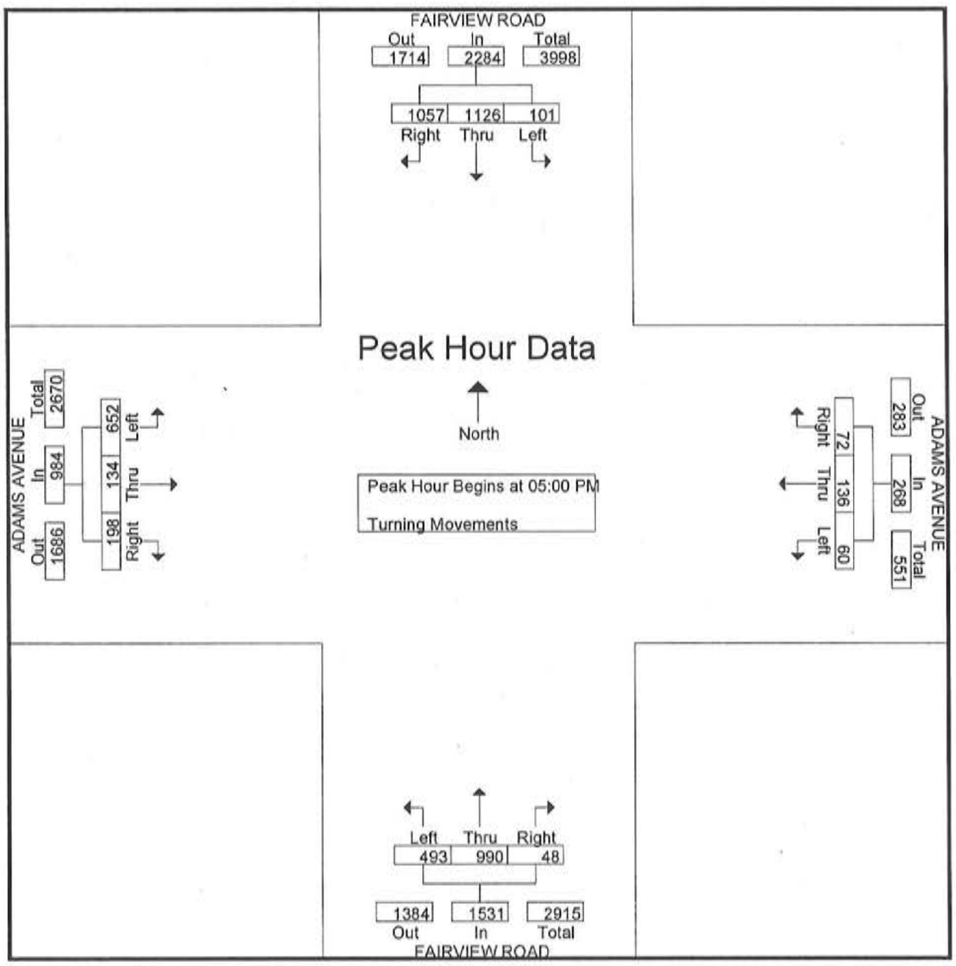


Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: FAIRVIEW ROAD
E-W Direction: ADAMS AVENUE

File Name : H1311018
Site Code : 00003873
Start Date : 10/29/2013
Page No : 3

	FAIRVIEW ROAD Southbound				ADAMS AVENUE Westbound				FAIRVIEW ROAD Northbound				ADAMS AVENUE Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	219	224	21	464	14	27	14	55	**19**	260	112	391	46	**48**	158	252	1162
05:15 PM	270	275	**41**	586	12	37	19	68	9	237	121	367	43	37	**201**	**281**	1302
05:30 PM	**286**	298	22	606	18	**47**	7	72	12	**284**	128	**424**	**66**	18	177	261	**1363**
05:45 PM	282	**329**	17	**628**	**28**	25	**20**	**73**	8	209	**132**	349	43	31	116	190	1240
Total Volume	1057	1126	101	2284	72	136	60	268	48	990	493	1531	198	134	652	984	5067
% App. Total	46.3	49.3	4.4		26.9	50.7	22.4		3.1	64.7	32.2		20.1	13.6	66.3		
PHF	.924	.856	.616	.909	.643	.723	.750	.918	.632	.871	.934	.903	.750	.698	.811	.875	.929



Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

B11

City: COSTA MESA
N-S Direction: FAIRVIEW ROAD
E-W Direction: MONITOR WAY

File Name : H1311019
Site Code : 00000000
Start Date : 10/29/2013
Page No : 1

Groups Printed- Turning Movements

	FAIRVIEW ROAD Southbound			MONITOR WAY Westbound			FAIRVIEW ROAD Northbound			MONITOR WAY Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00 AM	9	154	1	4	0	0	0	69	1	2	0	3	243
07:15 AM	39	283	21	10	1	3	0	171	4	2	1	0	535
07:30 AM	61	370	46	38	2	13	1	330	12	1	3	6	883
07:45 AM	89	305	2	6	0	7	1	198	30	1	0	11	650
Total	198	1112	70	58	3	23	2	768	47	6	4	20	2311
08:00 AM	51	268	1	0	0	0	0	149	15	2	0	6	492
08:15 AM	31	216	0	0	0	1	1	124	10	4	0	5	392
08:30 AM	18	198	1	1	0	0	0	107	5	2	0	6	338
08:45 AM	46	229	2	1	0	2	1	150	13	1	0	8	453
Total	146	911	4	2	0	3	2	530	43	9	0	25	1675
*** BREAK ***													
04:00 PM	20	225	2	7	1	4	1	294	2	8	1	35	600
04:15 PM	13	258	6	9	0	2	0	319	10	11	0	33	661
04:30 PM	23	218	4	5	0	2	3	274	6	9	0	47	591
04:45 PM	16	244	18	4	0	4	1	277	8	11	0	41	624
Total	72	945	30	25	1	12	5	1164	26	39	1	156	2476
05:00 PM	31	246	16	18	0	1	2	343	7	18	0	57	739
05:15 PM	48	302	19	7	0	4	2	309	9	6	0	31	737
05:30 PM	41	298	19	9	0	2	3	362	22	23	0	43	822
05:45 PM	45	308	22	12	0	4	3	321	22	4	0	34	775
Total	165	1154	76	46	0	11	10	1335	60	51	0	165	3073
Grand Total	581	4122	180	131	4	49	19	3797	176	105	5	366	9535
Apprch %	11.9	84.4	3.7	71.2	2.2	26.6	0.5	95.1	4.4	22.1	1.1	76.9	
Total %	6.1	43.2	1.9	1.4	0	0.5	0.2	39.8	1.8	1.1	0.1	3.8	

City: COSTA MESA
N-S Direction: FAIRVIEW ROAD
E-W Direction: MONITOR WAY

File Name : H1311019
Site Code : 00000000
Start Date : 10/29/2013
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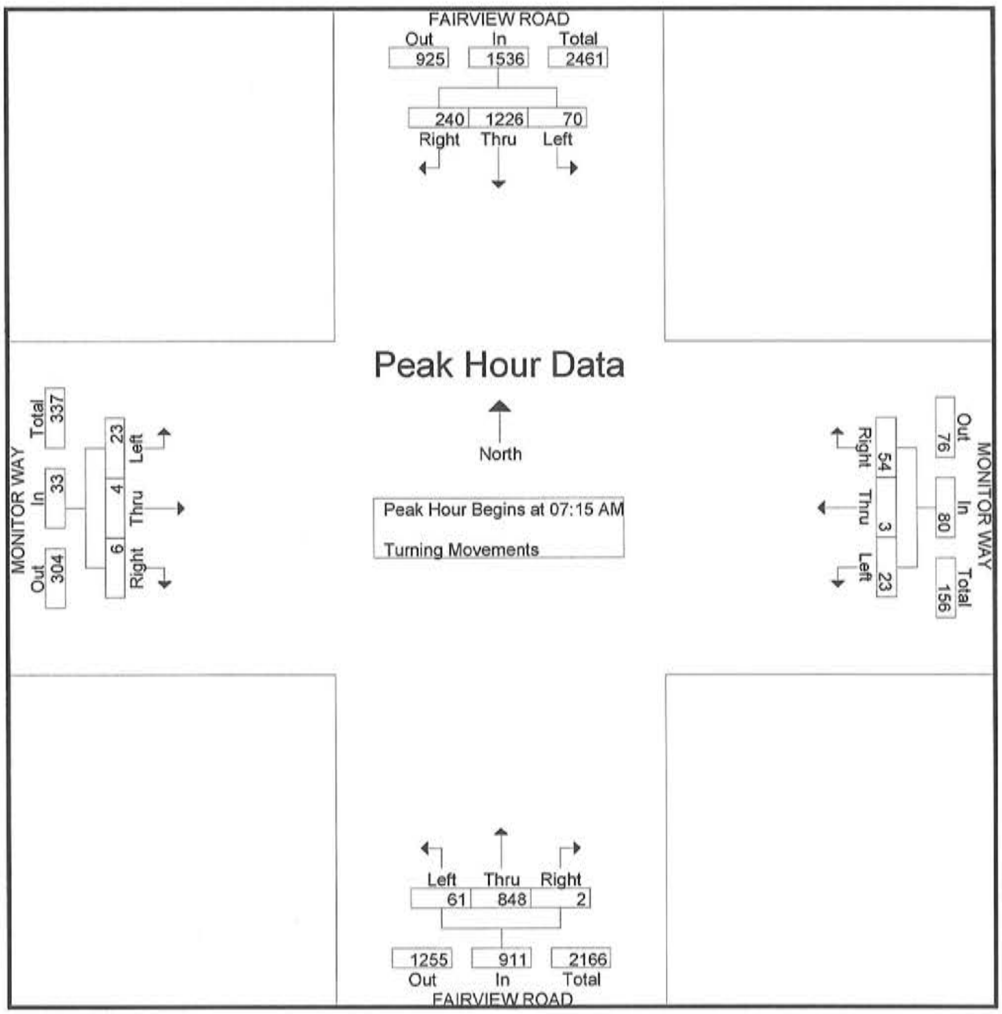
	FAIRVIEW ROAD Southbound				MONITOR WAY Westbound				FAIRVIEW ROAD Northbound				MONITOR WAY Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	39	283	21	343	10	1	3	14	0	171	4	175	**2**	1	0	3	535
07:30 AM	61	**370**	**46**	**477**	**38**	**2**	**13**	**53**	**1**	**330**	12	**343**	1	**3**	6	10	**883**
07:45 AM	**89**	305	2	396	6	0	7	13	1	198	**30**	229	1	0	**11**	**12**	650
08:00 AM	51	268	1	320	0	0	0	0	0	149	15	164	2	0	6	8	492
Total Volume	240	1226	70	1536	54	3	23	80	2	848	61	911	6	4	23	33	2560
% App. Total	15.6	79.8	4.6		67.5	3.8	28.8		0.2	93.1	6.7		18.2	12.1	69.7		
PHF	.674	.828	.380	.805	.355	.375	.442	.377	.500	.642	.508	.664	.750	.333	.523	.688	.725

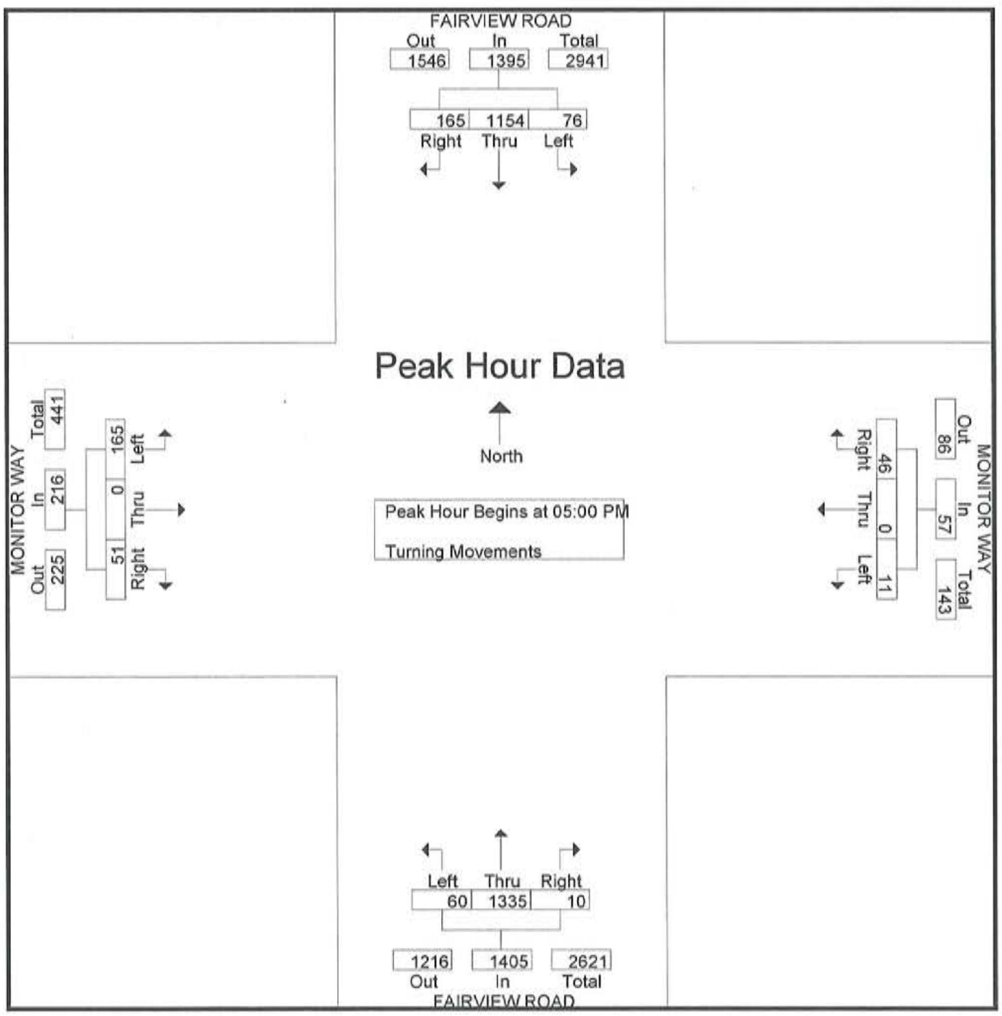


Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: FAIRVIEW ROAD
E-W Direction: MONITOR WAY

File Name : H1311019
Site Code : 00000000
Start Date : 10/29/2013
Page No : 3

	FAIRVIEW ROAD Southbound				MONITOR WAY Westbound				FAIRVIEW ROAD Northbound				MONITOR WAY Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	31	246	16	293	**18**	0	1	**19**	2	343	7	352	18	0	**57**	**75**	739
05:15 PM	**48**	302	19	369	7	0	**4**	11	2	309	9	320	6	0	31	37	737
05:30 PM	41	298	19	358	9	0	2	11	**3**	**362**	**22**	**387**	**23**	0	43	66	**822**
05:45 PM	45	**308**	**22**	**375**	12	0	4	16	3	321	22	346	4	0	34	38	775
Total Volume	165	1154	76	1395	46	0	11	57	10	1335	60	1405	51	0	165	216	3073
% App. Total	11.8	82.7	5.4		80.7	0	19.3		0.7	95	4.3		23.6	0	76.4		
PHF	.859	.937	.864	.930	.639	.000	.688	.750	.833	.922	.682	.908	.554	.000	.724	.720	.935



Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

R12

City: COSTA MESA
N-S Direction: FAIRVIEW ROAD
E-W Direction: PIRATES WAY / MUSTANG

File Name : H1311020
Site Code : 00000000
Start Date : 10/29/2013

Groups Printed- Turning Movements

	FAIRVIEW ROAD Southbound			MUSTANG WAY Westbound			FAIRVIEW ROAD Northbound			PIRATES WAY Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00 AM	27	89	17	5	0	14	0	105	8	2	0	3	270
07:15 AM	51	120	36	18	1	45	10	155	9	8	2	11	466
07:30 AM	90	205	45	20	0	43	40	276	16	10	12	18	775
07:45 AM	83	214	10	20	0	25	3	173	35	10	0	21	594
Total	251	628	108	63	1	127	53	709	68	30	14	53	2105
08:00 AM	61	211	1	4	0	33	1	140	11	8	0	21	491
08:15 AM	23	190	4	1	0	5	2	126	3	3	0	7	364
08:30 AM	34	158	2	4	0	4	1	96	6	7	0	12	324
08:45 AM	45	187	3	3	0	0	4	122	11	6	0	21	402
Total	163	746	10	12	0	42	8	484	31	24	0	61	1581
*** BREAK ***													
04:00 PM	38	180	4	10	0	9	0	237	11	9	0	34	532
04:15 PM	35	212	2	4	0	7	0	279	3	7	0	34	583
04:30 PM	24	188	2	6	0	7	0	262	5	7	0	24	525
04:45 PM	22	204	2	5	0	1	0	251	9	10	0	26	530
Total	119	784	10	25	0	24	0	1029	28	33	0	118	2170
05:00 PM	29	232	3	6	0	4	0	294	10	20	0	48	646
05:15 PM	61	239	4	2	0	5	0	274	19	16	0	36	656
05:30 PM	61	238	0	3	0	3	0	328	32	15	0	67	747
05:45 PM	68	250	5	7	0	3	0	309	20	17	0	44	723
Total	219	959	12	18	0	15	0	1205	81	68	0	195	2772
Grand Total	752	3117	140	118	1	208	61	3427	208	155	14	427	8628
Apprch %	18.8	77.8	3.5	36.1	0.3	63.6	1.7	92.7	5.6	26	2.3	71.6	
Total %	8.7	36.1	1.6	1.4	0	2.4	0.7	39.7	2.4	1.8	0.2	4.9	

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: FAIRVIEW ROAD
E-W Direction: PIRATES WAY / MUSTANG

File Name : H1311020
Site Code : 00000000
Start Date : 10/29/2013
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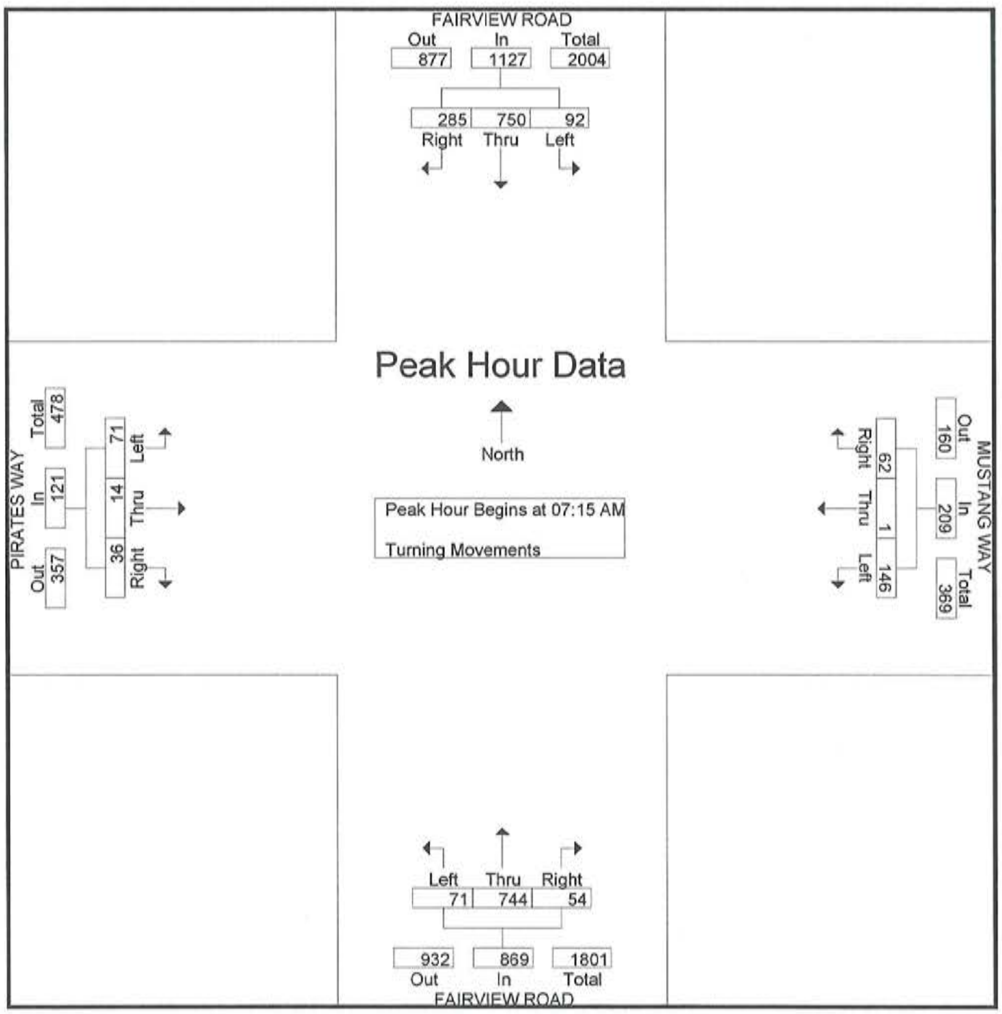
	FAIRVIEW ROAD Southbound				MUSTANG WAY Westbound				FAIRVIEW ROAD Northbound				PIRATES WAY Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	51	120	36	207	18	**1**	**45**	**64**	10	155	9	174	8	2	11	21	466
07:30 AM	**90**	205	**45**	**340**	**20**	0	43	63	**40**	**276**	16	**332**	**10**	**12**	18	**40**	**775**
07:45 AM	83	**214**	10	307	20	0	25	45	3	173	**35**	211	10	0	**21**	31	594
08:00 AM	61	211	1	273	4	0	33	37	1	140	11	152	8	0	21	29	491
Total Volume	285	750	92	1127	62	1	146	209	54	744	71	869	36	14	71	121	2326
% App. Total	25.3	66.5	8.2		29.7	0.5	69.9		6.2	85.6	8.2		29.8	11.6	58.7		
PHF	.792	.876	.511	.829	.775	.250	.811	.816	.338	.674	.507	.654	.900	.292	.845	.756	.750

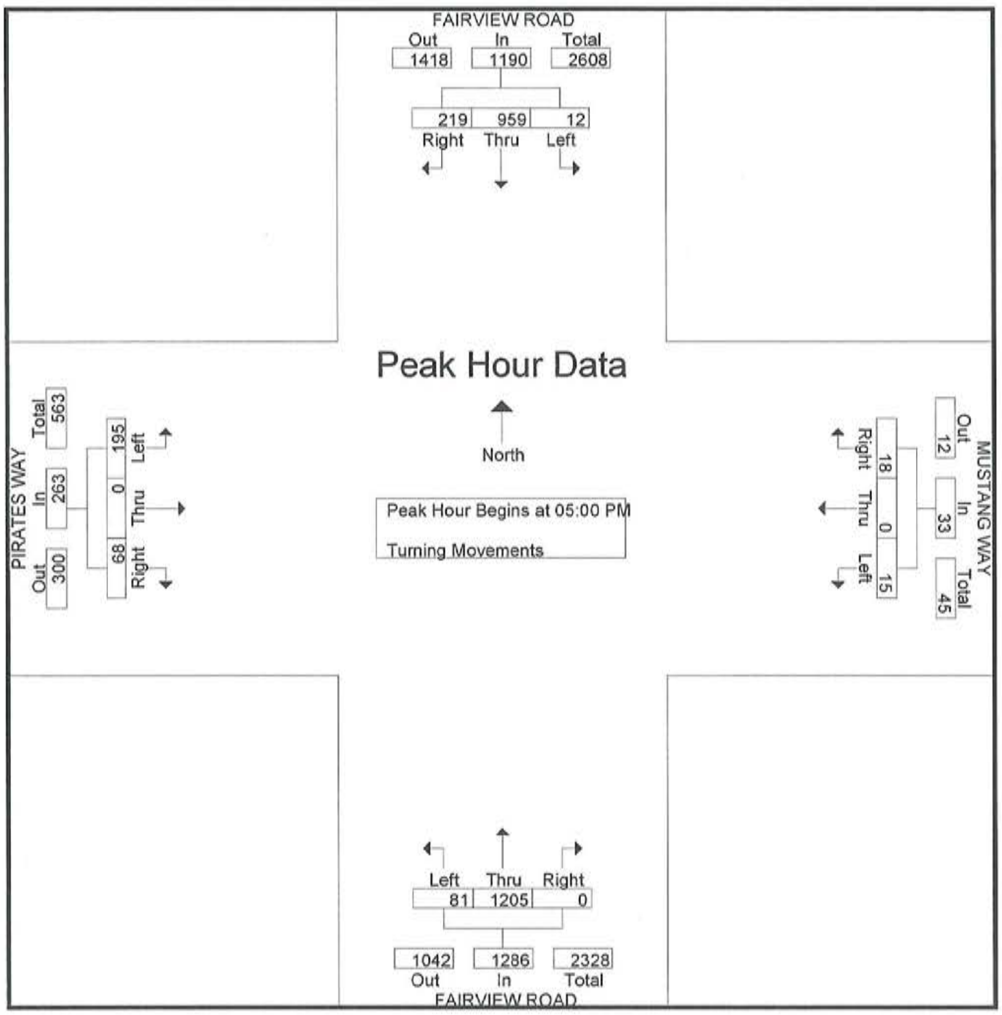


Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: FAIRVIEW ROAD
E-W Direction: PIRATES WAY / MUSTANG

File Name : H1311020
Site Code : 00000000
Start Date : 10/29/2013

	FAIRVIEW ROAD Southbound				MUSTANG WAY Westbound				FAIRVIEW ROAD Northbound				PIRATES WAY Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	29	232	3	264	6	0	4	**10**	0	294	10	304	**20**	0	48	68	646
05:15 PM	61	239	4	304	2	0	**5**	7	0	274	19	293	16	0	36	52	656
05:30 PM	61	238	0	299	3	0	3	6	0	**328**	**32**	**360**	15	0	**67**	**82**	**747**
05:45 PM	**68**	**250**	**5**	**323**	**7**	0	3	10	0	309	20	329	17	0	44	61	723
Total Volume	219	959	12	1190	18	0	15	33	0	1205	81	1286	68	0	195	263	2772
% App. Total	18.4	80.6	1		54.5	0	45.5		0	93.7	6.3		25.9	0	74.1		
PHF	.805	.959	.600	.921	.643	.000	.750	.825	.000	.918	.633	.893	.850	.000	.728	.802	.928



Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

#13

City: COSTA MESA
N-S Direction: FAIRVIEW ROAD
E-W Direction: ARLINGTON DRIVE

File Name : H1311021
Site Code : 00000000
Start Date : 10/29/2013
Page No : 1

Groups Printed- Turning Movements

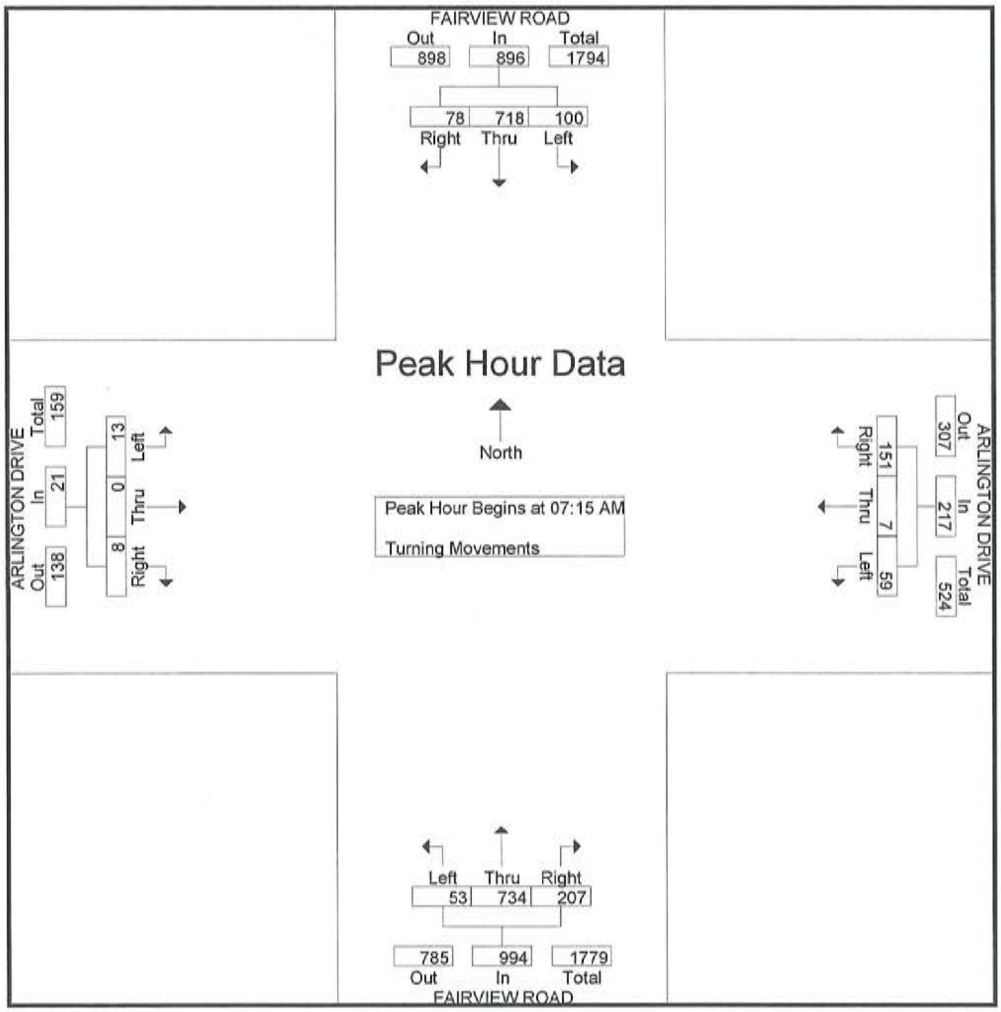
	FAIRVIEW ROAD Southbound			ARLINGTON DRIVE Westbound			FAIRVIEW ROAD Northbound			ARLINGTON DRIVE Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00 AM	8	90	8	9	0	4	10	86	4	0	0	0	219
07:15 AM	3	154	15	30	0	5	18	190	9	3	0	1	428
07:30 AM	17	207	21	66	1	9	27	258	7	2	0	1	616
07:45 AM	29	181	36	21	4	16	52	163	25	1	0	7	535
Total	57	632	80	126	5	34	107	697	45	6	0	9	1798
08:00 AM	29	176	28	34	2	29	110	123	12	2	0	4	549
08:15 AM	16	168	6	21	1	27	12	99	4	0	1	4	359
08:30 AM	7	150	12	14	2	21	17	105	8	2	0	2	340
08:45 AM	31	150	16	14	3	13	23	125	10	1	0	4	390
Total	83	644	62	83	8	90	162	452	34	5	1	14	1638
*** BREAK ***													
04:00 PM	21	176	8	49	2	30	25	183	3	3	5	24	529
04:15 PM	33	191	20	47	4	18	33	218	12	6	3	27	612
04:30 PM	10	185	15	51	1	20	21	199	3	4	1	13	523
04:45 PM	18	182	22	38	2	33	27	235	7	4	2	10	580
Total	82	734	65	185	9	101	106	835	25	17	11	74	2244
05:00 PM	13	227	12	72	2	41	33	227	9	13	2	13	664
05:15 PM	25	215	25	51	6	34	20	237	7	9	0	19	648
05:30 PM	22	209	12	72	6	16	26	244	23	6	1	17	654
05:45 PM	25	219	21	55	3	19	35	261	22	10	0	18	688
Total	85	870	70	250	17	110	114	969	61	38	3	67	2654
Grand Total	307	2880	277	644	39	335	489	2953	165	66	15	164	8334
Apprch %	8.9	83.1	8	63.3	3.8	32.9	13.6	81.9	4.6	26.9	6.1	66.9	
Total %	3.7	34.6	3.3	7.7	0.5	4	5.9	35.4	2	0.8	0.2	2	

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: FAIRVIEW ROAD
E-W Direction: ARLINGTON DRIVE

File Name : H1311021
Site Code : 00000000
Start Date : 10/29/2013
Page No : 2

	FAIRVIEW ROAD Southbound				ARLINGTON DRIVE Westbound				FAIRVIEW ROAD Northbound				ARLINGTON DRIVE Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	3	154	15	172	30	0	5	35	18	190	9	217	**3**	0	1	4	428
07:30 AM	17	**207**	21	245	**66**	1	9	**76**	27	**258**	7	**292**	2	0	1	3	**616**
07:45 AM	**29**	181	**36**	**246**	21	**4**	16	41	52	163	**25**	240	1	0	**7**	**8**	535
08:00 AM	29	176	28	233	34	2	**29**	65	**110**	123	12	245	2	0	4	6	549
Total Volume	78	718	100	896	151	7	59	217	207	734	53	994	8	0	13	21	2128
% App. Total	8.7	80.1	11.2		69.6	3.2	27.2		20.8	73.8	5.3		38.1	0	61.9		
PHF	.672	.867	.694	.911	.572	.438	.509	.714	.470	.711	.530	.851	.667	.000	.464	.656	.864

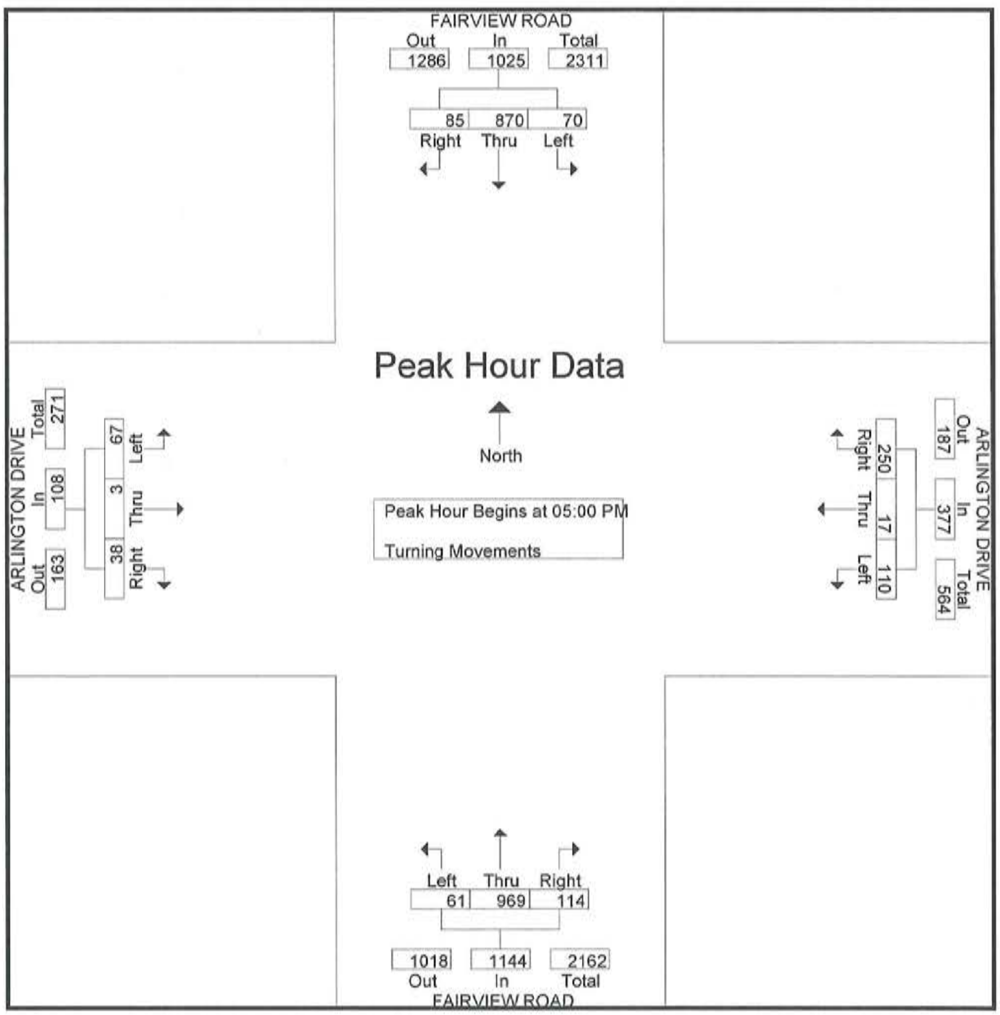


Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: FAIRVIEW ROAD
E-W Direction: ARLINGTON DRIVE

File Name : H1311021
Site Code : 00000000
Start Date : 10/29/2013

	FAIRVIEW ROAD Southbound				ARLINGTON DRIVE Westbound				FAIRVIEW ROAD Northbound				ARLINGTON DRIVE Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	13	227	12	252	72	2	41	115	33	227	9	269	13	2	13	28	664
05:15 PM	25	215	25	265	51	6	34	91	20	237	7	264	9	0	19	28	648
05:30 PM	22	209	12	243	72	6	16	94	26	244	23	293	6	1	17	24	654
05:45 PM	25	219	21	265	55	3	19	77	35	261	22	318	10	0	18	28	688
Total Volume	85	870	70	1025	250	17	110	377	114	969	61	1144	38	3	67	108	2654
% App. Total	8.3	84.9	6.8		66.3	4.5	29.2		10	84.7	5.3		35.2	2.8	62		
PHF	.850	.958	.700	.967	.868	.708	.671	.820	.814	.928	.663	.899	.731	.375	.882	.964	.964



(#14)

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: FAIRVIEW ROAD
E-W Direction: MERRIMAC WAY

File Name : H1311022
Site Code : 00000000
Start Date : 10/29/2013
Page No : 1

Groups Printed- Turning Movements

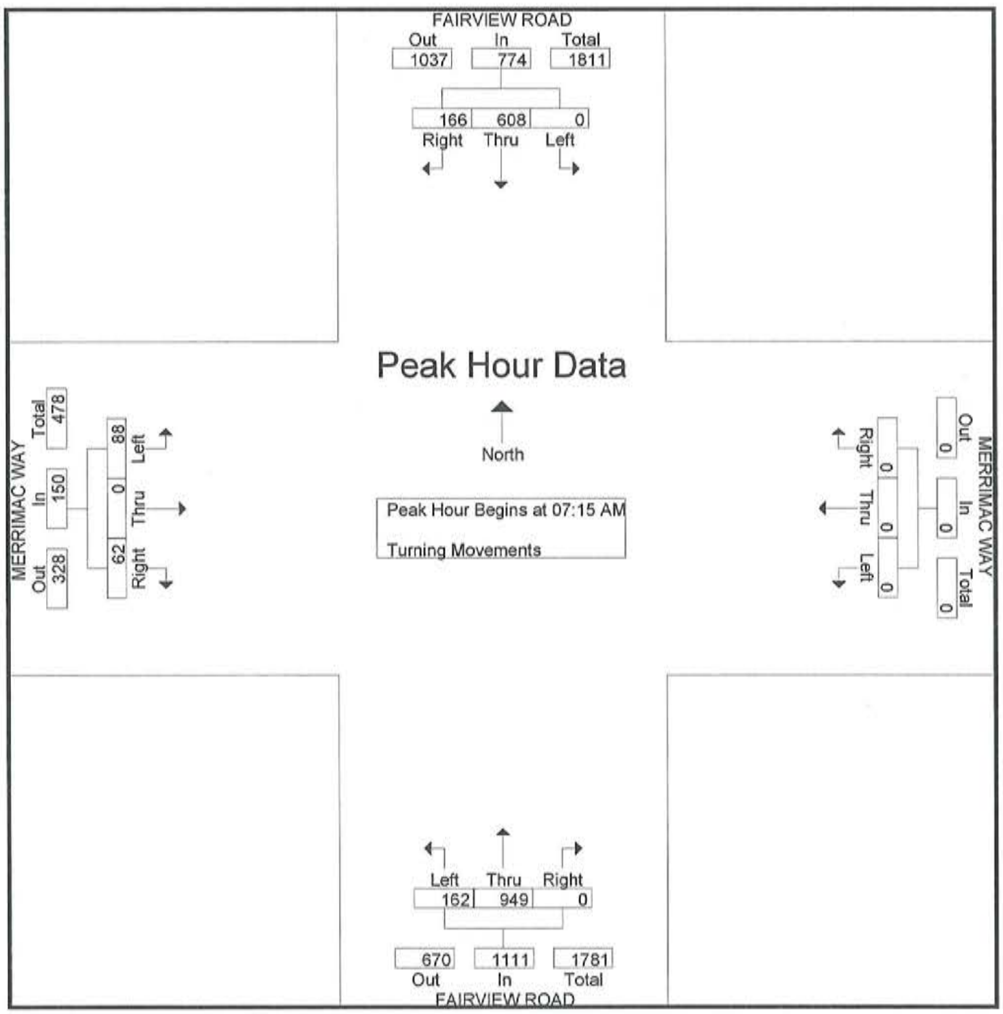
	FAIRVIEW ROAD Southbound			MERRIMAC WAY Westbound			FAIRVIEW ROAD Northbound			MERRIMAC WAY Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00 AM	17	74	0	0	0	0	0	93	15	9	0	6	214
07:15 AM	32	117	0	0	0	0	0	202	15	11	0	12	389
07:30 AM	29	189	0	0	0	0	0	298	28	18	0	27	589
07:45 AM	48	164	0	0	0	0	0	230	70	22	0	19	553
Total	126	544	0	0	0	0	0	823	128	60	0	64	1745
08:00 AM	57	138	0	0	0	0	0	219	49	11	0	30	504
08:15 AM	51	138	0	1	0	0	1	115	32	24	0	7	369
08:30 AM	57	129	0	0	0	0	1	119	51	13	0	5	375
08:45 AM	53	100	0	0	0	0	1	149	72	21	0	14	410
Total	218	505	0	1	0	0	3	602	204	69	0	56	1658
*** BREAK ***													
04:00 PM	40	157	0	0	0	0	2	166	34	41	0	29	469
04:15 PM	49	175	0	0	0	0	0	205	63	25	0	37	554
04:30 PM	40	177	0	0	0	0	0	193	45	31	0	42	528
04:45 PM	44	182	0	0	0	0	1	222	24	25	0	35	533
Total	173	691	0	0	0	0	3	786	166	122	0	143	2084
05:00 PM	75	220	0	0	0	0	1	224	47	28	1	32	628
05:15 PM	66	183	0	0	0	0	0	224	73	28	0	37	611
05:30 PM	60	176	0	0	0	0	1	255	48	22	0	43	605
05:45 PM	53	184	0	0	0	0	1	291	58	27	0	38	652
Total	254	763	0	0	0	0	3	994	226	105	1	150	2496
Grand Total	771	2503	0	1	0	0	9	3205	724	356	1	413	7983
Apprch %	23.5	76.5	0	100	0	0	0.2	81.4	18.4	46.2	0.1	53.6	
Total %	9.7	31.4	0	0	0	0	0.1	40.1	9.1	4.5	0	5.2	

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: FAIRVIEW ROAD
E-W Direction: MERRIMAC WAY

File Name : H1311022
Site Code : 00000000
Start Date : 10/29/2013
Page No : 2

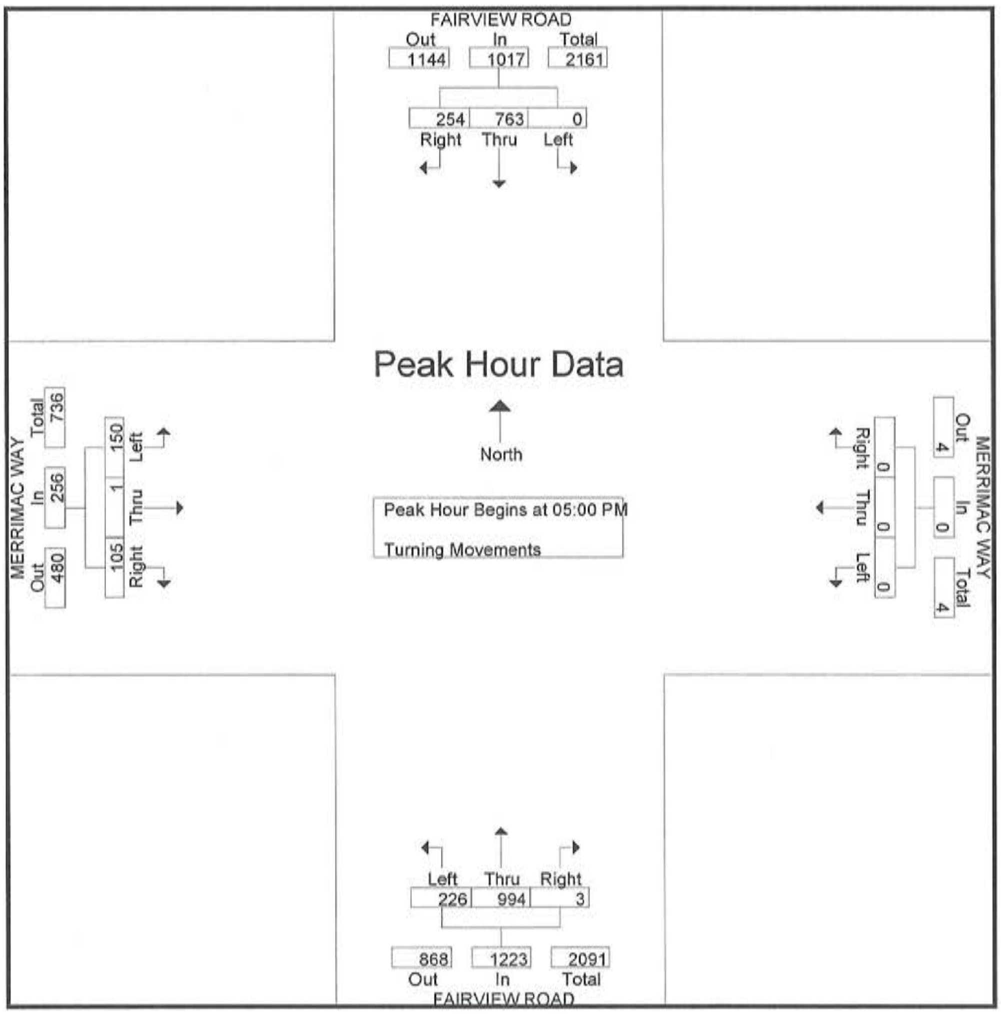
	FAIRVIEW ROAD Southbound				MERRIMAC WAY Westbound				FAIRVIEW ROAD Northbound				MERRIMAC WAY Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	32	117	0	149	0	0	0	0	0	202	15	217	11	0	12	23	389
07:30 AM	29	**189**	0	**218**	0	0	0	0	0	**298**	28	**326**	18	0	27	**45**	**589**
07:45 AM	48	164	0	212	0	0	0	0	0	230	**70**	300	**22**	0	19	41	553
08:00 AM	**57**	138	0	195	0	0	0	0	0	219	49	268	11	0	**30**	41	504
Total Volume	166	608	0	774	0	0	0	0	0	949	162	1111	62	0	88	150	2035
% App. Total	21.4	78.6	0		0	0	0		0	85.4	14.6		41.3	0	58.7		
PHF	.728	.804	.000	.888	.000	.000	.000	.000	.000	.796	.579	.852	.705	.000	.733	.833	.864



City: COSTA MESA
N-S Direction: FAIRVIEW ROAD
E-W Direction: MERRIMAC WAY

File Name : H1311022
Site Code : 00000000
Start Date : 10/29/2013
Page No : 3

	FAIRVIEW ROAD Southbound				MERRIMAC WAY Westbound				FAIRVIEW ROAD Northbound				MERRIMAC WAY Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**75**	**220**	0	**295**	0	0	0	0	**1**	224	47	272	**28**	**1**	32	61	628
05:15 PM	66	183	0	249	0	0	0	0	0	224	**73**	297	28	0	37	**65**	611
05:30 PM	60	176	0	236	0	0	0	0	1	255	48	304	22	0	**43**	65	605
05:45 PM	53	184	0	237	0	0	0	0	1	**291**	58	**350**	27	0	38	65	**652**
Total Volume	254	763	0	1017	0	0	0	0	3	994	226	1223	105	1	150	256	2496
% App. Total	25	75	0		0	0	0		0.2	81.3	18.5		41	0.4	58.6		
PHF	.847	.867	.000	.862	.000	.000	.000	.000	.750	.854	.774	.874	.938	.250	.872	.985	.957



(815)

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: FAIRVIEW ROAD
E-W Direction: FAIR DRIVE

File Name : H1311094
Site Code : 00000554
Start Date : 11/19/2013
Page No : 1

Groups Printed- Turning Movements

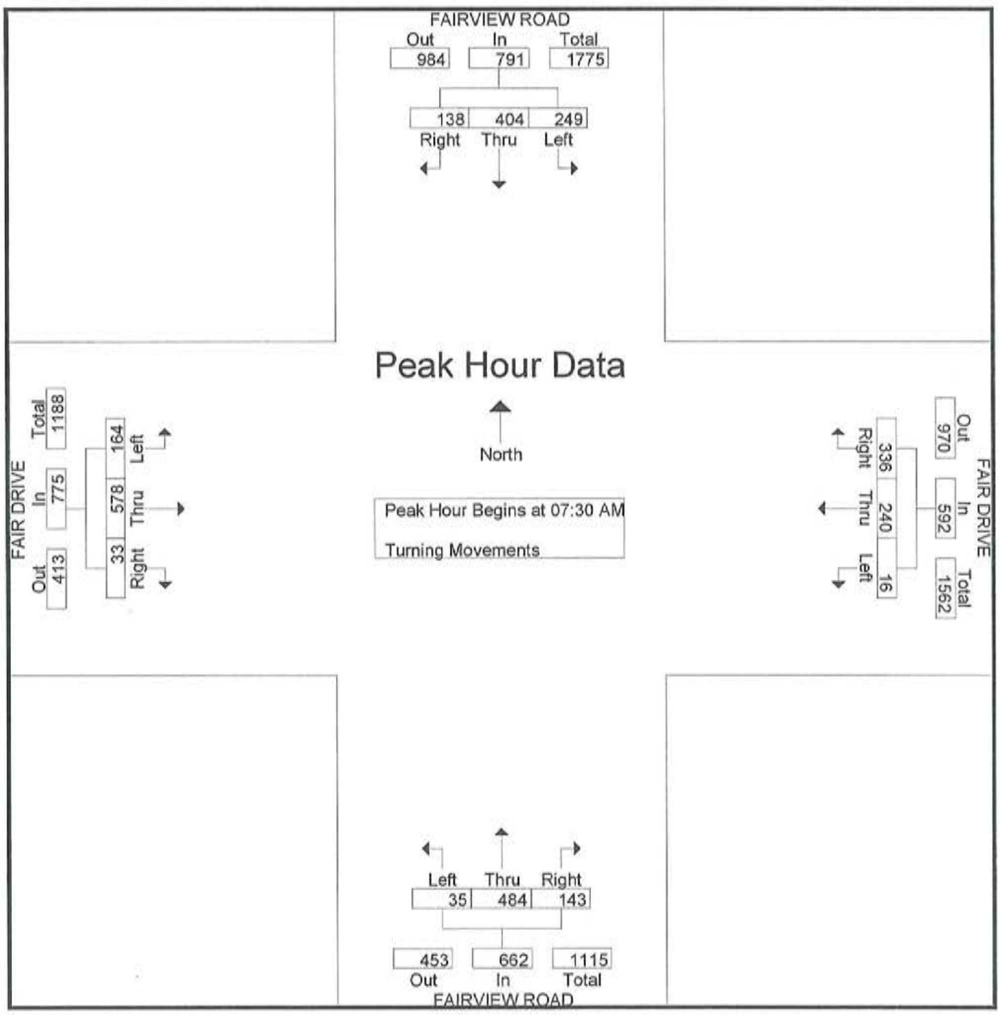
	FAIRVIEW ROAD Southbound			FAIR DRIVE Westbound			FAIRVIEW ROAD Northbound			FAIR DRIVE Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00 AM	13	36	31	35	50	3	25	53	4	1	96	15	362
07:15 AM	19	71	46	55	55	7	19	73	4	5	113	24	491
07:30 AM	42	93	54	71	60	6	36	162	6	6	142	58	736
07:45 AM	42	145	74	97	57	2	49	115	8	6	152	38	785
Total	116	345	205	258	222	18	129	403	22	18	503	135	2374
08:00 AM	29	76	61	116	54	4	31	113	8	10	148	37	687
08:15 AM	25	90	60	52	69	4	27	94	13	11	136	31	612
08:30 AM	20	104	62	70	64	6	22	75	9	9	132	17	590
08:45 AM	14	71	59	89	52	10	27	85	4	10	98	13	532
Total	88	341	242	327	239	24	107	367	34	40	514	98	2421
*** BREAK ***													
04:00 PM	32	106	73	84	129	11	25	95	13	10	56	24	658
04:15 PM	34	106	60	115	123	20	11	108	20	11	64	24	696
04:30 PM	23	117	68	117	146	9	9	110	11	8	62	23	703
04:45 PM	31	139	50	120	160	15	24	92	13	15	63	20	742
Total	120	468	251	436	558	55	69	405	57	44	245	91	2799
05:00 PM	26	126	58	127	191	21	11	101	9	7	76	20	773
05:15 PM	18	120	69	130	213	18	10	121	18	5	65	17	804
05:30 PM	21	104	53	132	211	18	10	123	13	9	58	32	784
05:45 PM	18	120	52	140	224	28	12	130	11	11	79	31	856
Total	83	470	232	529	839	85	43	475	51	32	278	100	3217
Grand Total	407	1624	930	1550	1858	182	348	1650	164	134	1540	424	10811
Apprch %	13.7	54.8	31.4	43.2	51.8	5.1	16.1	76.3	7.6	6.4	73.4	20.2	
Total %	3.8	15	8.6	14.3	17.2	1.7	3.2	15.3	1.5	1.2	14.2	3.9	

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: FAIRVIEW ROAD
E-W Direction: FAIR DRIVE

File Name : H1311094
Site Code : 00000554
Start Date : 11/19/2013
Page No : 2

	FAIRVIEW ROAD Southbound				FAIR DRIVE Westbound				FAIRVIEW ROAD Northbound				FAIR DRIVE Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	**42**	93	54	189	71	60	**6**	137	36	**162**	6	**204**	6	142	**58**	**206**	736
07:45 AM	42	**145**	**74**	**261**	97	57	2	156	**49**	115	8	172	6	**152**	38	196	**785**
08:00 AM	29	76	61	166	**116**	54	4	**174**	31	113	8	152	10	148	37	195	687
08:15 AM	25	90	60	175	52	**69**	4	125	27	94	**13**	134	**11**	136	31	178	612
Total Volume	138	404	249	791	336	240	16	592	143	484	35	662	33	578	164	775	2820
% App. Total	17.4	51.1	31.5		56.8	40.5	2.7		21.6	73.1	5.3		4.3	74.6	21.2		
PHF	.821	.697	.841	.758	.724	.870	.667	.851	.730	.747	.673	.811	.750	.951	.707	.941	.898

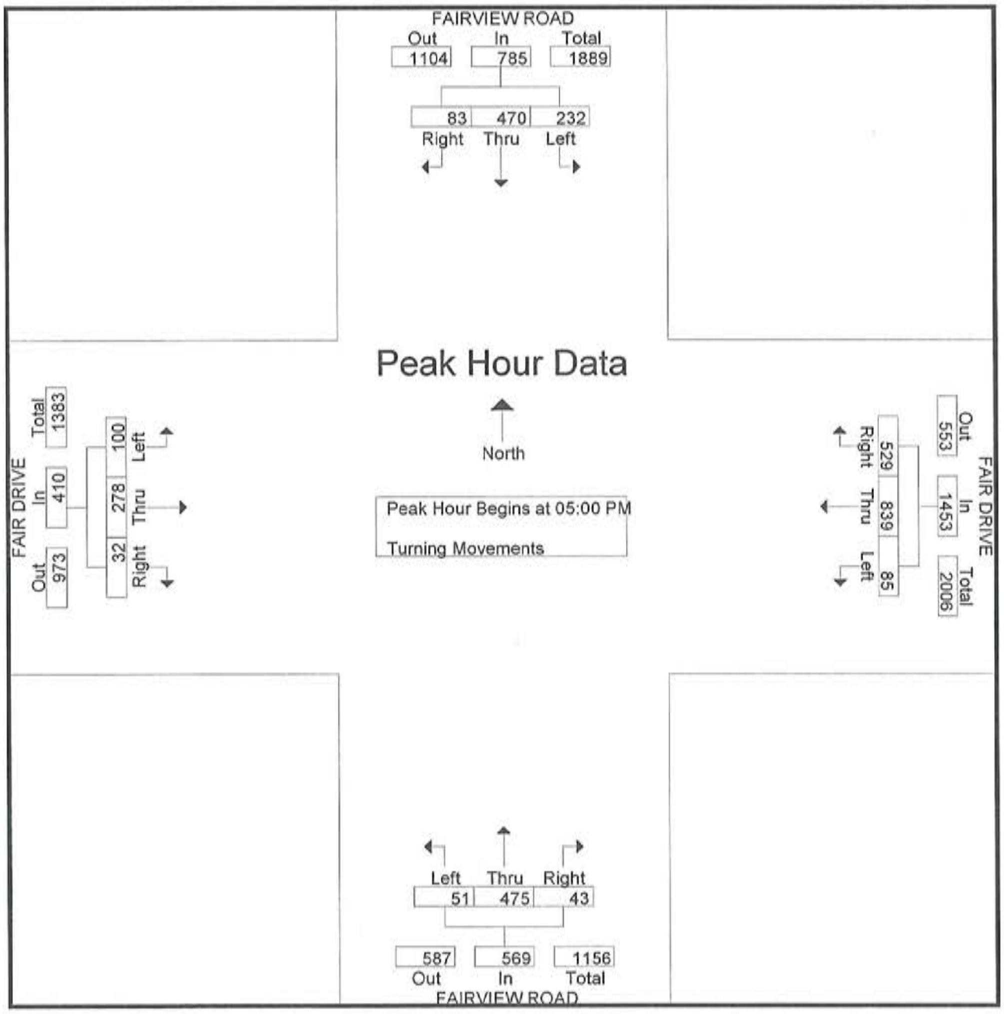


Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: FAIRVIEW ROAD
E-W Direction: FAIR DRIVE

File Name : H1311094
Site Code : 00000554
Start Date : 11/19/2013
Page No : 3

	FAIRVIEW ROAD Southbound				FAIR DRIVE Westbound				FAIRVIEW ROAD Northbound				FAIR DRIVE Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**26**	**126**	58	**210**	127	191	21	339	11	101	9	121	7	76	20	103	773
05:15 PM	18	120	**69**	207	130	213	18	361	10	121	**18**	149	5	65	17	87	804
05:30 PM	21	104	53	178	132	211	18	361	10	123	13	146	9	58	**32**	99	784
05:45 PM	18	120	52	190	**140**	**224**	**28**	**392**	**12**	**130**	11	**153**	**11**	**79**	31	**121**	**856**
Total Volume	83	470	232	785	529	839	85	1453	43	475	51	569	32	278	100	410	3217
% App. Total	10.6	59.9	29.6		36.4	57.7	5.8		7.6	83.5	9		7.8	67.8	24.4		
PHF	.798	.933	.841	.935	.945	.936	.759	.927	.896	.913	.708	.930	.727	.880	.781	.847	.940



#16

City: COSTA MESA
N-S Direction: LOT C
E-W Direction: MERRIMAC WAY

File Name : H1311023
Site Code : 00003873
Start Date : 10/29/2013
Page No : 1

Groups Printed- Turning Movements

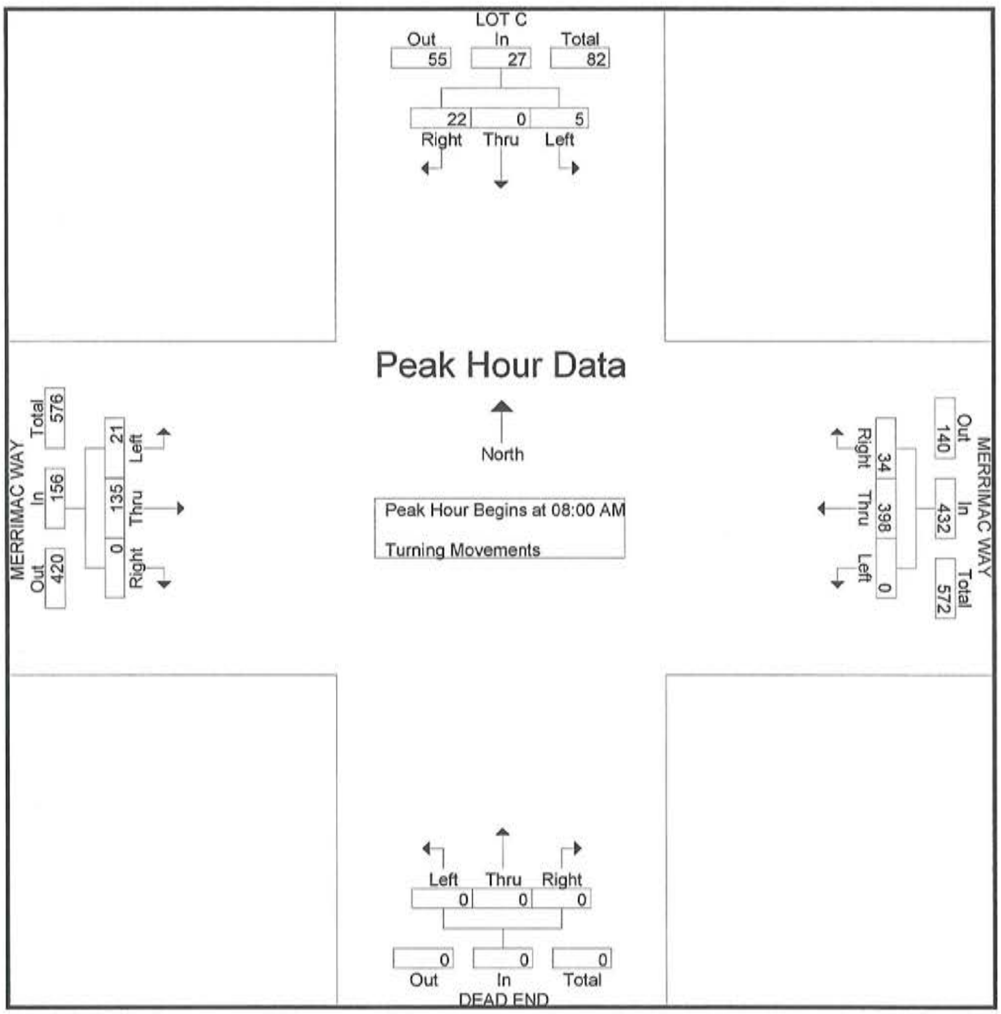
	LOT C Southbound			MERRIMAC WAY Westbound			DEAD END Northbound			MERRIMAC WAY Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00 AM	2	0	1	1	29	0	0	0	0	0	10	1	44
07:15 AM	2	0	0	2	44	0	0	0	0	0	26	3	77
07:30 AM	1	0	1	4	52	0	0	0	0	0	49	6	113
07:45 AM	5	0	0	12	87	0	0	0	0	0	41	10	155
Total	10	0	2	19	212	0	0	0	0	0	126	20	389
08:00 AM	9	0	0	13	107	0	0	0	0	0	45	9	183
08:15 AM	0	0	1	4	79	0	0	0	0	0	33	4	121
08:30 AM	4	0	0	4	112	0	0	0	0	0	24	1	145
08:45 AM	9	0	4	13	100	0	0	0	0	0	33	7	166
Total	22	0	5	34	398	0	0	0	0	0	135	21	615
*** BREAK ***													
04:00 PM	11	0	13	2	61	0	0	0	0	0	74	2	163
04:15 PM	9	0	15	22	67	0	0	0	0	0	63	1	177
04:30 PM	13	0	12	14	69	0	0	0	0	0	64	3	175
04:45 PM	7	0	10	5	63	0	0	0	0	0	59	3	147
Total	40	0	50	43	260	0	0	0	0	0	260	9	662
05:00 PM	14	0	8	9	99	0	0	0	0	0	48	2	180
05:15 PM	16	0	10	10	122	0	0	0	0	0	51	5	214
05:30 PM	12	0	10	9	113	0	0	0	0	0	58	12	214
05:45 PM	15	0	6	13	104	0	0	0	0	0	53	6	197
Total	57	0	34	41	438	0	0	0	0	0	210	25	805
Grand Total	129	0	91	137	1308	0	0	0	0	0	731	75	2471
Apprch %	58.6	0	41.4	9.5	90.5	0	0	0	0	0	90.7	9.3	
Total %	5.2	0	3.7	5.5	52.9	0	0	0	0	0	29.6	3	

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: LOT C
E-W Direction: MERRIMAC WAY

File Name : H1311023
Site Code : 00003873
Start Date : 10/29/2013
Page No : 2

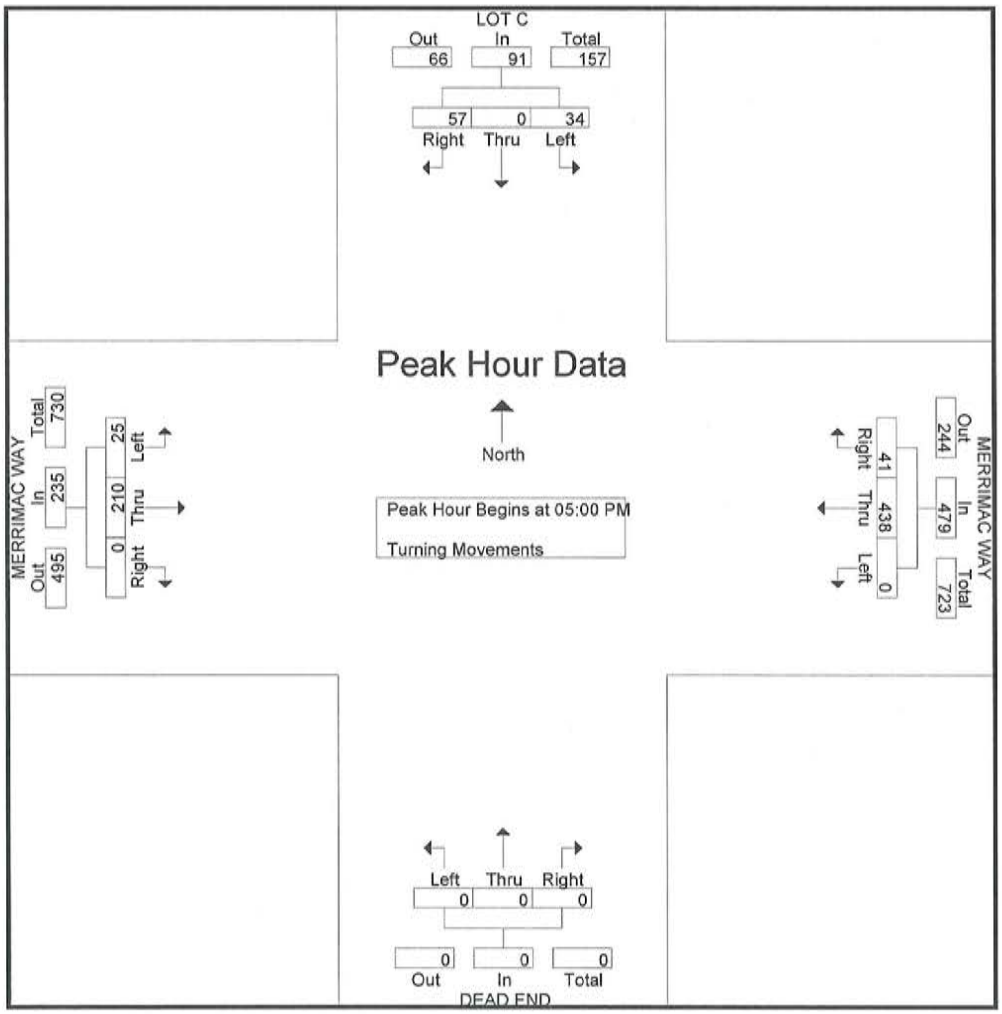
	LOT C Southbound				MERRIMAC WAY Westbound				DEAD END Northbound				MERRIMAC WAY Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	**9**	0	0	9	**13**	107	0	**120**	0	0	0	0	0	**45**	**9**	**54**	**183**
08:15 AM	0	0	1	1	4	79	0	83	0	0	0	0	0	33	4	37	121
08:30 AM	4	0	0	4	4	**112**	0	116	0	0	0	0	0	24	1	25	145
08:45 AM	9	0	**4**	**13**	13	100	0	113	0	0	0	0	0	33	7	40	166
Total Volume	22	0	5	27	34	398	0	432	0	0	0	0	0	135	21	156	615
% App. Total	81.5	0	18.5		7.9	92.1	0		0	0	0		0	86.5	13.5		
PHF	.611	.000	.313	.519	.654	.888	.000	.900	.000	.000	.000	.000	.000	.750	.583	.722	.840



City: COSTA MESA
N-S Direction: LOT C
E-W Direction: MERRIMAC WAY

File Name : H1311023
Site Code : 00003873
Start Date : 10/29/2013
Page No : 3

	LOT C Southbound				MERRIMAC WAY Westbound				DEAD END Northbound				MERRIMAC WAY Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	14	0	8	22	9	99	0	108	0	0	0	0	0	48	2	50	180
05:15 PM	**16**	0	**10**	**26**	10	**122**	0	**132**	0	0	0	0	0	51	5	56	**214**
05:30 PM	12	0	10	22	9	113	0	122	0	0	0	0	0	**58**	**12**	**70**	214
05:45 PM	15	0	6	21	**13**	104	0	117	0	0	0	0	0	53	6	59	197
Total Volume	57	0	34	91	41	438	0	479	0	0	0	0	0	210	25	235	805
% App. Total	62.6	0	37.4		8.6	91.4	0		0	0	0		0	89.4	10.6		
PHF	.891	.000	.850	.875	.788	.898	.000	.907	.000	.000	.000	.000	.000	.905	.521	.839	.940



a-17

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: LOT D
E-W Direction: MERRIMAC WAY

File Name : H1311024
Site Code : 00000571
Start Date : 10/29/2013
Page No : 1

Groups Printed- Turning Movements

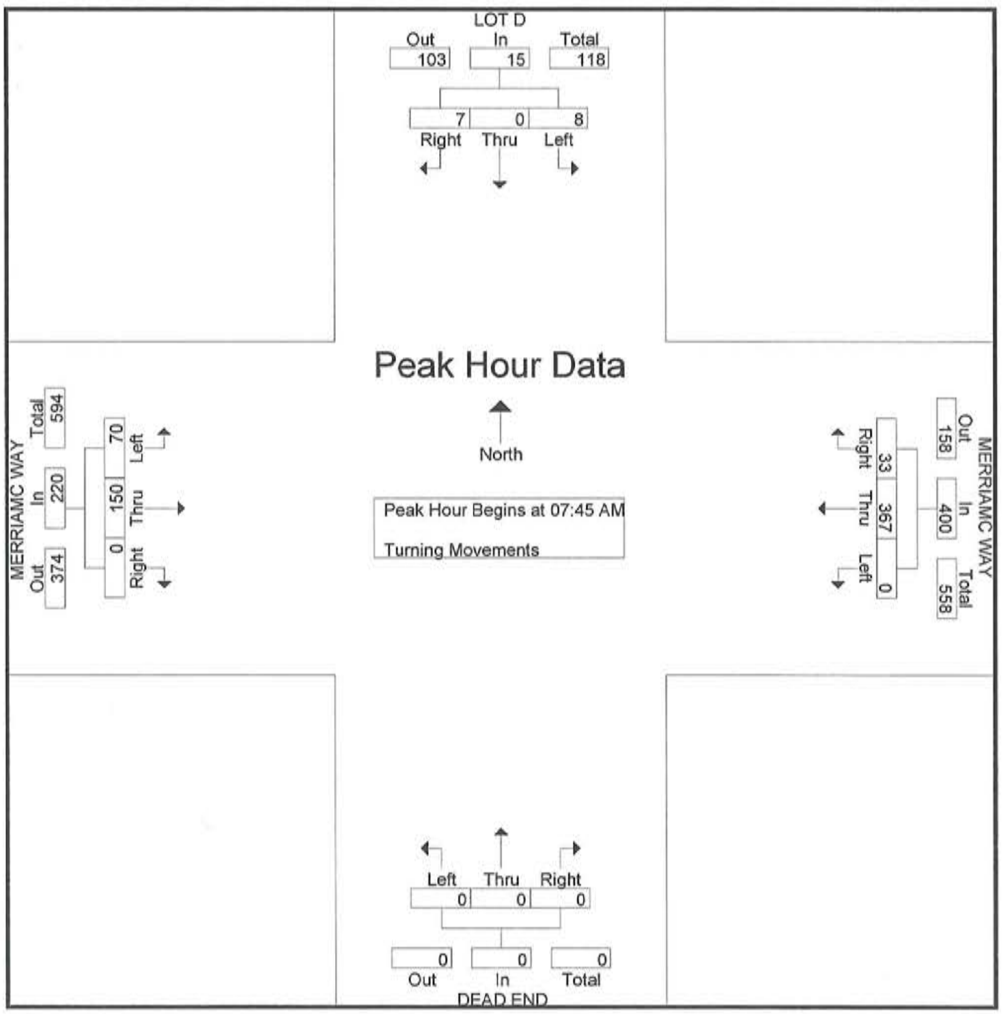
	LOT D Southbound			MERRIAMC WAY Westbound			DEAD END Northbound			MERRIAMC WAY Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00 AM	2	0	0	1	35	0	0	0	0	0	13	5	56
07:15 AM	2	0	1	3	34	0	0	0	0	0	29	4	73
07:30 AM	3	0	3	5	38	0	0	0	0	0	46	10	105
07:45 AM	0	0	3	12	82	0	0	0	0	0	43	24	164
Total	7	0	7	21	189	0	0	0	0	0	131	43	398
08:00 AM	1	0	3	13	109	0	0	0	0	0	47	19	192
08:15 AM	3	0	1	4	75	0	0	0	0	0	44	16	143
08:30 AM	3	0	1	4	101	0	0	0	0	0	16	11	136
08:45 AM	6	0	3	7	96	0	0	0	0	0	31	12	155
Total	13	0	8	28	381	0	0	0	0	0	138	58	626
*** BREAK ***													
04:00 PM	3	0	9	5	71	0	0	0	0	0	71	1	160
04:15 PM	7	0	7	9	63	0	0	0	0	0	51	9	146
04:30 PM	7	0	11	8	74	0	0	0	0	0	50	9	159
04:45 PM	6	0	6	4	62	0	0	0	0	0	51	8	137
Total	23	0	33	26	270	0	0	0	0	0	223	27	602
05:00 PM	5	0	3	7	89	0	0	0	0	0	48	7	159
05:15 PM	8	0	6	8	132	0	0	0	0	0	46	15	215
05:30 PM	7	0	12	5	120	0	0	0	0	0	55	15	214
05:45 PM	6	0	7	12	100	0	0	0	0	0	48	14	187
Total	26	0	28	32	441	0	0	0	0	0	197	51	775
Grand Total	69	0	76	107	1281	0	0	0	0	0	689	179	2401
Apprch %	47.6	0	52.4	7.7	92.3	0	0	0	0	0	79.4	20.6	
Total %	2.9	0	3.2	4.5	53.4	0	0	0	0	0	28.7	7.5	

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: LOT D
E-W Direction: MERRIMAC WAY

File Name : H1311024
Site Code : 00000571
Start Date : 10/29/2013
Page No : 2

	LOT D Southbound				MERRIAMC WAY Westbound				DEAD END Northbound				MERRIAMC WAY Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	0	**3**	3	12	82	0	94	0	0	0	0	0	43	**24**	**67**	164
08:00 AM	1	0	3	**4**	**13**	**109**	0	**122**	0	0	0	0	0	**47**	19	66	**192**
08:15 AM	**3**	0	1	4	4	75	0	79	0	0	0	0	0	44	16	60	143
08:30 AM	3	0	1	4	4	101	0	105	0	0	0	0	0	16	11	27	136
Total Volume	7	0	8	15	33	367	0	400	0	0	0	0	0	150	70	220	635
% App. Total	46.7	0	53.3		8.2	91.8	0		0	0	0		0	68.2	31.8		
PHF	.583	.000	.667	.938	.635	.842	.000	.820	.000	.000	.000	.000	.000	.798	.729	.821	.827

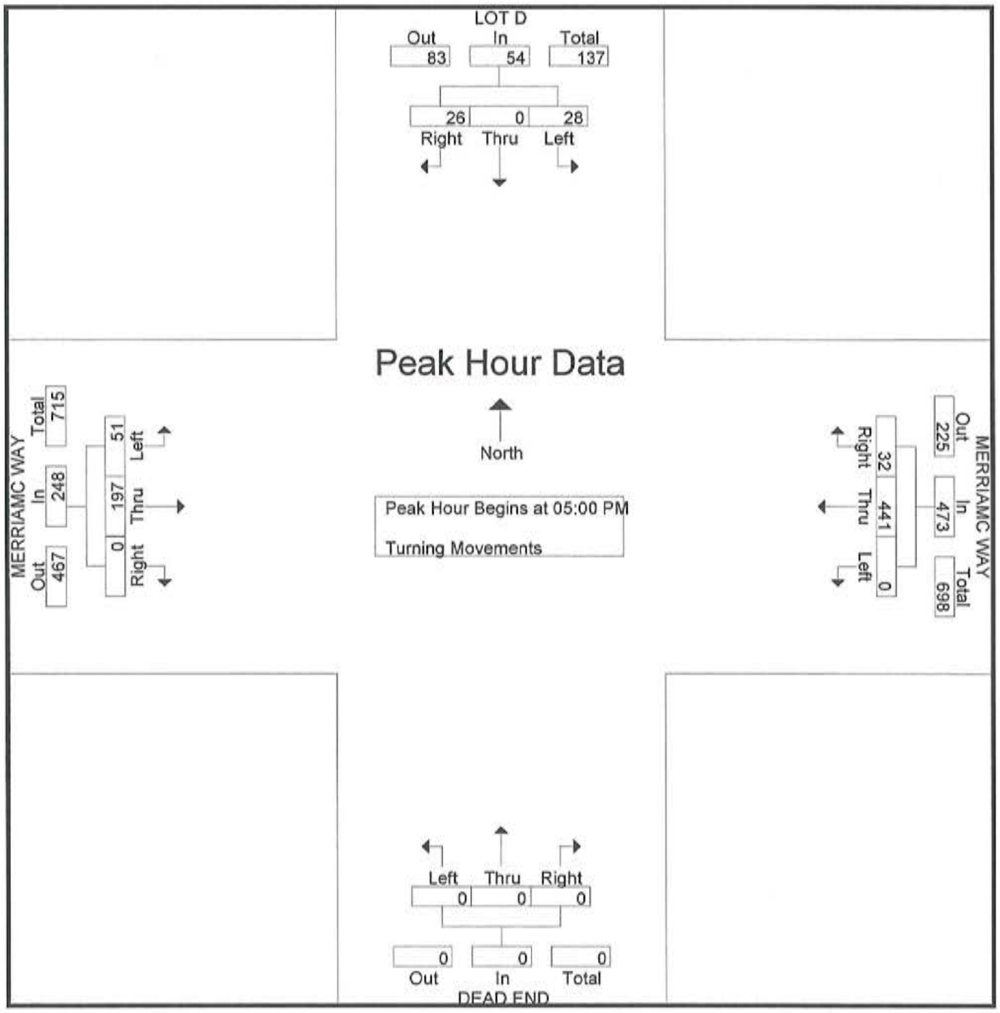


Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: LOT D
E-W Direction: MERRIMAC WAY

File Name : H1311024
Site Code : 00000571
Start Date : 10/29/2013
Page No : 3

	LOT D Southbound				MERRIAMC WAY Westbound				DEAD END Northbound				MERRIAMC WAY Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	5	0	3	8	7	89	0	96	0	0	0	0	0	48	7	55	159
05:15 PM	**8**	0	6	14	8	**132**	0	**140**	0	0	0	0	0	46	**15**	61	**215**
05:30 PM	7	0	**12**	**19**	5	120	0	125	0	0	0	0	0	**55**	15	**70**	214
05:45 PM	6	0	7	13	**12**	100	0	112	0	0	0	0	0	48	14	62	187
Total Volume	26	0	28	54	32	441	0	473	0	0	0	0	0	197	51	248	775
% App. Total	48.1	0	51.9		6.8	93.2	0		0	0	0		0	79.4	20.6		
PHF	.813	.000	.583	.711	.667	.835	.000	.845	.000	.000	.000	.000	.000	.895	.850	.886	.901



Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

#18

City: COSTA MESA
N-S Direction: LOT D
E-W Direction: MERRIMAC WAY

File Name : H1311025
Site Code : 00003872
Start Date : 10/29/2013
Page No : 1

Groups Printed- Turning Movements

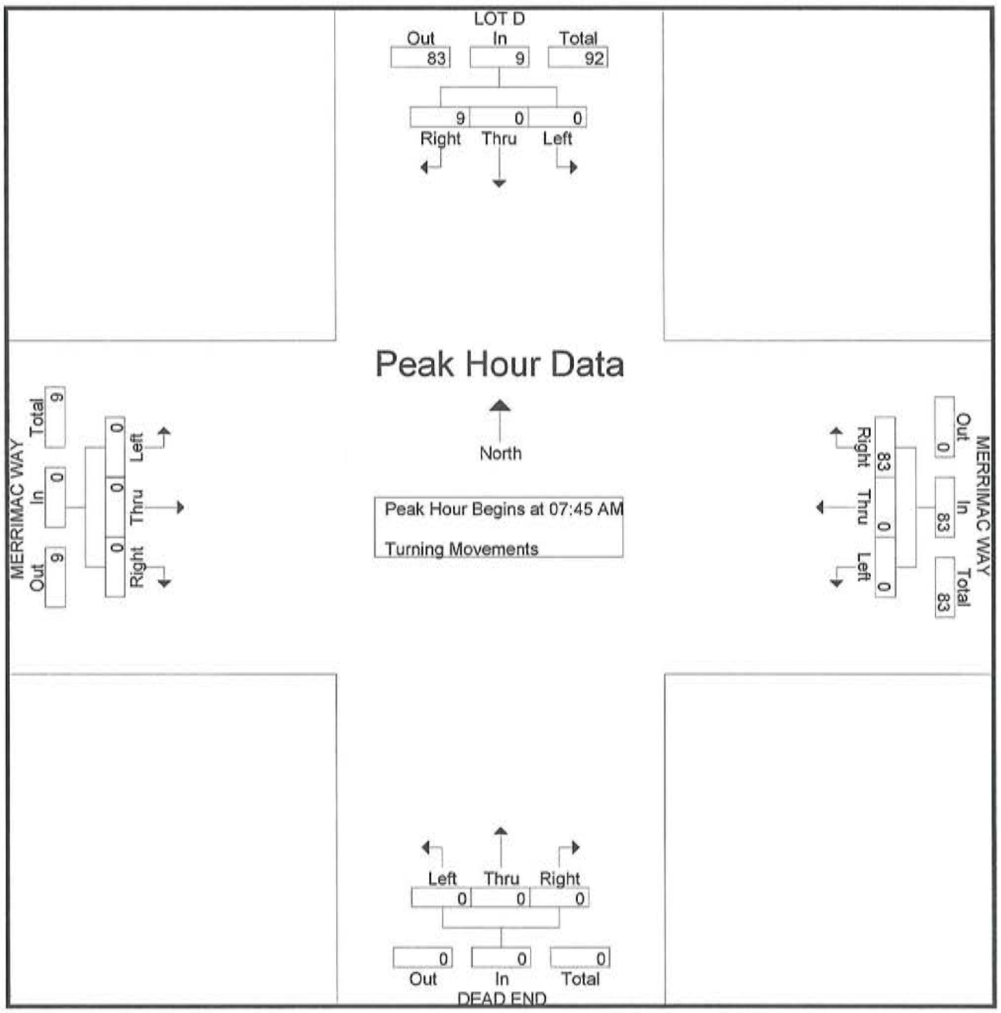
	LOT D Southbound			MERRIMAC WAY Westbound			DEAD END Northbound			MERRIMAC WAY Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00 AM	1	0	0	6	0	0	0	0	0	0	0	0	7
07:15 AM	0	0	0	3	0	0	0	0	0	0	0	0	3
07:30 AM	2	0	0	4	0	0	0	0	0	0	0	0	6
07:45 AM	4	0	0	12	0	0	0	0	0	0	0	0	16
Total	7	0	0	25	0	0	0	0	0	0	0	0	32
08:00 AM	1	0	0	20	0	0	0	0	0	0	0	0	21
08:15 AM	3	0	0	21	0	0	0	0	0	0	0	0	24
08:30 AM	1	0	0	30	0	0	0	0	0	0	0	0	31
08:45 AM	5	0	0	11	0	0	0	0	0	0	0	0	16
Total	10	0	0	82	0	0	0	0	0	0	0	0	92
*** BREAK ***													
04:00 PM	13	0	0	6	0	0	0	0	0	0	0	0	19
04:15 PM	5	0	0	3	0	0	0	0	0	0	0	0	8
04:30 PM	7	0	0	2	0	0	0	0	0	0	0	0	9
04:45 PM	9	0	0	5	0	0	0	0	0	0	0	0	14
Total	34	0	0	16	0	0	0	0	0	0	0	0	50
05:00 PM	11	0	0	12	0	0	0	0	0	0	0	0	23
05:15 PM	11	0	0	16	0	0	0	0	0	0	0	0	27
05:30 PM	8	0	0	12	0	0	0	0	0	0	0	0	20
05:45 PM	8	0	0	17	0	0	0	0	0	0	0	0	25
Total	38	0	0	57	0	0	0	0	0	0	0	0	95
Grand Total	89	0	0	180	0	0	0	0	0	0	0	0	269
Apprch %	100	0	0	100	0	0	0	0	0	0	0	0	
Total %	33.1	0	0	66.9	0	0	0	0	0	0	0	0	

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: LOT D
E-W Direction: MERRIMAC WAY

File Name : H1311025
Site Code : 00003872
Start Date : 10/29/2013
Page No : 2

	LOT D Southbound				MERRIMAC WAY Westbound				DEAD END Northbound				MERRIMAC WAY Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	**4**	0	0	**4**	12	0	0	12	0	0	0	0	0	0	0	0	16
08:00 AM	1	0	0	1	20	0	0	20	0	0	0	0	0	0	0	0	21
08:15 AM	3	0	0	3	21	0	0	21	0	0	0	0	0	0	0	0	24
08:30 AM	1	0	0	1	**30**	0	0	**30**	0	0	0	0	0	0	0	0	**31**
Total Volume	9	0	0	9	83	0	0	83	0	0	0	0	0	0	0	0	92
% App. Total	100	0	0		100	0	0		0	0	0		0	0	0		
PHF	.563	.000	.000	.563	.692	.000	.000	.692	.000	.000	.000	.000	.000	.000	.000	.000	.742

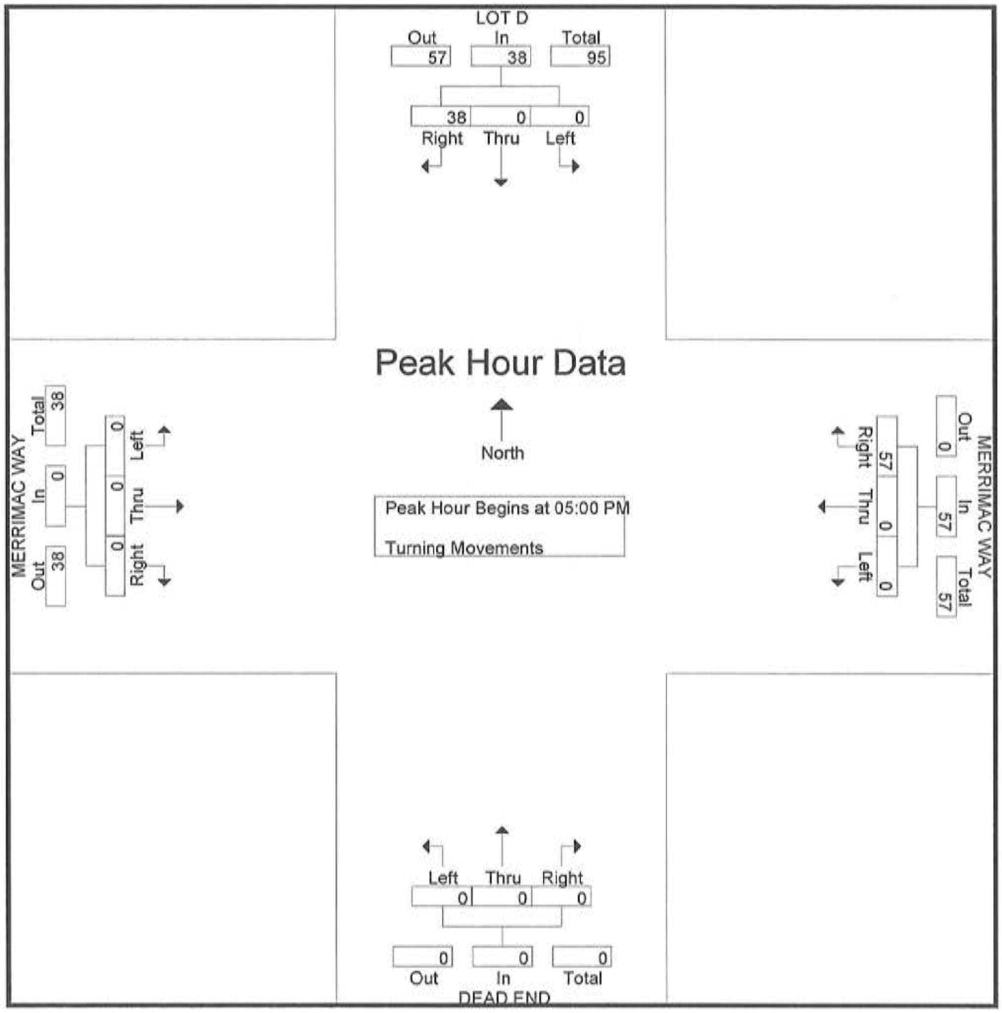


Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: LOT D
E-W Direction: MERRIMAC WAY

File Name : H1311025
Site Code : 00003872
Start Date : 10/29/2013
Page No : 3

	LOT D Southbound				MERRIMAC WAY Westbound				DEAD END Northbound				MERRIMAC WAY Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**11**	0	0	**11**	12	0	0	12	0	0	0	0	0	0	0	0	23
05:15 PM	11	0	0	11	16	0	0	16	0	0	0	0	0	0	0	0	**27**
05:30 PM	8	0	0	8	12	0	0	12	0	0	0	0	0	0	0	0	20
05:45 PM	8	0	0	8	**17**	0	0	**17**	0	0	0	0	0	0	0	0	25
Total Volume	38	0	0	38	57	0	0	57	0	0	0	0	0	0	0	0	95
% App. Total	100	0	0		100	0	0		0	0	0		0	0	0		
PHF	.864	.000	.000	.864	.838	.000	.000	.838	.000	.000	.000	.000	.000	.000	.000	.000	.880



(#19)

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: LOT D
E-W Direction: MERRIMAC WAY

File Name : H1311026
Site Code : 00003872
Start Date : 10/29/2013
Page No : 1

Groups Printed- Turning Movements

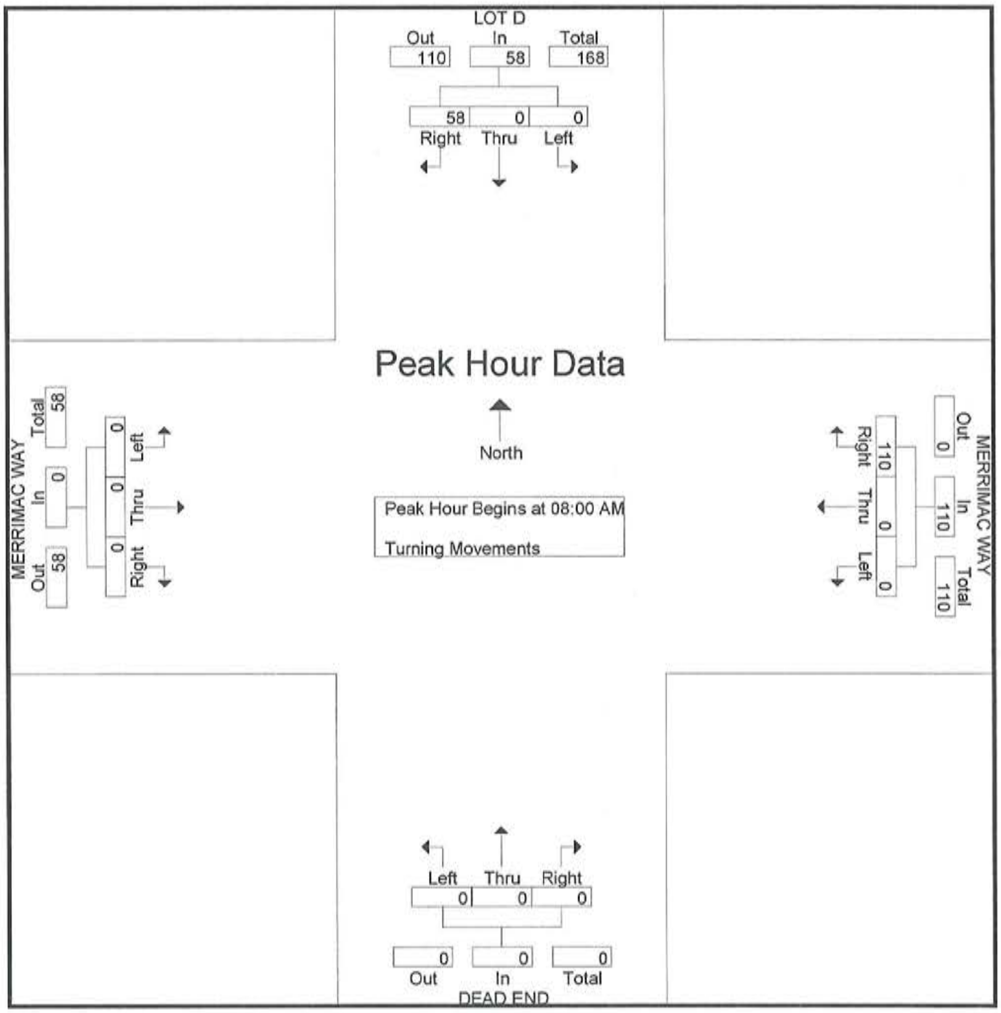
	LOT D Southbound			MERRIMAC WAY Westbound			DEAD END Northbound			MERRIMAC WAY Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	2	0	0	0	0	0	0	0	0	2
07:30 AM	3	0	0	26	0	0	0	0	0	0	0	0	29
07:45 AM	6	0	0	29	0	0	0	0	0	0	0	0	35
Total	9	0	0	58	0	0	0	0	0	0	0	0	67
08:00 AM	9	0	0	27	0	0	0	0	0	0	0	0	36
08:15 AM	12	0	0	22	0	0	0	0	0	0	0	0	34
08:30 AM	16	0	0	44	0	0	0	0	0	0	0	0	60
08:45 AM	21	0	0	17	0	0	0	0	0	0	0	0	38
Total	58	0	0	110	0	0	0	0	0	0	0	0	168
*** BREAK ***													
04:00 PM	15	0	0	8	0	0	0	0	0	0	0	0	23
04:15 PM	16	0	0	12	0	0	0	0	0	0	0	0	28
04:30 PM	15	0	0	8	0	0	0	0	0	0	0	0	23
04:45 PM	15	0	0	18	0	0	0	0	0	0	0	0	33
Total	61	0	0	46	0	0	0	0	0	0	0	0	107
05:00 PM	13	0	0	8	0	0	0	0	0	0	0	0	21
05:15 PM	13	0	0	5	0	0	0	0	0	0	0	0	18
05:30 PM	11	0	0	14	0	0	0	0	0	0	0	0	25
05:45 PM	10	0	0	6	0	0	0	0	0	0	0	0	16
Total	47	0	0	33	0	0	0	0	0	0	0	0	80
Grand Total	175	0	0	247	0	0	0	0	0	0	0	0	422
Apprch %	100	0	0	100	0	0	0	0	0	0	0	0	
Total %	41.5	0	0	58.5	0	0	0	0	0	0	0	0	

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: LOT D
E-W Direction: MERRIMAC WAY

File Name : H1311026
Site Code : 00003872
Start Date : 10/29/2013
Page No : 2

	LOT D Southbound				MERRIMAC WAY Westbound				DEAD END Northbound				MERRIMAC WAY Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	9	0	0	9	27	0	0	27	0	0	0	0	0	0	0	0	36
08:15 AM	12	0	0	12	22	0	0	22	0	0	0	0	0	0	0	0	34
08:30 AM	16	0	0	16	**44**	0	0	**44**	0	0	0	0	0	0	0	0	**60**
08:45 AM	**21**	0	0	**21**	17	0	0	17	0	0	0	0	0	0	0	0	38
Total Volume	58	0	0	58	110	0	0	110	0	0	0	0	0	0	0	0	168
% App. Total	100	0	0		100	0	0		0	0	0		0	0	0		
PHF	.690	.000	.000	.690	.625	.000	.000	.625	.000	.000	.000	.000	.000	.000	.000	.000	.700

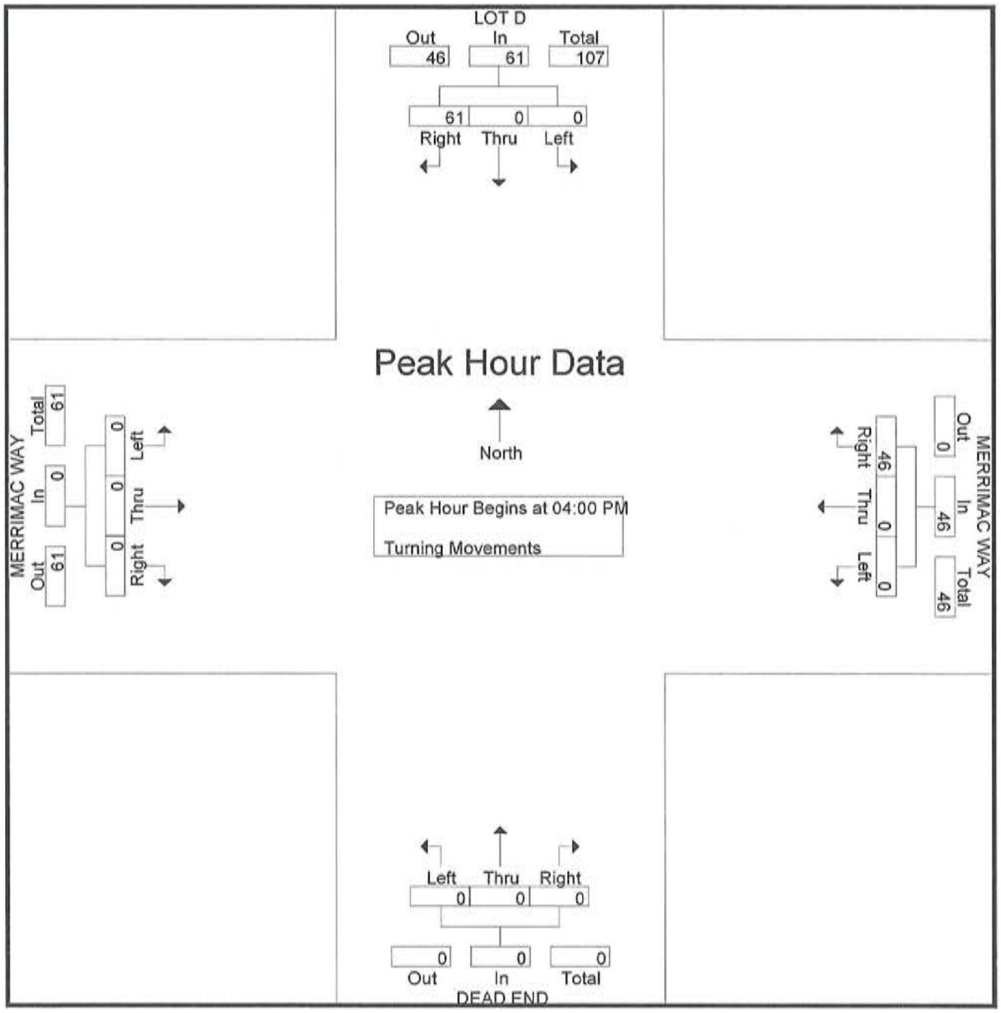


Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: LOT D
E-W Direction: MERRIMAC WAY

File Name : H1311026
Site Code : 00003872
Start Date : 10/29/2013
Page No : 3

	LOT D Southbound				MERRIMAC WAY Westbound				DEAD END Northbound				MERRIMAC WAY Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	15	0	0	15	8	0	0	8	0	0	0	0	0	0	0	0	23
04:15 PM	**16**	0	0	**16**	12	0	0	12	0	0	0	0	0	0	0	0	28
04:30 PM	15	0	0	15	8	0	0	8	0	0	0	0	0	0	0	0	23
04:45 PM	15	0	0	15	**18**	0	0	**18**	0	0	0	0	0	0	0	0	**33**
Total Volume	61	0	0	61	46	0	0	46	0	0	0	0	0	0	0	0	107
% App. Total	100	0	0		100	0	0		0	0	0		0	0	0		
PHF	.953	.000	.000	.953	.639	.000	.000	.639	.000	.000	.000	.000	.000	.000	.000	.000	.811



#20

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: LOT E
E-W Direction: MERRIMAC WAY

File Name : H1311027
Site Code : 00000571
Start Date : 10/29/2013
Page No : 1

Groups Printed- Turning Movements

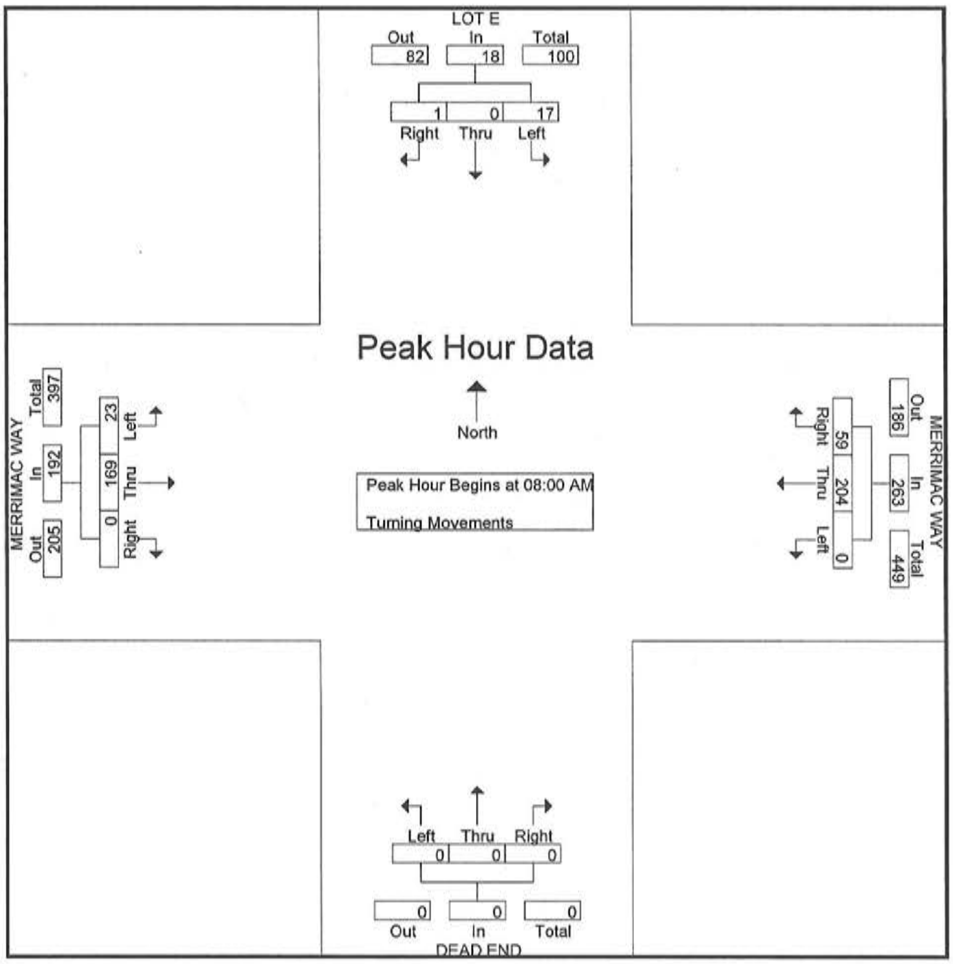
	LOT E Southbound			MERRIMAC WAY Westbound			DEAD END Northbound			MERRIMAC WAY Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00 AM	0	0	1	3	19	0	0	0	0	0	20	4	47
07:15 AM	0	0	1	6	22	0	0	0	0	0	37	1	67
07:30 AM	0	0	0	7	26	0	0	0	0	0	55	2	90
07:45 AM	1	0	1	15	22	0	0	0	0	0	51	2	92
Total	1	0	3	31	89	0	0	0	0	0	163	9	296
08:00 AM	0	0	4	20	53	0	0	0	0	0	52	6	135
08:15 AM	0	0	3	10	46	0	0	0	0	0	41	4	104
08:30 AM	0	0	2	10	51	0	0	0	0	0	42	3	108
08:45 AM	1	0	8	19	54	0	0	0	0	0	34	10	126
Total	1	0	17	59	204	0	0	0	0	0	169	23	473
*** BREAK ***													
04:00 PM	3	0	7	0	62	0	0	0	0	0	51	0	123
04:15 PM	2	0	1	2	79	0	0	0	0	0	52	0	136
04:30 PM	0	0	5	2	80	0	0	0	0	0	59	0	146
04:45 PM	0	0	3	1	87	0	0	0	0	0	59	1	151
Total	5	0	16	5	308	0	0	0	0	0	221	1	556
05:00 PM	1	0	4	1	123	0	0	0	0	0	55	0	184
05:15 PM	0	0	2	0	120	0	0	0	0	0	57	0	179
05:30 PM	0	0	5	1	109	0	0	0	0	0	63	0	178
05:45 PM	0	0	0	1	102	0	0	0	0	0	60	0	163
Total	1	0	11	3	454	0	0	0	0	0	235	0	704
Grand Total	8	0	47	98	1055	0	0	0	0	0	788	33	2029
Apprch %	14.5	0	85.5	8.5	91.5	0	0	0	0	0	96	4	
Total %	0.4	0	2.3	4.8	52	0	0	0	0	0	38.8	1.6	

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: LOT E
E-W Direction: MERRIMAC WAY

File Name : H1311027
Site Code : 00000571
Start Date : 10/29/2013
Page No : 2

	LOT E Southbound				MERRIMAC WAY Westbound				DEAD END Northbound				MERRIMAC WAY Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	0	0	4	4	**20**	53	0	73	0	0	0	0	0	**52**	6	**58**	**135**
08:15 AM	0	0	3	3	10	46	0	56	0	0	0	0	0	41	4	45	104
08:30 AM	0	0	2	2	10	51	0	61	0	0	0	0	0	42	3	45	108
08:45 AM	**1**	0	**8**	**9**	19	**54**	0	73	0	0	0	0	0	34	**10**	44	126
Total Volume	1	0	17	18	59	204	0	263	0	0	0	0	0	169	23	192	473
% App. Total	5.6	0	94.4		22.4	77.6	0		0	0	0		0	88	12		
PHF	.250	.000	.531	.500	.738	.944	.000	.901	.000	.000	.000	.000	.000	.813	.575	.828	.876

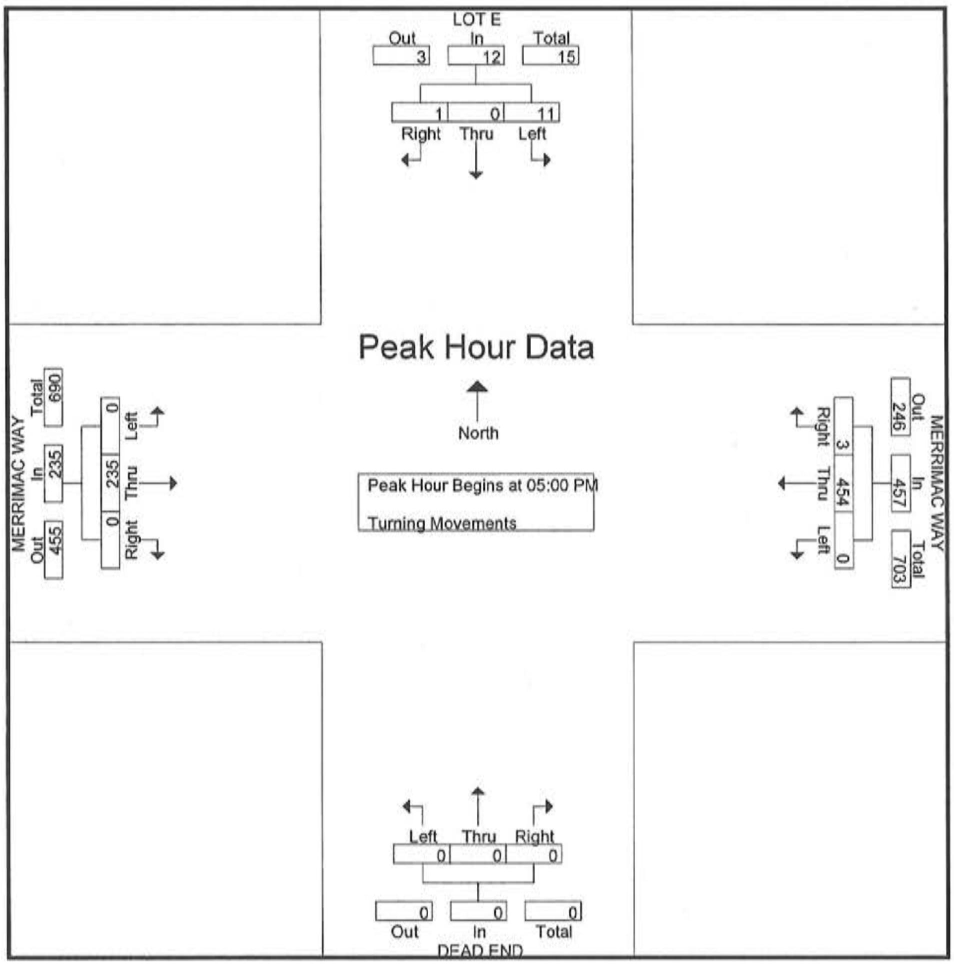


Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: LOT E
E-W Direction: MERRIMAC WAY

File Name : H1311027
Site Code : 00000571
Start Date : 10/29/2013
Page No : 3

	LOT E Southbound				MERRIMAC WAY Westbound				DEAD END Northbound				MERRIMAC WAY Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**1**	0	4	**5**	**1**	**123**	0	**124**	0	0	0	0	0	55	0	55	**184**
05:15 PM	0	0	2	2	0	120	0	120	0	0	0	0	0	57	0	57	179
05:30 PM	0	0	**5**	5	1	109	0	110	0	0	0	0	0	**63**	0	**63**	178
05:45 PM	0	0	0	0	1	102	0	103	0	0	0	0	0	60	0	60	163
Total Volume	1	0	11	12	3	454	0	457	0	0	0	0	0	235	0	235	704
% App. Total	8.3	0	91.7		0.7	99.3	0		0	0	0		0	100	0		
PHF	.250	.000	.550	.600	.750	.923	.000	.921	.000	.000	.000	.000	.000	.933	.000	.933	.957



#21

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: LOT E
E-W Direction: MERRIMAC WAY

File Name : H1311028
Site Code : 00005724
Start Date : 10/29/2013
Page No : 1

Groups Printed- Turning Movements

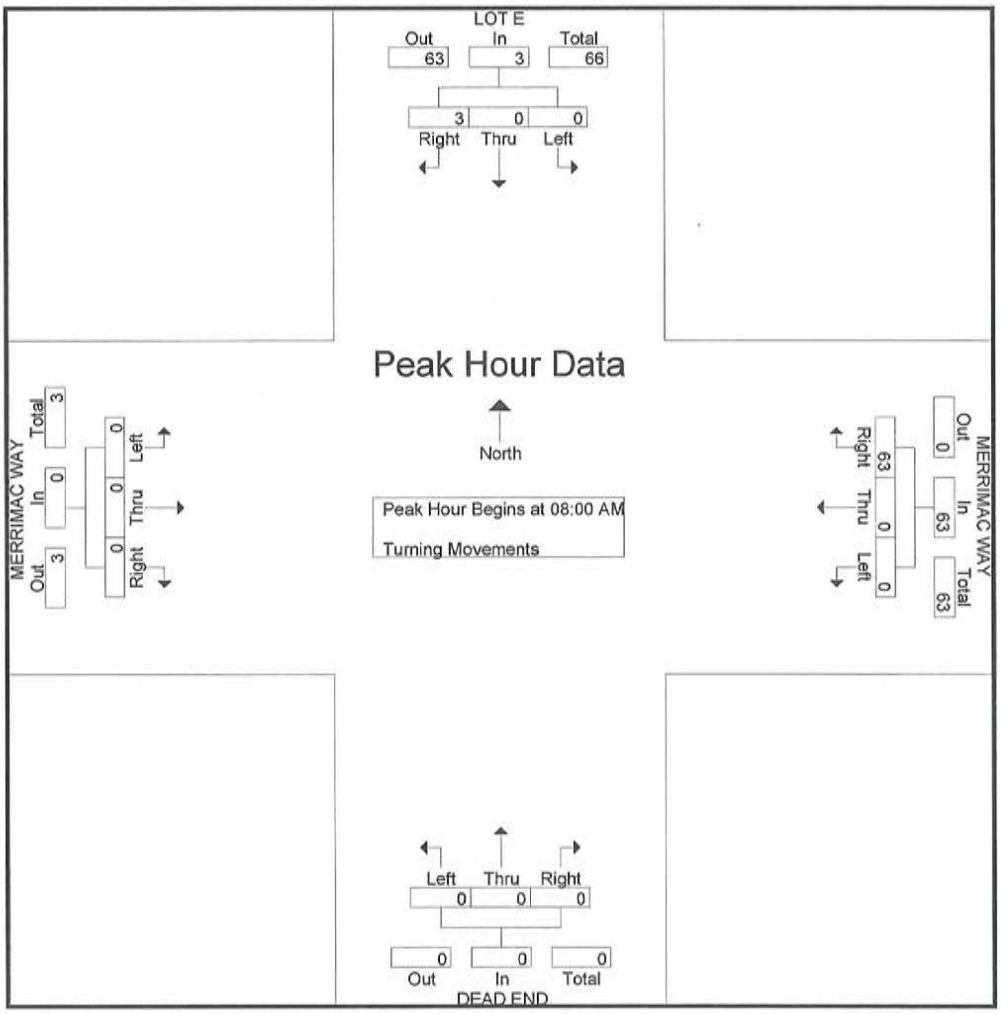
	LOT E Southbound			MERRIMAC WAY Westbound			DEAD END Northbound			MERRIMAC WAY Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00 AM	0	0	0	5	0	0	0	0	0	0	0	0	5
07:15 AM	0	0	0	10	0	0	0	0	0	0	0	0	10
07:30 AM	0	0	0	5	0	0	0	0	0	0	0	0	5
07:45 AM	0	0	0	10	0	0	0	0	0	0	0	0	10
Total	0	0	0	30	0	0	0	0	0	0	0	0	30
08:00 AM	1	0	0	22	0	0	0	0	0	0	0	0	23
08:15 AM	0	0	0	10	0	0	0	0	0	0	0	0	10
08:30 AM	1	0	0	13	0	0	0	0	0	0	0	0	14
08:45 AM	1	0	0	18	0	0	0	0	0	0	0	0	19
Total	3	0	0	63	0	0	0	0	0	0	0	0	66
*** BREAK ***													
04:00 PM	3	0	0	5	0	0	0	0	0	0	0	0	8
04:15 PM	3	0	0	2	0	0	0	0	0	0	0	0	5
04:30 PM	4	0	0	5	0	0	0	0	0	0	0	0	9
04:45 PM	6	0	0	3	0	0	0	0	0	0	0	0	9
Total	16	0	0	15	0	0	0	0	0	0	0	0	31
05:00 PM	3	0	0	5	0	0	0	0	0	0	0	0	8
05:15 PM	5	0	0	12	0	0	0	0	0	0	0	0	17
05:30 PM	5	0	0	10	0	0	0	0	0	0	0	0	15
05:45 PM	4	0	0	17	0	0	0	0	0	0	0	0	21
Total	17	0	0	44	0	0	0	0	0	0	0	0	61
Grand Total	36	0	0	152	0	0	0	0	0	0	0	0	188
Apprch %	100	0	0	100	0	0	0	0	0	0	0	0	
Total %	19.1	0	0	80.9	0	0	0	0	0	0	0	0	

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: LOT E
E-W Direction: MERRIMAC WAY

File Name : H1311028
Site Code : 00005724
Start Date : 10/29/2013
Page No : 2

	LOT E Southbound				MERRIMAC WAY Westbound				DEAD END Northbound				MERRIMAC WAY Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	**1**	0	0	**1**	**22**	0	0	**22**	0	0	0	0	0	0	0	0	**23**
08:15 AM	0	0	0	0	10	0	0	10	0	0	0	0	0	0	0	0	10
08:30 AM	1	0	0	1	13	0	0	13	0	0	0	0	0	0	0	0	14
08:45 AM	1	0	0	1	18	0	0	18	0	0	0	0	0	0	0	0	19
Total Volume	3	0	0	3	63	0	0	63	0	0	0	0	0	0	0	0	66
% App. Total	100	0	0		100	0	0		0	0	0		0	0	0		
PHF	.750	.000	.000	.750	.716	.000	.000	.716	.000	.000	.000	.000	.000	.000	.000	.000	.717

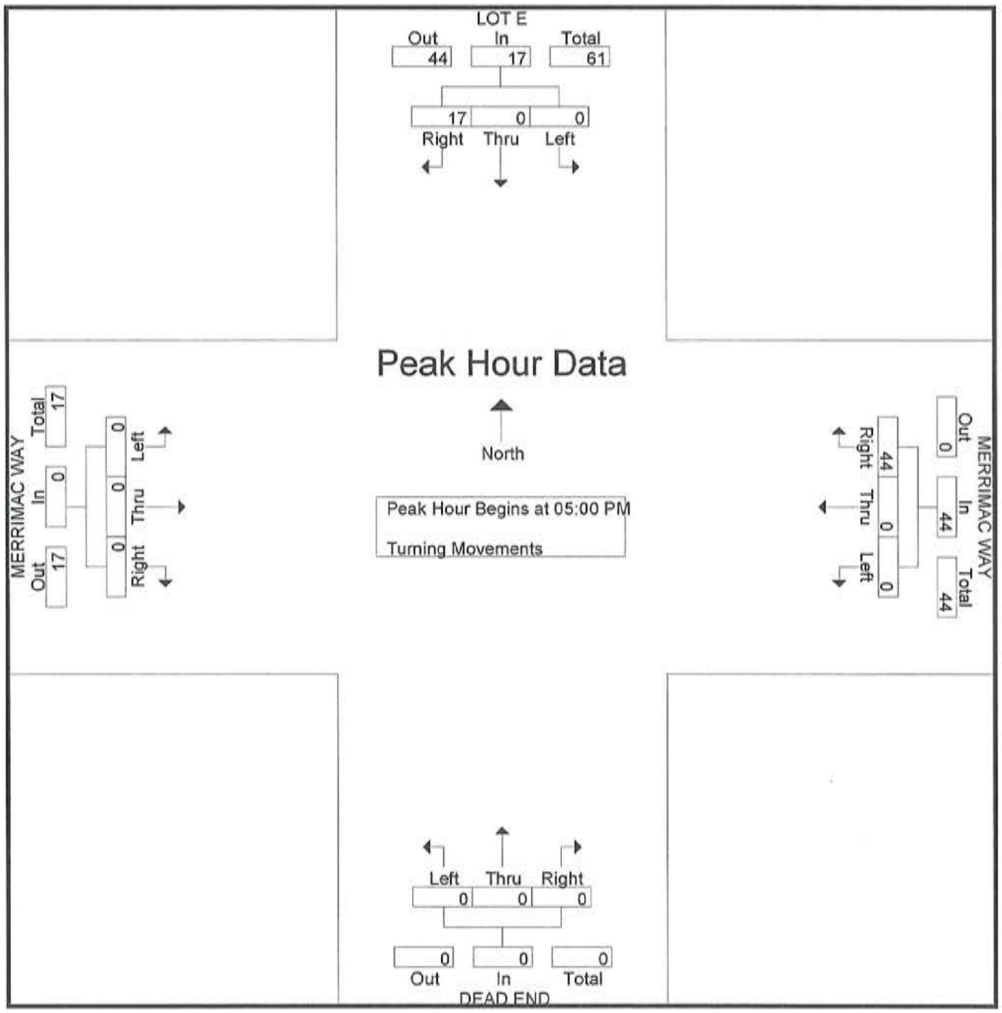


Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: LOT E
E-W Direction: MERRIMAC WAY

File Name : H1311028
Site Code : 00005724
Start Date : 10/29/2013
Page No : 3

	LOT E Southbound				MERRIMAC WAY Westbound				DEAD END Northbound				MERRIMAC WAY Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	3	0	0	3	5	0	0	5	0	0	0	0	0	0	0	0	8
05:15 PM	**5**	0	0	**5**	12	0	0	12	0	0	0	0	0	0	0	0	17
05:30 PM	5	0	0	5	10	0	0	10	0	0	0	0	0	0	0	0	15
05:45 PM	4	0	0	4	**17**	0	0	**17**	0	0	0	0	0	0	0	0	**21**
Total Volume	17	0	0	17	44	0	0	44	0	0	0	0	0	0	0	0	61
% App. Total	100	0	0		100	0	0		0	0	0		0	0	0		
PHF	.850	.000	.000	.850	.647	.000	.000	.647	.000	.000	.000	.000	.000	.000	.000	.000	.726



#22

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: LOT E
E-W Direction: MERRIMAC WAY

File Name : H1311029
Site Code : 00000571
Start Date : 10/29/2013
Page No : 1

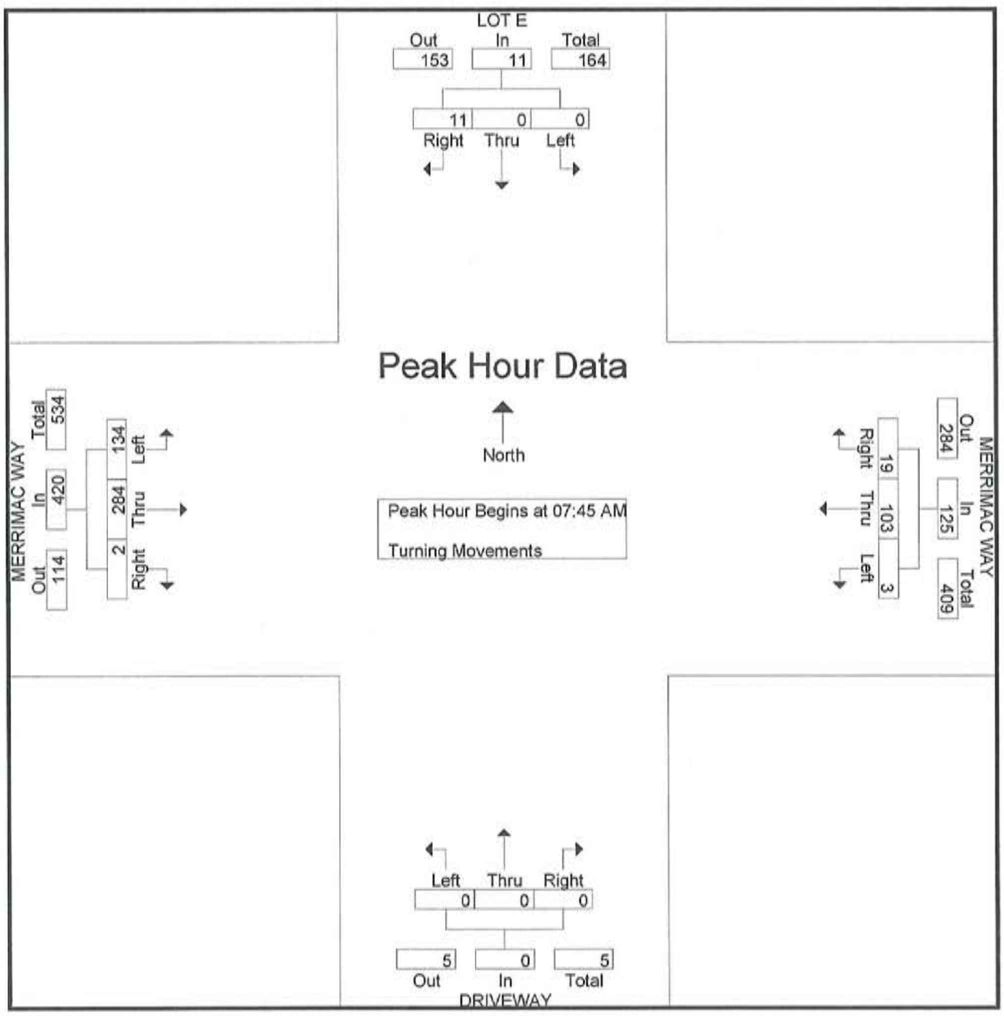
Groups Printed- Turning Movements

	LOT E Southbound			MERRIMAC WAY Westbound			DRIVEWAY Northbound			MERRIMAC WAY Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00 AM	0	0	0	3	9	0	0	0	0	0	15	11	38
07:15 AM	0	0	1	3	12	0	0	0	0	0	31	19	66
07:30 AM	1	0	1	2	15	1	0	0	0	0	54	22	96
07:45 AM	4	0	0	3	24	1	0	0	0	0	90	47	169
Total	5	0	2	11	60	2	0	0	0	0	190	99	369
08:00 AM	4	0	0	4	22	1	0	0	0	0	79	36	146
08:15 AM	1	0	0	8	27	0	0	0	0	0	62	26	124
08:30 AM	2	0	0	4	30	1	0	0	0	2	53	25	117
08:45 AM	2	0	0	5	36	1	0	0	0	0	48	24	116
Total	9	0	0	21	115	3	0	0	0	2	242	111	503
*** BREAK ***													
04:00 PM	18	0	6	2	64	0	0	0	0	0	19	9	118
04:15 PM	9	0	4	2	57	0	0	0	0	0	29	8	109
04:30 PM	20	0	6	2	55	1	0	0	0	0	31	14	129
04:45 PM	9	0	7	4	60	1	0	0	0	0	21	13	115
Total	56	0	23	10	236	2	0	0	0	0	100	44	471
05:00 PM	12	0	8	10	77	1	0	0	0	0	42	17	167
05:15 PM	5	0	4	9	82	1	0	0	1	0	33	24	159
05:30 PM	17	0	3	5	96	1	0	0	0	0	38	17	177
05:45 PM	3	0	4	7	73	1	0	0	0	0	41	22	151
Total	37	0	19	31	328	4	0	0	1	0	154	80	654
Grand Total	107	0	44	73	739	11	0	0	1	2	686	334	1997
Apprch %	70.9	0	29.1	8.9	89.8	1.3	0	0	100	0.2	67.1	32.7	
Total %	5.4	0	2.2	3.7	37	0.6	0	0	0.1	0.1	34.4	16.7	

City: COSTA MESA
N-S Direction: LOT E
E-W Direction: MERRIMAC WAY

File Name : H1311029
Site Code : 00000571
Start Date : 10/29/2013
Page No : 2

	LOT E Southbound				MERRIMAC WAY Westbound				DRIVEWAY Northbound				MERRIMAC WAY Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	**4**	0	0	**4**	3	24	**1**	28	0	0	0	0	0	**90**	**47**	**137**	**169**
08:00 AM	4	0	0	4	4	22	1	27	0	0	0	0	0	79	36	115	146
08:15 AM	1	0	0	1	**8**	27	0	**35**	0	0	0	0	0	62	26	88	124
08:30 AM	2	0	0	2	4	**30**	1	35	0	0	0	0	**2**	53	25	80	117
Total Volume	11	0	0	11	19	103	3	125	0	0	0	0	2	284	134	420	556
% App. Total	100	0	0		15.2	82.4	2.4		0	0	0		0.5	67.6	31.9		
PHF	.688	.000	.000	.688	.594	.858	.750	.893	.000	.000	.000	.000	.250	.789	.713	.766	.822

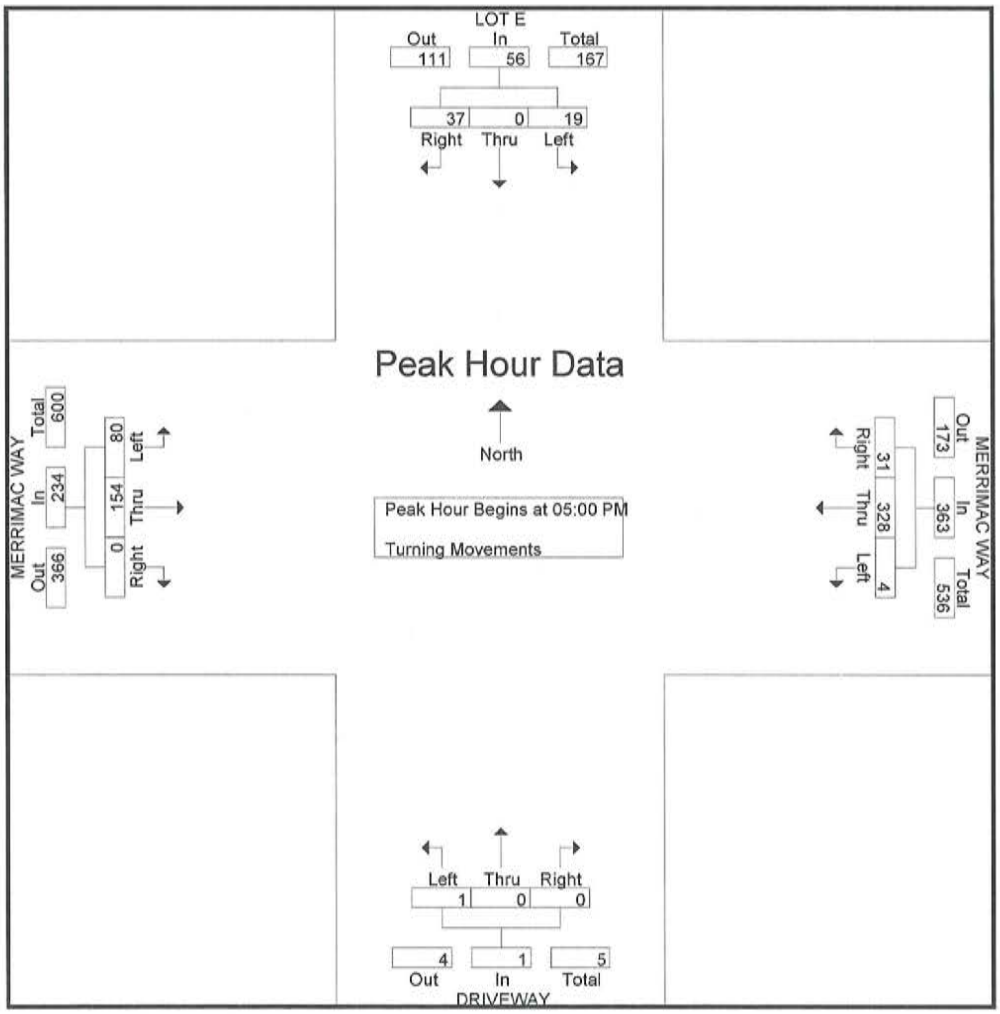


Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: LOT E
E-W Direction: MERRIMAC WAY

File Name : H1311029
Site Code : 00000571
Start Date : 10/29/2013
Page No : 3

	LOT E Southbound				MERRIMAC WAY Westbound				DRIVEWAY Northbound				MERRIMAC WAY Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	12	0	**8**	**20**	**10**	77	1	88	0	0	0	0	0	**42**	17	59	167
05:15 PM	5	0	4	9	9	82	1	92	0	0	**1**	**1**	0	33	**24**	57	159
05:30 PM	**17**	0	3	20	5	**96**	1	**102**	0	0	0	0	0	38	17	55	**177**
05:45 PM	3	0	4	7	7	73	1	81	0	0	0	0	0	41	22	**63**	151
Total Volume	37	0	19	56	31	328	4	363	0	0	1	1	0	154	80	234	654
% App. Total	66.1	0	33.9		8.5	90.4	1.1		0	0	100		0	65.8	34.2		
PHF	.544	.000	.594	.700	.775	.854	1.00	.890	.000	.000	.250	.250	.000	.917	.833	.929	.924



(#23)

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: LOT E
E-W Direction: MERRIMAC WAY

File Name : h1311030
Site Code : 00003872
Start Date : 10/29/2013
Page No : 1

Groups Printed- Turning Movements

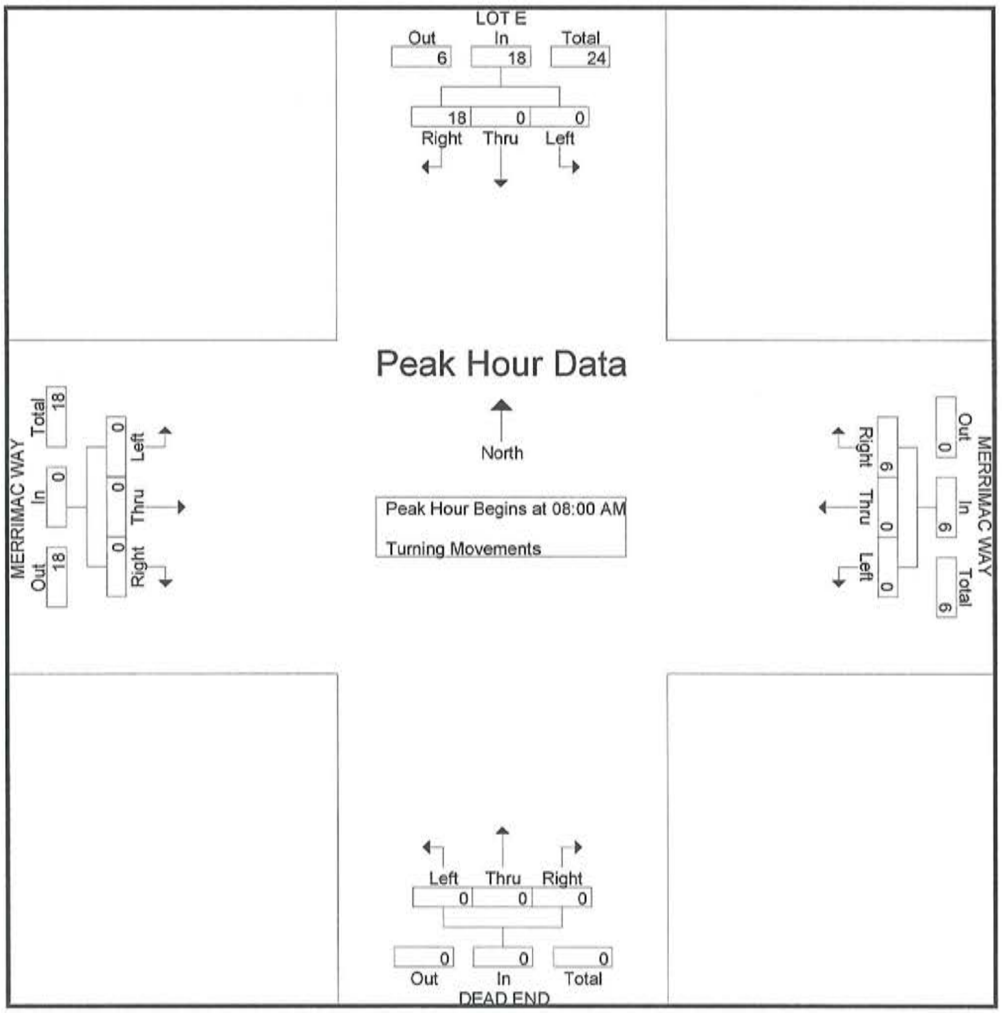
	LOT E Southbound			MERRIMAC WAY Westbound			DEAD END Northbound			MERRIMAC WAY Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00 AM	2	0	0	2	0	0	0	0	0	0	0	0	4
07:15 AM	2	0	0	1	0	0	0	0	0	0	0	0	3
07:30 AM	1	0	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	1	0	0	2	0	0	0	0	0	0	0	0	3
Total	6	0	0	5	0	0	0	0	0	0	0	0	11
08:00 AM	7	0	0	2	0	0	0	0	0	0	0	0	9
08:15 AM	5	0	0	1	0	0	0	0	0	0	0	0	6
08:30 AM	2	0	0	2	0	0	0	0	0	0	0	0	4
08:45 AM	4	0	0	1	0	0	0	0	0	0	0	0	5
Total	18	0	0	6	0	0	0	0	0	0	0	0	24
*** BREAK ***													
04:00 PM	19	0	0	1	0	0	0	0	0	0	0	0	20
04:15 PM	10	0	0	0	0	0	0	0	0	0	0	0	10
04:30 PM	9	0	0	1	0	0	0	0	0	0	0	0	10
04:45 PM	13	0	0	1	0	0	0	0	0	0	0	0	14
Total	51	0	0	3	0	0	0	0	0	0	0	0	54
05:00 PM	10	0	0	2	0	0	0	0	0	0	0	0	12
05:15 PM	11	0	0	0	0	0	0	0	0	0	0	0	11
05:30 PM	14	0	0	2	0	0	0	0	0	0	0	0	16
05:45 PM	9	0	0	2	0	0	0	0	0	0	0	0	11
Total	44	0	0	6	0	0	0	0	0	0	0	0	50
Grand Total	119	0	0	20	0	0	0	0	0	0	0	0	139
Apprch %	100	0	0	100	0	0	0	0	0	0	0	0	
Total %	85.6	0	0	14.4	0	0	0	0	0	0	0	0	

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: LOT E
E-W Direction: MERRIMAC WAY

File Name : h1311030
Site Code : 00003872
Start Date : 10/29/2013
Page No : 2

	LOT E Southbound				MERRIMAC WAY Westbound				DEAD END Northbound				MERRIMAC WAY Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	7	0	0	7	2	0	0	2	0	0	0	0	0	0	0	0	9
08:15 AM	5	0	0	5	1	0	0	1	0	0	0	0	0	0	0	0	6
08:30 AM	2	0	0	2	2	0	0	2	0	0	0	0	0	0	0	0	4
08:45 AM	4	0	0	4	1	0	0	1	0	0	0	0	0	0	0	0	5
Total Volume	18	0	0	18	6	0	0	6	0	0	0	0	0	0	0	0	24
% App. Total	100	0	0		100	0	0		0	0	0		0	0	0		
PHF	.643	.000	.000	.643	.750	.000	.000	.750	.000	.000	.000	.000	.000	.000	.000	.000	.667

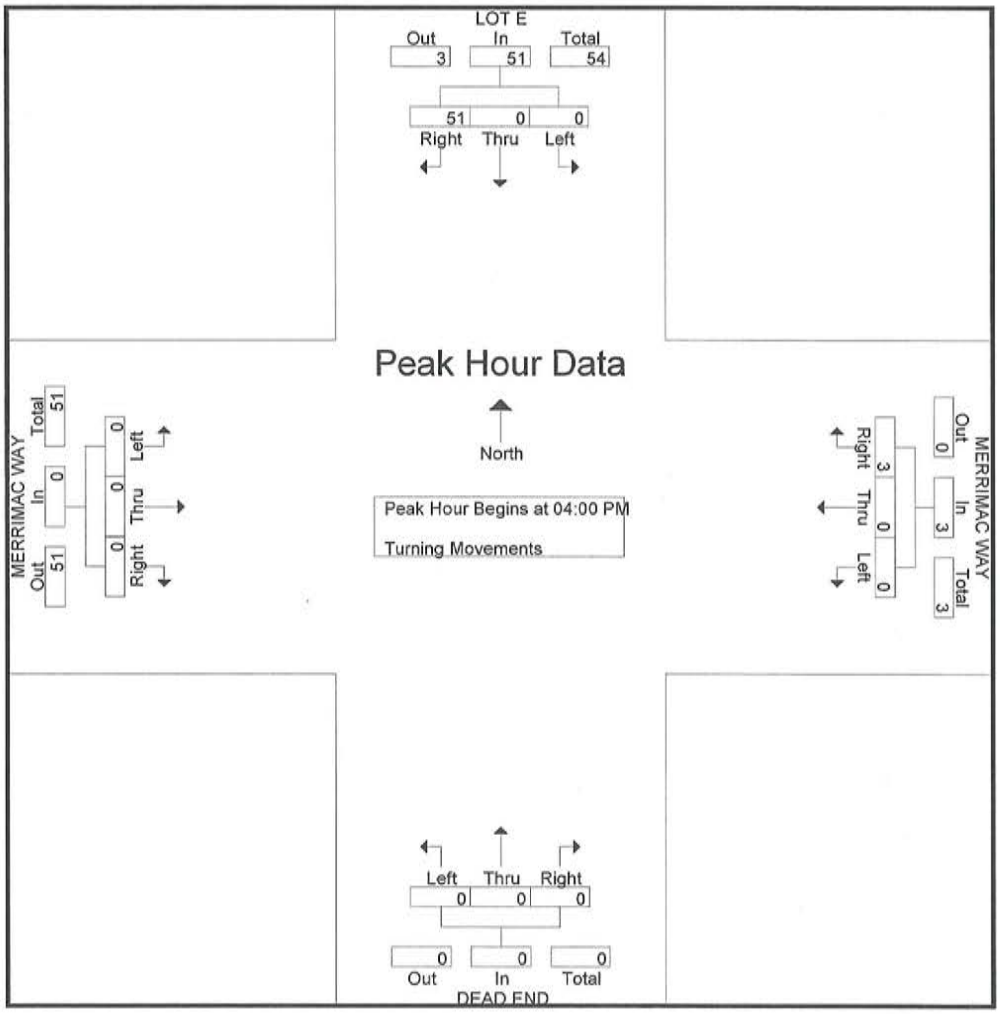


Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: LOT E
E-W Direction: MERRIMAC WAY

File Name : h1311030
Site Code : 00003872
Start Date : 10/29/2013
Page No : 3

	LOT E Southbound				MERRIMAC WAY Westbound				DEAD END Northbound				MERRIMAC WAY Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	**19**	0	0	**19**	**1**	0	0	**1**	0	0	0	0	0	0	0	0	**20**
04:15 PM	10	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	10
04:30 PM	9	0	0	9	1	0	0	1	0	0	0	0	0	0	0	0	10
04:45 PM	13	0	0	13	1	0	0	1	0	0	0	0	0	0	0	0	14
Total Volume	51	0	0	51	3	0	0	3	0	0	0	0	0	0	0	0	54
% App. Total	100	0	0		100	0	0		0	0	0		0	0	0		
PHF	.671	.000	.000	.671	.750	.000	.000	.750	.000	.000	.000	.000	.000	.000	.000	.000	.675



APPENDIX A-I

EXISTING ORANGE COAST COLLEGE

TRIP GENERATION SUMMARY

TABLE A
EXISTING TRIP GENERATION SUMMARY
Orange Coast College, Costa Mesa

		AM Peak Hour			PM Peak Hour		
Location	**Daily**	**Enter**	**Exit**	**Total**	**Enter**	**Exit**	**Total**
Pinecreek Drive/S Street at Adams Avenue	14,795	836	45	881	525	423	948
Fairview Road at Monitor Way	2,646	304	33	337	225	216	441
Fairview Road at Pirate Way/Mustang Way	3,378	357	121	478	300	263	563
Fairview Road at Arlington Drive	1,626	138	21	159	163	108	271
Lot C at Merrimac Way	942	55	27	82	66	91	157
Lot D at Merrimac Way (Full Access)	822	103	15	118	83	54	137
Lot D at Merrimac Way (Right-In/Right-Out)	570	83	9	92	57	38	95
Lot D at Merrimac Way (Right-In/Right-Out)	642	110	58	168	46	61	107
Lot E at Merrimac Way (Full Access)	90	82	18	100	3	12	15
Lot E at Merrimac Way (Right-In/Right-Out)	366	63	3	66	44	17	61
Lot E at Merrimac Way (Full Access)	1,002	153	11	164	111	56	167
Lot E at Merrimac Way (Right-In/Right-Out)	324	6	18	24	3	51	54
Total	**27,203**	**2,290**	**379**	**2,669**	**1,626**	**1,390**	**3,016**
Trip Rate Based On 21,410 Students	1.271	0.107	0.018	0.125	0.076	0.065	0.141
21,410 Students To 28,332 Students (Increase of 6,922 Students)	8,798	741	124	865	526	450	976

APPENDIX A-II

RECYCLING CENTER COUNTS/OBSERVATIONS

TABLE B
RECYCLING CENTER OBSERVATIONS
Orange Coast College, Costa Mesa

Time	Enter	Exit	Total
8:00 AM - 9:00 AM (AM Peak Hour)	5	5	10
9:00 AM - 10:00 AM	25	23	48
10:00 AM - 11:00 AM	23	25	48
11:00 AM - 12:00 PM	46	43	89
12:00 PM - 1:00 PM	34	37	71
1:00 PM - 2:00 PM	28	24	52
2:00 PM - 3:00 PM	25	29	54
3:00 PM - 4:00 PM	31	31	62
4:00 PM - 5:00 PM (PM Peak Hour)	30	30	60
Total	**247**	**247**	**494**

APPENDIX B

INTERSECTION LEVEL OF SERVICE CALCULATION WORKSHEETS

APPENDIX B-I

EXISTING PLUS PROJECT TRAFFIC CONDITIONS

```
-------------------------------------------------------------------------------
                                  AM Existing
                      2.13.3396.1 Orange Coast College
-------------------------------------------------------------------------------
                     Level Of Service Computation Report
        ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*******************************************************************************
Intersection #1 Harbor Boulevard at Gisler Avenue
*******************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):         0.572
Loss Time (sec):        0               Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         53               Level Of Service:                  A
*******************************************************************************
Street Name:              Harbor Boulevard                 Gisler Avenue
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected        Protected        Protected
Rights:           Include          Include          Include          Include
Min. Green:    0    0     0    0    0     0    0    0     0    0    0     0
Y+R:         4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:       1  0  4  1  0   1  0  3  1  0   2  0  0  1  0   1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     49 1835     2   83 1702   112  574   38    51   30   21   125
Growth Adj: 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Initial Bse:  49 1835     2   83 1702   112  574   38    51   30   21   125
Added Vol:     0    0     0    0    0     0    0    0     0    0    0     0
PasserByVol:   0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:  49 1835     2   83 1702   112  574   38    51   30   21   125
User Adj:   1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Volume:   49 1835     2   83 1702   112  574   38    51   30   21   125
Reduct Vol:    0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:  49 1835     2   83 1702   112  574   38    51   30   21   125
PCE Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume:  49 1835     2   83 1702   112  574   38    51   30   21   125
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:   1600 1600  1600 1600 1600  1600 1600 1600  1600 1600 1600  1600
Adjustment: 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Lanes:      1.00 4.99  0.01 1.00 3.75  0.25 2.00 0.43  0.57 1.00 1.00  1.00
Final Sat.: 1600 7991     9 1600 6005   395 3200  683   917 1600 1600  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.03 0.23  0.23 0.05 0.28  0.28 0.18 0.06  0.06 0.02 0.01  0.08
Crit Moves: ****                   ****     ****                          ****
*******************************************************************************
```

AM Existing Plus Project
2.13.3396.1 Orange Coast College

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Harbor Boulevard at Gisler Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.595
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	56	Level Of Service:	A

Street Name:	Harbor Boulevard						Gisler Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	4	1 0	1 0	3	1 0	2 0	0	1 0	1 0	1	0 1
Volume Module:												
Base Vol:	49	1869	2	83	1853	112	574	38	51	30	21	125
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	49	1869	2	83	1853	112	574	38	51	30	21	125
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	49	1869	2	83	1853	112	574	38	51	30	21	125
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	49	1869	2	83	1853	112	574	38	51	30	21	125
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	49	1869	2	83	1853	112	574	38	51	30	21	125
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	49	1869	2	83	1853	112	574	38	51	30	21	125
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	4.99	0.01	1.00	3.77	0.23	2.00	0.43	0.57	1.00	1.00	1.00
Final Sat.:	1600	7991	9	1600	6035	365	3200	683	917	1600	1600	1600
Capacity Analysis Module:												
Vol/Sat:	0.03	0.23	0.23	0.05	0.31	0.31	0.18	0.06	0.06	0.02	0.01	0.08
Crit Moves:	****				****		****					****

```
-------------------------------------------------------------------------------
                                  PM Existing
                         2.13.3396.1 Orange Coast College
-------------------------------------------------------------------------------
                        Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*******************************************************************************
Intersection #1 Harbor Boulevard at Gisler Avenue
*******************************************************************************
Cycle (sec):         100               Critical Vol./Cap.(X):         0.717
Loss Time (sec):       0               Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        81               Level Of Service:                  C
*******************************************************************************
Street Name:            Harbor Boulevard                Gisler Avenue
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Protected        Protected        Protected        Protected
Rights:          Include          Include          Include          Include
Min. Green:    0    0    0    0    0    0    0    0    0    0    0    0
Y+R:         4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0
Lanes:        1  0  4  1  0   1  0  3  1  0   2  0  0  1  0   1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     116 2146   43    92 2434  393   167   73   92   111   79  241
Growth Adj:  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Initial Bse:  116 2146   43    92 2434  393   167   73   92   111   79  241
Added Vol:      0    0    0     0    0    0     0    0    0     0    0    0
PasserByVol:    0    0    0     0    0    0     0    0    0     0    0    0
Initial Fut:  116 2146   43    92 2434  393   167   73   92   111   79  241
User Adj:    1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
PHF Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
PHF Volume:   116 2146   43    92 2434  393   167   73   92   111   79  241
Reduct Vol:     0    0    0     0    0    0     0    0    0     0    0    0
Reduced Vol:  116 2146   43    92 2434  393   167   73   92   111   79  241
PCE Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
MLF Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
FinalVolume:  116 2146   43    92 2434  393   167   73   92   111   79  241
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600 1600  1600 1600 1600  1600 1600 1600  1600 1600 1600
Adjustment:  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Lanes:       1.00 4.90 0.10  1.00 3.44 0.56  2.00 0.44 0.56  1.00 1.00 1.00
Final Sat.:  1600 7843  157  1600 5510  890  3200  708  892  1600 1600 1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.07 0.27 0.27  0.06 0.44 0.44  0.05 0.10 0.10  0.07 0.05 0.15
Crit Moves:  ****                 ****       ****                        ****
*******************************************************************************
```

```
--------------------------------------------------------------------------------
                          PM Existing Plus Project
                    2.13.3396.1 Orange Coast College
--------------------------------------------------------------------------------
                     Level Of Service Computation Report
        ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #1 Harbor Boulevard at Gisler Avenue
********************************************************************************
Cycle (sec):         100               Critical Vol./Cap.(X):         0.737
Loss Time (sec):       0               Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        87               Level Of Service:                  C
********************************************************************************
Street Name:             Harbor Boulevard                     Gisler Avenue
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected        Protected        Protected
Rights:           Include          Include          Include          Include
Min. Green:    0    0     0    0    0     0    0    0     0    0    0     0
Y+R:         4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:        1  0  4  1  0   1  0  3  1  0   2  0  0  1  0   1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:    117 2283    43   92 2556   393  167   73    93  111   79   241
Growth Adj: 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Initial Bse: 117 2283    43   92 2556   393  167   73    93  111   79   241
Added Vol:     0    0     0    0    0     0    0    0     0    0    0     0
PasserByVol:   0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut: 117 2283    43   92 2556   393  167   73    93  111   79   241
User Adj:   1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Volume:  117 2283    43   92 2556   393  167   73    93  111   79   241
Reduct Vol:    0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol: 117 2283    43   92 2556   393  167   73    93  111   79   241
PCE Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume: 117 2283    43   92 2556   393  167   73    93  111   79   241
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:   1600 1600  1600 1600 1600  1600 1600 1600  1600 1600 1600  1600
Adjustment: 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Lanes:      1.00 4.91  0.09 1.00 3.47  0.53 2.00 0.44  0.56 1.00 1.00  1.00
Final Sat.: 1600 7852   148 1600 5547   853 3200  704   896 1600 1600  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.07 0.29  0.29 0.06 0.46  0.46 0.05 0.10  0.10 0.07 0.05  0.15
Crit Moves: ****                 ****      ****                           ****
********************************************************************************
```

```
--------------------------------------------------------------------------------
                                 AM Existing
                      2.13.3396.1 Orange Coast College
--------------------------------------------------------------------------------

                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #2 Harbor Boulevard at Baker Street
********************************************************************************
Cycle (sec):        100               Critical Vol./Cap.(X):         0.473
Loss Time (sec):      0               Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       43               Level Of Service:                  A
********************************************************************************
Street Name:             Harbor Boulevard                    Baker Street
Approach:        North Bound      South Bound       East Bound       West Bound
Movement:       L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Protected        Protected         Protected        Protected
Rights:             Ovl              Ovl             Include          Include
Min. Green:     0     0     0    0     0     0    0     0     0    0     0     0
Y+R:          4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:         2  0  4  0  1    2  0  4  0  1    2  0  1  1  0    2  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      46  1628   242   192  1432   148   227   208    52   176   177   140
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:   46  1628   242   192  1432   148   227   208    52   176   177   140
Added Vol:      0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:   46  1628   242   192  1432   148   227   208    52   176   177   140
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:    46  1628   242   192  1432   148   227   208    52   176   177   140
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:   46  1628   242   192  1432   148   227   208    52   176   177   140
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:   46  1628   242   192  1432   148   227   208    52   176   177   140
OvlAdjVol:                154                35
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       2.00  4.00  1.00  2.00  4.00  1.00  2.00  1.60  0.40  2.00  2.00  1.00
Final Sat.:  3200  6400  1600  3200  6400  1600  3200  2560   640  3200  3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.01  0.25  0.15  0.06  0.22  0.09  0.07  0.08  0.08  0.06  0.06  0.09
OvlAdjV/S:               0.10              0.02
Crit Moves:        ****        ****              ****                          ****
********************************************************************************
```

```
--------------------------------------------------------------------------------
                        AM Existing Plus Project
                    2.13.3396.1 Orange Coast College
--------------------------------------------------------------------------------

                    Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #2 Harbor Boulevard at Baker Street
********************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):         0.478
Loss Time (sec):        0               Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         44               Level Of Service:                  A
********************************************************************************
Street Name:           Harbor Boulevard                       Baker Street
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected        Protected        Protected
Rights:            Ovl              Ovl            Include          Include
Min. Green:     0     0     0    0     0     0    0     0     0    0     0     0
Y+R:          4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:        2  0  4  0  1   2  0  4  0  1   2  0  1  1  0   2  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      47 1662   242  192 1583   148  227  208    55  176  177   140
Growth Adj:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Initial Bse:   47 1662   242  192 1583   148  227  208    55  176  177   140
Added Vol:      0    0     0    0    0     0    0    0     0    0    0     0
PasserByVol:    0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:   47 1662   242  192 1583   148  227  208    55  176  177   140
User Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Volume:    47 1662   242  192 1583   148  227  208    55  176  177   140
Reduct Vol:     0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:   47 1662   242  192 1583   148  227  208    55  176  177   140
PCE Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume:   47 1662   242  192 1583   148  227  208    55  176  177   140
OvlAdjVol:               154               35
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600 1600 1600  1600 1600 1600  1600 1600 1600  1600
Adjustment:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Lanes:       2.00 4.00  1.00 2.00 4.00  1.00 2.00 1.58  0.42 2.00 2.00  1.00
Final Sat.:  3200 6400  1600 3200 6400  1600 3200 2531   669 3200 3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.01 0.26  0.15 0.06 0.25  0.09 0.07 0.08  0.08 0.06 0.06  0.09
OvlAdjV/S:              0.10              0.02
Crit Moves:       ****       ****             ****                        ****
********************************************************************************
```

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-------------------------------------------------------------------------------
                                 PM Existing
                       2.13.3396.1 Orange Coast College
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                      Level Of Service Computation Report
          ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*******************************************************************************
Intersection #2 Harbor Boulevard at Baker Street
*******************************************************************************
Cycle (sec):          100                Critical Vol./Cap.(X):         0.657
Loss Time (sec):        0                Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         66                Level Of Service:                  B
*******************************************************************************
Street Name:            Harbor Boulevard                     Baker Street
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected        Protected        Protected
Rights:            Ovl              Ovl            Include          Include
Min. Green:    0    0    0     0    0    0     0    0    0     0    0    0
Y+R:         4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0
Lanes:        2  0  4  0  1   2  0  4  0  1   2  0  1  1  0   2  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:    150 1833  248   206 2068  286   196  161   56   508  592  361
Growth Adj: 1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Initial Bse: 150 1833  248   206 2068  286   196  161   56   508  592  361
Added Vol:     0    0    0     0    0    0     0    0    0     0    0    0
PasserByVol:   0    0    0     0    0    0     0    0    0     0    0    0
Initial Fut: 150 1833  248   206 2068  286   196  161   56   508  592  361
User Adj:   1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
PHF Adj:    1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
PHF Volume:  150 1833  248   206 2068  286   196  161   56   508  592  361
Reduct Vol:    0    0    0     0    0    0     0    0    0     0    0    0
Reduced Vol: 150 1833  248   206 2068  286   196  161   56   508  592  361
PCE Adj:    1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
MLF Adj:    1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
FinalVolume: 150 1833  248   206 2068  286   196  161   56   508  592  361
OvlAdjVol:               0               188
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:   1600 1600 1600  1600 1600 1600  1600 1600 1600  1600 1600 1600
Adjustment: 1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Lanes:      2.00 4.00 1.00  2.00 4.00 1.00  2.00 1.48 0.52  2.00 2.00 1.00
Final Sat.: 3200 6400 1600  3200 6400 1600  3200 2374  826  3200 3200 1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.05 0.29 0.16  0.06 0.32 0.18  0.06 0.07 0.07  0.16 0.19 0.23
OvlAdjV/S:            0.00             0.12
Crit Moves: ****                  ****        ****                         ****
*******************************************************************************
```

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------------------------------------------------------------------------------
                          PM Existing Plus Project
                      2.13.3396.1 Orange Coast College
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                     Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
******************************************************************************
Intersection #2 Harbor Boulevard at Baker Street
******************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):         0.678
Loss Time (sec):        0               Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         71               Level Of Service:                  B
******************************************************************************
Street Name:           Harbor Boulevard                   Baker Street
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected        Protected        Protected
Rights:            Ovl              Ovl            Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Y+R:         4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:         2  0  4  0  1    2  0  4  0  1    2  0  1  1  0    2  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:    155  1971   248  206  2191   286  196   161    59  508   592   361
Growth Adj: 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Initial Bse: 155  1971   248  206  2191   286  196   161    59  508   592   361
Added Vol:     0     0     0    0     0     0    0     0     0    0     0     0
PasserByVol:   0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut: 155  1971   248  206  2191   286  196   161    59  508   592   361
User Adj:   1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Volume:  155  1971   248  206  2191   286  196   161    59  508   592   361
Reduct Vol:    0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol: 155  1971   248  206  2191   286  196   161    59  508   592   361
PCE Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
MLF Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
FinalVolume: 155  1971   248  206  2191   286  196   161    59  508   592   361
OvlAdjVol:                 0                188
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:   1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600  1600
Adjustment: 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Lanes:      2.00  4.00  1.00 2.00  4.00  1.00 2.00  1.46  0.54 2.00  2.00  1.00
Final Sat.: 3200  6400  1600 3200  6400  1600 3200  2342   858 3200  3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.05  0.31  0.16 0.06  0.34  0.18 0.06  0.07  0.07 0.16  0.19  0.23
OvlAdjV/S:              0.00             0.12
Crit Moves: ****              ****            ****                         ****
******************************************************************************
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AM Existing
2.13.3396.1 Orange Coast College

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Harbor Boulevard at Adams Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.665
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	68	Level Of Service:	B

Street Name:	Harbor Boulevard						Adams Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	2 1	0	2 0	4 0	1	2 0	3 0	1	2 0	3 0	1
Volume Module:												
Base Vol:	166	998	153	193	1144	256	838	1576	202	118	334	103
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	166	998	153	193	1144	256	838	1576	202	118	334	103
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	166	998	153	193	1144	256	838	1576	202	118	334	103
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	166	998	153	193	1144	256	838	1576	202	118	334	103
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	166	998	153	193	1144	256	838	1576	202	118	334	103
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	166	998	153	193	1144	256	838	1576	202	118	334	103
OvlAdjVol:						0						
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	2.60	0.40	2.00	4.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3200	4162	638	3200	6400	1600	3200	4800	1600	3200	4800	1600
Capacity Analysis Module:												
Vol/Sat:	0.05	0.24	0.24	0.06	0.18	0.16	0.26	0.33	0.13	0.04	0.07	0.06
OvlAdjV/S:						0.00						
Crit Moves:		****		****				****		****		

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                              AM Existing
                   2.13.3396.1 Orange Coast College
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                  Level Of Service Computation Report
        ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #3 Harbor Boulevard at Adams Avenue
********************************************************************************
Cycle (sec):        100               Critical Vol./Cap.(X):         0.665
Loss Time (sec):      0               Average Delay (sec/veh):       xxxxxx
Optimal Cycle:       68               Level Of Service:                   B
********************************************************************************
Street Name:          Harbor Boulevard                    Adams Avenue
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected        Protected        Protected
Rights:          Include            Ovl            Include          Include
Min. Green:    0    0     0    0    0     0    0    0     0    0    0     0
Y+R:         4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:        2  0  2  1  0   2  0  4  0  2   3  0  3  0  1   2  0  3  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:    166  998   153   193 1144   256   838 1576   202   118  334   103
Growth Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse: 166  998   153   193 1144   256   838 1576   202   118  334   103
Added Vol:     0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:   0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut: 166  998   153   193 1144   256   838 1576   202   118  334   103
User Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:  166  998   153   193 1144   256   838 1576   202   118  334   103
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol: 166  998   153   193 1144   256   838 1576   202   118  334   103
PCE Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume: 166  998   153   193 1144   256   838 1576   202   118  334   103
OvlAdjVol:                                 0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:   1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:      2.00 2.60  0.40  2.00 4.00  2.00  3.00 3.00  1.00  2.00 3.00  1.00
Final Sat.: 3200 4162   638  3200 6400  3200  4800 4800  1600  3200 4800  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.05 0.24  0.24  0.06 0.18  0.08  0.17 0.33  0.13  0.04 0.07  0.06
OvlAdjV/S:                              0.00
Crit Moves:      ****        ****                    ****        ****
********************************************************************************
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                           AM Existing Plus Project
                       2.13.3396.1 Orange Coast College
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                      Level Of Service Computation Report
          ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #3 Harbor Boulevard at Adams Avenue
********************************************************************************
Cycle (sec):          100                Critical Vol./Cap.(X):          0.725
Loss Time (sec):        0                Average Delay (sec/veh):       xxxxxx
Optimal Cycle:         83                Level Of Service:                   C
********************************************************************************
Street Name:              Harbor Boulevard                     Adams Avenue
Approach:          North Bound      South Bound      East Bound       West Bound
Movement:        L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:           Protected        Protected        Protected        Protected
Rights:              Include           Ovl             Include          Include
Min. Green:      0     0     0    0     0     0    0     0     0    0     0     0
Y+R:           4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:           2  0  2  1  0   2  0  4  0  2   3  0  3  0  1   2  0  3  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      175  1009   187  288  1204   256  838  1662   250  127   353   126
Growth Adj:   1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Initial Bse:   175  1009   187  288  1204   256  838  1662   250  127   353   126
Added Vol:       0     0     0    0     0     0    0     0     0    0     0     0
PasserByVol:     0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut:   175  1009   187  288  1204   256  838  1662   250  127   353   126
User Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Adj:      1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Volume:    175  1009   187  288  1204   256  838  1662   250  127   353   126
Reduct Vol:      0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol:   175  1009   187  288  1204   256  838  1662   250  127   353   126
PCE Adj:      1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
MLF Adj:      1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
FinalVolume:   175  1009   187  288  1204   256  838  1662   250  127   353   126
OvlAdjVol:                                    0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:     1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600  1600
Adjustment:   1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Lanes:        2.00  2.53  0.47 2.00  4.00  2.00 3.00  3.00  1.00 2.00  3.00  1.00
Final Sat.:   3200  4049   751 3200  6400  3200 4800  4800  1600 3200  4800  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:      0.05  0.25  0.25 0.09  0.19  0.08 0.17  0.35  0.16 0.04  0.07  0.08
OvlAdjV/S:                                 0.00
Crit Moves:         ****       ****                   ****       ****
********************************************************************************
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                                PM Existing
                       2.13.3396.1 Orange Coast College
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                      Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #3 Harbor Boulevard at Adams Avenue
********************************************************************************
Cycle (sec):          100              Critical Vol./Cap.(X):         0.856
Loss Time (sec):        0              Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        159              Level Of Service:                  D
********************************************************************************
Street Name:          Harbor Boulevard                    Adams Avenue
Approach:        North Bound       South Bound       East Bound        West Bound
Movement:       L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Protected         Protected         Protected         Protected
Rights:            Include            Ovl              Include           Include
Min. Green:     0     0     0    0     0     0    0     0     0    0     0     0
Y+R:          4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:         2  0  2  1  0    2  0  4  0  1    2  0  3  0  1    2  0  3  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     432  1694    81  191  1656   761  342   647   111  145  1179   203
Growth Adj:  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Initial Bse:  432  1694    81  191  1656   761  342   647   111  145  1179   203
Added Vol:      0     0     0    0     0     0    0     0     0    0     0     0
PasserByVol:    0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut:  432  1694    81  191  1656   761  342   647   111  145  1179   203
User Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Volume:   432  1694    81  191  1656   761  342   647   111  145  1179   203
Reduct Vol:     0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol:  432  1694    81  191  1656   761  342   647   111  145  1179   203
PCE Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
FinalVolume:  432  1694    81  191  1656   761  342   647   111  145  1179   203
OvlAdjVol:                                 590
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600  1600
Adjustment:  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Lanes:       2.00  2.86  0.14 2.00  4.00  1.00 2.00  3.00  1.00 2.00  3.00  1.00
Final Sat.:  3200  4581   219 3200  6400  1600 3200  4800  1600 3200  4800  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.14  0.37  0.37 0.06  0.26  0.48 0.11  0.13  0.07 0.05  0.25  0.13
OvlAdjV/S:                                0.37
Crit Moves:  ****                         **** ****                   ****
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                                  PM Existing
                        2.13.3396.1 Orange Coast College
--------------------------------------------------------------------------------
                       Level Of Service Computation Report
          ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #3 Harbor Boulevard at Adams Avenue
********************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):          0.746
Loss Time (sec):        0               Average Delay (sec/veh):       xxxxxx
Optimal Cycle:         90               Level Of Service:                   C
********************************************************************************
Street Name:          Harbor Boulevard                    Adams Avenue
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected        Protected        Protected
Rights:          Include            Ovl            Include          Include
Min. Green:     0    0     0    0    0     0    0    0     0    0    0     0
Y+R:          4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:         2  0  2  1  0   2  0  4  0  2   3  0  3  0  1   2  0  3  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     432 1694    81   191 1656   761   342  647   111   145 1179   203
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  432 1694    81   191 1656   761   342  647   111   145 1179   203
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  432 1694    81   191 1656   761   342  647   111   145 1179   203
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   432 1694    81   191 1656   761   342  647   111   145 1179   203
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  432 1694    81   191 1656   761   342  647   111   145 1179   203
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  432 1694    81   191 1656   761   342  647   111   145 1179   203
OvlAdjVol:                                533
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 2.86  0.14  2.00 4.00  2.00  3.00 3.00  1.00  2.00 3.00  1.00
Final Sat.:  3200 4581   219  3200 6400  3200  4800 4800  1600  3200 4800  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.14 0.37  0.37  0.06 0.26  0.24  0.07 0.13  0.07  0.05 0.25  0.13
OvlAdjV/S:                                0.17
Crit Moves:       ****        ****              ****                  ****
********************************************************************************
```

```
-------------------------------------------------------------------------------
                          PM Existing Plus Project
                      2.13.3396.1 Orange Coast College
-------------------------------------------------------------------------------
                      Level Of Service Computation Report
        ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*******************************************************************************
Intersection #3 Harbor Boulevard at Adams Avenue
*******************************************************************************
Cycle (sec):          100             Critical Vol./Cap.(X):         0.805
Loss Time (sec):        0             Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        117             Level Of Service:                  D
*******************************************************************************
Street Name:              Harbor Boulevard                  Adams Avenue
Approach:        North Bound      South Bound       East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Protected        Protected         Protected        Protected
Rights:           Include            Ovl             Include          Include
Min. Green:     0     0     0    0     0     0     0     0     0     0     0     0
Y+R:          4.0   4.0   4.0  4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0
Lanes:        2  0  2  1  0    2  0  4  0  2     3  0  3  0  1     2  0  3  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     468  1745   113  277  1696   761   342   719   144   176  1250   294
Growth Adj:  1.00  1.00  1.00 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:  468  1745   113  277  1696   761   342   719   144   176  1250   294
Added Vol:      0     0     0    0     0     0     0     0     0     0     0     0
PasserByVol:    0     0     0    0     0     0     0     0     0     0     0     0
Initial Fut:  468  1745   113  277  1696   761   342   719   144   176  1250   294
User Adj:    1.00  1.00  1.00 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:   468  1745   113  277  1696   761   342   719   144   176  1250   294
Reduct Vol:     0     0     0    0     0     0     0     0     0     0     0     0
Reduced Vol:  468  1745   113  277  1696   761   342   719   144   176  1250   294
PCE Adj:     1.00  1.00  1.00 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:  468  1745   113  277  1696   761   342   719   144   176  1250   294
OvlAdjVol:                                 533
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600 1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:  1.00  1.00  1.00 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       2.00  2.82  0.18 2.00  4.00  2.00  3.00  3.00  1.00  2.00  3.00  1.00
Final Sat.:  3200  4508   292 3200  6400  3200  4800  4800  1600  3200  4800  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.15  0.39  0.39 0.09  0.27  0.24  0.07  0.15  0.09  0.06  0.26  0.18
OvlAdjV/S:                                0.17
Crit Moves:        ****       ****              ****                    ****
*******************************************************************************
```

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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 Harbor Boulevard at Merrimac Way

Cycle (sec):	100	Critical Vol./Cap.(X):	0.368
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	29	Level Of Service:	A

Street Name:	Harbor Boulevard						Merrimac Way					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0 2 1 0			2 0 2 1 0			1 0 0 1 0			1 0 0 1 1		
Volume Module:												
Base Vol:	33	1048	53	230	1296	29	69	23	19	27	15	61
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	33	1048	53	230	1296	29	69	23	19	27	15	61
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	33	1048	53	230	1296	29	69	23	19	27	15	61
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	33	1048	53	230	1296	29	69	23	19	27	15	61
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	33	1048	53	230	1296	29	69	23	19	27	15	61
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	33	1048	53	230	1296	29	69	23	19	27	15	61
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.86	0.14	2.00	2.93	0.07	1.00	0.55	0.45	1.00	0.39	1.61
Final Sat.:	1600	4569	231	3200	4695	105	1600	876	724	1600	632	2568
Capacity Analysis Module:												
Vol/Sat:	0.02	0.23	0.23	0.07	0.28	0.28	0.04	0.03	0.03	0.02	0.02	0.02
Crit Moves:		****		****			****				****	

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-------------------------------------------------------------------------------
                          AM Existing Plus Project
                     2.13.3396.1 Orange Coast College
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                     Level Of Service Computation Report
        ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #4 Harbor Boulevard at Merrimac Way
********************************************************************************
Cycle (sec):          100             Critical Vol./Cap.(X):          0.418
Loss Time (sec):        0             Average Delay (sec/veh):       xxxxxx
Optimal Cycle:         32             Level Of Service:                   A
********************************************************************************
Street Name:               Harbor Boulevard                  Merrimac Way
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected         Permitted        Permitted
Rights:          Include          Include           Include          Include
Min. Green:     0    0     0    0    0     0    0    0     0    0    0     0
Y+R:          4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:         1  0  2  1  0   2  0  2  1  0   1  0  0  1  0   1  0  0  1  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      33 1082    68   337 1305    29    69   23    19    30   15    81
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   33 1082    68   337 1305    29    69   23    19    30   15    81
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   33 1082    68   337 1305    29    69   23    19    30   15    81
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    33 1082    68   337 1305    29    69   23    19    30   15    81
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   33 1082    68   337 1305    29    69   23    19    30   15    81
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   33 1082    68   337 1305    29    69   23    19    30   15    81
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.82  0.18  2.00 2.93  0.07  1.00 0.55  0.45  1.00 0.31  1.69
Final Sat.:  1600 4516   284  3200 4696   104  1600  876   724  1600  500  2700
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.02 0.24  0.24  0.11 0.28  0.28  0.04 0.03  0.03  0.02 0.03  0.03
Crit Moves:       ****        ****             ****                   ****
********************************************************************************
```

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--------------------------------------------------------------------------------
                                  PM Existing
                        2.13.3396.1 Orange Coast College
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                       Level Of Service Computation Report
          ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #4 Harbor Boulevard at Merrimac Way
********************************************************************************
Cycle (sec):          100                Critical Vol./Cap.(X):          0.623
Loss Time (sec):        0                Average Delay (sec/veh):       xxxxxx
Optimal Cycle:         49                Level Of Service:                   B
********************************************************************************
Street Name:              Harbor Boulevard                    Merrimac Way
Approach:        North Bound      South Bound      East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:          Protected        Protected        Permitted        Permitted
Rights:             Include          Include          Include          Include
Min. Green:     0     0     0     0     0     0     0     0     0     0     0     0
Y+R:          4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0
Lanes:         1  0  2  1  0   2  0  2  1  0   1  0  0  1  0   1  0  0  1  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      38  1880    85   236  1630    49    69    16    31    86    39   271
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:   38  1880    85   236  1630    49    69    16    31    86    39   271
Added Vol:      0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:   38  1880    85   236  1630    49    69    16    31    86    39   271
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:    38  1880    85   236  1630    49    69    16    31    86    39   271
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:   38  1880    85   236  1630    49    69    16    31    86    39   271
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:   38  1880    85   236  1630    49    69    16    31    86    39   271
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       1.00  2.87  0.13  2.00  2.91  0.09  1.00  0.34  0.66  1.00  0.25  1.75
Final Sat.:  1600  4592   208  3200  4660   140  1600   545  1055  1600   403  2797
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.02  0.41  0.41  0.07  0.35  0.35  0.04  0.03  0.03  0.05  0.10  0.10
Crit Moves:        ****        ****              ****                    ****
********************************************************************************
```

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                           PM Existing Plus Project
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                      Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #4 Harbor Boulevard at Merrimac Way
********************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):         0.682
Loss Time (sec):        0               Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         59               Level Of Service:                  B
********************************************************************************
Street Name:              Harbor Boulevard                   Merrimac Way
Approach:        North Bound      South Bound      East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected         Permitted        Permitted
Rights:          Include          Include           Include          Include
Min. Green:    0     0     0   0     0     0   0     0     0   0     0     0
Y+R:         4.0   4.0   4.0 4.0   4.0   4.0 4.0   4.0   4.0 4.0   4.0   4.0
Lanes:       1  0  2  1  0   2  0  2  1  0   1  0  0  1  0   1  0  0  1  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      38 1911    95   310 1660    50    70   16    31   100   39   357
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   38 1911    95   310 1660    50    70   16    31   100   39   357
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   38 1911    95   310 1660    50    70   16    31   100   39   357
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    38 1911    95   310 1660    50    70   16    31   100   39   357
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   38 1911    95   310 1660    50    70   16    31   100   39   357
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   38 1911    95   310 1660    50    70   16    31   100   39   357
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.86  0.14  2.00 2.91  0.09  1.00 0.34  0.66  1.00 0.20  1.80
Final Sat.:  1600 4573   227  3200 4660   140  1600  545  1055  1600  315  2885
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.02 0.42  0.42  0.10 0.36  0.36  0.04 0.03  0.03  0.06 0.12  0.12
Crit Moves:       ****        ****             ****                   ****
********************************************************************************
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                                  AM Existing
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                      Level Of Service Computation Report
          ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #5 Harbor Boulevard at Fair Drive
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):          0.356
Loss Time (sec):       0              Average Delay (sec/veh):        xxxxxx
Optimal Cycle:        35              Level Of Service:                    A
********************************************************************************
Street Name:            Harbor Boulevard                      Fair Drive
Approach:       North Bound       South Bound        East Bound        West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected         Protected         Split Phase       Split Phase
Rights:           Include           Include           Include           Include
Min. Green:    0     0     0     0     0     0     0     0     0     0     0     0
Y+R:         4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0
Lanes:        1  0  3  0  1    2  0  2  1  0    1  0  1  0  1    2  0  0  1  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     28   939   248   206  1063    53    31    35    33   129    59   178
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:  28   939   248   206  1063    53    31    35    33   129    59   178
Added Vol:     0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:   0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:  28   939   248   206  1063    53    31    35    33   129    59   178
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:   28   939   248   206  1063    53    31    35    33   129    59   178
Reduct Vol:    0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:  28   939   248   206  1063    53    31    35    33   129    59   178
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:  28   939   248   206  1063    53    31    35    33   129    59   178
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       1.00  3.00  1.00  2.00  2.86  0.14  1.00  1.00  1.00  2.00  0.50  1.50
Final Sat.:  1600  4800  1600  3200  4572   228  1600  1600  1600  3200   797  2403
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.02  0.20  0.16  0.06  0.23  0.23  0.02  0.02  0.02  0.04  0.07  0.07
Crit Moves:        ****        ****                    ****              ****
********************************************************************************
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--------------------------------------------------------------------------------
                         AM Existing Plus Project
                    2.13.3396.1 Orange Coast College
--------------------------------------------------------------------------------
                    Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #5 Harbor Boulevard at Fair Drive
********************************************************************************
Cycle (sec):         100               Critical Vol./Cap.(X):          0.366
Loss Time (sec):       0               Average Delay (sec/veh):       xxxxxx
Optimal Cycle:        36               Level Of Service:                   A
********************************************************************************
Street Name:           Harbor Boulevard                      Fair Drive
Approach:       North Bound       South Bound       East Bound        West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected         Protected        Split Phase       Split Phase
Rights:          Include           Include          Include           Include
Min. Green:    0     0     0     0     0     0     0     0     0     0     0     0
Y+R:         4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0
Lanes:        1  0  3  0  1    2  0  2  1  0    1  0  1  0  1    2  0  0  1  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      28   988   248   206  1075    53    31    35    33   129    59   178
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:   28   988   248   206  1075    53    31    35    33   129    59   178
Added Vol:      0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:   28   988   248   206  1075    53    31    35    33   129    59   178
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:    28   988   248   206  1075    53    31    35    33   129    59   178
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:   28   988   248   206  1075    53    31    35    33   129    59   178
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:   28   988   248   206  1075    53    31    35    33   129    59   178
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       1.00  3.00  1.00  2.00  2.86  0.14  1.00  1.00  1.00  2.00  0.50  1.50
Final Sat.:  1600  4800  1600  3200  4574   226  1600  1600  1600  3200   797  2403
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.02  0.21  0.16  0.06  0.23  0.24  0.02  0.02  0.02  0.04  0.07  0.07
Crit Moves:        ****        ****                    ****                ****
********************************************************************************
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                                 PM Existing
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                        Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #5 Harbor Boulevard at Fair Drive
********************************************************************************
Cycle (sec):          100              Critical Vol./Cap.(X):          0.546
Loss Time (sec):        0              Average Delay (sec/veh):       xxxxxx
Optimal Cycle:         50              Level Of Service:                   A
********************************************************************************
Street Name:               Harbor Boulevard                     Fair Drive
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Protected        Protected       Split Phase      Split Phase
Rights:            Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Y+R:         4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:         1  0  3  0  1   2  0  2  1  0   1  0  1  0  1   2  0  0  1  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       22  1476   228  180  1574    26   33    38    37  401    27   481
Growth Adj:   1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Initial Bse:    22  1476   228  180  1574    26   33    38    37  401    27   481
Added Vol:       0     0     0    0     0     0    0     0     0    0     0     0
PasserByVol:     0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut:    22  1476   228  180  1574    26   33    38    37  401    27   481
User Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Adj:      1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Volume:     22  1476   228  180  1574    26   33    38    37  401    27   481
Reduct Vol:      0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol:    22  1476   228  180  1574    26   33    38    37  401    27   481
PCE Adj:      1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
MLF Adj:      1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
FinalVolume:    22  1476   228  180  1574    26   33    38    37  401    27   481
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:     1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600  1600
Adjustment:   1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Lanes:        1.00  3.00  1.00 2.00  2.95  0.05 1.00  1.00  1.00 2.00  0.11  1.89
Final Sat.:   1600  4800  1600 3200  4722    78 1600  1600  1600 3200   170  3030
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:      0.01  0.31  0.14 0.06  0.33  0.33 0.02  0.02  0.02 0.13  0.16  0.16
Crit Moves:         ****       ****                   ****                  ****
********************************************************************************
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                        PM Existing Plus Project
                   2.13.3396.1 Orange Coast College
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                    Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #5 Harbor Boulevard at Fair Drive
********************************************************************************
Cycle (sec):          100              Critical Vol./Cap.(X):          0.555
Loss Time (sec):        0              Average Delay (sec/veh):        xxxxxx
Optimal Cycle:         51              Level Of Service:                    A
********************************************************************************
Street Name:          Harbor Boulevard                   Fair Drive
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected       Split Phase      Split Phase
Rights:          Include          Include          Include          Include
Min. Green:    0    0     0    0    0     0    0    0     0    0    0     0
Y+R:         4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:       1  0  3  0  1   2  0  2  1  0   1  0  1  0  1   2  0  0  1  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      22 1517   228   180 1618    26    33   38    37   401   27   481
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   22 1517   228   180 1618    26    33   38    37   401   27   481
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   22 1517   228   180 1618    26    33   38    37   401   27   481
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    22 1517   228   180 1618    26    33   38    37   401   27   481
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   22 1517   228   180 1618    26    33   38    37   401   27   481
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   22 1517   228   180 1618    26    33   38    37   401   27   481
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 3.00  1.00  2.00 2.95  0.05  1.00 1.00  1.00  2.00 0.11  1.89
Final Sat.:  1600 4800  1600  3200 4724    76  1600 1600  1600  3200  170  3030
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.01 0.32  0.14  0.06 0.34  0.34  0.02 0.02  0.02  0.13 0.16  0.16
Crit Moves:       ****        ****                   ****              ****
********************************************************************************
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                                 AM Existing
                      2.13.3396.1 Orange Coast College
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                      Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #6 Pinecreek Drive at Adams Avenue
********************************************************************************
Cycle (sec):          100              Critical Vol./Cap.(X):         0.369
Loss Time (sec):        0              Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         36              Level Of Service:                  A
********************************************************************************
Street Name:             Pinecreek Drive                    Adams Avenue
Approach:        North Bound      South Bound       East Bound       West Bound
Movement:       L  -  T  -  R   L  -  T  -  R    L  -  T  -  R   L  -  T  -  R
------------|----------------||----------------||----------------||----------------|
Control:        Split Phase      Split Phase        Protected        Protected
Rights:            Include          Include           Ignore           Include
Min. Green:      0     0     0    0     0     0    0     0     0    0     0     0
Y+R:           4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:          1  1  0  0  1   0  1  0  0  1    1  0  3  0  1   2  0  1  1  0
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:       15     3    27   61    10    45   28  1350   740   86   504    54
Growth Adj:   1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Initial Bse:    15     3    27   61    10    45   28  1350   740   86   504    54
Added Vol:       0     0     0    0     0     0    0     0     0    0     0     0
PasserByVol:     0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut:    15     3    27   61    10    45   28  1350   740   86   504    54
User Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  0.00 1.00  1.00  1.00
PHF Adj:      1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  0.00 1.00  1.00  1.00
PHF Volume:     15     3    27   61    10    45   28  1350     0   86   504    54
Reduct Vol:      0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol:    15     3    27   61    10    45   28  1350     0   86   504    54
PCE Adj:      1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  0.00 1.00  1.00  1.00
MLF Adj:      1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  0.00 1.00  1.00  1.00
FinalVolume:    15     3    27   61    10    45   28  1350     0   86   504    54
------------|----------------||----------------||----------------||----------------|
Saturation Flow Module:
Sat/Lane:     1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600  1600
Adjustment:   1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Lanes:        1.67  0.33  1.00 0.86  0.14  1.00 1.00  3.00  1.00 2.00  1.81  0.19
Final Sat.:   2667   533  1600 1375   225  1600 1600  4800  1600 3200  2890   310
------------|----------------||----------------||----------------||----------------|
Capacity Analysis Module:
Vol/Sat:      0.01  0.01  0.02 0.04  0.04  0.03 0.02  0.28  0.00 0.03  0.17  0.17
Crit Moves:               ****       ****             ****         ****
********************************************************************************
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                      2.13.3396.1 Orange Coast College
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                     Level Of Service Computation Report
        ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #6 Pinecreek Drive at Adams Avenue
********************************************************************************
Cycle (sec):          100                Critical Vol./Cap.(X):          0.459
Loss Time (sec):        0                Average Delay (sec/veh):       xxxxxx
Optimal Cycle:         42                Level Of Service:                   A
********************************************************************************
Street Name:          Pinecreek Drive                     Adams Avenue
Approach:       North Bound      South Bound       East Bound        West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Split Phase      Split Phase        Protected         Protected
Rights:            Include          Include           Ignore           Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Y+R:         4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:        1  1  0  0  1    0  1  0  0  1    1  0  3  0  1    2  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      58     3    60   61    10    45   28  1379   911  286   513    54
Growth Adj:  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Initial Bse:   58     3    60   61    10    45   28  1379   911  286   513    54
Added Vol:      0     0     0    0     0     0    0     0     0    0     0     0
PasserByVol:    0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut:   58     3    60   61    10    45   28  1379   911  286   513    54
User Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  0.00 1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  0.00 1.00  1.00  1.00
PHF Volume:    58     3    60   61    10    45   28  1379     0  286   513    54
Reduct Vol:     0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol:   58     3    60   61    10    45   28  1379     0  286   513    54
PCE Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  0.00 1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  0.00 1.00  1.00  1.00
FinalVolume:   58     3    60   61    10    45   28  1379     0  286   513    54
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600  1600
Adjustment:  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Lanes:       1.90  0.10  1.00 0.86  0.14  1.00 1.00  3.00  1.00 2.00  1.81  0.19
Final Sat.:  3043   157  1600 1375   225  1600 1600  4800  1600 3200  2895   305
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.02  0.02  0.04 0.04  0.04  0.03 0.02  0.29  0.00 0.09  0.18  0.18
Crit Moves:              ****       ****             ****       ****
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                                 PM Existing
                        2.13.3396.1 Orange Coast College
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                        Level Of Service Computation Report
         ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #6 Pinecreek Drive at Adams Avenue
********************************************************************************
Cycle (sec):           100                 Critical Vol./Cap.(X):         0.623
Loss Time (sec):         0                 Average Delay (sec/veh):      xxxxxx
Optimal Cycle:          60                 Level Of Service:                  B
********************************************************************************
Street Name:            Pinecreek Drive                     Adams Avenue
Approach:        North Bound      South Bound       East Bound       West Bound
Movement:       L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Split Phase      Split Phase        Protected        Protected
Rights:            Include          Include           Ignore           Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Y+R:          4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0
Lanes:        1  1  0  0  1    0  1  0  0  1    1  0  3  0  1    2  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     248   30   145    61   25    90    71  764   347   153 1213   168
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  248   30   145    61   25    90    71  764   347   153 1213   168
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  248   30   145    61   25    90    71  764   347   153 1213   168
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00
PHF Volume:   248   30   145    61   25    90    71  764     0   153 1213   168
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  248   30   145    61   25    90    71  764     0   153 1213   168
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00
FinalVolume:  248   30   145    61   25    90    71  764     0   153 1213   168
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.78 0.22  1.00  0.71 0.29  1.00  1.00 3.00  1.00  2.00 1.76  0.24
Final Sat.:  2855  345  1600  1135  465  1600  1600 4800  1600  3200 2811   389
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.09 0.09  0.09  0.05 0.05  0.06  0.04 0.16  0.00  0.05 0.43  0.43
Crit Moves:             ****              ****  ****                  ****
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                          PM Existing Plus Project
                     2.13.3396.1 Orange Coast College
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                     Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #6 Pinecreek Drive at Adams Avenue
********************************************************************************
Cycle (sec):           100                Critical Vol./Cap.(X):         0.712
Loss Time (sec):         0                Average Delay (sec/veh):      xxxxxx
Optimal Cycle:          79                Level Of Service:                  C
********************************************************************************
Street Name:           Pinecreek Drive                     Adams Avenue
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:      Split Phase      Split Phase       Protected        Protected
Rights:          Include          Include          Ignore           Include
Min. Green:     0     0     0     0     0     0     0     0     0     0     0     0
Y+R:          4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0
Lanes:        1  1  0  0  1   0  1  0  0  1   1  0  3  0  1   2  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     393    30   263    62    25    90    71   831   475   333  1261   169
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:  393    30   263    62    25    90    71   831   475   333  1261   169
Added Vol:      0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:  393    30   263    62    25    90    71   831   475   333  1261   169
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  1.00
PHF Volume:   393    30   263    62    25    90    71   831     0   333  1261   169
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:  393    30   263    62    25    90    71   831     0   333  1261   169
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  1.00
FinalVolume:  393    30   263    62    25    90    71   831     0   333  1261   169
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       1.86  0.14  1.00  0.71  0.29  1.00  1.00  3.00  1.00  2.00  1.76  0.24
Final Sat.:  2973   227  1600  1140   460  1600  1600  4800  1600  3200  2822   378
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.13  0.13  0.16  0.05  0.05  0.06  0.04  0.17  0.00  0.10  0.45  0.45
Crit Moves:              ****              ****  ****                    ****
********************************************************************************
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                                AM Existing
                       2.13.3396.1 Orange Coast College
---------------------------------------------------------------------------------
                       Level Of Service Computation Report
         ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*********************************************************************************
Intersection #7 Fairview Road at I-405 NB Ramps
*********************************************************************************
Cycle (sec):         100                  Critical Vol./Cap.(X):         0.658
Loss Time (sec):       0                  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        54                  Level Of Service:                  B
*********************************************************************************
Street Name:            Fairview Road                        I-405 NB Ramps
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Permitted        Split Phase      Split Phase
Rights:          Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Y+R:         4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:       1  0  3  0  0    0  0  6  0  1    0  0  0  0  0    2  0  0  0  2
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:    225   741     0    0  1351   354    0     0     0  778     0   946
Growth Adj: 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Initial Bse: 225   741     0    0  1351   354    0     0     0  778     0   946
Added Vol:     0     0     0    0     0     0    0     0     0    0     0     0
PasserByVol:   0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut: 225   741     0    0  1351   354    0     0     0  778     0   946
User Adj:   1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Volume:  225   741     0    0  1351   354    0     0     0  778     0   946
Reduct Vol:    0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol: 225   741     0    0  1351   354    0     0     0  778     0   946
PCE Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
MLF Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
FinalVolume: 225   741     0    0  1351   354    0     0     0  778     0   946
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:   1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600  1600
Adjustment: 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Lanes:      1.00  3.00  0.00 0.00  6.00  1.00 0.00  0.00  0.00 2.00  0.00  2.00
Final Sat.: 1600  4800     0    0  9600  1600    0     0     0 3200     0  3200
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.14  0.15  0.00 0.00  0.14  0.22 0.00  0.00  0.00 0.24  0.00  0.30
Crit Moves: ****                          ****                              ****
*********************************************************************************
```

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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #7 Fairview Road at I-405 NB Ramps

Cycle (sec):	100	Critical Vol./Cap.(X):	0.684
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	59	Level Of Service:	B

Street Name:	Fairview Road						I-405 NB Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	3	0 0	0 0	6	0 1	0 0	0	0 0	2 0	0	0 2
Volume Module:												
Base Vol:	241	757	0	0	1422	354	0	0	0	999	0	946
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	241	757	0	0	1422	354	0	0	0	999	0	946
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	241	757	0	0	1422	354	0	0	0	999	0	946
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	241	757	0	0	1422	354	0	0	0	999	0	946
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	241	757	0	0	1422	354	0	0	0	999	0	946
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	241	757	0	0	1422	354	0	0	0	999	0	946
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	3.00	0.00	0.00	6.00	1.00	0.00	0.00	0.00	2.00	0.00	2.00
Final Sat.:	1600	4800	0	0	9600	1600	0	0	0	3200	0	3200
Capacity Analysis Module:												
Vol/Sat:	0.15	0.16	0.00	0.00	0.15	0.22	0.00	0.00	0.00	0.31	0.00	0.30
Crit Moves:	****					****				****		

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--------------------------------------------------------------------------------
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                      Level Of Service Computation Report
        ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #7 Fairview Road at I-405 NB Ramps
********************************************************************************
Cycle (sec):         100                 Critical Vol./Cap.(X):         0.688
Loss Time (sec):       0                 Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        60                 Level Of Service:                  B
********************************************************************************
Street Name:              Fairview Road                    I-405 NB Ramps
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:      L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected         Permitted       Split Phase       Split Phase
Rights:          Include           Include          Include           Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Y+R:          4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0
Lanes:         1  0  3  0  0    0  0  6  0  1    0  0  0  0  0    2  0  0  0  2
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     213 1205     0     0 1628   326     0    0     0   868    0  1123
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  213 1205     0     0 1628   326     0    0     0   868    0  1123
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  213 1205     0     0 1628   326     0    0     0   868    0  1123
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   213 1205     0     0 1628   326     0    0     0   868    0  1123
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  213 1205     0     0 1628   326     0    0     0   868    0  1123
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  213 1205     0     0 1628   326     0    0     0   868    0  1123
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 3.00  0.00  0.00 6.00  1.00  0.00 0.00  0.00  2.00 0.00  2.00
Final Sat.:  1600 4800     0     0 9600  1600     0    0     0  3200    0  3200
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.13 0.25  0.00  0.00 0.17  0.20  0.00 0.00  0.00  0.27 0.00  0.35
Crit Moves:  ****                        ****                               ****
********************************************************************************
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                        Level Of Service Computation Report
         ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #7 Fairview Road at I-405 NB Ramps
********************************************************************************
Cycle (sec):          100                 Critical Vol./Cap.(X):         0.728
Loss Time (sec):        0                 Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         68                 Level Of Service:                  C
********************************************************************************
Street Name:               Fairview Road                   I-405 NB Ramps
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Permitted       Split Phase      Split Phase
Rights:           Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Y+R:         4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:        1  0  3  0  0    0  0  6  0  1    0  0  0  0  0    2  0  0  0  2
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     277  1262     0     0  1685   326     0     0     0  1032     0  1123
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:  277  1262     0     0  1685   326     0     0     0  1032     0  1123
Added Vol:      0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:  277  1262     0     0  1685   326     0     0     0  1032     0  1123
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:   277  1262     0     0  1685   326     0     0     0  1032     0  1123
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:  277  1262     0     0  1685   326     0     0     0  1032     0  1123
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:  277  1262     0     0  1685   326     0     0     0  1032     0  1123
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       1.00  3.00  0.00  0.00  6.00  1.00  0.00  0.00  0.00  2.00  0.00  2.00
Final Sat.:  1600  4800     0     0  9600  1600     0     0     0  3200     0  3200
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.17  0.26  0.00  0.00  0.18  0.20  0.00  0.00  0.00  0.32  0.00  0.35
Crit Moves:  ****                          ****                                ****
********************************************************************************
```

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                     Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #8 Fairview Road at I-405 SB Ramps
********************************************************************************
Cycle (sec):         100               Critical Vol./Cap.(X):         0.611
Loss Time (sec):       0               Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        48               Level Of Service:                  B
********************************************************************************
Street Name:            Fairview Road                    I-405 SB Ramps
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Protected       Split Phase      Split Phase
Rights:          Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Y+R:         4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:        0  0  3  1  1    3  0  3  0  0    2  0  0  0  2    0  0  0  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0   700   969  1073 1165     0   246     0   271     0     0     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   0   700   969  1073 1165     0   246     0   271     0     0     0
Added Vol:     0     0     0     0    0     0     0     0     0     0     0     0
PasserByVol:   0     0     0     0    0     0     0     0     0     0     0     0
Initial Fut:   0   700   969  1073 1165     0   246     0   271     0     0     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    0   700   969  1073 1165     0   246     0   271     0     0     0
Reduct Vol:    0     0     0     0    0     0     0     0     0     0     0     0
Reduced Vol:   0   700   969  1073 1165     0   246     0   271     0     0     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   0   700   969  1073 1165     0   246     0   271     0     0     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 3.00  2.00  3.00 3.00  0.00  2.00 0.00  2.00  0.00 0.00  0.00
Final Sat.:     0 4800  3200  4800 4800     0  3200    0  3200     0    0     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.15  0.30  0.22 0.24  0.00  0.08 0.00  0.08  0.00 0.00  0.00
Crit Moves:             ****  ****                          ****
********************************************************************************
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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #8 Fairview Road at I-405 SB Ramps

Cycle (sec):	100	Critical Vol./Cap.(X):	0.652
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	53	Level Of Service:	B

Street Name:	Fairview Road						I-405 SB Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0 3 1 1			3 0 3 0 0			2 0 0 0 2			0 0 0 0 0		
Volume Module:												
Base Vol:	0	731	1012	1073	1458	0	246	0	360	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	731	1012	1073	1458	0	246	0	360	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	731	1012	1073	1458	0	246	0	360	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	731	1012	1073	1458	0	246	0	360	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	731	1012	1073	1458	0	246	0	360	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	731	1012	1073	1458	0	246	0	360	0	0	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	3.00	2.00	3.00	3.00	0.00	2.00	0.00	2.00	0.00	0.00	0.00
Final Sat.:	0	4800	3200	4800	4800	0	3200	0	3200	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.15	0.32	0.22	0.30	0.00	0.08	0.00	0.11	0.00	0.00	0.00
Crit Moves:			****	****					****			

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--------------------------------------------------------------------------------
                     Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #8 Fairview Road at I-405 SB Ramps
********************************************************************************
Cycle (sec):          100                Critical Vol./Cap.(X):         0.545
Loss Time (sec):        0                Average Delay (sec/veh):       xxxxxx
Optimal Cycle:         41                Level Of Service:                   A
********************************************************************************
Street Name:              Fairview Road                      I-405 SB Ramps
Approach:         North Bound      South Bound      East Bound       West Bound
Movement:       L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Permitted         Protected        Split Phase      Split Phase
Rights:           Include           Include           Include          Include
Min. Green:     0    0     0    0    0     0    0    0     0    0    0     0
Y+R:          4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:         0  0  3  1  1   3  0  3  0  0   2  0  0  0  2   0  0  0  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  937   524 1048 1427     0  462    0   404    0    0     0
Growth Adj:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Initial Bse:    0  937   524 1048 1427     0  462    0   404    0    0     0
Added Vol:      0    0     0    0    0     0    0    0     0    0    0     0
PasserByVol:    0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:    0  937   524 1048 1427     0  462    0   404    0    0     0
User Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Volume:     0  937   524 1048 1427     0  462    0   404    0    0     0
Reduct Vol:     0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:    0  937   524 1048 1427     0  462    0   404    0    0     0
PCE Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume:    0  937   524 1048 1427     0  462    0   404    0    0     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600 1600 1600  1600 1600 1600  1600 1600 1600  1600
Adjustment:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Lanes:       0.00 3.21  1.79 3.00 3.00  0.00 2.00 0.00  2.00 0.00 0.00  0.00
Final Sat.:     0 5131  2869 4800 4800     0 3200    0  3200    0    0     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.18  0.18 0.22 0.30  0.00 0.14 0.00  0.13 0.00 0.00  0.00
Crit Moves:       ****       ****             ****
********************************************************************************
```

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                        PM Existing Plus Project
                   2.13.3396.1 Orange Coast College
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                  Level Of Service Computation Report
    ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #8 Fairview Road at I-405 SB Ramps
********************************************************************************
Cycle (sec):         100               Critical Vol./Cap.(X):        0.583
Loss Time (sec):       0               Average Delay (sec/veh):     xxxxxx
Optimal Cycle:        45               Level Of Service:                 A
********************************************************************************
Street Name:            Fairview Road                  I-405 SB Ramps
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Protected       Split Phase      Split Phase
Rights:          Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Y+R:         4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:        0  0  3  1  1    3  0  3  0  0    2  0  0  0  2    0  0  0  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0  1058   692  1048  1648     0   462     0   467     0     0     0
Growth Adj: 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:   0  1058   692  1048  1648     0   462     0   467     0     0     0
Added Vol:     0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:   0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:   0  1058   692  1048  1648     0   462     0   467     0     0     0
User Adj:   1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:    0  1058   692  1048  1648     0   462     0   467     0     0     0
Reduct Vol:    0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:   0  1058   692  1048  1648     0   462     0   467     0     0     0
PCE Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:   0  1058   692  1048  1648     0   462     0   467     0     0     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:   1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment: 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:      0.00  3.02  1.98  3.00  3.00  0.00  2.00  0.00  2.00  0.00  0.00  0.00
Final Sat.:    0  4837  3163  4800  4800     0  3200     0  3200     0     0     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.00  0.22  0.22  0.22  0.34  0.00  0.14  0.00  0.15  0.00  0.00  0.00
Crit Moves:       ****        ****                          ****
********************************************************************************
```

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                                  AM Existing
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                      Level Of Service Computation Report
          ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #9 Fairview Road at Baker Street
********************************************************************************
Cycle (sec):         100             Critical Vol./Cap.(X):          0.588
Loss Time (sec):       0             Average Delay (sec/veh):       xxxxxx
Optimal Cycle:        55             Level Of Service:                   A
********************************************************************************
Street Name:              Fairview Road                      Baker Street
Approach:        North Bound      South Bound       East Bound       West Bound
Movement:       L  -  T  -  R   L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Protected        Protected         Protected         Protected
Rights:             Ovl             Include           Include           Include
Min. Green:     0    0     0    0    0     0     0    0     0     0    0     0
Y+R:          4.0  4.0   4.0  4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0
Lanes:         2  0  3  0  1   2  0  4  0  1    2  0  2  0  1    2  0  3  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     132 1186   620   178 1213   235   230  463   139   280  315   136
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  132 1186   620   178 1213   235   230  463   139   280  315   136
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  132 1186   620   178 1213   235   230  463   139   280  315   136
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   132 1186   620   178 1213   235   230  463   139   280  315   136
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  132 1186   620   178 1213   235   230  463   139   280  315   136
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  132 1186   620   178 1213   235   230  463   139   280  315   136
OvlAdjVol:               480
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 3.00  1.00  2.00 4.00  1.00  2.00 2.00  1.00  2.00 3.00  1.00
Final Sat.:  3200 4800  1600  3200 6400  1600  3200 3200  1600  3200 4800  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.04 0.25  0.39  0.06 0.19  0.15  0.07 0.14  0.09  0.09 0.07  0.09
OvlAdjV/S:              0.30
Crit Moves:             ****  ****                  ****        ****
********************************************************************************
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                    2.13.3396.1 Orange Coast College
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                       Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #9 Fairview Road at Baker Street
********************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):         0.597
Loss Time (sec):        0               Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         57               Level Of Service:                  A
********************************************************************************
Street Name:                Fairview Road                    Baker Street
Approach:         North Bound      South Bound      East Bound       West Bound
Movement:       L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:          Protected        Protected        Protected        Protected
Rights:              Ovl            Include          Include          Include
Min. Green:      0    0     0    0    0     0    0    0     0    0    0     0
Y+R:           4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:         2  0  3  0  1   2  0  4  0  1   2  0  2  0  1   2  0  3  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      132 1260   634   178 1595   235   230  463   139   336  315   136
Growth Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   132 1260   634   178 1595   235   230  463   139   336  315   136
Added Vol:       0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:     0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   132 1260   634   178 1595   235   230  463   139   336  315   136
User Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    132 1260   634   178 1595   235   230  463   139   336  315   136
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   132 1260   634   178 1595   235   230  463   139   336  315   136
PCE Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   132 1260   634   178 1595   235   230  463   139   336  315   136
OvlAdjVol:                466
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:     1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:        2.00 3.00  1.00  2.00 4.00  1.00  2.00 2.00  1.00  2.00 3.00  1.00
Final Sat.:   3200 4800  1600  3200 6400  1600  3200 3200  1600  3200 4800  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:      0.04 0.26  0.40  0.06 0.25  0.15  0.07 0.14  0.09  0.11 0.07  0.09
OvlAdjV/S:                0.29
Crit Moves:               ****  ****                   ****       ****
********************************************************************************
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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #9 Fairview Road at Baker Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.586
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	55	Level Of Service:	A

Street Name:	Fairview Road						Baker Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Ovl			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	3 0	1	2 0	4 0	1	2 0	2 0	1	2 0	3 0	1
Volume Module:												
Base Vol:	158	975	280	220	1325	293	263	396	187	610	979	179
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	158	975	280	220	1325	293	263	396	187	610	979	179
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	158	975	280	220	1325	293	263	396	187	610	979	179
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	158	975	280	220	1325	293	263	396	187	610	979	179
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	158	975	280	220	1325	293	263	396	187	610	979	179
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	158	975	280	220	1325	293	263	396	187	610	979	179
OvlAdjVol:			0									
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	3.00	1.00	2.00	4.00	1.00	2.00	2.00	1.00	2.00	3.00	1.00
Final Sat.:	3200	4800	1600	3200	6400	1600	3200	3200	1600	3200	4800	1600
Capacity Analysis Module:												
Vol/Sat:	0.05	0.20	0.17	0.07	0.21	0.18	0.08	0.12	0.12	0.19	0.20	0.11
OvlAdjV/S:			0.00									
Crit Moves:		****		****				****		****		

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                          PM Existing Plus Project
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                     Level Of Service Computation Report
        ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*******************************************************************************
Intersection #9 Fairview Road at Baker Street
*******************************************************************************
Cycle (sec):         100               Critical Vol./Cap.(X):         0.662
Loss Time (sec):       0               Average Delay (sec/veh):       xxxxxx
Optimal Cycle:        67               Level Of Service:                   B
*******************************************************************************
Street Name:              Fairview Road                    Baker Street
Approach:        North Bound      South Bound      East Bound       West Bound
Movement:       L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected        Protected        Protected
Rights:            Ovl             Include          Include          Include
Min. Green:     0     0     0    0     0     0    0     0     0    0     0     0
Y+R:          4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:        2  0  3  0  1    2  0  4  0  1    2  0  2  0  1    2  0  3  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     158  1266   335  220  1609   293  263   396   187  657   979   179
Growth Adj:  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Initial Bse:  158  1266   335  220  1609   293  263   396   187  657   979   179
Added Vol:      0     0     0    0     0     0    0     0     0    0     0     0
PasserByVol:    0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut:  158  1266   335  220  1609   293  263   396   187  657   979   179
User Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Volume:   158  1266   335  220  1609   293  263   396   187  657   979   179
Reduct Vol:     0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol:  158  1266   335  220  1609   293  263   396   187  657   979   179
PCE Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
FinalVolume:  158  1266   335  220  1609   293  263   396   187  657   979   179
OvlAdjVol:                  6
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600  1600
Adjustment:  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Lanes:       2.00  3.00  1.00 2.00  4.00  1.00 2.00  2.00  1.00 2.00  3.00  1.00
Final Sat.:  3200  4800  1600 3200  6400  1600 3200  3200  1600 3200  4800  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.05  0.26  0.21 0.07  0.25  0.18 0.08  0.12  0.12 0.21  0.20  0.11
OvlAdjV/S:                 0.00
Crit Moves:        ****       ****                    ****       ****
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                   Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #10 Fairview Road at Adams Avenue
********************************************************************************
Cycle (sec):          100              Critical Vol./Cap.(X):         0.670
Loss Time (sec):        0              Average Delay (sec/veh):       xxxxxx
Optimal Cycle:         69              Level Of Service:                   B
********************************************************************************
Street Name:               Fairview Road                      Adams Avenue
Approach:         North Bound      South Bound       East Bound       West Bound
Movement:        L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------||----------------||----------------||----------------|
Control:           Protected         Protected        Split Phase       Split Phase
Rights:              Include           Ignore           Include           Include
Min. Green:       0     0     0     0     0     0     0     0     0     0     0     0
Y+R:            4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0
Lanes:          2  0  2  1  0    1  0  3  0  1    2  0  1  0  1    0  1  1  0  1
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:       111   670   109    50  1117   498  1104    93   219    81    91    92
Growth Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:    111   670   109    50  1117   498  1104    93   219    81    91    92
Added Vol:        0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:      0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:    111   670   109    50  1117   498  1104    93   219    81    91    92
User Adj:      1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:       1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:     111   670   109    50  1117     0  1104    93   219    81    91    92
Reduct Vol:       0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:    111   670   109    50  1117     0  1104    93   219    81    91    92
PCE Adj:       1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:       1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:    111   670   109    50  1117     0  1104    93   219    81    91    92
------------|----------------||----------------||----------------||----------------|
Saturation Flow Module:
Sat/Lane:      1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:         2.00  2.58  0.42  1.00  3.00  1.00  2.00  1.00  1.00  0.94  1.06  1.00
Final Sat.:    3200  4128   672  1600  4800  1600  3200  1600  1600  1507  1693  1600
------------|----------------||----------------||----------------||----------------|
Capacity Analysis Module:
Vol/Sat:       0.03  0.16  0.16  0.03  0.23  0.00  0.34  0.06  0.14  0.05  0.05  0.06
Crit Moves:    ****                    ****        ****                          ****
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                          AM Existing Plus Project
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                      Level Of Service Computation Report
        ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #10 Fairview Road at Adams Avenue
********************************************************************************
Cycle (sec):          100                Critical Vol./Cap.(X):          0.738
Loss Time (sec):        0                Average Delay (sec/veh):       xxxxxx
Optimal Cycle:         87                Level Of Service:                   C
********************************************************************************
Street Name:                 Fairview Road                      Adams Avenue
Approach:          North Bound       South Bound       East Bound        West Bound
Movement:        L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------||----------------||----------------||----------------|
Control:          Protected         Protected        Split Phase       Split Phase
Rights:             Include           Ignore           Include           Include
Min. Green:      0     0     0    0     0     0    0     0     0    0     0     0
Y+R:           4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:           2  0  2  1  0    1  0  3  0  1    2  0  1  0  1    0  1  1  0  1
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:      122   716   110    50  1363   691  1146    93   240    84    91    92
Growth Adj:   1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:   122   716   110    50  1363   691  1146    93   240    84    91    92
Added Vol:       0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:     0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:   122   716   110    50  1363   691  1146    93   240    84    91    92
User Adj:     1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:      1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:    122   716   110    50  1363     0  1146    93   240    84    91    92
Reduct Vol:      0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:   122   716   110    50  1363     0  1146    93   240    84    91    92
PCE Adj:      1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:      1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:   122   716   110    50  1363     0  1146    93   240    84    91    92
------------|----------------||----------------||----------------||----------------|
Saturation Flow Module:
Sat/Lane:     1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:   1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:        2.00  2.60  0.40  1.00  3.00  1.00  2.00  1.00  1.00  0.96  1.04  1.00
Final Sat.:   3200  4161   639  1600  4800  1600  3200  1600  1600  1536  1664  1600
------------|----------------||----------------||----------------||----------------|
Capacity Analysis Module:
Vol/Sat:      0.04  0.17  0.17  0.03  0.28  0.00  0.36  0.06  0.15  0.05  0.05  0.06
Crit Moves:   ****                    ****        ****                          ****
********************************************************************************
```

PM Existing
2.13.3396.1 Orange Coast College

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #10 Fairview Road at Adams Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.654
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	66	Level Of Service:	B

Street Name:	Fairview Road						Adams Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Ignore			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0 2 1 0			1 0 3 0 1			2 0 1 0 1			0 1 1 0 1		
Volume Module:												
Base Vol:	493	990	48	101	1126	1057	652	134	198	60	136	72
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	493	990	48	101	1126	1057	652	134	198	60	136	72
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	493	990	48	101	1126	1057	652	134	198	60	136	72
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	493	990	48	101	1126	0	652	134	198	60	136	72
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	493	990	48	101	1126	0	652	134	198	60	136	72
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	493	990	48	101	1126	0	652	134	198	60	136	72
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	2.86	0.14	1.00	3.00	1.00	2.00	1.00	1.00	0.61	1.39	1.00
Final Sat.:	3200	4578	222	1600	4800	1600	3200	1600	1600	980	2220	1600
Capacity Analysis Module:												
Vol/Sat:	0.15	0.22	0.22	0.06	0.23	0.00	0.20	0.08	0.12	0.06	0.06	0.05
Crit Moves:	****				****		****				****	

PM Existing Plus Project
2.13.3396.1 Orange Coast College

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #10 Fairview Road at Adams Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.749
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	91	Level Of Service:	C

Street Name:	Fairview Road						Adams Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Ignore			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	2 1	0	1 0	3 0	1	2 0	1 0	1	0 1	1 0	1
Volume Module:												
Base Vol:	529	1183	52	101	1295	1218	804	135	229	62	137	72
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	529	1183	52	101	1295	1218	804	135	229	62	137	72
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	529	1183	52	101	1295	1218	804	135	229	62	137	72
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	529	1183	52	101	1295	0	804	135	229	62	137	72
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	529	1183	52	101	1295	0	804	135	229	62	137	72
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	529	1183	52	101	1295	0	804	135	229	62	137	72
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	2.87	0.13	1.00	3.00	1.00	2.00	1.00	1.00	0.62	1.38	1.00
Final Sat.:	3200	4598	202	1600	4800	1600	3200	1600	1600	997	2203	1600
Capacity Analysis Module:												
Vol/Sat:	0.17	0.26	0.26	0.06	0.27	0.00	0.25	0.08	0.14	0.06	0.06	0.05
Crit Moves:	****				****		****			****		

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                      Level Of Service Computation Report
          ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #11 Fairview Road at Monitor Way
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):         0.342
Loss Time (sec):       0              Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        28              Level Of Service:                  A
********************************************************************************
Street Name:              Fairview Road                      Monitor Way
Approach:        North Bound      South Bound       East Bound       West Bound
Movement:      L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
-------------|----------------||----------------||----------------||----------------|
Control:        Prot+Permit      Prot+Permit        Permitted         Permitted
Rights:           Include          Include           Include           Include
Min. Green:     0     0     0    0     0     0     0     0     0     0     0     0
Y+R:          4.0   4.0   4.0  4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0
Lanes:         1  0  2  1  0    1  0  3  0  1    0  1  0  0  1    0  1  0  0  1
-------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:      61   848     2    70  1226   240    23     4     6    23     3    54
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:   61   848     2    70  1226   240    23     4     6    23     3    54
Added Vol:      0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:   61   848     2    70  1226   240    23     4     6    23     3    54
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:    61   848     2    70  1226   240    23     4     6    23     3    54
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:   61   848     2    70  1226   240    23     4     6    23     3    54
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:   61   848     2    70  1226   240    23     4     6    23     3    54
-------------|----------------||----------------||----------------||----------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       1.00  2.99  0.01  1.00  3.00  1.00  0.85  0.15  1.00  0.88  0.12  1.00
Final Sat.:  1600  4789    11  1600  4800  1600  1363   237  1600  1415   185  1600
-------------|----------------||----------------||----------------||----------------|
Capacity Analysis Module:
Vol/Sat:     0.04  0.18  0.18  0.04  0.26  0.15  0.01  0.02  0.00  0.01  0.02  0.03
Crit Moves:  ****              ****              ****                          ****
********************************************************************************
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AM Existing Plus Project
2.13.3396.1 Orange Coast College

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #11 Fairview Road at Monitor Way

Cycle (sec):	100	Critical Vol./Cap.(X):	0.428
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	33	Level Of Service:	A

Street Name:	Fairview Road						Monitor Way					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2	1 0	1 0	3	0 1	0 1	0	0 1	0 1	0	0 1
Volume Module:												
Base Vol:	128	886	2	70	1378	359	43	4	17	23	3	54
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	128	886	2	70	1378	359	43	4	17	23	3	54
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	128	886	2	70	1378	359	43	4	17	23	3	54
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	128	886	2	70	1378	359	43	4	17	23	3	54
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	128	886	2	70	1378	359	43	4	17	23	3	54
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	128	886	2	70	1378	359	43	4	17	23	3	54
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.99	0.01	1.00	3.00	1.00	0.91	0.09	1.00	0.88	0.12	1.00
Final Sat.:	1600	4789	11	1600	4800	1600	1464	136	1600	1415	185	1600
Capacity Analysis Module:												
Vol/Sat:	0.08	0.18	0.19	0.04	0.29	0.22	0.03	0.03	0.01	0.01	0.02	0.03
Crit Moves:	****				****		****					****

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                         Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*********************************************************************************
Intersection #11 Fairview Road at Monitor Way
*********************************************************************************
Cycle (sec):          100              Critical Vol./Cap.(X):          0.460
Loss Time (sec):        0              Average Delay (sec/veh):       xxxxxx
Optimal Cycle:         34              Level Of Service:                   A
*********************************************************************************
Street Name:                Fairview Road                     Monitor Way
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Prot+Permit      Prot+Permit        Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Y+R:         4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:        1  0  2  1  0   1  0  3  0  1   0  1  0  0  1   0  1  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      60  1335    10   76  1154   165  165     0    51   11     0    46
Growth Adj:  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Initial Bse:   60  1335    10   76  1154   165  165     0    51   11     0    46
Added Vol:      0     0     0    0     0     0    0     0     0    0     0     0
PasserByVol:    0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut:   60  1335    10   76  1154   165  165     0    51   11     0    46
User Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Volume:    60  1335    10   76  1154   165  165     0    51   11     0    46
Reduct Vol:     0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol:   60  1335    10   76  1154   165  165     0    51   11     0    46
PCE Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
FinalVolume:   60  1335    10   76  1154   165  165     0    51   11     0    46
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600  1600
Adjustment:  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Lanes:       1.00  2.98  0.02 1.00  3.00  1.00 1.00  0.00  1.00 1.00  0.00  1.00
Final Sat.:  1600  4764    36 1600  4800  1600 1600     0  1600 1600     0  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.04  0.28  0.28 0.05  0.24  0.10 0.10  0.00  0.03 0.01  0.00  0.03
Crit Moves:        ****       ****             ****                         ****
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------------------------------------------------------------------------------
                       PM Existing Plus Project
                   2.13.3396.1 Orange Coast College
------------------------------------------------------------------------------
                    Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
******************************************************************************
Intersection #11 Fairview Road at Monitor Way
******************************************************************************
Cycle (sec):          100                Critical Vol./Cap.(X):         0.538
Loss Time (sec):        0                Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         40                Level Of Service:                  A
******************************************************************************
Street Name:              Fairview Road                    Monitor Way
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Prot+Permit      Prot+Permit        Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:    0    0     0    0    0     0    0    0     0    0    0     0
Y+R:         4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:        1  0  2  1  0   1  0  3  0  1   0  1  0  0  1   0  1  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:    107 1495    10   76 1272   249  237    0    91   11    0    46
Growth Adj: 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Initial Bse: 107 1495    10   76 1272   249  237    0    91   11    0    46
Added Vol:     0    0     0    0    0     0    0    0     0    0    0     0
PasserByVol:   0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut: 107 1495    10   76 1272   249  237    0    91   11    0    46
User Adj:   1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Volume:  107 1495    10   76 1272   249  237    0    91   11    0    46
Reduct Vol:    0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol: 107 1495    10   76 1272   249  237    0    91   11    0    46
PCE Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume: 107 1495    10   76 1272   249  237    0    91   11    0    46
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:   1600 1600  1600 1600 1600  1600 1600 1600  1600 1600 1600  1600
Adjustment: 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Lanes:      1.00 2.98  0.02 1.00 3.00  1.00 1.00 0.00  1.00 1.00 0.00  1.00
Final Sat.: 1600 4768    32 1600 4800  1600 1600    0  1600 1600    0  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.07 0.31  0.31 0.05 0.27  0.16 0.15 0.00  0.06 0.01 0.00  0.03
Crit Moves:      ****       ****             ****                         ****
******************************************************************************
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                                  AM Existing
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                        Level Of Service Computation Report
          ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #12 Fairview Road at Pirate Way/Mustang Way
********************************************************************************
Cycle (sec):          100                 Critical Vol./Cap.(X):         0.399
Loss Time (sec):        0                 Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         31                 Level Of Service:                  A
********************************************************************************
Street Name:                Fairview Road                Pirate Way/Mustang Way
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected         Permitted        Permitted
Rights:          Include          Include           Include          Include
Min. Green:    0    0     0    0    0     0    0    0     0    0    0     0
Y+R:         4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:        1  0  2  1  0    1  0  3  0  1    0  1  0  0  1    0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     71  744    54    92  750   285    71   14    36   146    1    62
Growth Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  71  744    54    92  750   285    71   14    36   146    1    62
Added Vol:     0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:   0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  71  744    54    92  750   285    71   14    36   146    1    62
User Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   71  744    54    92  750   285    71   14    36   146    1    62
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  71  744    54    92  750   285    71   14    36   146    1    62
PCE Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  71  744    54    92  750   285    71   14    36   146    1    62
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:   1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:      1.00 2.80  0.20  1.00 3.00  1.00  0.84 0.16  1.00  0.70 0.01  0.29
Final Sat.: 1600 4475   325  1600 4800  1600  1336  264  1600  1118    8   475
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.04 0.17  0.17  0.06 0.16  0.18  0.04 0.05  0.02  0.09 0.13  0.13
Crit Moves:      ****        ****             ****                   ****
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                          AM Existing Plus Project
                      2.13.3396.1 Orange Coast College
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                      Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #12 Fairview Road at Pirate Way/Mustang Way
********************************************************************************
Cycle (sec):         100               Critical Vol./Cap.(X):         0.466
Loss Time (sec):       0               Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        35               Level Of Service:                  A
********************************************************************************
Street Name:              Fairview Road                Pirate Way/Mustang Way
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------||----------------||----------------||----------------|
Control:        Protected        Protected         Permitted        Permitted
Rights:           Include          Include           Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Y+R:         4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:        1  0  2  1  0    1  0  3  0  1    0  1  0  0  1    0  0  1! 0  0
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:    145   844    54   92   884   315   76    14    48  146     1    62
Growth Adj: 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Initial Bse: 145   844    54   92   884   315   76    14    48  146     1    62
Added Vol:     0     0     0    0     0     0    0     0     0    0     0     0
PasserByVol:   0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut: 145   844    54   92   884   315   76    14    48  146     1    62
User Adj:   1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Volume:  145   844    54   92   884   315   76    14    48  146     1    62
Reduct Vol:    0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol: 145   844    54   92   884   315   76    14    48  146     1    62
PCE Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
MLF Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
FinalVolume: 145   844    54   92   884   315   76    14    48  146     1    62
------------|----------------||----------------||----------------||----------------|
Saturation Flow Module:
Sat/Lane:   1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600  1600
Adjustment: 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Lanes:      1.00  2.82  0.18 1.00  3.00  1.00 0.84  0.16  1.00 0.70  0.01  0.29
Final Sat.: 1600  4511   289 1600  4800  1600 1351   249  1600 1118     8   475
------------|----------------||----------------||----------------||----------------|
Capacity Analysis Module:
Vol/Sat:    0.09  0.19  0.19 0.06  0.18  0.20 0.05  0.06  0.03 0.09  0.13  0.13
Crit Moves: ****                          ****  ****                    ****
********************************************************************************
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                                  PM Existing
                       2.13.3396.1 Orange Coast College
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                      Level Of Service Computation Report
         ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #12 Fairview Road at Pirate Way/Mustang Way
********************************************************************************
Cycle (sec):        100              Critical Vol./Cap.(X):          0.401
Loss Time (sec):      0              Average Delay (sec/veh):        xxxxxx
Optimal Cycle:       31              Level Of Service:                    A
********************************************************************************
Street Name:               Fairview Road                 Pirate Way/Mustang Way
Approach:       North Bound       South Bound       East Bound        West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected         Protected         Permitted         Permitted
Rights:          Include           Include           Include           Include
Min. Green:   0     0     0    0     0     0    0     0     0    0     0     0
Y+R:        4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:       1  0  2  1  0    1  0  3  0  1    0  1  0  0  1    0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     81  1205     0    12   959   219   195     0    68    15     0    18
Growth Adj: 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:  81  1205     0    12   959   219   195     0    68    15     0    18
Added Vol:     0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:   0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:  81  1205     0    12   959   219   195     0    68    15     0    18
User Adj:   1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:   81  1205     0    12   959   219   195     0    68    15     0    18
Reduct Vol:    0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:  81  1205     0    12   959   219   195     0    68    15     0    18
PCE Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:  81  1205     0    12   959   219   195     0    68    15     0    18
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:   1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment: 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:      1.00  3.00  0.00  1.00  3.00  1.00  1.00  0.00  1.00  0.45  0.00  0.55
Final Sat.: 1600  4800     0  1600  4800  1600  1600     0  1600   727     0   873
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.05  0.25  0.00  0.01  0.20  0.14  0.12  0.00  0.04  0.01  0.00  0.02
Crit Moves:       ****        ****              ****                          ****
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                        PM Existing Plus Project
                    2.13.3396.1 Orange Coast College
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                    Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
******************************************************************************
Intersection #12 Fairview Road at Pirate Way/Mustang Way
******************************************************************************
Cycle (sec):          100                Critical Vol./Cap.(X):         0.466
Loss Time (sec):        0                Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         35                Level Of Service:                  A
******************************************************************************
Street Name:              Fairview Road              Pirate Way/Mustang Way
Approach:        North Bound      South Bound      East Bound       West Bound
Movement:      L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
-------------|-----------------||-----------------||-----------------||-----------------|
Control:          Protected        Protected         Permitted         Permitted
Rights:            Include          Include           Include           Include
Min. Green:     0     0     0    0     0     0    0     0     0    0     0     0
Y+R:          4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:         1  0  2  1  0    1  0  3  0  1    0  1  0  0  1    0  0  1!  0  0
-------------|-----------------||-----------------||-----------------||-----------------|
Volume Module:
Base Vol:     134  1394     0   12  1097   240  213     0   113   15     0    18
Growth Adj:  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Initial Bse:  134  1394     0   12  1097   240  213     0   113   15     0    18
Added Vol:      0     0     0    0     0     0    0     0     0    0     0     0
PasserByVol:    0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut:  134  1394     0   12  1097   240  213     0   113   15     0    18
User Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Volume:   134  1394     0   12  1097   240  213     0   113   15     0    18
Reduct Vol:     0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol:  134  1394     0   12  1097   240  213     0   113   15     0    18
PCE Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
FinalVolume:  134  1394     0   12  1097   240  213     0   113   15     0    18
-------------|-----------------||-----------------||-----------------||-----------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600  1600
Adjustment:  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Lanes:       1.00  3.00  0.00 1.00  3.00  1.00 1.00  0.00  1.00 0.45  0.00  0.55
Final Sat.:  1600  4800     0 1600  4800  1600 1600     0  1600  727     0   873
-------------|-----------------||-----------------||-----------------||-----------------|
Capacity Analysis Module:
Vol/Sat:     0.08  0.29  0.00 0.01  0.23  0.15 0.13  0.00  0.07 0.01  0.00  0.02
Crit Moves:  ****                     ****     ****                          ****
******************************************************************************
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                                 AM Existing
                     2.13.3396.1 Orange Coast College
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                     Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #13 Fairview Road at Arlington Drive
********************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):          0.287
Loss Time (sec):        0               Average Delay (sec/veh):       xxxxxx
Optimal Cycle:         26               Level Of Service:                   A
********************************************************************************
Street Name:                Fairview Road                 Arlington Drive
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:       L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Protected        Protected        Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Y+R:          4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0
Lanes:        2  0  3  0  1    2  0  3  0  1    1  0  1  0  1    1  1  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      53  734   207   100  718    78    13    0     8    59    7   151
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   53  734   207   100  718    78    13    0     8    59    7   151
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   53  734   207   100  718    78    13    0     8    59    7   151
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    53  734   207   100  718    78    13    0     8    59    7   151
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   53  734   207   100  718    78    13    0     8    59    7   151
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   53  734   207   100  718    78    13    0     8    59    7   151
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 3.00  1.00  2.00 3.00  1.00  1.00 1.00  1.00  1.79 0.21  1.00
Final Sat.:  3200 4800  1600  3200 4800  1600  1600 1600  1600  2861  339  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.02 0.15  0.13  0.03 0.15  0.05  0.01 0.00  0.01  0.02 0.02  0.09
Crit Moves:       ****        ****             ****                         ****
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                             AM Existing Plus Project
                      2.13.3396.1 Orange Coast College
--------------------------------------------------------------------------------
                     Level Of Service Computation Report
         ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #13 Fairview Road at Arlington Drive
********************************************************************************
Cycle (sec):          100              Critical Vol./Cap.(X):         0.331
Loss Time (sec):        0              Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         28              Level Of Service:                  A
********************************************************************************
Street Name:              Fairview Road                   Arlington Drive
Approach:       North Bound      South Bound       East Bound        West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected         Permitted         Permitted
Rights:           Include          Include           Include           Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Y+R:         4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:       2  0  3  0  1    2  0  3  0  1    1  0  1  0  1    1  1  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     84   888   207   100   777   165    32     0    14    59     7   151
Growth Adj: 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:  84   888   207   100   777   165    32     0    14    59     7   151
Added Vol:     0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:   0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:  84   888   207   100   777   165    32     0    14    59     7   151
User Adj:   1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:   84   888   207   100   777   165    32     0    14    59     7   151
Reduct Vol:    0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:  84   888   207   100   777   165    32     0    14    59     7   151
PCE Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:  84   888   207   100   777   165    32     0    14    59     7   151
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:   1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment: 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:      2.00  3.00  1.00  2.00  3.00  1.00  1.00  1.00  1.00  1.79  0.21  1.00
Final Sat.: 3200  4800  1600  3200  4800  1600  1600  1600  1600  2861   339  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.03  0.19  0.13  0.03  0.16  0.10  0.02  0.00  0.01  0.02  0.02  0.09
Crit Moves:       ****        ****              ****                          ****
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                                  PM Existing
                       2.13.3396.1 Orange Coast College
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                      Level Of Service Computation Report
          ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #13 Fairview Road at Arlington Drive
********************************************************************************
Cycle (sec):          100                Critical Vol./Cap.(X):         0.422
Loss Time (sec):        0                Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         32                Level Of Service:                  A
********************************************************************************
Street Name:             Fairview Road                   Arlington Drive
Approach:        North Bound      South Bound      East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected         Permitted        Permitted
Rights:           Include          Include           Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Y+R:          4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:         2  0  3  0  1   2  0  3  0  1   1  0  1  0  1   1  1  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      61   969   114   70   870    85   67     3    38  110    17   250
Growth Adj:  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Initial Bse:   61   969   114   70   870    85   67     3    38  110    17   250
Added Vol:      0     0     0    0     0     0    0     0     0    0     0     0
PasserByVol:    0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut:   61   969   114   70   870    85   67     3    38  110    17   250
User Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Volume:    61   969   114   70   870    85   67     3    38  110    17   250
Reduct Vol:     0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol:   61   969   114   70   870    85   67     3    38  110    17   250
PCE Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
FinalVolume:   61   969   114   70   870    85   67     3    38  110    17   250
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600  1600
Adjustment:  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Lanes:       2.00  3.00  1.00 2.00  3.00  1.00 1.00  1.00  1.00 1.73  0.27  1.00
Final Sat.:  3200  4800  1600 3200  4800  1600 1600  1600  1600 2772   428  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.02  0.20  0.07 0.02  0.18  0.05 0.04  0.00  0.02 0.04  0.04  0.16
Crit Moves:        ****       ****             ****                         ****
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------------------------------------------------------------------------------------
                        PM Existing Plus Project
                   2.13.3396.1 Orange Coast College
------------------------------------------------------------------------------------
                    Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
************************************************************************************
Intersection #13 Fairview Road at Arlington Drive
************************************************************************************
Cycle (sec):          100                 Critical Vol./Cap.(X):         0.516
Loss Time (sec):        0                 Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         38                 Level Of Service:                  A
************************************************************************************
Street Name:           Fairview Road                     Arlington Drive
Approach:        North Bound      South Bound      East Bound       West Bound
Movement:       L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Protected        Protected         Permitted        Permitted
Rights:            Include          Include           Include          Include
Min. Green:     0     0     0    0     0     0    0     0     0    0     0     0
Y+R:          4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:        2  0  3  0  1    2  0  3  0  1    1  0  1  0  1    1  1  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      87  1114   114   70   997   145  169     3    66  110    17   250
Growth Adj:  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Initial Bse:   87  1114   114   70   997   145  169     3    66  110    17   250
Added Vol:      0     0     0    0     0     0    0     0     0    0     0     0
PasserByVol:    0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut:   87  1114   114   70   997   145  169     3    66  110    17   250
User Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Volume:    87  1114   114   70   997   145  169     3    66  110    17   250
Reduct Vol:     0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol:   87  1114   114   70   997   145  169     3    66  110    17   250
PCE Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
FinalVolume:   87  1114   114   70   997   145  169     3    66  110    17   250
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600  1600
Adjustment:  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Lanes:       2.00  3.00  1.00 2.00  3.00  1.00 1.00  1.00  1.00 1.73  0.27  1.00
Final Sat.:  3200  4800  1600 3200  4800  1600 1600  1600  1600 2772   428  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.03  0.23  0.07 0.02  0.21  0.09 0.11  0.00  0.04 0.04  0.04  0.16
Crit Moves:        ****       ****             ****                          ****
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                               AM Existing
                     2.13.3396.1 Orange Coast College
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                    Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #14 Fairview Road at Merrimac Way
********************************************************************************
Cycle (sec):         100                Critical Vol./Cap.(X):         0.236
Loss Time (sec):       0                Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        24                Level Of Service:                  A
********************************************************************************
Street Name:              Fairview Road                    Merrimac Way
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected         Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:    0    0     0     0    0     0     0    0     0     0    0     0
Y+R:         4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0
Lanes:        2  0  3  0  1    2  0  3  0  1    1  1  0  0  1    1  0  0  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     162  949     0     0  608   166    88    0    62     0    0     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  162  949     0     0  608   166    88    0    62     0    0     0
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  162  949     0     0  608   166    88    0    62     0    0     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   162  949     0     0  608   166    88    0    62     0    0     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  162  949     0     0  608   166    88    0    62     0    0     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  162  949     0     0  608   166    88    0    62     0    0     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 3.00  1.00  2.00 3.00  1.00  2.00 0.00  1.00  1.00 1.00  0.00
Final Sat.:  3200 4800  1600  3200 4800  1600  3200    0  1600  1600 1600     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.05 0.20  0.00  0.00 0.13  0.10  0.03 0.00  0.04  0.00 0.00  0.00
Crit Moves:       ****        ****                            ****
********************************************************************************
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                          AM Existing Plus Project
                      2.13.3396.1 Orange Coast College
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                      Level Of Service Computation Report
        ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #14 Fairview Road at Merrimac Way
********************************************************************************
Cycle (sec):         100                Critical Vol./Cap.(X):          0.270
Loss Time (sec):       0                Average Delay (sec/veh):       xxxxxx
Optimal Cycle:        25                Level Of Service:                   A
********************************************************************************
Street Name:              Fairview Road                      Merrimac Way
Approach:       North Bound      South Bound       East Bound        West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected         Permitted         Permitted
Rights:           Include          Include           Include           Include
Min. Green:     0     0     0     0     0     0     0     0     0     0     0     0
Y+R:          4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0
Lanes:        2  0  3  0  1    2  0  3  0  1    1  1  0  0  1    1  0  0  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     192  1076     0     0   635   205   146     0    68     0     0     1
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:  192  1076     0     0   635   205   146     0    68     0     0     1
Added Vol:      0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:  192  1076     0     0   635   205   146     0    68     0     0     1
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:   192  1076     0     0   635   205   146     0    68     0     0     1
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:  192  1076     0     0   635   205   146     0    68     0     0     1
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:  192  1076     0     0   635   205   146     0    68     0     0     1
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       2.00  3.00  1.00  2.00  3.00  1.00  2.00  0.00  1.00  1.00  0.00  1.00
Final Sat.:  3200  4800  1600  3200  4800  1600  3200     0  1600  1600     0  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.06  0.22  0.00  0.00  0.13  0.13  0.05  0.00  0.04  0.00  0.00  0.00
Crit Moves:        ****        ****              ****                    ****
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                     Level Of Service Computation Report
        ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #14 Fairview Road at Merrimac Way
********************************************************************************
Cycle (sec):         100                 Critical Vol./Cap.(X):          0.295
Loss Time (sec):       0                 Average Delay (sec/veh):       xxxxxx
Optimal Cycle:        26                 Level Of Service:                   A
********************************************************************************
Street Name:            Fairview Road                      Merrimac Way
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:      L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|-----------------||-----------------||-----------------||-----------------|
Control:         Protected        Protected         Permitted         Permitted
Rights:           Include          Include           Include           Include
Min. Green:     0     0     0    0     0     0    0     0     0    0     0     0
Y+R:          4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:         2  0  3  0  1    2  0  3  0  1    1  1  0  0  1    1  0  0  1  0
------------|-----------------||-----------------||-----------------||-----------------|
Volume Module:
Base Vol:     226   994     3    0   763   254  150     1   105    0     0     0
Growth Adj:  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Initial Bse:  226   994     3    0   763   254  150     1   105    0     0     0
Added Vol:      0     0     0    0     0     0    0     0     0    0     0     0
PasserByVol:    0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut:  226   994     3    0   763   254  150     1   105    0     0     0
User Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Volume:   226   994     3    0   763   254  150     1   105    0     0     0
Reduct Vol:     0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol:  226   994     3    0   763   254  150     1   105    0     0     0
PCE Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
FinalVolume:  226   994     3    0   763   254  150     1   105    0     0     0
------------|-----------------||-----------------||-----------------||-----------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600  1600
Adjustment:  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Lanes:       2.00  3.00  1.00 2.00  3.00  1.00 1.99  0.01  1.00 1.00  1.00  0.00
Final Sat.:  3200  4800  1600 3200  4800  1600 3179    21  1600 1600  1600     0
------------|-----------------||-----------------||-----------------||-----------------|
Capacity Analysis Module:
Vol/Sat:     0.07  0.21  0.00 0.00  0.16  0.16 0.05  0.05  0.07 0.00  0.00  0.00
Crit Moves:  ****                     ****                    ****
********************************************************************************
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                     Level Of Service Computation Report
        ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #14 Fairview Road at Merrimac Way
********************************************************************************
Cycle (sec):          100                Critical Vol./Cap.(X):         0.352
Loss Time (sec):        0                Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         29                Level Of Service:                  A
********************************************************************************
Street Name:              Fairview Road                     Merrimac Way
Approach:         North Bound      South Bound      East Bound       West Bound
Movement:       L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Protected        Protected         Permitted        Permitted
Rights:           Include          Include           Include          Include
Min. Green:     0    0     0    0    0     0    0    0     0    0    0     0
Y+R:          4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:         2  0  3  0  1   2  0  3  0  1   1  1  0  0  1   1  0  0  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     247 1096     3    0  863   306  215    1   133    0    0     0
Growth Adj:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Initial Bse:  247 1096     3    0  863   306  215    1   133    0    0     0
Added Vol:      0    0     0    0    0     0    0    0     0    0    0     0
PasserByVol:    0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:  247 1096     3    0  863   306  215    1   133    0    0     0
User Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Volume:   247 1096     3    0  863   306  215    1   133    0    0     0
Reduct Vol:     0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:  247 1096     3    0  863   306  215    1   133    0    0     0
PCE Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume:  247 1096     3    0  863   306  215    1   133    0    0     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600 1600 1600  1600 1600 1600  1600 1600 1600  1600
Adjustment:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Lanes:       2.00 3.00  1.00 2.00 3.00  1.00 1.99 0.01  1.00 1.00 1.00  0.00
Final Sat.:  3200 4800  1600 3200 4800  1600 3185   15  1600 1600 1600     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.08 0.23  0.00 0.00 0.18  0.19 0.07 0.07  0.08 0.00 0.00  0.00
Crit Moves:  ****                       ****             ****
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                                 AM Existing
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                       Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #15 Fairview Road at Fair Drive
********************************************************************************
Cycle (sec):          100                Critical Vol./Cap.(X):         0.401
Loss Time (sec):        0                Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         38                Level Of Service:                  A
********************************************************************************
Street Name:                 Fairview Road                     Fair Drive
Approach:        North Bound      South Bound       East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------||----------------||----------------||----------------|
Control:         Protected        Protected         Protected        Protected
Rights:            Include          Include           Include          Include
Min. Green:    0     0     0    0     0     0     0     0     0     0     0     0
Y+R:          4.0   4.0   4.0  4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0
Lanes:         1  0  3  0  1   2  0  3  0  1    1  0  2  0  1    1  0  1  1  1
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:       35   484   143  249   404   138   164   578    33    16   240   336
Growth Adj:   1.00  1.00  1.00 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:    35   484   143  249   404   138   164   578    33    16   240   336
Added Vol:       0     0     0    0     0     0     0     0     0     0     0     0
PasserByVol:     0     0     0    0     0     0     0     0     0     0     0     0
Initial Fut:    35   484   143  249   404   138   164   578    33    16   240   336
User Adj:     1.00  1.00  1.00 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:      1.00  1.00  1.00 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:     35   484   143  249   404   138   164   578    33    16   240   336
Reduct Vol:      0     0     0    0     0     0     0     0     0     0     0     0
Reduced Vol:    35   484   143  249   404   138   164   578    33    16   240   336
PCE Adj:      1.00  1.00  1.00 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:      1.00  1.00  1.00 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:    35   484   143  249   404   138   164   578    33    16   240   336
------------|----------------||----------------||----------------||----------------|
Saturation Flow Module:
Sat/Lane:     1600  1600  1600 1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:   1.00  1.00  1.00 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:        1.00  3.00  1.00 2.00  3.00  1.00  1.00  2.00  1.00  1.00  1.25  1.75
Final Sat.:   1600  4800  1600 3200  4800  1600  1600  3200  1600  1600  2000  2800
------------|----------------||----------------||----------------||----------------|
Capacity Analysis Module:
Vol/Sat:      0.02  0.10  0.09 0.08  0.08  0.09  0.10  0.18  0.02  0.01  0.12  0.12
Crit Moves:         ****       ****              ****                    ****
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                          AM Existing Plus Project
                     2.13.3396.1 Orange Coast College
--------------------------------------------------------------------------------
                     Level Of Service Computation Report
        ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #15 Fairview Road at Fair Drive
********************************************************************************
Cycle (sec):         100                 Critical Vol./Cap.(X):         0.442
Loss Time (sec):       0                 Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        41                 Level Of Service:                  A
********************************************************************************
Street Name:               Fairview Road                       Fair Drive
Approach:        North Bound      South Bound      East Bound       West Bound
Movement:       L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Protected        Protected        Protected        Protected
Rights:            Include          Include          Include          Include
Min. Green:      0    0     0    0    0     0    0    0     0    0    0     0
Y+R:           4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:          1  0  3  0  1   2  0  3  0  1   1  0  2  0  1   1  0  1  1  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       35  536   143  270  415   139  167  578    33   16  240   438
Growth Adj:   1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Initial Bse:    35  536   143  270  415   139  167  578    33   16  240   438
Added Vol:       0    0     0    0    0     0    0    0     0    0    0     0
PasserByVol:     0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:    35  536   143  270  415   139  167  578    33   16  240   438
User Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:      1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Volume:     35  536   143  270  415   139  167  578    33   16  240   438
Reduct Vol:      0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:    35  536   143  270  415   139  167  578    33   16  240   438
PCE Adj:      1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:      1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume:    35  536   143  270  415   139  167  578    33   16  240   438
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:     1600 1600  1600 1600 1600  1600 1600 1600  1600 1600 1600  1600
Adjustment:   1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Lanes:        1.00 3.00  1.00 2.00 3.00  1.00 1.00 2.00  1.00 1.00 1.06  1.94
Final Sat.:   1600 4800  1600 3200 4800  1600 1600 3200  1600 1600 1699  3101
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:      0.02 0.11  0.09 0.08 0.09  0.09 0.10 0.18  0.02 0.01 0.14  0.14
Crit Moves:        ****       ****             ****                  ****
********************************************************************************
```

PM Existing
2.13.3396.1 Orange Coast College

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #15 Fairview Road at Fair Drive

Cycle (sec):	100	Critical Vol./Cap.(X):	0.519
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	47	Level Of Service:	A

Street Name:	Fairview Road						Fair Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	3 0	1	2 0	3 0	1	1 0	2 0	1	1 0	1 1	1
Volume Module:												
Base Vol:	51	475	43	232	470	83	100	278	32	85	839	529
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	51	475	43	232	470	83	100	278	32	85	839	529
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	51	475	43	232	470	83	100	278	32	85	839	529
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	51	475	43	232	470	83	100	278	32	85	839	529
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	51	475	43	232	470	83	100	278	32	85	839	529
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	51	475	43	232	470	83	100	278	32	85	839	529
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	3.00	1.00	2.00	3.00	1.00	1.00	2.00	1.00	1.00	1.84	1.16
Final Sat.:	1600	4800	1600	3200	4800	1600	1600	3200	1600	1600	2944	1856
Capacity Analysis Module:												
Vol/Sat:	0.03	0.10	0.03	0.07	0.10	0.05	0.06	0.09	0.02	0.05	0.28	0.29
Crit Moves:		****		****			****					****

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                          PM Existing Plus Project
                     2.13.3396.1 Orange Coast College
-------------------------------------------------------------------------------
                       Level Of Service Computation Report
        ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*******************************************************************************
Intersection #15 Fairview Road at Fair Drive
*******************************************************************************
Cycle (sec):          100                Critical Vol./Cap.(X):         0.569
Loss Time (sec):        0                Average Delay (sec/veh):       xxxxxx
Optimal Cycle:         53                Level Of Service:                   A
*******************************************************************************
Street Name:              Fairview Road                      Fair Drive
Approach:         North Bound      South Bound       East Bound       West Bound
Movement:       L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|-----------------||-----------------||-----------------||-----------------|
Control:         Protected        Protected         Protected         Protected
Rights:            Include          Include           Include           Include
Min. Green:     0     0     0    0     0     0     0     0     0     0     0     0
Y+R:          4.0   4.0   4.0  4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0
Lanes:         1  0  3  0  1    2  0  3  0  1    1  0  2  0  1    1  0  1  1  1
------------|-----------------||-----------------||-----------------||-----------------|
Volume Module:
Base Vol:      51   517    43   307   518    88   103   278    32    85   839   606
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:   51   517    43   307   518    88   103   278    32    85   839   606
Added Vol:      0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:   51   517    43   307   518    88   103   278    32    85   839   606
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:    51   517    43   307   518    88   103   278    32    85   839   606
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:   51   517    43   307   518    88   103   278    32    85   839   606
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:   51   517    43   307   518    88   103   278    32    85   839   606
------------|-----------------||-----------------||-----------------||-----------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       1.00  3.00  1.00  2.00  3.00  1.00  1.00  2.00  1.00  1.00  1.74  1.26
Final Sat.:  1600  4800  1600  3200  4800  1600  1600  3200  1600  1600  2787  2013
------------|-----------------||-----------------||-----------------||-----------------|
Capacity Analysis Module:
Vol/Sat:     0.03  0.11  0.03  0.10  0.11  0.06  0.06  0.09  0.02  0.05  0.30  0.30
Crit Moves:        ****        ****              ****                    ****
*******************************************************************************
```

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--------------------------------------------------------------------------------
                                  AM Existing
                      2.13.3396.1 Orange Coast College
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                        Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #16 Driveway 1 at Merrimac Way
********************************************************************************
Average Delay (sec/veh):       0.7      Worst Case Level Of Service: B[ 10.4]
********************************************************************************
Street Name:              Driveway 1                      Merrimac Way
Approach:        North Bound      South Bound      East Bound       West Bound
Movement:       L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:           Include          Include          Include          Include
Lanes:        0  0  0  0  0    0  0  1! 0  0    1  0  2  0  0    0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0     0     5     0    22    21   135     0     0   398    34
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:    0     0     0     5     0    22    21   135     0     0   398    34
Added Vol:      0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:    0     0     0     5     0    22    21   135     0     0   398    34
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95
PHF Volume:     0     0     0     5     0    23    22   142     0     0   419    36
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
FinalVolume:    0     0     0     5     0    23    22   142     0     0   419    36
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx    6.8   6.5   6.9   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx    3.5   4.0   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx    552   623   227   455 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx    468   405   782  1117 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx    461   397   782  1117 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx   0.01  0.00  0.03  0.02 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   xxxx xxxx xxxxx    0.1 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx  xxxxx xxxx xxxxx    8.3 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *     *     *     *     *     *     A     *     *     *     *     *
Movement:      LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx   xxxx   693 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx  xxxxx   0.1 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx  xxxxx  10.4 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *     *     *     *     B     *     *     *     *     *     *     *
ApproachDel:      xxxxxx             10.4            xxxxxx           xxxxxx
ApproachLOS:         *                 B                *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
```

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-------------------------------------------------------------------------------
                          AM Existing Plus Project
                      2.13.3396.1 Orange Coast College
-------------------------------------------------------------------------------
                     Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
*******************************************************************************
Intersection #16 Driveway 1 at Merrimac Way
*******************************************************************************
Average Delay (sec/veh):        1.3      Worst Case Level Of Service: B[ 11.9]
*******************************************************************************
Street Name:                Driveway 1                      Merrimac Way
Approach:        North Bound       South Bound       East Bound        West Bound
Movement:      L  -  T  -  R     L  -  T  -  R     L  -  T  -  R     L  -  T  -  R
------------|-----------------||-----------------||-----------------||-----------------|
Control:         Stop Sign         Stop Sign        Uncontrolled      Uncontrolled
Rights:           Include           Include           Include           Include
Lanes:         0  0  0  0  0     0  0  1! 0  0     1  0  2  0  0     0  0  1  1  0
------------|-----------------||-----------------||-----------------||-----------------|
Volume Module:
Base Vol:        0     0     0    12     0    32    62   192     0     0   436    64
Growth Adj:   1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:     0     0     0    12     0    32    62   192     0     0   436    64
Added Vol:       0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:     0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:     0     0     0    12     0    32    62   192     0     0   436    64
User Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:      0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95
PHF Volume:      0     0     0    13     0    34    65   202     0     0   459    67
Reduct Vol:      0     0     0     0     0     0     0     0     0     0     0     0
FinalVolume:     0     0     0    13     0    34    65   202     0     0   459    67
------------|-----------------||-----------------||-----------------||-----------------|
Critical Gap Module:
Critical Gp:xxxxx  xxxx xxxxx    6.8   6.5   6.9   4.1  xxxx xxxxx xxxxx  xxxx xxxxx
FollowUpTim:xxxxx  xxxx xxxxx    3.5   4.0   3.3   2.2  xxxx xxxxx xxxxx  xxxx xxxxx
------------|-----------------||-----------------||-----------------||-----------------|
Capacity Module:
Cnflict Vol: xxxx  xxxx xxxxx    724   825   263   526  xxxx xxxxx  xxxx  xxxx xxxxx
Potent Cap.: xxxx  xxxx xxxxx    365   310   741  1051  xxxx xxxxx  xxxx  xxxx xxxxx
Move Cap.:   xxxx  xxxx xxxxx    348   291   741  1051  xxxx xxxxx  xxxx  xxxx xxxxx
Volume/Cap:  xxxx  xxxx  xxxx   0.04  0.00  0.05  0.06  xxxx  xxxx  xxxx  xxxx  xxxx
------------|-----------------||-----------------||-----------------||-----------------|
Level Of Service Module:
2Way95thQ:   xxxx  xxxx xxxxx   xxxx  xxxx xxxxx   0.2  xxxx xxxxx  xxxx  xxxx xxxxx
Control Del:xxxxx  xxxx xxxxx  xxxxx  xxxx xxxxx   8.7  xxxx xxxxx xxxxx  xxxx xxxxx
LOS by Move:    *     *     *      *     *     *     A     *     *     *     *     *
Movement:      LT - LTR - RT     LT - LTR - RT     LT - LTR - RT     LT - LTR - RT
Shared Cap.: xxxx  xxxx xxxxx   xxxx   566 xxxxx  xxxx  xxxx xxxxx  xxxx  xxxx xxxxx
SharedQueue:xxxxx  xxxx xxxxx  xxxxx   0.3 xxxxx xxxxx  xxxx xxxxx xxxxx  xxxx xxxxx
Shrd ConDel:xxxxx  xxxx xxxxx  xxxxx  11.9 xxxxx xxxxx  xxxx xxxxx xxxxx  xxxx xxxxx
Shared LOS:     *     *     *      *     B     *     *     *     *     *     *     *
ApproachDel:       xxxxxx               11.9              xxxxxx            xxxxxx
ApproachLOS:          *                   B                  *                 *
*******************************************************************************
Note: Queue reported is the number of cars per lane.
*******************************************************************************
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                              PM Existing
                    2.13.3396.1 Orange Coast College
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                   Level Of Service Computation Report
         2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #16 Driveway 1 at Merrimac Way
********************************************************************************
Average Delay (sec/veh):      1.7     Worst Case Level Of Service: B[ 12.6]
********************************************************************************
Street Name:             Driveway 1                      Merrimac Way
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:          Include          Include          Include          Include
Lanes:        0  0  0  0  0   0  0  1! 0  0   1  0  2  0  0   0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0    34    0    57    25  210     0     0  438    41
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     0    34    0    57    25  210     0     0  438    41
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0    0     0    34    0    57    25  210     0     0  438    41
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:     0    0     0    36    0    60    26  221     0     0  461    43
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0    0     0    36    0    60    26  221     0     0  461    43
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.8  6.5   6.9   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5  4.0   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   646  756   252   504 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx   409  340   754  1071 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx   401  331   754  1071 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  0.09 0.00  0.08  0.02 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.1 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx   8.4 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     *     A    *     *     *    *     *
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx  567 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx  0.6 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx 12.6 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    B     *     *    *     *     *    *     *
ApproachDel:     xxxxxx             12.6             xxxxxx           xxxxxx
ApproachLOS:        *                 B                 *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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PM Existing Plus Project
2.13.3396.1 Orange Coast College

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #16 Driveway 1 at Merrimac Way

Average Delay (sec/veh): 3.4   Worst Case Level Of Service: C[17.6]

Street Name:	Driveway 1		Merrimac Way	
Approach:	North Bound	South Bound	East Bound	West Bound
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Rights:	Include	Include	Include	Include
Lanes:	0 0 0 0 0	0 0 1! 0 0	1 0 2 0 0	0 0 1 1 0

Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:												
Base Vol:	0	0	0	72	0	108	51	265	0	0	491	60
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	72	0	108	51	265	0	0	491	60
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	72	0	108	51	265	0	0	491	60
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	76	0	114	54	279	0	0	517	63
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	76	0	114	54	279	0	0	517	63
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.8	6.5	6.9	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	795	935	290	580	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	329	268	713	1004	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	315	253	713	1004	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.24	0.00	0.16	0.05	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.2	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	474	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	1.9	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	17.6	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	C	*	*	*	*	*	*	*
ApproachDel:		xxxxxx			17.6			xxxxxx			xxxxxx	
ApproachLOS:		*			C			*			*	

Note: Queue reported is the number of cars per lane.

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                     Level Of Service Computation Report
           2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #17 Driveway 2 at Merrimac Way
********************************************************************************
Average Delay (sec/veh):      1.2      Worst Case Level Of Service: B[ 12.1]
********************************************************************************
Street Name:              Driveway 2                      Merrimac Way
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:      L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------||----------------||----------------||----------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:          Include          Include          Include          Include
Lanes:        0  0  0  0  0    0  0  1! 0  0    1  0  2  0  0    0  0  1  1  0
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:       0    0     0     8    0     7    70  150     0     0  367    33
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     0     8    0     7    70  150     0     0  367    33
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0    0     0     8    0     7    70  150     0     0  367    33
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:     0    0     0     8    0     7    74  158     0     0  386    35
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0    0     0     8    0     7    74  158     0     0  386    35
------------|----------------||----------------||----------------||----------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.8  6.5   6.9   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5  4.0   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|----------------||----------------||----------------||----------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   630  709   211   421 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx   418  362   801  1149 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx   398  338   801  1149 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  0.02 0.00  0.01  0.06 xxxx  xxxx  xxxx xxxx  xxxx
------------|----------------||----------------||----------------||----------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.2 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx   8.3 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     *     A    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx  520 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx  0.1 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx 12.1 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    B     *     *    *     *     *    *     *
ApproachDel:     xxxxxx            12.1            xxxxxx           xxxxxx
ApproachLOS:       *                 B                *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                          AM Existing Plus Project
                     2.13.3396.1 Orange Coast College
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                    Level Of Service Computation Report
         2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #17 Driveway 2 at Merrimac Way
********************************************************************************
Average Delay (sec/veh):       1.0     Worst Case Level Of Service: B[ 13.1]
********************************************************************************
Street Name:              Driveway 2                       Merrimac Way
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:           Include          Include          Include          Include
Lanes:        0  0  0  0  0   0  0  1! 0  0   1  0  2  0  0   0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0     8    0     7    70  248     0     0  415    33
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     0     8    0     7    70  248     0     0  415    33
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0    0     0     8    0     7    70  248     0     0  415    33
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:     0    0     0     8    0     7    74  261     0     0  437    35
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0    0     0     8    0     7    74  261     0     0  437    35
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.8  6.5   6.9   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5  4.0   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   732  863   236   472 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx   361  295   772  1101 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx   342  275   772  1101 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  0.02 0.00  0.01  0.07 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.2 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx   8.5 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     *     A    *     *     *    *     *
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx  462 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx  0.1 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx 13.1 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    B     *     *    *     *     *    *     *
ApproachDel:     xxxxxx             13.1             xxxxxx           xxxxxx
ApproachLOS:        *                 B                *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                    2.13.3396.1 Orange Coast College
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                   Level Of Service Computation Report
         2000 HCM Unsignalized Method (Future Volume Alternative)
******************************************************************************
Intersection #17 Driveway 2 at Merrimac Way
******************************************************************************
Average Delay (sec/veh):      1.5      Worst Case Level Of Service: B[ 13.3]
******************************************************************************
Street Name:              Driveway 2                    Merrimac Way
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Stop Sign        Stop Sign      Uncontrolled     Uncontrolled
Rights:           Include          Include          Include          Include
Lanes:         0  0  0  0  0   0  0  1! 0  0   1  0  2  0  0   0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        0    0     0    28    0    26    51  197     0     0  441    32
Growth Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:     0    0     0    28    0    26    51  197     0     0  441    32
Added Vol:       0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:     0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:     0    0     0    28    0    26    51  197     0     0  441    32
User Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:      0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:      0    0     0    29    0    27    54  207     0     0  464    34
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:     0    0     0    29    0    27    54  207     0     0  464    34
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx    6.8  6.5   6.9   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx    3.5  4.0   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx    692  796   249   498 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx    382  322   757  1076 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx    368  306   757  1076 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx   0.08 0.00  0.04  0.05 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx    0.2 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx    8.5 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:     *    *     *     *    *     *     A    *     *     *    *     *
Movement:      LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx  489 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx  0.4 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx 13.3 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:      *    *     *     *    B     *     *    *     *     *    *     *
ApproachDel:      xxxxxx            13.3            xxxxxx           xxxxxx
ApproachLOS:        *                B                *                *
******************************************************************************
Note: Queue reported is the number of cars per lane.
******************************************************************************
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                         PM Existing Plus Project
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                   Level Of Service Computation Report
         2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #17 Driveway 2 at Merrimac Way
********************************************************************************
Average Delay (sec/veh):        1.3      Worst Case Level Of Service: C[ 15.3]
********************************************************************************
Street Name:                 Driveway 2                    Merrimac Way
Approach:        North Bound      South Bound       East Bound       West Bound
Movement:       L  -  T  -  R   L  -  T  -  R    L  -  T  -  R   L  -  T  -  R
-------------|---------------||---------------||---------------||---------------|
Control:         Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:           Include          Include          Include          Include
Lanes:          0  0  0  0  0   0  0  1! 0  0    1  0  2  0  0   0  0  1  1  0
-------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        0     0     0    28     0    26    51   278     0     0   545    32
Growth Adj:   1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:     0     0     0    28     0    26    51   278     0     0   545    32
Added Vol:       0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:     0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:     0     0     0    28     0    26    51   278     0     0   545    32
User Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:      0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95
PHF Volume:      0     0     0    29     0    27    54   293     0     0   574    34
Reduct Vol:      0     0     0     0     0     0     0     0     0     0     0     0
FinalVolume:     0     0     0    29     0    27    54   293     0     0   574    34
-------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.8   6.5   6.9   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5   4.0   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
-------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   844   991   304   607 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx   306   248   698   981 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx   293   235   698   981 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  0.10  0.00  0.04  0.05 xxxx  xxxx  xxxx xxxx  xxxx
-------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.2 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx   8.9 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:     *     *     *     *     *     *     A     *     *     *     *     *
Movement:       LT - LTR - RT   LT - LTR - RT    LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx   407 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx   0.5 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx  15.3 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:      *     *     *     *     C     *     *     *     *     *     *     *
ApproachDel:      xxxxxx              15.3            xxxxxx           xxxxxx
ApproachLOS:         *                 C                *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                       2.13.3396.1 Orange Coast College
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                       Level Of Service Computation Report
           2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #18 Driveway 3 at Merrimac Way
********************************************************************************
Average Delay (sec/veh):        0.1      Worst Case Level Of Service: A[  9.5]
********************************************************************************
Street Name:                 Driveway 3                      Merrimac Way
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:      L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:           Include          Include          Include          Include
Lanes:         0  0  0  0  0    0  0  0  0  1    0  0  2  0  0    0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        0    0     0     0    0     9     0  220     0     0  291    83
Growth Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:     0    0     0     0    0     9     0  220     0     0  291    83
Added Vol:       0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:     0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:     0    0     0     0    0     9     0  220     0     0  291    83
User Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:      0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:      0    0     0     0    0     9     0  232     0     0  306    87
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:     0    0     0     0    0     9     0  232     0     0  306    87
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxx   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  xxxx xxxx   197  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx  xxxx xxxx   818  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx  xxxx xxxx   818  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  xxxx xxxx  0.01  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx   0.0  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx   9.5 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:     *    *     *     *    *     A     *    *     *     *    *     *
Movement:      LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:      *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:      xxxxxx              9.5             xxxxxx           xxxxxx
ApproachLOS:        *                  A                 *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                         AM Existing Plus Project
                     2.13.3396.1 Orange Coast College
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                    Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
*******************************************************************************
Intersection #18 Driveway 3 at Merrimac Way
*******************************************************************************
Average Delay (sec/veh):      0.1      Worst Case Level Of Service: A[  9.6]
*******************************************************************************
Street Name:              Driveway 3                     Merrimac Way
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:          Include          Include          Include          Include
Lanes:        0  0  0  0  0   0  0  0  0  1   0  0  2  0  0   0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0     0    0     9     0  318     0     0  339    83
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     0     0    0     9     0  318     0     0  339    83
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0    0     0     0    0     9     0  318     0     0  339    83
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:     0    0     0     0    0     9     0  335     0     0  357    87
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0    0     0     0    0     9     0  335     0     0  357    87
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxx   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  xxxx xxxx   222  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx  xxxx xxxx   788  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx  xxxx xxxx   788  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  xxxx xxxx  0.01  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx   0.0  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx   9.6 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     A     *    *     *     *    *     *
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:     xxxxxx              9.6             xxxxxx           xxxxxx
ApproachLOS:        *                 A                 *                *
*******************************************************************************
Note: Queue reported is the number of cars per lane.
*******************************************************************************
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                                  PM Existing
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                       Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #18 Driveway 3 at Merrimac Way
********************************************************************************
Average Delay (sec/veh):        0.5       Worst Case Level Of Service: A[ 10.0]
********************************************************************************
Street Name:                Driveway 3                       Merrimac Way
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------||----------------||----------------||----------------|
Control:        Stop Sign         Stop Sign        Uncontrolled      Uncontrolled
Rights:          Include           Include           Include           Include
Lanes:        0  0  0  0  0   0  0  0  0  1    0  0  2  0  0    0  0  1  1  0
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:       0     0     0     0     0    38     0   248     0     0   410    57
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:    0     0     0     0     0    38     0   248     0     0   410    57
Added Vol:      0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:    0     0     0     0     0    38     0   248     0     0   410    57
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95
PHF Volume:     0     0     0     0     0    40     0   261     0     0   432    60
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
FinalVolume:    0     0     0     0     0    40     0   261     0     0   432    60
------------|----------------||----------------||----------------||----------------|
Critical Gap Module:
Critical Gp:xxxxx  xxxx xxxxx xxxxx  xxxx   6.9 xxxxx  xxxx xxxxx xxxxx  xxxx xxxxx
FollowUpTim:xxxxx  xxxx xxxxx xxxxx  xxxx   3.3 xxxxx  xxxx xxxxx xxxxx  xxxx xxxxx
------------|----------------||----------------||----------------||----------------|
Capacity Module:
Cnflict Vol: xxxx  xxxx xxxxx  xxxx  xxxx   246  xxxx  xxxx xxxxx  xxxx  xxxx xxxxx
Potent Cap.: xxxx  xxxx xxxxx  xxxx  xxxx   761  xxxx  xxxx xxxxx  xxxx  xxxx xxxxx
Move Cap.:   xxxx  xxxx xxxxx  xxxx  xxxx   761  xxxx  xxxx xxxxx  xxxx  xxxx xxxxx
Volume/Cap:  xxxx  xxxx  xxxx  xxxx  xxxx  0.05  xxxx  xxxx  xxxx  xxxx  xxxx  xxxx
------------|----------------||----------------||----------------||----------------|
Level Of Service Module:
2Way95thQ:   xxxx  xxxx xxxxx  xxxx  xxxx   0.2  xxxx  xxxx xxxxx  xxxx  xxxx xxxxx
Control Del:xxxxx  xxxx xxxxx xxxxx  xxxx  10.0 xxxxx  xxxx xxxxx xxxxx  xxxx xxxxx
LOS by Move:    *     *     *     *     *     A     *     *     *     *     *     *
Movement:     LT  - LTR - RT    LT  - LTR - RT    LT  - LTR - RT    LT  - LTR - RT
Shared Cap.: xxxx  xxxx xxxxx  xxxx  xxxx xxxxx  xxxx  xxxx xxxxx  xxxx  xxxx xxxxx
SharedQueue:xxxxx  xxxx xxxxx xxxxx  xxxx xxxxx xxxxx  xxxx xxxxx xxxxx  xxxx xxxxx
Shrd ConDel:xxxxx  xxxx xxxxx xxxxx  xxxx xxxxx xxxxx  xxxx xxxxx xxxxx  xxxx xxxxx
Shared LOS:     *     *     *     *     *     *     *     *     *     *     *     *
ApproachDel:     xxxxxx             10.0             xxxxxx            xxxxxx
ApproachLOS:        *                 A                 *                 *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                    Level Of Service Computation Report
         2000 HCM Unsignalized Method (Future Volume Alternative)
*******************************************************************************
Intersection #18 Driveway 3 at Merrimac Way
*******************************************************************************
Average Delay (sec/veh):       0.4      Worst Case Level Of Service: B[ 10.4]
*******************************************************************************
Street Name:                Driveway 3                      Merrimac Way
Approach:      North Bound       South Bound       East Bound        West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Stop Sign         Stop Sign        Uncontrolled      Uncontrolled
Rights:          Include           Include           Include           Include
Lanes:       0  0  0  0  0    0  0  0  0  1    0  0  2  0  0    0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0     0    0    38     0  329     0     0  514    57
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     0     0    0    38     0  329     0     0  514    57
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0    0     0     0    0    38     0  329     0     0  514    57
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:     0    0     0     0    0    40     0  346     0     0  541    60
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0    0     0     0    0    40     0  346     0     0  541    60
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxx   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  xxxx xxxx   301  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx  xxxx xxxx   702  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx  xxxx xxxx   702  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  xxxx xxxx  0.06  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx   0.2  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx  10.4 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     B     *    *     *     *    *     *
Movement:    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:     xxxxxx             10.4             xxxxxx            xxxxxx
ApproachLOS:        *                 B                 *                 *
*******************************************************************************
Note: Queue reported is the number of cars per lane.
*******************************************************************************
```

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--------------------------------------------------------------------------------
                               AM Existing
                     2.13.3396.1 Orange Coast College
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                    Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #19 Driveway 4 at Merrimac Way
********************************************************************************
Average Delay (sec/veh):       1.0      Worst Case Level Of Service: A[  9.5]
********************************************************************************
Street Name:              Driveway 4                      Merrimac Way
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------||----------------||----------------||----------------|
Control:       Stop Sign        Stop Sign        Uncontrolled     Uncontrolled
Rights:         Include          Include           Include          Include
Lanes:        0  0  0  0  0    0  0  0  0  1    0  0  2  0  0    0  0  1  1  0
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:       0    0     0     0    0    58     0  220     0     0  190   110
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     0     0    0    58     0  220     0     0  190   110
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0    0     0     0    0    58     0  220     0     0  190   110
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:     0    0     0     0    0    61     0  232     0     0  200   116
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0    0     0     0    0    61     0  232     0     0  200   116
------------|----------------||----------------||----------------||----------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxx   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
------------|----------------||----------------||----------------||----------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  xxxx xxxx   158  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx  xxxx xxxx   866  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx  xxxx xxxx   866  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  xxxx xxxx  0.07  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|----------------||----------------||----------------||----------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx   0.2  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx   9.5 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     A     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:     xxxxxx              9.5             xxxxxx           xxxxxx
ApproachLOS:        *                 A                 *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                          AM Existing Plus Project
                      2.13.3396.1 Orange Coast College
-----------------------------------------------------------------------------------
                     Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
***********************************************************************************
Intersection #19 Driveway 4 at Merrimac Way
***********************************************************************************
Average Delay (sec/veh):        0.8      Worst Case Level Of Service: A[  9.7]
***********************************************************************************
Street Name:                 Driveway 4                        Merrimac Way
Approach:        North Bound       South Bound       East Bound        West Bound
Movement:       L   -   T   -   R   L   -   T   -   R   L   -   T   -   R   L   -   T   -   R
------------|---------------||---------------||---------------||---------------|
Control:          Stop Sign         Stop Sign        Uncontrolled      Uncontrolled
Rights:             Include           Include           Include           Include
Lanes:          0  0  0  0  0     0  0  0  0  1     0  0  2  0  0     0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:         0    0     0     0    0    58      0  318     0      0  238   110
Growth Adj:    1.00 1.00  1.00  1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00
Initial Bse:      0    0     0     0    0    58      0  318     0      0  238   110
Added Vol:        0    0     0     0    0     0      0    0     0      0    0     0
PasserByVol:      0    0     0     0    0     0      0    0     0      0    0     0
Initial Fut:      0    0     0     0    0    58      0  318     0      0  238   110
User Adj:      1.00 1.00  1.00  1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00
PHF Adj:       0.95 0.95  0.95  0.95 0.95  0.95   0.95 0.95  0.95   0.95 0.95  0.95
PHF Volume:       0    0     0     0    0    61      0  335     0      0  251   116
Reduct Vol:       0    0     0     0    0     0      0    0     0      0    0     0
FinalVolume:      0    0     0     0    0    61      0  335     0      0  251   116
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxx   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  xxxx xxxx   183  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx  xxxx xxxx   834  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx  xxxx xxxx   834  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  xxxx xxxx  0.07  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx   0.2  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx   9.7 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:     *    *     *     *    *     A     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:      *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:      xxxxxx              9.7             xxxxxx            xxxxxx
ApproachLOS:           *                A                  *                 *
***********************************************************************************
Note: Queue reported is the number of cars per lane.
***********************************************************************************
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                                  PM Existing
                       2.13.3396.1 Orange Coast College
--------------------------------------------------------------------------------
                       Level Of Service Computation Report
           2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #19 Driveway 4 at Merrimac Way
********************************************************************************
Average Delay (sec/veh):       0.8       Worst Case Level Of Service: B[ 10.1]
********************************************************************************
Street Name:                Driveway 4                      Merrimac Way
Approach:        North Bound      South Bound      East Bound       West Bound
Movement:      L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
-------------|----------------||----------------||----------------||----------------|
Control:         Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:            Include          Include          Include          Include
Lanes:         0  0  0  0  0    0  0  0  0  1    0  0  2  0  0    0  0  1  1  0
-------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:       0     0     0     0     0    61     0   248     0     0   402    46
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:    0     0     0     0     0    61     0   248     0     0   402    46
Added Vol:      0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:    0     0     0     0     0    61     0   248     0     0   402    46
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95
PHF Volume:     0     0     0     0     0    64     0   261     0     0   423    48
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
FinalVolume:    0     0     0     0     0    64     0   261     0     0   423    48
-------------|----------------||----------------||----------------||----------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxx   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
-------------|----------------||----------------||----------------||----------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  xxxx xxxx   236  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx  xxxx xxxx   772  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx  xxxx xxxx   772  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  xxxx xxxx  0.08  xxxx xxxx  xxxx  xxxx xxxx  xxxx
-------------|----------------||----------------||----------------||----------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx   0.3  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx  10.1 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *     *     *     *     *     B     *     *     *     *     *     *
Movement:      LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *     *     *     *     *     *     *     *     *     *     *     *
ApproachDel:     xxxxxx              10.1             xxxxxx           xxxxxx
ApproachLOS:        *                  B                 *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                          PM Existing Plus Project
                     2.13.3396.1 Orange Coast College
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                    Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #19 Driveway 4 at Merrimac Way
********************************************************************************
Average Delay (sec/veh):         0.7     Worst Case Level Of Service: B[ 10.6]
********************************************************************************
Street Name:               Driveway 4                        Merrimac Way
Approach:        North Bound       South Bound       East Bound        West Bound
Movement:       L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Stop Sign         Stop Sign        Uncontrolled      Uncontrolled
Rights:           Include           Include           Include           Include
Lanes:          0  0  0  0  0    0  0  0  0  1    0  0  2  0  0    0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        0    0     0     0    0    61     0  329     0     0  506    46
Growth Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:     0    0     0     0    0    61     0  329     0     0  506    46
Added Vol:       0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:     0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:     0    0     0     0    0    61     0  329     0     0  506    46
User Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:      0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:      0    0     0     0    0    64     0  346     0     0  533    48
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:     0    0     0     0    0    64     0  346     0     0  533    48
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxx   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  xxxx xxxx   291  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx  xxxx xxxx   712  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx  xxxx xxxx   712  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  xxxx xxxx  0.09  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx   0.3  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx  10.6 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:     *    *     *     *    *     B     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:      *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:      xxxxxx             10.6             xxxxxx            xxxxxx
ApproachLOS:        *                  B                 *                 *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                                  AM Existing
                        2.13.3396.1 Orange Coast College
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                       Level Of Service Computation Report
             2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #20 Driveway 5 at Merrimac Way
********************************************************************************
Average Delay (sec/veh):        0.8       Worst Case Level Of Service: B[ 11.2]
********************************************************************************
Street Name:               Driveway 5                        Merrimac Way
Approach:        North Bound      South Bound       East Bound       West Bound
Movement:       L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Stop Sign        Stop Sign        Uncontrolled     Uncontrolled
Rights:           Include          Include           Include          Include
Lanes:          0  0  0  0  0    0  0  1! 0  0    1  0  2  0  0    0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:         0    0     0     17    0     1     23  169     0      0  204    59
Growth Adj:    1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00
Initial Bse:      0    0     0     17    0     1     23  169     0      0  204    59
Added Vol:        0    0     0      0    0     0      0    0     0      0    0     0
PasserByVol:      0    0     0      0    0     0      0    0     0      0    0     0
Initial Fut:      0    0     0     17    0     1     23  169     0      0  204    59
User Adj:      1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00
PHF Adj:       0.95 0.95  0.95   0.95 0.95  0.95   0.95 0.95  0.95   0.95 0.95  0.95
PHF Volume:       0    0     0     18    0     1     24  178     0      0  215    62
Reduct Vol:       0    0     0      0    0     0      0    0     0      0    0     0
FinalVolume:      0    0     0     18    0     1     24  178     0      0  215    62
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx    6.8  6.5   6.9    4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx    3.5  4.0   3.3    2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx    383  472   138    277 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx    597  493   891   1298 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx    589  484   891   1298 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx   0.03 0.00  0.00   0.02 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx    0.1 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx    7.8 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     *      A    *     *     *    *     *
Movement:      LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx  600 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx  0.1 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx 11.2 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    B     *     *    *     *     *    *     *
ApproachDel:      xxxxxx             11.2             xxxxxx           xxxxxx
ApproachLOS:        *                  B                *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                         AM Existing Plus Project
                     2.13.3396.1 Orange Coast College
--------------------------------------------------------------------------------
                     Level Of Service Computation Report
        2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #20 Driveway 5 at Merrimac Way
********************************************************************************
Average Delay (sec/veh):        0.9     Worst Case Level Of Service: B[ 12.5]
********************************************************************************
Street Name:                Driveway 5                     Merrimac Way
Approach:        North Bound      South Bound      East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
-------------|---------------||---------------||---------------||---------------|
Control:          Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:             Include          Include          Include          Include
Lanes:         0  0  0  0  0   0  0  1! 0  0   1  0  2  0  0   0  0  1  1  0
-------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        0    0     0   20    0     2   38  264     0    0  245    66
Growth Adj:   1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Initial Bse:     0    0     0   20    0     2   38  264     0    0  245    66
Added Vol:       0    0     0    0    0     0    0    0     0    0    0     0
PasserByVol:     0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:     0    0     0   20    0     2   38  264     0    0  245    66
User Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:      0.95 0.95  0.95 0.95 0.95  0.95 0.95 0.95  0.95 0.95 0.95  0.95
PHF Volume:      0    0     0   21    0     2   40  278     0    0  258    69
Reduct Vol:      0    0     0    0    0     0    0    0     0    0    0     0
FinalVolume:     0    0     0   21    0     2   40  278     0    0  258    69
-------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.8  6.5   6.9  4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5  4.0   3.3  2.2 xxxx xxxxx xxxxx xxxx xxxxx
-------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   512  651   164  327 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx   497  391   858 1244 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx   485  378   858 1244 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  0.04 0.00  0.00 0.03 xxxx  xxxx  xxxx xxxx  xxxx
-------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  0.1 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx  8.0 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:     *    *     *    *    *     *    A    *     *    *    *     *
Movement:      LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx  504 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx  0.1 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx 12.5 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:      *    *     *    *    B     *    *    *     *    *    *     *
ApproachDel:      xxxxxx             12.5             xxxxxx           xxxxxx
ApproachLOS:         *                 B                 *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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-------------------------------------------------------------------------------
                              PM Existing
                    2.13.3396.1 Orange Coast College
-------------------------------------------------------------------------------
                      Level Of Service Computation Report
           2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #20 Driveway 5 at Merrimac Way
********************************************************************************
Average Delay (sec/veh):       0.2      Worst Case Level Of Service: B[ 13.2]
********************************************************************************
Street Name:              Driveway 5                     Merrimac Way
Approach:     North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign        Uncontrolled     Uncontrolled
Rights:          Include          Include           Include          Include
Lanes:        0  0  0  0  0    0  0  1! 0  0    1  0  2  0  0    0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0    11    0     1     0  235     0     0  454     3
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     0    11    0     1     0  235     0     0  454     3
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0    0     0    11    0     1     0  235     0     0  454     3
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:     0    0     0    12    0     1     0  247     0     0  478     3
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0    0     0    12    0     1     0  247     0     0  478     3
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.8  6.5   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5  4.0   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   603  727   241  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx   435  353   767  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx   435  353   767  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  0.03 0.00  0.00  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx  451 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx  0.1 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx 13.2 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    B     *     *    *     *     *    *     *
ApproachDel:      xxxxxx             13.2             xxxxxx           xxxxxx
ApproachLOS:         *                 B                 *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                        PM Existing Plus Project
                   2.13.3396.1 Orange Coast College
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                    Level Of Service Computation Report
        2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #20 Driveway 5 at Merrimac Way
********************************************************************************
Average Delay (sec/veh):       0.5     Worst Case Level Of Service: C[ 15.2]
********************************************************************************
Street Name:              Driveway 5                        Merrimac Way
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign        Uncontrolled     Uncontrolled
Rights:          Include          Include           Include          Include
Lanes:        0  0  0  0  0    0  0  1! 0  0    1  0  2  0  0    0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0     20    0     5     11  307     0      0  552     8
Growth Adj:  1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00
Initial Bse:    0    0     0     20    0     5     11  307     0      0  552     8
Added Vol:      0    0     0      0    0     0      0    0     0      0    0     0
PasserByVol:    0    0     0      0    0     0      0    0     0      0    0     0
Initial Fut:    0    0     0     20    0     5     11  307     0      0  552     8
User Adj:    1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.95   0.95 0.95  0.95   0.95 0.95  0.95   0.95 0.95  0.95
PHF Volume:     0    0     0     21    0     5     12  323     0      0  581     8
Reduct Vol:     0    0     0      0    0     0      0    0     0      0    0     0
FinalVolume:    0    0     0     21    0     5     12  323     0      0  581     8
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx    6.8  6.5   6.9    4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx    3.5  4.0   3.3    2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx    770  932   295    589 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx    341  269   708    996 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx    338  266   708    996 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx   0.06 0.00  0.01   0.01 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   xxxx xxxx xxxxx    0.0 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx  xxxxx xxxx xxxxx    8.7 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *      *    *     *      A    *     *      *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx   xxxx  378 xxxxx   xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx  xxxxx  0.2 xxxxx  xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx  xxxxx 15.2 xxxxx  xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *      *    C     *      *    *     *      *    *     *
ApproachDel:      xxxxxx              15.2             xxxxxx           xxxxxx
ApproachLOS:         *                  C                 *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                                  AM Existing
                       2.13.3396.1 Orange Coast College
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                      Level Of Service Computation Report
            2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #21 Driveway 6 at Merrimac Way
********************************************************************************
Average Delay (sec/veh):        0.1       Worst Case Level Of Service: A[  8.9]
********************************************************************************
Street Name:                 Driveway 6                     Merrimac Way
Approach:        North Bound      South Bound       East Bound       West Bound
Movement:       L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Stop Sign        Stop Sign        Uncontrolled     Uncontrolled
Rights:            Include          Include           Include          Include
Lanes:          0  0  0  0  0    0  0  0  0  1    0  0  2  0  0    0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0     0    0     3     0  192     0     0  142    63
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     0     0    0     3     0  192     0     0  142    63
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0    0     0     0    0     3     0  192     0     0  142    63
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:     0    0     0     0    0     3     0  202     0     0  149    66
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0    0     0     0    0     3     0  202     0     0  149    66
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxx   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  xxxx xxxx   108  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx  xxxx xxxx   932  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx  xxxx xxxx   932  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  xxxx xxxx  0.00  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx   0.0  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx   8.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     A     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:     xxxxxx             8.9             xxxxxx            xxxxxx
ApproachLOS:        *                A                 *                 *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                           AM Existing Plus Project
                       2.13.3396.1 Orange Coast College
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                       Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #21 Driveway 6 at Merrimac Way
********************************************************************************
Average Delay (sec/veh):        0.1     Worst Case Level Of Service: A[  9.0]
********************************************************************************
Street Name:                 Driveway 6                         Merrimac Way
Approach:        North Bound      South Bound       East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:          Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:            Include          Include          Include          Include
Lanes:         0  0  0  0  0   0  0  0  0  1   0  0  2  0  0   0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        0    0     0    0    0     4    0  302     0    0  177    70
Growth Adj:   1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Initial Bse:     0    0     0    0    0     4    0  302     0    0  177    70
Added Vol:       0    0     0    0    0     0    0    0     0    0    0     0
PasserByVol:     0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:     0    0     0    0    0     4    0  302     0    0  177    70
User Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:      0.95 0.95  0.95 0.95 0.95  0.95 0.95 0.95  0.95 0.95 0.95  0.95
PHF Volume:      0    0     0    0    0     4    0  318     0    0  186    74
Reduct Vol:      0    0     0    0    0     0    0    0     0    0    0     0
FinalVolume:     0    0     0    0    0     4    0  318     0    0  186    74
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxx   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  xxxx xxxx   130  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx  xxxx xxxx   902  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx  xxxx xxxx   902  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  xxxx xxxx  0.00  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx   0.0  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx   9.0 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:     *    *     *    *    *     A    *    *     *    *    *     *
Movement:      LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:      *    *     *    *    *     *    *    *     *    *    *     *
ApproachDel:       xxxxxx             9.0            xxxxxx           xxxxxx
ApproachLOS:          *                A                *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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------------------------------------------------------------------------------
                              PM Existing
                    2.13.3396.1 Orange Coast College
------------------------------------------------------------------------------
                   Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
******************************************************************************
Intersection #21 Driveway 6 at Merrimac Way
******************************************************************************
Average Delay (sec/veh):       0.2      Worst Case Level Of Service: A[  9.8]
******************************************************************************
Street Name:              Driveway 6                       Merrimac Way
Approach:        North Bound      South Bound       East Bound       West Bound
Movement:       L  -  T  -  R   L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:          Stop Sign        Stop Sign        Uncontrolled     Uncontrolled
Rights:            Include          Include            Include          Include
Lanes:          0  0  0  0  0   0  0  0  0  1    0  0  2  0  0    0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:         0    0     0     0    0    17     0  235     0     0  411    44
Growth Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:      0    0     0     0    0    17     0  235     0     0  411    44
Added Vol:        0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:      0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:      0    0     0     0    0    17     0  235     0     0  411    44
User Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:       0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:       0    0     0     0    0    18     0  247     0     0  433    46
Reduct Vol:       0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:      0    0     0     0    0    18     0  247     0     0  433    46
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxx   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  xxxx xxxx   239  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx  xxxx xxxx   768  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx  xxxx xxxx   768  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  xxxx xxxx  0.02  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx   0.1  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx   9.8 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:     *    *     *     *    *     A     *    *     *     *    *     *
Movement:      LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:      *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:      xxxxxx              9.8             xxxxxx           xxxxxx
ApproachLOS:         *                 A                 *                *
******************************************************************************
Note: Queue reported is the number of cars per lane.
******************************************************************************
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------------------------------------------------------------------------------------
                            PM Existing Plus Project
                        2.13.3396.1 Orange Coast College
------------------------------------------------------------------------------------
                       Level Of Service Computation Report
             2000 HCM Unsignalized Method (Future Volume Alternative)
************************************************************************************
Intersection #21 Driveway 6 at Merrimac Way
************************************************************************************
Average Delay (sec/veh):      0.3      Worst Case Level Of Service: B[ 10.3]
************************************************************************************
Street Name:              Driveway 6                          Merrimac Way
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:      L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
-------------|----------------||----------------||----------------||----------------|
Control:         Stop Sign        Stop Sign        Uncontrolled      Uncontrolled
Rights:            Include          Include           Include           Include
Lanes:         0  0  0  0  0    0  0  0  0  1    0  0  2  0  0    0  0  1  1  0
-------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:        0     0     0     0     0    22     0   317     0     0   509    49
Growth Adj:   1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:     0     0     0     0     0    22     0   317     0     0   509    49
Added Vol:       0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:     0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:     0     0     0     0     0    22     0   317     0     0   509    49
User Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:      0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95
PHF Volume:      0     0     0     0     0    23     0   334     0     0   536    52
Reduct Vol:      0     0     0     0     0     0     0     0     0     0     0     0
FinalVolume:     0     0     0     0     0    23     0   334     0     0   536    52
-------------|----------------||----------------||----------------||----------------|
Critical Gap Module:
Critical Gp:xxxxx  xxxx xxxxx xxxxx  xxxx   6.9 xxxxx  xxxx xxxxx xxxxx  xxxx xxxxx
FollowUpTim:xxxxx  xxxx xxxxx xxxxx  xxxx   3.3 xxxxx  xxxx xxxxx xxxxx  xxxx xxxxx
-------------|----------------||----------------||----------------||----------------|
Capacity Module:
Cnflict Vol:  xxxx  xxxx xxxxx  xxxx  xxxx   294  xxxx  xxxx xxxxx  xxxx  xxxx xxxxx
Potent Cap.:  xxxx  xxxx xxxxx  xxxx  xxxx   709  xxxx  xxxx xxxxx  xxxx  xxxx xxxxx
Move Cap.:    xxxx  xxxx xxxxx  xxxx  xxxx   709  xxxx  xxxx xxxxx  xxxx  xxxx xxxxx
Volume/Cap:   xxxx  xxxx  xxxx  xxxx  xxxx  0.03  xxxx  xxxx  xxxx  xxxx  xxxx  xxxx
-------------|----------------||----------------||----------------||----------------|
Level Of Service Module:
2Way95thQ:    xxxx  xxxx xxxxx  xxxx  xxxx   0.1  xxxx  xxxx xxxxx  xxxx  xxxx xxxxx
Control Del:xxxxx  xxxx xxxxx xxxxx  xxxx  10.3 xxxxx  xxxx xxxxx xxxxx  xxxx xxxxx
LOS by Move:     *     *     *     *     *     B     *     *     *     *     *     *
Movement:      LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.:  xxxx  xxxx xxxxx  xxxx  xxxx xxxxx  xxxx  xxxx xxxxx  xxxx  xxxx xxxxx
SharedQueue:xxxxx  xxxx xxxxx xxxxx  xxxx xxxxx xxxxx  xxxx xxxxx xxxxx  xxxx xxxxx
Shrd ConDel:xxxxx  xxxx xxxxx xxxxx  xxxx xxxxx xxxxx  xxxx xxxxx xxxxx  xxxx xxxxx
Shared LOS:      *     *     *     *     *     *     *     *     *     *     *     *
ApproachDel:      xxxxxx              10.3            xxxxxx            xxxxxx
ApproachLOS:         *                  B                *                 *
************************************************************************************
Note: Queue reported is the number of cars per lane.
************************************************************************************
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-------------------------------------------------------------------------------
                                 AM Existing
                      2.13.3396.1 Orange Coast College
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                      Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
*******************************************************************************
Intersection #22 Driveway 7 at Merrimac Way
*******************************************************************************
Average Delay (sec/veh):      2.1      Worst Case Level Of Service: A[  8.7]
*******************************************************************************
Street Name:                Driveway 7                      Merrimac Way
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:      L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign        Uncontrolled     Uncontrolled
Rights:          Include          Include           Include          Include
Lanes:       0  0  1! 0  0    0  0  0  0  1    1  0  1  1  0    1  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0    0     0     0    0    11    134  284     2     3  103    19
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00   1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   0    0     0     0    0    11    134  284     2     3  103    19
Added Vol:     0    0     0     0    0     0      0    0     0     0    0     0
PasserByVol:   0    0     0     0    0     0      0    0     0     0    0     0
Initial Fut:   0    0     0     0    0    11    134  284     2     3  103    19
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00   1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.95  0.95 0.95  0.95   0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:    0    0     0     0    0    12    141  299     2     3  108    20
Reduct Vol:    0    0     0     0    0     0      0    0     0     0    0     0
FinalVolume:   0    0     0     0    0    12    141  299     2     3  108    20
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  7.5  6.5   6.9 xxxxx xxxx   6.9    4.1 xxxx xxxxx   4.1 xxxx xxxxx
FollowUpTim:  3.5  4.0   3.3 xxxxx xxxx   3.3    2.2 xxxx xxxxx   2.2 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  643  717   151  xxxx xxxx    64    128 xxxx xxxxx   301 xxxx xxxxx
Potent Cap.:  363  358   875  xxxx xxxx   993   1470 xxxx xxxxx  1271 xxxx xxxxx
Move Cap.:    331  323   875  xxxx xxxx   993   1470 xxxx xxxxx  1271 xxxx xxxxx
Volume/Cap:  0.00 0.00  0.00  xxxx xxxx  0.01   0.10 xxxx  xxxx  0.00 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:    xxxx xxxx xxxxx  xxxx xxxx   0.0    0.3 xxxx xxxxx   0.0 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx   8.7    7.7 xxxx xxxxx   7.8 xxxx xxxxx
LOS by Move:    *    *     *     *    *     A      A    *     *     A    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx     0 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *      *    *     *     *    *     *
ApproachDel:     xxxxxx             8.7             xxxxxx           xxxxxx
ApproachLOS:        *                A                 *                *
*******************************************************************************
Note: Queue reported is the number of cars per lane.
*******************************************************************************
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                          AM Existing Plus Project
                      2.13.3396.1 Orange Coast College
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                     Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #22 Driveway 7 at Merrimac Way
********************************************************************************
Average Delay (sec/veh):        1.9      Worst Case Level Of Service: B[ 10.1]
********************************************************************************
Street Name:                Driveway 7                          Merrimac Way
Approach:       North Bound       South Bound       East Bound        West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign         Stop Sign        Uncontrolled      Uncontrolled
Rights:          Include           Include           Include           Include
Lanes:        0  0  1! 0  0    0  0  1! 0  0    1  0  1  1  0    1  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0     0     3     0    12   149   392     2     3   132    26
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:    0     0     0     3     0    12   149   392     2     3   132    26
Added Vol:      0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:    0     0     0     3     0    12   149   392     2     3   132    26
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95
PHF Volume:     0     0     0     3     0    13   157   413     2     3   139    27
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
FinalVolume:    0     0     0     3     0    13   157   413     2     3   139    27
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  7.5   6.5   6.9   6.8   6.5   6.9   4.1  xxxx xxxxx   4.1  xxxx xxxxx
FollowUpTim:  3.5   4.0   3.3   3.5   4.0   3.3   2.2  xxxx xxxxx   2.2  xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  803   900   207   679   887    83   166  xxxx xxxxx   415  xxxx xxxxx
Potent Cap.:  278   280   805   390   285   966  1424  xxxx xxxxx  1155  xxxx xxxxx
Move Cap.:    251   249   805   356   253   966  1424  xxxx xxxxx  1155  xxxx xxxxx
Volume/Cap:  0.00  0.00  0.00  0.01  0.00  0.01  0.11  xxxx  xxxx  0.00  xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx  xxxx xxxxx  xxxx  xxxx xxxxx   0.4  xxxx xxxxx   0.0  xxxx xxxxx
Control Del:xxxxx  xxxx xxxxx xxxxx  xxxx xxxxx   7.8  xxxx xxxxx   8.1  xxxx xxxxx
LOS by Move:    *     *     *     *     *     *     A     *     *     A     *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx     0 xxxxx  xxxx   720 xxxxx  xxxx  xxxx xxxxx  xxxx  xxxx xxxxx
SharedQueue:xxxxx  xxxx xxxxx xxxxx   0.1 xxxxx xxxxx  xxxx xxxxx xxxxx  xxxx xxxxx
Shrd ConDel:xxxxx  xxxx xxxxx xxxxx  10.1 xxxxx xxxxx  xxxx xxxxx xxxxx  xxxx xxxxx
Shared LOS:     *     *     *     *     B     *     *     *     *     *     *     *
ApproachDel:     xxxxxx              10.1             xxxxxx            xxxxxx
ApproachLOS:        *                  B                 *                 *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                   2.13.3396.1 Orange Coast College
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                   Level Of Service Computation Report
         2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #22 Driveway 7 at Merrimac Way
********************************************************************************
Average Delay (sec/veh):      2.1     Worst Case Level Of Service: B[ 13.9]
********************************************************************************
Street Name:              Driveway 7                      Merrimac Way
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:         Include          Include          Include          Include
Lanes:        1  0  0  0  0    0  0  1! 0  0    1  0  1  1  0    1  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       1    0     0     19    0    37     80  154     0      4  328    31
Growth Adj:  1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00
Initial Bse:    1    0     0     19    0    37     80  154     0      4  328    31
Added Vol:      0    0     0      0    0     0      0    0     0      0    0     0
PasserByVol:    0    0     0      0    0     0      0    0     0      0    0     0
Initial Fut:    1    0     0     19    0    37     80  154     0      4  328    31
User Adj:    1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.95   0.95 0.95  0.95   0.95 0.95  0.95   0.95 0.95  0.95
PHF Volume:     1    0     0     20    0    39     84  162     0      4  345    33
Reduct Vol:     0    0     0      0    0     0      0    0     0      0    0     0
FinalVolume:    1    0     0     20    0    39     84  162     0      4  345    33
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  7.5 xxxx xxxxx    7.5  6.5   6.9    4.1 xxxx xxxxx    4.1 xxxx xxxxx
FollowUpTim:  3.5 xxxx xxxxx    3.5  4.0   3.3    2.2 xxxx xxxxx    2.2 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  512 xxxx xxxxx    619  701   189    378 xxxx xxxxx    162 xxxx xxxxx
Potent Cap.:  450 xxxx xxxxx    377  366   827   1192 xxxx xxxxx   1429 xxxx xxxxx
Move Cap.:    404 xxxx xxxxx    356  339   827   1192 xxxx xxxxx   1429 xxxx xxxxx
Volume/Cap:  0.00 xxxx  xxxx   0.06 0.00  0.05   0.07 xxxx  xxxx   0.00 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:    0.0 xxxx xxxxx   xxxx xxxx xxxxx    0.2 xxxx xxxxx    0.0 xxxx xxxxx
Control Del: 13.9 xxxx xxxxx  xxxxx xxxx xxxxx    8.3 xxxx xxxxx    7.5 xxxx xxxxx
LOS by Move:    B    *     *      *    *     *      A    *     *      A    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx   xxxx  570 xxxxx   xxxx xxxx xxxxx   xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx  xxxxx  0.3 xxxxx  xxxxx xxxx xxxxx  xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx  xxxxx 12.0 xxxxx  xxxxx xxxx xxxxx  xxxxx xxxx xxxxx
Shared LOS:     *    *     *      *    B     *      *    *     *      *    *     *
ApproachDel:      13.9             12.0             xxxxxx           xxxxxx
ApproachLOS:        B                B                 *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #22 Driveway 7 at Merrimac Way

Average Delay (sec/veh): 2.2   Worst Case Level Of Service: C[16.7]

Street Name:	Driveway 7						Merrimac Way					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	1 0	0	0 0	0 0	1!	0 0	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	1	0	0	28	0	42	90	227	0	4	425	36
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	0	0	28	0	42	90	227	0	4	425	36
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	1	0	0	28	0	42	90	227	0	4	425	36
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	1	0	0	29	0	44	95	239	0	4	447	38
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	1	0	0	29	0	44	95	239	0	4	447	38
Critical Gap Module:												
Critical Gp:	7.5	xxxx	xxxxx	7.5	6.5	6.9	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	661	xxxx	xxxxx	784	903	243	485	xxxx	xxxxx	239	xxxx	xxxxx
Potent Cap.:	352	xxxx	xxxxx	287	279	764	1088	xxxx	xxxxx	1340	xxxx	xxxxx
Move Cap.:	309	xxxx	xxxxx	267	254	764	1088	xxxx	xxxxx	1340	xxxx	xxxxx
Volume/Cap:	0.00	xxxx	xxxx	0.11	0.00	0.06	0.09	xxxx	xxxx	0.00	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.3	xxxx	xxxxx	0.0	xxxx	xxxxx
Control Del:	16.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.6	xxxx	xxxxx	7.7	xxxx	xxxxx
LOS by Move:	C	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	438	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.6	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	14.9	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	B	*	*	*	*	*	*	*
ApproachDel:		16.7			14.9			xxxxxx			xxxxxx	
ApproachLOS:		C			B			*			*	

Note: Queue reported is the number of cars per lane.

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                      Level Of Service Computation Report
           2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #23 Driveway 8 at Merrimac Way
********************************************************************************
Average Delay (sec/veh):         0.3      Worst Case Level Of Service: A[  8.7]
********************************************************************************
Street Name:               Driveway 8                      Merrimac Way
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign        Uncontrolled     Uncontrolled
Rights:          Include          Include           Include          Include
Lanes:        0  0  0  0  0   0  0  0  0  1    0  0  2  0  0    0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0     0    0     0    18     0   420     0     0   108     6
Growth Adj:  1.00  1.00  1.00 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:    0     0     0    0     0    18     0   420     0     0   108     6
Added Vol:      0     0     0    0     0     0     0     0     0     0     0     0
PasserByVol:    0     0     0    0     0     0     0     0     0     0     0     0
Initial Fut:    0     0     0    0     0    18     0   420     0     0   108     6
User Adj:    1.00  1.00  1.00 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     0.95  0.95  0.95 0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95
PHF Volume:     0     0     0    0     0    19     0   442     0     0   114     6
Reduct Vol:     0     0     0    0     0     0     0     0     0     0     0     0
FinalVolume:    0     0     0    0     0    19     0   442     0     0   114     6
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxx   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  xxxx xxxx    60  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx  xxxx xxxx   999  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx  xxxx xxxx   999  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  xxxx xxxx  0.02  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx   0.1  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx   8.7 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     A     *    *     *     *    *     *
Movement:     LT - LTR - RT   LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:     xxxxxx             8.7             xxxxxx            xxxxxx
ApproachLOS:        *                A                 *                 *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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-------------------------------------------------------------------------------
                        AM Existing Plus Project
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-------------------------------------------------------------------------------
                     Level Of Service Computation Report
         2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #23 Driveway 8 at Merrimac Way
********************************************************************************
Average Delay (sec/veh):       0.2     Worst Case Level Of Service: A[  8.8]
********************************************************************************
Street Name:                Driveway 8                     Merrimac Way
Approach:        North Bound       South Bound       East Bound        West Bound
Movement:      L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Stop Sign         Stop Sign        Uncontrolled      Uncontrolled
Rights:            Include           Include           Include           Include
Lanes:         0  0  0  0  0    0  0  0  0  1    0  0  2  0  0    0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        0     0     0     0     0    19     0   543     0     0   130    13
Growth Adj:   1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:     0     0     0     0     0    19     0   543     0     0   130    13
Added Vol:       0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:     0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:     0     0     0     0     0    19     0   543     0     0   130    13
User Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:      0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95
PHF Volume:      0     0     0     0     0    20     0   572     0     0   137    14
Reduct Vol:      0     0     0     0     0     0     0     0     0     0     0     0
FinalVolume:     0     0     0     0     0    20     0   572     0     0   137    14
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxx   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  xxxx xxxx    75  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx  xxxx xxxx   977  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx  xxxx xxxx   977  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  xxxx xxxx  0.02  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx   0.1  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx   8.8 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:     *     *     *     *     *     A     *     *     *     *     *     *
Movement:      LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:      *     *     *     *     *     *     *     *     *     *     *     *
ApproachDel:      xxxxxx              8.8             xxxxxx            xxxxxx
ApproachLOS:           *               A                  *                 *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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-------------------------------------------------------------------------------
                                 PM Existing
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                      Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
*******************************************************************************
Intersection #23 Driveway 8 at Merrimac Way
*******************************************************************************
Average Delay (sec/veh):        0.8      Worst Case Level Of Service: A[  9.7]
*******************************************************************************
Street Name:               Driveway 8                       Merrimac Way
Approach:        North Bound      South Bound      East Bound       West Bound
Movement:       L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:           Include          Include          Include          Include
Lanes:          0  0  0  0  0   0  0  0  0  1   0  0  2  0  0   0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:         0    0     0     0    0    51     0  234     0     0  363     3
Growth Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:      0    0     0     0    0    51     0  234     0     0  363     3
Added Vol:        0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:      0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:      0    0     0     0    0    51     0  234     0     0  363     3
User Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:       0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:       0    0     0     0    0    54     0  246     0     0  382     3
Reduct Vol:       0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:      0    0     0     0    0    54     0  246     0     0  382     3
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxx   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  xxxx xxxx   193  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx  xxxx xxxx   823  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx  xxxx xxxx   823  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  xxxx xxxx  0.07  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx   0.2  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx   9.7 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     A     *    *     *     *    *     *
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:      xxxxxx               9.7             xxxxxx           xxxxxx
ApproachLOS:        *                   A                 *                *
*******************************************************************************
Note: Queue reported is the number of cars per lane.
*******************************************************************************
```

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                           PM Existing Plus Project
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                      Level Of Service Computation Report
             2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #23 Driveway 8 at Merrimac Way
********************************************************************************
Average Delay (sec/veh):       0.7       Worst Case Level Of Service: B[ 10.1]
********************************************************************************
Street Name:                Driveway 8                         Merrimac Way
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign        Uncontrolled     Uncontrolled
Rights:          Include          Include           Include          Include
Lanes:        0  0  0  0  0    0  0  0  0  1    0  0  2  0  0    0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0     0     0     0    56     0   318     0     0   459     8
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:    0     0     0     0     0    56     0   318     0     0   459     8
Added Vol:      0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:    0     0     0     0     0    56     0   318     0     0   459     8
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95
PHF Volume:     0     0     0     0     0    59     0   335     0     0   483     8
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
FinalVolume:    0     0     0     0     0    59     0   335     0     0   483     8
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxx   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  xxxx xxxx   246  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx  xxxx xxxx   761  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx  xxxx xxxx   761  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  xxxx xxxx  0.08  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx   0.3  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx  10.1 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *     *     *     *     *     B     *     *     *     *     *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *     *     *     *     *     *     *     *     *     *     *     *
ApproachDel:      xxxxxx             10.1             xxxxxx            xxxxxx
ApproachLOS:        *                  B                *                 *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                              AM Existing
                  2.13.3396.1 Orange Coast College
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                  Level Of Service Computation Report
         2000 HCM Unsignalized Method (Future Volume Alternative)
*******************************************************************************
Intersection #24 Recycling Center Driveway No. 1 (Inbound Only) at Adams Avenue
*******************************************************************************
Average Delay (sec/veh):       0.0      Worst Case Level Of Service: A[  0.0]
*******************************************************************************
Street Name:Recycling Center Driveway No. 1 (           Adams Avenue
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------||----------------||----------------||----------------|
Control:        Stop Sign        Stop Sign        Uncontrolled      Uncontrolled
Rights:          Include          Include           Include           Include
Lanes:        0  0  0  0  0    0  0  0  0  0    0  0  2  1  0    0  0  2  0  0
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:       0    0     0     0    0     0      0 1433     5     0  644     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00   1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     0     0    0     0      0 1433     5     0  644     0
Added Vol:      0    0     0     0    0     0      0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0      0    0     0     0    0     0
Initial Fut:    0    0     0     0    0     0      0 1433     5     0  644     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00   1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.95  0.95 0.95  0.95   0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:     0    0     0     0    0     0      0 1508     5     0  678     0
Reduct Vol:     0    0     0     0    0     0      0    0     0     0    0     0
FinalVolume:    0    0     0     0    0     0      0 1508     5     0  678     0
------------|----------------||----------------||----------------||----------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
------------|----------------||----------------||----------------||----------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|----------------||----------------||----------------||----------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     *      *    *     *     *    *     *
Movement:     LT - LTR - RT   LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *      *    *     *     *    *     *
ApproachDel:      xxxxxx           xxxxxx            xxxxxx            xxxxxx
ApproachLOS:         *                *                 *                 *
*******************************************************************************
Note: Queue reported is the number of cars per lane.
*******************************************************************************
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                           AM Existing Plus Project
                       2.13.3396.1 Orange Coast College
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                      Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #24 Recycling Center Driveway No. 1 (Inbound Only) at Adams Avenue
********************************************************************************
Average Delay (sec/veh):        0.0     Worst Case Level Of Service: A[  0.0]
********************************************************************************
Street Name:Recycling Center Driveway No. 1 (             Adams Avenue
Approach:      North Bound         South Bound         East Bound         West Bound
Movement:     L  -  T  -  R     L  -  T  -  R     L  -  T  -  R     L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign          Stop Sign        Uncontrolled       Uncontrolled
Rights:          Include            Include            Include            Include
Lanes:        0  0  0  0  0    0  0  0  0  0    0  0  2  1  0    0  0  2  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0     0     0     0     0     0  1491    15     0   853     0
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:    0     0     0     0     0     0     0  1491    15     0   853     0
Added Vol:      0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:    0     0     0     0     0     0     0  1491    15     0   853     0
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95
PHF Volume:     0     0     0     0     0     0     0  1569    16     0   898     0
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
FinalVolume:    0     0     0     0     0     0     0  1569    16     0   898     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *     *     *     *     *     *     *     *     *     *     *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *     *     *     *     *     *     *     *     *     *     *     *
ApproachDel:     xxxxxx             xxxxxx             xxxxxx             xxxxxx
ApproachLOS:        *                  *                  *                  *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                      Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #24 Recycling Center Driveway No. 1 (Inbound Only) at Adams Avenue
********************************************************************************
Average Delay (sec/veh):        0.0      Worst Case Level Of Service: A[  0.0]
********************************************************************************
Street Name:Recycling Center Driveway No. 1 (          Adams Avenue
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------||----------------||----------------||----------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:           Include          Include          Include          Include
Lanes:       0  0  0  0  0    0  0  0  0  0    0  0  2  1  0    0  0  2  0  0
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:       0    0     0     0    0     0     0  940    30     0 1534     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     0     0    0     0     0  940    30     0 1534     0
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0    0     0     0    0     0     0  940    30     0 1534     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:     0    0     0     0    0     0     0  989    32     0 1615     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0    0     0     0    0     0     0  989    32     0 1615     0
------------|----------------||----------------||----------------||----------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
------------|----------------||----------------||----------------||----------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|----------------||----------------||----------------||----------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     *     *    *     *     *    *     *
Movement:    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:      xxxxxx           xxxxxx           xxxxxx           xxxxxx
ApproachLOS:         *                *                *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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-------------------------------------------------------------------------------
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-------------------------------------------------------------------------------

                    Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
*******************************************************************************
Intersection #24 Recycling Center Driveway No. 1 (Inbound Only) at Adams Avenue
*******************************************************************************
Average Delay (sec/veh):       0.0      Worst Case Level Of Service: A[  0.0]
*******************************************************************************
Street Name:Recycling Center Driveway No. 1 (          Adams Avenue
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:          Include          Include          Include          Include
Lanes:        0  0  0  0  0   0  0  0  0  0   0  0  2  1  0   0  0  2  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0    0    0     0     0 1095    90     0 1764     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     0    0    0     0     0 1095    90     0 1764     0
Added Vol:      0    0     0    0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0    0    0     0     0    0     0     0    0     0
Initial Fut:    0    0     0    0    0     0     0 1095    90     0 1764     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:     0    0     0    0    0     0     0 1153    95     0 1857     0
Reduct Vol:     0    0     0    0    0     0     0    0     0     0    0     0
FinalVolume:    0    0     0    0    0     0     0 1153    95     0 1857     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:     xxxxxx           xxxxxx           xxxxxx           xxxxxx
ApproachLOS:        *                *                *                *
*******************************************************************************
Note: Queue reported is the number of cars per lane.
*******************************************************************************
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                                  AM Existing
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                       Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #25 Recycling Center Driveway No. 2 (Outbound Only) at Adams Avenue
********************************************************************************
Average Delay (sec/veh):        0.0      Worst Case Level Of Service: B[ 12.0]
********************************************************************************
Street Name:Recycling Center Driveway No. 2 (           Adams Avenue
Approach:     North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R   L  -  T  -  R    L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Stop Sign        Stop Sign        Uncontrolled     Uncontrolled
Rights:         Include          Include          Include          Include
Lanes:       0  0  0  0  1   0  0  0  0  0    0  0  3  0  0   0  0  2  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     5     0    0     0     0 1433     0     0  644     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     5     0    0     0     0 1433     0     0  644     0
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0    0     5     0    0     0     0 1433     0     0  644     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:     0    0     5     0    0     0     0 1508     0     0  678     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0    0     5     0    0     0     0 1508     0     0  678     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx   503  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx   519  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx   519  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  0.01  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx   0.0  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx  12.0 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     B     *    *     *     *    *     *     *    *     *
Movement:    LT - LTR - RT   LT - LTR - RT    LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:       12.0            xxxxxx           xxxxxx           xxxxxx
ApproachLOS:         B                *                *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                            AM Existing Plus Project
                        2.13.3396.1 Orange Coast College
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                      Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #25 Recycling Center Driveway No. 2 (Outbound Only) at Adams Avenue
********************************************************************************
Average Delay (sec/veh):      0.1      Worst Case Level Of Service: B[ 12.4]
********************************************************************************
Street Name:Recycling Center Driveway No. 2 (              Adams Avenue
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------||----------------||----------------||----------------|
Control:        Stop Sign        Stop Sign        Uncontrolled      Uncontrolled
Rights:          Include          Include           Include           Include
Lanes:        0  0  0  0  1    0  0  0  0  0    0  0  3  0  0    0  0  2  0  0
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:       0     0    15     0     0     0     0  1491     0     0   853     0
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:    0     0    15     0     0     0     0  1491     0     0   853     0
Added Vol:      0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:    0     0    15     0     0     0     0  1491     0     0   853     0
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95
PHF Volume:     0     0    16     0     0     0     0  1569     0     0   898     0
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
FinalVolume:    0     0    16     0     0     0     0  1569     0     0   898     0
------------|----------------||----------------||----------------||----------------|
Critical Gap Module:
Critical Gp:xxxxx  xxxx   6.9 xxxxx  xxxx xxxxx xxxxx  xxxx xxxxx xxxxx  xxxx xxxxx
FollowUpTim:xxxxx  xxxx   3.3 xxxxx  xxxx xxxxx xxxxx  xxxx xxxxx xxxxx  xxxx xxxxx
------------|----------------||----------------||----------------||----------------|
Capacity Module:
Cnflict Vol: xxxx  xxxx   523  xxxx  xxxx xxxxx  xxxx  xxxx xxxxx  xxxx  xxxx xxxxx
Potent Cap.: xxxx  xxxx   504  xxxx  xxxx xxxxx  xxxx  xxxx xxxxx  xxxx  xxxx xxxxx
Move Cap.:   xxxx  xxxx   504  xxxx  xxxx xxxxx  xxxx  xxxx xxxxx  xxxx  xxxx xxxxx
Volume/Cap:  xxxx  xxxx  0.03  xxxx  xxxx  xxxx  xxxx  xxxx  xxxx  xxxx  xxxx  xxxx
------------|----------------||----------------||----------------||----------------|
Level Of Service Module:
2Way95thQ:   xxxx  xxxx   0.1  xxxx  xxxx xxxxx  xxxx  xxxx xxxxx  xxxx  xxxx xxxxx
Control Del:xxxxx  xxxx  12.4 xxxxx  xxxx xxxxx xxxxx  xxxx xxxxx xxxxx  xxxx xxxxx
LOS by Move:    *     *     B     *     *     *     *     *     *     *     *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx  xxxx xxxxx  xxxx  xxxx xxxxx  xxxx  xxxx xxxxx  xxxx  xxxx xxxxx
SharedQueue:xxxxx  xxxx xxxxx xxxxx  xxxx xxxxx xxxxx  xxxx xxxxx xxxxx  xxxx xxxxx
Shrd ConDel:xxxxx  xxxx xxxxx xxxxx  xxxx xxxxx xxxxx  xxxx xxxxx xxxxx  xxxx xxxxx
Shared LOS:     *     *     *     *     *     *     *     *     *     *     *     *
ApproachDel:       12.4            xxxxxx            xxxxxx            xxxxxx
ApproachLOS:         B                *                 *                 *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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--------------------------------------------------------------------------------
                                 PM Existing
                     2.13.3396.1 Orange Coast College
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                    Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #25 Recycling Center Driveway No. 2 (Outbound Only) at Adams Avenue
********************************************************************************
Average Delay (sec/veh):        0.1      Worst Case Level Of Service: B[ 10.6]
********************************************************************************
Street Name:Recycling Center Driveway No. 2 (               Adams Avenue
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------||----------------||----------------||----------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:          Include          Include          Include          Include
Lanes:        0  0  0  0  1    0  0  0  0  0    0  0  3  0  0    0  0  2  0  0
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:       0     0    30     0     0     0     0   940     0     0  1534     0
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:    0     0    30     0     0     0     0   940     0     0  1534     0
Added Vol:      0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:    0     0    30     0     0     0     0   940     0     0  1534     0
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95
PHF Volume:     0     0    32     0     0     0     0   989     0     0  1615     0
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
FinalVolume:    0     0    32     0     0     0     0   989     0     0  1615     0
------------|----------------||----------------||----------------||----------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx    6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx    3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
------------|----------------||----------------||----------------||----------------|
Capacity Module:
Cnflict Vol: xxxx xxxx    330  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx    672  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx    672  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx   0.05  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|----------------||----------------||----------------||----------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx    0.1  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx   10.6 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *      B     *    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:       10.6           xxxxxx           xxxxxx           xxxxxx
ApproachLOS:         B               *                *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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--------------------------------------------------------------------------------
                        PM Existing Plus Project
                    2.13.3396.1 Orange Coast College
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                     Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #25 Recycling Center Driveway No. 2 (Outbound Only) at Adams Avenue
********************************************************************************
Average Delay (sec/veh):        0.4      Worst Case Level Of Service: B[ 11.9]
********************************************************************************
Street Name:Recycling Center Driveway No. 2 (            Adams Avenue
Approach:      North Bound      South Bound       East Bound        West Bound
Movement:     L  -  T  -  R   L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled      Uncontrolled
Rights:          Include          Include          Include           Include
Lanes:        0  0  0  0  1   0  0  0  0  0    0  0  3  0  0    0  0  2  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0    90     0     0     0     0 1095     0     0 1764     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0     0    90     0     0     0     0 1095     0     0 1764     0
Added Vol:      0     0     0     0     0     0     0    0     0     0    0     0
PasserByVol:    0     0     0     0     0     0     0    0     0     0    0     0
Initial Fut:    0     0    90     0     0     0     0 1095     0     0 1764     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:     0     0    95     0     0     0     0 1153     0     0 1857     0
Reduct Vol:     0     0     0     0     0     0     0    0     0     0    0     0
FinalVolume:    0     0    95     0     0     0     0 1153     0     0 1857     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx   384  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx   620  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx   620  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  0.15  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx   0.5  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx  11.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     B     *    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT   LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:       11.9            xxxxxx            xxxxxx            xxxxxx
ApproachLOS:         B                *                 *                 *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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--------------------------------------------------------------------------------
                                 AM Existing
                      2.13.3396.1 Orange Coast College
                          Additional Intersections
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                     Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #1 Mesa Verde Drive/Placentia Avenue at Adams Avenue
********************************************************************************
Cycle (sec):         100                Critical Vol./Cap.(X):         0.739
Loss Time (sec):       0                Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        87                Level Of Service:                  C
********************************************************************************
Street Name:Mesa Verde Drive/Placentia Avenue           Adams Avenue
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Protected        Protected        Protected        Protected
Rights:          Include          Include           Ovl             Include
Min. Green:    0    0     0    0    0     0    0    0     0    0    0     0
Y+R:         4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:        2  0  1  0  1   1  0  2  0  1   1  0  3  0  1   1  0  2  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     187  240   231   25  246   112  102 2268   207  161  635    21
Growth Adj:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Initial Bse:  187  240   231   25  246   112  102 2268   207  161  635    21
Added Vol:      0    0     0    0    0     0    0    0     0    0    0     0
PasserByVol:    0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:  187  240   231   25  246   112  102 2268   207  161  635    21
User Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Volume:   187  240   231   25  246   112  102 2268   207  161  635    21
Reduct Vol:     0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:  187  240   231   25  246   112  102 2268   207  161  635    21
PCE Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume:  187  240   231   25  246   112  102 2268   207  161  635    21
OvlAdjVol:                                                113
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600 1600 1600  1600 1600 1600  1600 1600 1600  1600
Adjustment:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Lanes:       2.00 1.00  1.00 1.00 2.00  1.00 1.00 3.00  1.00 1.00 2.90  0.10
Final Sat.:  3200 1600  1600 1600 3200  1600 1600 4800  1600 1600 4646   154
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.06 0.15  0.14 0.02 0.08  0.07 0.06 0.47  0.13 0.10 0.14  0.14
OvlAdjV/S:                                                0.07
Crit Moves:       ****       ****                   ****       ****
********************************************************************************
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--------------------------------------------------------------------------------
                          AM Existing Plus Project
                      2.13.3396.1 Orange Coast College
                          Additional Intersections
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                      Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #1 Mesa Verde Drive/Placentia Avenue at Adams Avenue
********************************************************************************
Cycle (sec):          100                 Critical Vol./Cap.(X):         0.764
Loss Time (sec):        0                 Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         97                 Level Of Service:                  C
********************************************************************************
Street Name:Mesa Verde Drive/Placentia Avenue             Adams Avenue
Approach:     North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Protected        Protected        Protected        Protected
Rights:          Include          Include           Ovl             Include
Min. Green:    0    0    0    0    0    0    0    0    0    0    0    0
Y+R:         4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0
Lanes:       2  0  1  0  1   1  0  2  0  1   1  0  3  0  1   1  0  2  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:    187  240   240    35  246   112   102 2355   207   162  653    23
Growth Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse: 187  240   240    35  246   112   102 2355   207   162  653    23
Added Vol:     0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:   0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut: 187  240   240    35  246   112   102 2355   207   162  653    23
User Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:  187  240   240    35  246   112   102 2355   207   162  653    23
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol: 187  240   240    35  246   112   102 2355   207   162  653    23
PCE Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume: 187  240   240    35  246   112   102 2355   207   162  653    23
OvlAdjVol:                                                 113
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:   1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:      2.00 1.00  1.00  1.00 2.00  1.00  1.00 3.00  1.00  1.00 2.90  0.10
Final Sat.: 3200 1600  1600  1600 3200  1600  1600 4800  1600  1600 4637   163
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.06 0.15  0.15  0.02 0.08  0.07  0.06 0.49  0.13  0.10 0.14  0.14
OvlAdjV/S:                                                0.07
Crit Moves:      ****  ****                        ****        ****
********************************************************************************
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PM Existing
2.13.3396.1 Orange Coast College
Additional Intersections

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Mesa Verde Drive/Placentia Avenue at Adams Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.743
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	89	Level Of Service:	C

Street Name: Mesa Verde Drive/Placentia Avenue — Adams Avenue

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ovl			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0 1 0 1			1 0 2 0 1			1 0 3 0 1			1 0 2 1 0		
Volume Module:												
Base Vol:	252	122	223	24	138	217	72	725	186	172	2288	33
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	252	122	223	24	138	217	72	725	186	172	2288	33
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	252	122	223	24	138	217	72	725	186	172	2288	33
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	252	122	223	24	138	217	72	725	186	172	2288	33
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	252	122	223	24	138	217	72	725	186	172	2288	33
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	252	122	223	24	138	217	72	725	186	172	2288	33
OvlAdjVol:									60			
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	1.00	1.00	1.00	2.00	1.00	1.00	3.00	1.00	1.00	2.96	0.04
Final Sat.:	3200	1600	1600	1600	3200	1600	1600	4800	1600	1600	4732	68
Capacity Analysis Module:												
Vol/Sat:	0.08	0.08	0.14	0.02	0.04	0.14	0.05	0.15	0.12	0.11	0.48	0.48
OvlAdjV/S:									0.04			
Crit Moves:	****					****	****				****	

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                         PM Existing Plus Project
                   2.13.3396.1 Orange Coast College
                         Additional Intersections
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                  Level Of Service Computation Report
     ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #1 Mesa Verde Drive/Placentia Avenue at Adams Avenue
********************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):         0.760
Loss Time (sec):        0               Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         95               Level Of Service:                  C
********************************************************************************
Street Name:Mesa Verde Drive/Placentia Avenue            Adams Avenue
Approach:     North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected        Protected        Protected
Rights:          Include          Include            Ovl            Include
Min. Green:     0     0     0    0     0     0    0     0     0    0     0     0
Y+R:          4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:        2  0  1  0  1    1  0  2  0  1    1  0  3  0  1    1  0  2  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     252   122   230   32   138   217   72   795   186  181  2357    44
Growth Adj:  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Initial Bse:  252   122   230   32   138   217   72   795   186  181  2357    44
Added Vol:      0     0     0    0     0     0    0     0     0    0     0     0
PasserByVol:    0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut:  252   122   230   32   138   217   72   795   186  181  2357    44
User Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Volume:   252   122   230   32   138   217   72   795   186  181  2357    44
Reduct Vol:     0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol:  252   122   230   32   138   217   72   795   186  181  2357    44
PCE Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
FinalVolume:  252   122   230   32   138   217   72   795   186  181  2357    44
OvlAdjVol:                                                     60
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600  1600
Adjustment:  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Lanes:       2.00  1.00  1.00 1.00  2.00  1.00 1.00  3.00  1.00 1.00  2.95  0.05
Final Sat.:  3200  1600  1600 1600  3200  1600 1600  4800  1600 1600  4712    88
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.08  0.08  0.14 0.02  0.04  0.14 0.05  0.17  0.12 0.11  0.50  0.50
OvlAdjV/S:                                                   0.04
Crit Moves:  ****                         **** ****                     ****
********************************************************************************
```

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--------------------------------------------------------------------------------
                                  AM Existing
                      2.13.3396.1 Orange Coast College
                           Additional Intersections
--------------------------------------------------------------------------------

                      Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #2 Harbor Boulevard at South Coast Drive
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):          0.465
Loss Time (sec):       0              Average Delay (sec/veh):       xxxxxx
Optimal Cycle:        35              Level Of Service:                   A
********************************************************************************
Street Name:           Harbor Boulevard                 South Coast Drive
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R    L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Protected        Protected         Permitted        Protected
Rights:           Ovl            Include           Include          Include
Min. Green:    0    0     0    0    0     0    0    0     0    0    0     0
Y+R:         4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:        2  0  3  1  1   2  0  4  0  1    1  0  0  1  1   2  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     261 1571   225    91 1847    66    12   35   204    63  148    47
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  261 1571   225    91 1847    66    12   35   204    63  148    47
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  261 1571   225    91 1847    66    12   35   204    63  148    47
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   261 1571   225    91 1847    66    12   35   204    63  148    47
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  261 1571   225    91 1847    66    12   35   204    63  148    47
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  261 1571   225    91 1847    66    12   35   204    63  148    47
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 4.00  1.00  2.00 4.00  1.00  1.00 0.29  1.71  2.00 2.00  1.00
Final Sat.:  3200 6400  1600  3200 6400  1600  1600  469  2731  3200 3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.08 0.25  0.14  0.03 0.29  0.04  0.01 0.07  0.07  0.02 0.05  0.03
Crit Moves:  ****                  ****             ****        ****
********************************************************************************
```

AM Existing Plus Project
2.13.3396.1 Orange Coast College
Additional Intersections

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Harbor Boulevard at South Coast Drive

Cycle (sec):	100	Critical Vol./Cap.(X):	0.473
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	35	Level Of Service:	A

Street Name:	Harbor Boulevard						South Coast Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Protected		
Rights:	Ovl			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	3 1	1	2 0	4 0	1	1 0	0 1	1	2 0	2 0	1
Volume Module:												
Base Vol:	261	1585	225	91	1903	66	12	35	204	63	148	47
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	261	1585	225	91	1903	66	12	35	204	63	148	47
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	261	1585	225	91	1903	66	12	35	204	63	148	47
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	261	1585	225	91	1903	66	12	35	204	63	148	47
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	261	1585	225	91	1903	66	12	35	204	63	148	47
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	261	1585	225	91	1903	66	12	35	204	63	148	47
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	4.00	1.00	2.00	4.00	1.00	1.00	0.29	1.71	2.00	2.00	1.00
Final Sat.:	3200	6400	1600	3200	6400	1600	1600	469	2731	3200	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.08	0.25	0.14	0.03	0.30	0.04	0.01	0.07	0.07	0.02	0.05	0.03
Crit Moves:	****				****			****		****		

PM Existing
2.13.3396.1 Orange Coast College
Additional Intersections

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Harbor Boulevard at South Coast Drive

Cycle (sec):	100	Critical Vol./Cap.(X):	0.669
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	94	Level Of Service:	B

Street Name:	Harbor Boulevard						South Coast Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Protected		
Rights:	Ovl			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	3 1	1	2 0	4 0	1	1 0	0 1	1	2 0	2 0	1
Volume Module:												
Base Vol:	395	1868	214	136	1576	108	32	70	354	376	958	239
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	395	1868	214	136	1576	108	32	70	354	376	958	239
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	395	1868	214	136	1576	108	32	70	354	376	958	239
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	395	1868	214	136	1576	108	32	70	354	376	958	239
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	395	1868	214	136	1576	108	32	70	354	376	958	239
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	395	1868	214	136	1576	108	32	70	354	376	958	239
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	4.00	1.00	2.00	4.00	1.00	1.00	0.33	1.67	2.00	2.00	1.00
Final Sat.:	3200	6400	1600	3200	6400	1600	1600	528	2672	3200	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.12	0.29	0.13	0.04	0.25	0.07	0.02	0.13	0.13	0.12	0.30	0.15
Crit Moves:	****				****						****	

PM Existing Plus Project
2.13.3396.1 Orange Coast College
Additional Intersections

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Harbor Boulevard at South Coast Drive

Cycle (sec):	100	Critical Vol./Cap.(X):	0.676
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	97	Level Of Service:	B

Street Name:	Harbor Boulevard						South Coast Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Protected		
Rights:	Ovl			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	3 1	1	2 0	4 0	1	1 0	0 1	1	2 0	2 0	1
Volume Module:												
Base Vol:	395	1920	214	136	1620	108	32	70	354	376	958	239
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	395	1920	214	136	1620	108	32	70	354	376	958	239
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	395	1920	214	136	1620	108	32	70	354	376	958	239
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	395	1920	214	136	1620	108	32	70	354	376	958	239
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	395	1920	214	136	1620	108	32	70	354	376	958	239
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	395	1920	214	136	1620	108	32	70	354	376	958	239
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	4.00	1.00	2.00	4.00	1.00	1.00	0.33	1.67	2.00	2.00	1.00
Final Sat.:	3200	6400	1600	3200	6400	1600	1600	528	2672	3200	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.12	0.30	0.13	0.04	0.25	0.07	0.02	0.13	0.13	0.12	0.30	0.15
Crit Moves:	****				****						****	

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                                  AM Existing
                       2.13.3396.1 Orange Coast College
                           Additional Intersections
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                       Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #3 Harbor Boulevard at I-405 NB Ramps
********************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):         0.460
Loss Time (sec):        0               Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         34               Level Of Service:                  A
********************************************************************************
Street Name:           Harbor Boulevard                   I-405 NB Ramps
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted       Split Phase      Split Phase
Rights:          Include          Ignore           Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Y+R:         4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:         0  0  4  0  0    0  0  4  0  1    0  0  0  0  0    1  0  1! 0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0  1261     0    0  1298  1224    0     0     0  454     0   780
Growth Adj:  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Initial Bse:   0  1261     0    0  1298  1224    0     0     0  454     0   780
Added Vol:     0     0     0    0     0     0    0     0     0    0     0     0
PasserByVol:   0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut:   0  1261     0    0  1298  1224    0     0     0  454     0   780
User Adj:    1.00  1.00  1.00 1.00  1.00  0.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00 1.00  1.00  0.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Volume:    0  1261     0    0  1298     0    0     0     0  454     0   780
Reduct Vol:    0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol:   0  1261     0    0  1298     0    0     0     0  454     0   780
PCE Adj:     1.00  1.00  1.00 1.00  1.00  0.00 1.00  1.00  1.00 1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00 1.00  1.00  0.00 1.00  1.00  1.00 1.00  1.00  1.00
FinalVolume:   0  1261     0    0  1298     0    0     0     0  454     0   780
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600  1600
Adjustment:  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Lanes:       0.00  4.00  0.00 0.00  4.00  1.00 0.00  0.00  0.00 1.10  0.00  1.90
Final Sat.:    0  6400     0    0  6400  1600    0     0     0 1766     0  3034
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00  0.20  0.00 0.00  0.20  0.00 0.00  0.00  0.00 0.26  0.00  0.26
Crit Moves:  ****                   ****                        ****
********************************************************************************
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------------------------------------------------------------------------------
                            AM Existing Plus Project
                        2.13.3396.1 Orange Coast College
                            Additional Intersections
------------------------------------------------------------------------------

                        Level Of Service Computation Report
          ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
******************************************************************************
Intersection #3 Harbor Boulevard at I-405 NB Ramps
******************************************************************************
Cycle (sec):         100               Critical Vol./Cap.(X):        0.469
Loss Time (sec):       0               Average Delay (sec/veh):     xxxxxx
Optimal Cycle:        35               Level Of Service:                 A
******************************************************************************
Street Name:           Harbor Boulevard                   I-405 NB Ramps
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted       Split Phase      Split Phase
Rights:          Include          Ignore          Include          Include
Min. Green:    0    0     0    0    0     0    0    0     0    0    0     0
Y+R:         4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:        0  0  4  0  0   0  0  4  0  1   0  0  0  0  0   1  0  1!  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0 1275    0     0 1354 1224     0    0     0   454    0   780
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0 1275    0     0 1354 1224     0    0     0   454    0   780
Added Vol:      0    0    0     0    0    0     0    0     0     0    0     0
PasserByVol:    0    0    0     0    0    0     0    0     0     0    0     0
Initial Fut:    0 1275    0     0 1354 1224     0    0     0   454    0   780
User Adj:    1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0 1275    0     0 1354    0     0    0     0   454    0   780
Reduct Vol:     0    0    0     0    0    0     0    0     0     0    0     0
Reduced Vol:    0 1275    0     0 1354    0     0    0     0   454    0   780
PCE Adj:     1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:    0 1275    0     0 1354    0     0    0     0   454    0   780
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 4.00  0.00  0.00 4.00  1.00  0.00 0.00  0.00  1.10 0.00  1.90
Final Sat.:     0 6400    0     0 6400 1600     0    0     0  1766    0  3034
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.20  0.00  0.00 0.21  0.00  0.00 0.00  0.00  0.26 0.00  0.26
Crit Moves:  ****                  ****                          ****
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                                PM Existing
                     2.13.3396.1 Orange Coast College
                         Additional Intersections
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                      Level Of Service Computation Report
        ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #3 Harbor Boulevard at I-405 NB Ramps
********************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):         0.597
Loss Time (sec):        0               Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         46               Level Of Service:                  A
********************************************************************************
Street Name:          Harbor Boulevard                    I-405 NB Ramps
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted       Split Phase      Split Phase
Rights:          Include          Ignore           Include          Include
Min. Green:    0    0     0    0    0     0    0    0     0    0    0     0
Y+R:         4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:       0  0  4  0  0   0  0  4  0  1   0  0  0  0  0   1  0  1!  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0 1537     0    0 1585  1035    0    0     0  727    0   951
Growth Adj: 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Initial Bse:   0 1537     0    0 1585  1035    0    0     0  727    0   951
Added Vol:     0    0     0    0    0     0    0    0     0    0    0     0
PasserByVol:   0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:   0 1537     0    0 1585  1035    0    0     0  727    0   951
User Adj:   1.00 1.00  1.00 1.00 1.00  0.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:    1.00 1.00  1.00 1.00 1.00  0.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Volume:    0 1537     0    0 1585     0    0    0     0  727    0   951
Reduct Vol:    0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:   0 1537     0    0 1585     0    0    0     0  727    0   951
PCE Adj:    1.00 1.00  1.00 1.00 1.00  0.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:    1.00 1.00  1.00 1.00 1.00  0.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume:   0 1537     0    0 1585     0    0    0     0  727    0   951
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:   1600 1600  1600 1600 1600  1600 1600 1600  1600 1600 1600  1600
Adjustment: 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Lanes:      0.00 4.00  0.00 0.00 4.00  1.00 0.00 0.00  0.00 1.29 0.01  1.70
Final Sat.:    0 6400     0    0 6400  1600    0    0     0 2080    0  2720
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.00 0.24  0.00 0.00 0.25  0.00 0.00 0.00  0.00 0.35 0.00  0.35
Crit Moves: ****                 ****                            ****
********************************************************************************
```

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--------------------------------------------------------------------------------
                          PM Existing Plus Project
                      2.13.3396.1 Orange Coast College
                          Additional Intersections
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                     Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #3 Harbor Boulevard at I-405 NB Ramps
********************************************************************************
Cycle (sec):          100                Critical Vol./Cap.(X):         0.604
Loss Time (sec):        0                Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         47                Level Of Service:                  B
********************************************************************************
Street Name:          Harbor Boulevard                     I-405 NB Ramps
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted       Split Phase      Split Phase
Rights:          Include          Ignore           Include          Include
Min. Green:    0    0    0    0    0    0    0    0    0    0    0    0
Y+R:         4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0
Lanes:       0  0  4  0  0   0  0  4  0  1   0  0  0  0  0   1  0  1! 0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0 1589    0     0 1629 1035     0    0    0   727    0  951
Growth Adj: 1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Initial Bse:   0 1589    0     0 1629 1035     0    0    0   727    0  951
Added Vol:     0    0    0     0    0    0     0    0    0     0    0    0
PasserByVol:   0    0    0     0    0    0     0    0    0     0    0    0
Initial Fut:   0 1589    0     0 1629 1035     0    0    0   727    0  951
User Adj:   1.00 1.00 1.00  1.00 1.00 0.00  1.00 1.00 1.00  1.00 1.00 1.00
PHF Adj:    1.00 1.00 1.00  1.00 1.00 0.00  1.00 1.00 1.00  1.00 1.00 1.00
PHF Volume:    0 1589    0     0 1629    0     0    0    0   727    0  951
Reduct Vol:    0    0    0     0    0    0     0    0    0     0    0    0
Reduced Vol:   0 1589    0     0 1629    0     0    0    0   727    0  951
PCE Adj:    1.00 1.00 1.00  1.00 1.00 0.00  1.00 1.00 1.00  1.00 1.00 1.00
MLF Adj:    1.00 1.00 1.00  1.00 1.00 0.00  1.00 1.00 1.00  1.00 1.00 1.00
FinalVolume:   0 1589    0     0 1629    0     0    0    0   727    0  951
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:   1600 1600 1600  1600 1600 1600  1600 1600 1600  1600 1600 1600
Adjustment: 1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Lanes:      0.00 4.00 0.00  0.00 4.00 1.00  0.00 0.00 0.00  1.29 0.01 1.70
Final Sat.:    0 6400    0     0 6400 1600     0    0    0  2080    0 2720
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.00 0.25 0.00  0.00 0.25 0.00  0.00 0.00 0.00  0.35 0.00 0.35
Crit Moves: ****                 ****                         ****
********************************************************************************
```

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--------------------------------------------------------------------------------
                                  AM Existing
                        2.13.3396.1 Orange Coast College
                            Additional Intersections
--------------------------------------------------------------------------------
                        Level Of Service Computation Report
        ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #4 Harbor Boulevard at I-405 SB Ramps
********************************************************************************
Cycle (sec):           100                Critical Vol./Cap.(X):          0.427
Loss Time (sec):         0                Average Delay (sec/veh):       xxxxxx
Optimal Cycle:          32                Level Of Service:                   A
********************************************************************************
Street Name:           Harbor Boulevard                      I-405 SB Ramps
Approach:        North Bound      South Bound       East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Permitted        Permitted       Split Phase      Split Phase
Rights:           Ignore           Include          Include          Include
Min. Green:     0    0    0     0    0    0     0    0    0     0    0    0
Y+R:          4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0
Lanes:        0  0  3  0  1   0  0  4  0  0   1  0  1! 0  1   0  0  0  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  934  472     0 1775    0   283    0  433     0    0    0
Growth Adj:  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Initial Bse:    0  934  472     0 1775    0   283    0  433     0    0    0
Added Vol:      0    0    0     0    0    0     0    0    0     0    0    0
PasserByVol:    0    0    0     0    0    0     0    0    0     0    0    0
Initial Fut:    0  934  472     0 1775    0   283    0  433     0    0    0
User Adj:    1.00 1.00 0.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
PHF Adj:     1.00 1.00 0.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
PHF Volume:     0  934    0     0 1775    0   283    0  433     0    0    0
Reduct Vol:     0    0    0     0    0    0     0    0    0     0    0    0
Reduced Vol:    0  934    0     0 1775    0   283    0  433     0    0    0
PCE Adj:     1.00 1.00 0.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
MLF Adj:     1.00 1.00 0.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
FinalVolume:    0  934    0     0 1775    0   283    0  433     0    0    0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600 1600  1600 1600 1600  1600 1600 1600  1600 1600 1600
Adjustment:  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Lanes:       0.00 3.00 1.00  0.00 4.00 0.00  1.19 xxxx 1.81  0.00 0.00 0.00
Final Sat.:     0 4800 1600     0 6400    0  1897    0 2903     0    0    0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.19 0.00  0.00 0.28 0.00  0.15 0.00 0.15  0.00 0.00 0.00
Crit Moves:  ****                 ****       ****
********************************************************************************
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--------------------------------------------------------------------------------
                          AM Existing Plus Project
                      2.13.3396.1 Orange Coast College
                          Additional Intersections
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                       Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #4 Harbor Boulevard at I-405 SB Ramps
********************************************************************************
Cycle (sec):          100              Critical Vol./Cap.(X):          0.455
Loss Time (sec):        0              Average Delay (sec/veh):       xxxxxx
Optimal Cycle:         34              Level Of Service:                   A
********************************************************************************
Street Name:             Harbor Boulevard                 I-405 SB Ramps
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted       Split Phase      Split Phase
Rights:           Ignore           Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Y+R:         4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:        0  0  3  0  1    0  0  4  0  0    1  0  1! 0  1    0  0  0  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0   948   494    0  1831     0  283     0   529    0     0     0
Growth Adj:  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Initial Bse:   0   948   494    0  1831     0  283     0   529    0     0     0
Added Vol:     0     0     0    0     0     0    0     0     0    0     0     0
PasserByVol:   0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut:   0   948   494    0  1831     0  283     0   529    0     0     0
User Adj:    1.00  1.00  0.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Adj:     1.00  1.00  0.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Volume:    0   948     0    0  1831     0  283     0   529    0     0     0
Reduct Vol:    0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol:   0   948     0    0  1831     0  283     0   529    0     0     0
PCE Adj:     1.00  1.00  0.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
MLF Adj:     1.00  1.00  0.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
FinalVolume:   0   948     0    0  1831     0  283     0   529    0     0     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600  1600
Adjustment:  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Lanes:       0.00  3.00  1.00 0.00  4.00  0.00 1.04  0.01  1.95 0.00  0.00  0.00
Final Sat.:    0  4800  1600    0  6400     0 1673     0  3127    0     0     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00  0.20  0.00 0.00  0.29  0.00 0.17  0.00  0.17 0.00  0.00  0.00
Crit Moves:  ****                     ****     ****
********************************************************************************
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--------------------------------------------------------------------------------
                                 PM Existing
                     2.13.3396.1 Orange Coast College
                         Additional Intersections
--------------------------------------------------------------------------------
                    Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #4 Harbor Boulevard at I-405 SB Ramps
********************************************************************************
Cycle (sec):          100            Critical Vol./Cap.(X):          0.606
Loss Time (sec):        0            Average Delay (sec/veh):       xxxxxx
Optimal Cycle:         47            Level Of Service:                   B
********************************************************************************
Street Name:             Harbor Boulevard                  I-405 SB Ramps
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Permitted        Permitted       Split Phase      Split Phase
Rights:           Ignore           Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Y+R:         4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:       0  0  3  0  1    0  0  4  0  0    1  0  1! 0  1    0  0  0  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0  1331   628    0  2336     0   163     0   771    0     0     0
Growth Adj:  1.00 1.00  1.00 1.00 1.00  1.00  1.00 1.00  1.00 1.00 1.00  1.00
Initial Bse:   0  1331   628    0  2336     0   163     0   771    0     0     0
Added Vol:     0     0     0    0     0     0     0     0     0    0     0     0
PasserByVol:   0     0     0    0     0     0     0     0     0    0     0     0
Initial Fut:   0  1331   628    0  2336     0   163     0   771    0     0     0
User Adj:    1.00 1.00  0.00 1.00 1.00  1.00  1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:     1.00 1.00  0.00 1.00 1.00  1.00  1.00 1.00  1.00 1.00 1.00  1.00
PHF Volume:    0  1331     0    0  2336     0   163     0   771    0     0     0
Reduct Vol:    0     0     0    0     0     0     0     0     0    0     0     0
Reduced Vol:   0  1331     0    0  2336     0   163     0   771    0     0     0
PCE Adj:     1.00 1.00  0.00 1.00 1.00  1.00  1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:     1.00 1.00  0.00 1.00 1.00  1.00  1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume:   0  1331     0    0  2336     0   163     0   771    0     0     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600 1600 1600  1600  1600 1600  1600 1600 1600  1600
Adjustment:  1.00 1.00  1.00 1.00 1.00  1.00  1.00 1.00  1.00 1.00 1.00  1.00
Lanes:       0.00 3.00  1.00 0.00 4.00  0.00  1.00 0.00  2.00 0.00 0.00  0.00
Final Sat.:    0  4800  1600    0  6400     0  1600     0  3200    0     0     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.28  0.00 0.00 0.37  0.00  0.10 0.00  0.24 0.00 0.00  0.00
Crit Moves:  ****                  ****                   ****
********************************************************************************
```

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---------------------------------------------------------------------------------
                          PM Existing Plus Project
                     2.13.3396.1 Orange Coast College
                          Additional Intersections
---------------------------------------------------------------------------------
                      Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*********************************************************************************
Intersection #4 Harbor Boulevard at I-405 SB Ramps
*********************************************************************************
Cycle (sec):          100                 Critical Vol./Cap.(X):         0.637
Loss Time (sec):        0                 Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         51                 Level Of Service:                  B
*********************************************************************************
Street Name:          Harbor Boulevard                    I-405 SB Ramps
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted       Split Phase      Split Phase
Rights:           Ignore           Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Y+R:         4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:        0  0  3  0  1    0  0  4  0  0    1  0  1! 0  1    0  0  0  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0 1383   712     0 2380     0   163     0   850     0     0     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0 1383   712     0 2380     0   163     0   850     0     0     0
Added Vol:      0    0     0     0    0     0     0     0     0     0     0     0
PasserByVol:    0    0     0     0    0     0     0     0     0     0     0     0
Initial Fut:    0 1383   712     0 2380     0   163     0   850     0     0     0
User Adj:    1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0 1383     0     0 2380     0   163     0   850     0     0     0
Reduct Vol:     0    0     0     0    0     0     0     0     0     0     0     0
Reduced Vol:    0 1383     0     0 2380     0   163     0   850     0     0     0
PCE Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:    0 1383     0     0 2380     0   163     0   850     0     0     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 3.00  1.00  0.00 4.00  0.00  1.00 0.00  2.00  0.00 0.00  0.00
Final Sat.:     0 4800  1600     0 6400     0  1600    0  3200     0     0     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.29  0.00  0.00 0.37  0.00  0.10 0.00  0.27  0.00 0.00  0.00
Crit Moves:  ****                  ****                    ****
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--------------------------------------------------------------------------------
                                  AM Existing
                       2.13.3396.1 Orange Coast College
                           Additional Intersections
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
         ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #5 Harbor Boulevard at Victoria Street
********************************************************************************
Cycle (sec):          100                Critical Vol./Cap.(X):         0.679
Loss Time (sec):        0                Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         71                Level Of Service:                  B
********************************************************************************
Street Name:           Harbor Boulevard                  Victoria Street
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------||----------------||----------------||----------------|
Control:       Protected         Protected         Protected         Protected
Rights:          Include            Ovl              Include           Include
Min. Green:     0     0     0     0     0     0     0     0     0     0     0     0
Y+R:          4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0
Lanes:        1  0  3  0  1    1  0  3  0  1    2  0  2  0  1    2  0  2  0  1
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:      54   570    44   129   947   179   282  1298   134   136   631   116
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:   54   570    44   129   947   179   282  1298   134   136   631   116
Added Vol:      0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:   54   570    44   129   947   179   282  1298   134   136   631   116
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:    54   570    44   129   947   179   282  1298   134   136   631   116
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:   54   570    44   129   947   179   282  1298   134   136   631   116
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:   54   570    44   129   947   179   282  1298   134   136   631   116
OvlAdjVol:                                     38
------------|----------------||----------------||----------------||----------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       1.00  3.00  1.00  1.00  3.00  1.00  2.00  2.00  1.00  2.00  2.00  1.00
Final Sat.:  1600  4800  1600  1600  4800  1600  3200  3200  1600  3200  3200  1600
------------|----------------||----------------||----------------||----------------|
Capacity Analysis Module:
Vol/Sat:     0.03  0.12  0.03  0.08  0.20  0.11  0.09  0.41  0.08  0.04  0.20  0.07
OvlAdjV/S:                                   0.02
Crit Moves:  ****                    ****              ****        ****
********************************************************************************
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-------------------------------------------------------------------------------
                       AM Existing Plus Project
                   2.13.3396.1 Orange Coast College
                       Additional Intersections
-------------------------------------------------------------------------------

                    Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*******************************************************************************
Intersection #5 Harbor Boulevard at Victoria Street
*******************************************************************************
Cycle (sec):          100              Critical Vol./Cap.(X):         0.680
Loss Time (sec):        0              Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         71              Level Of Service:                  B
*******************************************************************************
Street Name:              Harbor Boulevard                Victoria Street
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected        Protected        Protected
Rights:          Include            Ovl            Include          Include
Min. Green:    0    0     0    0    0     0    0    0     0    0    0     0
Y+R:         4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:       1  0  3  0  1   1  0  3  0  1   2  0  2  0  1   2  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      54  591    44   130  951   182   300 1298   134   136  631   117
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   54  591    44   130  951   182   300 1298   134   136  631   117
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   54  591    44   130  951   182   300 1298   134   136  631   117
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    54  591    44   130  951   182   300 1298   134   136  631   117
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   54  591    44   130  951   182   300 1298   134   136  631   117
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   54  591    44   130  951   182   300 1298   134   136  631   117
OvlAdjVol:                                 32
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 3.00  1.00  1.00 3.00  1.00  2.00 2.00  1.00  2.00 2.00  1.00
Final Sat.:  1600 4800  1600  1600 4800  1600  3200 3200  1600  3200 3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.03 0.12  0.03  0.08 0.20  0.11  0.09 0.41  0.08  0.04 0.20  0.07
OvlAdjV/S:                               0.02
Crit Moves:  ****                 ****              ****        ****
*******************************************************************************
```

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--------------------------------------------------------------------------------
                                 PM Existing
                       2.13.3396.1 Orange Coast College
                           Additional Intersections
--------------------------------------------------------------------------------

                      Level Of Service Computation Report
        ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #5 Harbor Boulevard at Victoria Street
********************************************************************************
Cycle (sec):          100                Critical Vol./Cap.(X):          0.814
Loss Time (sec):        0                Average Delay (sec/veh):       xxxxxx
Optimal Cycle:        122                Level Of Service:                   D
********************************************************************************
Street Name:          Harbor Boulevard                  Victoria Street
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected        Protected        Protected
Rights:           Include           Ovl             Include          Include
Min. Green:    0    0    0     0    0    0     0    0    0     0    0    0
Y+R:         4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0
Lanes:        1  0  3  0  1   1  0  3  0  1   2  0  2  0  1   2  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     187 1145  122   100 1206  319   232  532  132    85 1194  110
Growth Adj:  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Initial Bse:  187 1145  122   100 1206  319   232  532  132    85 1194  110
Added Vol:      0    0    0     0    0    0     0    0    0     0    0    0
PasserByVol:    0    0    0     0    0    0     0    0    0     0    0    0
Initial Fut:  187 1145  122   100 1206  319   232  532  132    85 1194  110
User Adj:    1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
PHF Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
PHF Volume:   187 1145  122   100 1206  319   232  532  132    85 1194  110
Reduct Vol:     0    0    0     0    0    0     0    0    0     0    0    0
Reduced Vol:  187 1145  122   100 1206  319   232  532  132    85 1194  110
PCE Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
MLF Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
FinalVolume:  187 1145  122   100 1206  319   232  532  132    85 1194  110
OvlAdjVol:                                203
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600 1600  1600 1600 1600  1600 1600 1600  1600 1600 1600
Adjustment:  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Lanes:       1.00 3.00 1.00  1.00 3.00 1.00  2.00 2.00 1.00  2.00 2.00 1.00
Final Sat.:  1600 4800 1600  1600 4800 1600  3200 3200 1600  3200 3200 1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.12 0.24 0.08  0.06 0.25 0.20  0.07 0.17 0.08  0.03 0.37 0.07
OvlAdjV/S:                                0.13
Crit Moves:  ****                 ****       ****                  ****
********************************************************************************
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                         PM Existing Plus Project
                    2.13.3396.1 Orange Coast College
                         Additional Intersections
--------------------------------------------------------------------------------

                     Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #5 Harbor Boulevard at Victoria Street
********************************************************************************
Cycle (sec):          100              Critical Vol./Cap.(X):          0.822
Loss Time (sec):        0              Average Delay (sec/veh):       xxxxxx
Optimal Cycle:        128              Level Of Service:                   D
********************************************************************************
Street Name:              Harbor Boulevard                 Victoria Street
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected         Protected        Protected
Rights:          Include            Ovl             Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Y+R:         4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:        1  0  3  0  1   1  0  3  0  1   2  0  2  0  1   2  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     187  1163   122   102  1226   332   246   532   132    85  1194   112
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:  187  1163   122   102  1226   332   246   532   132    85  1194   112
Added Vol:      0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:  187  1163   122   102  1226   332   246   532   132    85  1194   112
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:   187  1163   122   102  1226   332   246   532   132    85  1194   112
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:  187  1163   122   102  1226   332   246   532   132    85  1194   112
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:  187  1163   122   102  1226   332   246   532   132    85  1194   112
OvlAdjVol:                                  209
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       1.00  3.00  1.00  1.00  3.00  1.00  2.00  2.00  1.00  2.00  2.00  1.00
Final Sat.:  1600  4800  1600  1600  4800  1600  3200  3200  1600  3200  3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.12  0.24  0.08  0.06  0.26  0.21  0.08  0.17  0.08  0.03  0.37  0.07
OvlAdjV/S:                                  0.13
Crit Moves:  ****                    ****        ****                    ****
********************************************************************************
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--------------------------------------------------------------------------------
                                 AM Existing
                        2.13.3396.1 Orange Coast College
                          Additional Intersections
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                      Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #6 Fairview Road at South Coast Drive
********************************************************************************
Cycle (sec):          100                 Critical Vol./Cap.(X):         0.702
Loss Time (sec):        0                 Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         76                 Level Of Service:                  C
********************************************************************************
Street Name:             Fairview Road                   South Coast Drive
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Protected        Protected        Protected        Protected
Rights:          Include          Include          Include          Include
Min. Green:    0    0     0    0    0     0    0    0     0    0    0     0
Y+R:         4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:       2  0  3  0  1   2  0  2  1  0   1  0  1  1  1   2  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     40 1924    62  229 1225   162  274  100    65   12   66    93
Growth Adj:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Initial Bse:  40 1924    62  229 1225   162  274  100    65   12   66    93
Added Vol:     0    0     0    0    0     0    0    0     0    0    0     0
PasserByVol:   0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:  40 1924    62  229 1225   162  274  100    65   12   66    93
User Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Volume:   40 1924    62  229 1225   162  274  100    65   12   66    93
Reduct Vol:    0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:  40 1924    62  229 1225   162  274  100    65   12   66    93
PCE Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume:  40 1924    62  229 1225   162  274  100    65   12   66    93
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600 1600 1600  1600 1600 1600  1600 1600 1600  1600
Adjustment:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Lanes:       2.00 3.00  1.00 2.00 2.65  0.35 1.00 1.82  1.18 2.00 2.00  1.00
Final Sat.:  3200 4800  1600 3200 4239   561 1600 2909  1891 3200 3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.01 0.40  0.04 0.07 0.29  0.29 0.17 0.03  0.03 0.00 0.02  0.06
Crit Moves:       ****       ****            ****                         ****
********************************************************************************
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--------------------------------------------------------------------------------
                          AM Existing Plus Project
                      2.13.3396.1 Orange Coast College
                          Additional Intersections
--------------------------------------------------------------------------------

                     Level Of Service Computation Report
        ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #6 Fairview Road at South Coast Drive
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):           0.705
Loss Time (sec):       0              Average Delay (sec/veh):        xxxxxx
Optimal Cycle:        77              Level Of Service:                    C
********************************************************************************
Street Name:              Fairview Road                  South Coast Drive
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
-------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected        Protected        Protected
Rights:           Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Y+R:         4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:        2  0  3  0  1   2  0  2  1  0   1  0  1  1  1   2  0  2  0  1
-------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      40  1940    62  229  1296   162  274   100    65   12    66    93
Growth Adj:  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Initial Bse:   40  1940    62  229  1296   162  274   100    65   12    66    93
Added Vol:      0     0     0    0     0     0    0     0     0    0     0     0
PasserByVol:    0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut:   40  1940    62  229  1296   162  274   100    65   12    66    93
User Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Volume:    40  1940    62  229  1296   162  274   100    65   12    66    93
Reduct Vol:     0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol:   40  1940    62  229  1296   162  274   100    65   12    66    93
PCE Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
FinalVolume:   40  1940    62  229  1296   162  274   100    65   12    66    93
-------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600  1600
Adjustment:  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Lanes:       2.00  3.00  1.00 2.00  2.67  0.33 1.00  1.82  1.18 2.00  2.00  1.00
Final Sat.:  3200  4800  1600 3200  4267   533 1600  2909  1891 3200  3200  1600
-------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.01  0.40  0.04 0.07  0.30  0.30 0.17  0.03  0.03 0.00  0.02  0.06
Crit Moves:        ****       ****             ****                         ****
********************************************************************************
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-------------------------------------------------------------------------------
                                 PM Existing
                       2.13.3396.1 Orange Coast College
                           Additional Intersections
-------------------------------------------------------------------------------
                      Level Of Service Computation Report
     ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*******************************************************************************
Intersection #6 Fairview Road at South Coast Drive
*******************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):         0.683
Loss Time (sec):        0               Average Delay (sec/veh):       xxxxxx
Optimal Cycle:         72               Level Of Service:                   B
*******************************************************************************
Street Name:               Fairview Road                 South Coast Drive
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected        Protected        Protected
Rights:           Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Y+R:         4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:        2  0  3  0  1    2  0  2  1  0    1  0  1  1  1    2  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     121  1961   366    75  1455    59    77   210   503   299   272   158
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:  121  1961   366    75  1455    59    77   210   503   299   272   158
Added Vol:      0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:  121  1961   366    75  1455    59    77   210   503   299   272   158
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:   121  1961   366    75  1455    59    77   210   503   299   272   158
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:  121  1961   366    75  1455    59    77   210   503   299   272   158
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:  121  1961   366    75  1455    59    77   210   503   299   272   158
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       2.00  3.00  1.00  2.00  2.88  0.12  1.00  1.00  2.00  2.00  2.00  1.00
Final Sat.:  3200  4800  1600  3200  4613   187  1600  1600  3200  3200  3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.04  0.41  0.23  0.02  0.32  0.32  0.05  0.13  0.16  0.09  0.09  0.10
Crit Moves:        ****        ****                          ****  ****
*******************************************************************************
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-------------------------------------------------------------------------------
                          PM Existing Plus Project
                       2.13.3396.1 Orange Coast College
                          Additional Intersections
-------------------------------------------------------------------------------
                     Level Of Service Computation Report
        ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*******************************************************************************
Intersection #6 Fairview Road at South Coast Drive
*******************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):          0.694
Loss Time (sec):       0              Average Delay (sec/veh):       xxxxxx
Optimal Cycle:        75              Level Of Service:                   B
*******************************************************************************
Street Name:           Fairview Road                South Coast Drive
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Protected        Protected        Protected        Protected
Rights:         Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Y+R:         4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:        2  0  3  0  1    2  0  2  1  0    1  0  1  1  1    2  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     121  2018   366    75  1512    59    77   210   503   299   272   158
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:  121  2018   366    75  1512    59    77   210   503   299   272   158
Added Vol:      0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:  121  2018   366    75  1512    59    77   210   503   299   272   158
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:   121  2018   366    75  1512    59    77   210   503   299   272   158
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:  121  2018   366    75  1512    59    77   210   503   299   272   158
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:  121  2018   366    75  1512    59    77   210   503   299   272   158
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       2.00  3.00  1.00  2.00  2.89  0.11  1.00  1.00  2.00  2.00  2.00  1.00
Final Sat.:  3200  4800  1600  3200  4620   180  1600  1600  3200  3200  3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.04  0.42  0.23  0.02  0.33  0.33  0.05  0.13  0.16  0.09  0.09  0.10
Crit Moves:        ****        ****                          ****  ****
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---------------------------------------------------------------------------
                            AM Existing
                 2.13.3396.1 Orange Coast College
                      Additional Intersections
---------------------------------------------------------------------------

                 Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
***************************************************************************
Intersection #7 Bear Street at Baker Street
***************************************************************************
Cycle (sec):         100                Critical Vol./Cap.(X):        0.563
Loss Time (sec):       0                Average Delay (sec/veh):     xxxxxx
Optimal Cycle:        52                Level Of Service:                 A
***************************************************************************
Street Name:               Bear Street                    Baker Street
Approach:     North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:      Protected        Protected        Protected        Protected
Rights:         Include           Ovl            Include          Include
Min. Green:    0    0    0    0    0    0    0    0    0    0    0    0
Y+R:         4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0
Lanes:        1  0  0  1  0   2  0  1  0  2   2  0  1  1  0   1  0  2  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      58   98   17  176  203  329  324  980  255   22  411   95
Growth Adj:  1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse:   58   98   17  176  203  329  324  980  255   22  411   95
Added Vol:      0    0    0    0    0    0    0    0    0    0    0    0
PasserByVol:    0    0    0    0    0    0    0    0    0    0    0    0
Initial Fut:   58   98   17  176  203  329  324  980  255   22  411   95
User Adj:    1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:     1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume:    58   98   17  176  203  329  324  980  255   22  411   95
Reduct Vol:     0    0    0    0    0    0    0    0    0    0    0    0
Reduced Vol:   58   98   17  176  203  329  324  980  255   22  411   95
PCE Adj:     1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj:     1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume:   58   98   17  176  203  329  324  980  255   22  411   95
OvlAdjVol:                                5
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600
Adjustment:  1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes:       1.00 0.85 0.15 2.00 1.00 2.00 2.00 1.59 0.41 1.00 2.44 0.56
Final Sat.:  1600 1363  237 3200 1600 3200 3200 2539  661 1600 3899  901
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.04 0.07 0.07 0.06 0.13 0.10 0.10 0.39 0.39 0.01 0.11 0.11
OvlAdjV/S:                             0.00
Crit Moves:  ****                ****           ****      ****
***************************************************************************
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--------------------------------------------------------------------------------
                             AM Existing Plus Project
                        2.13.3396.1 Orange Coast College
                             Additional Intersections
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                        Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #7 Bear Street at Baker Street
********************************************************************************
Cycle (sec):           100               Critical Vol./Cap.(X):          0.564
Loss Time (sec):         0               Average Delay (sec/veh):       xxxxxx
Optimal Cycle:          52               Level Of Service:                   A
********************************************************************************
Street Name:                 Bear Street                      Baker Street
Approach:          North Bound      South Bound       East Bound       West Bound
Movement:        L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:          Protected        Protected         Protected         Protected
Rights:             Include            Ovl              Include           Include
Min. Green:      0     0     0    0     0     0    0     0     0    0     0     0
Y+R:           4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:          1  0  0  1  0    2  0  1  0  2    2  0  1  1  0    1  0  2  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       58    98    17  176   203   340  327   984   255   22   434    95
Growth Adj:   1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Initial Bse:    58    98    17  176   203   340  327   984   255   22   434    95
Added Vol:       0     0     0    0     0     0    0     0     0    0     0     0
PasserByVol:     0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut:    58    98    17  176   203   340  327   984   255   22   434    95
User Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Adj:      1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Volume:     58    98    17  176   203   340  327   984   255   22   434    95
Reduct Vol:      0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol:    58    98    17  176   203   340  327   984   255   22   434    95
PCE Adj:      1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
MLF Adj:      1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
FinalVolume:    58    98    17  176   203   340  327   984   255   22   434    95
OvlAdjVol:                                   13
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:     1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600  1600
Adjustment:   1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Lanes:        1.00  0.85  0.15 2.00  1.00  2.00 2.00  1.59  0.41 1.00  2.46  0.54
Final Sat.:   1600  1363   237 3200  1600  3200 3200  2541   659 1600  3938   862
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:      0.04  0.07  0.07 0.06  0.13  0.11 0.10  0.39  0.39 0.01  0.11  0.11
OvlAdjV/S:                                 0.00
Crit Moves:   ****                    ****              ****        ****
********************************************************************************
```

PM Existing
2.13.3396.1 Orange Coast College
Additional Intersections

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #7 Bear Street at Baker Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.688
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	73	Level Of Service:	B

Street Name:	Bear Street						Baker Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	0 1	0	2 0	1 0	2	2 0	1 1	0	1 0	2 1	0
Volume Module:												
Base Vol:	213	195	26	171	174	588	317	566	129	17	1437	229
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	213	195	26	171	174	588	317	566	129	17	1437	229
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	213	195	26	171	174	588	317	566	129	17	1437	229
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	213	195	26	171	174	588	317	566	129	17	1437	229
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	213	195	26	171	174	588	317	566	129	17	1437	229
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	213	195	26	171	174	588	317	566	129	17	1437	229
OvlAdjVol:						271						
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.88	0.12	2.00	1.00	2.00	2.00	1.63	0.37	1.00	2.59	0.41
Final Sat.:	1600	1412	188	3200	1600	3200	3200	2606	594	1600	4140	660
Capacity Analysis Module:												
Vol/Sat:	0.13	0.14	0.14	0.05	0.11	0.18	0.10	0.22	0.22	0.01	0.35	0.35
OvlAdjV/S:						0.08						
Crit Moves:	****				****		****				****	

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--------------------------------------------------------------------------------
                           PM Existing Plus Project
                       2.13.3396.1 Orange Coast College
                           Additional Intersections
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                       Level Of Service Computation Report
         ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #7 Bear Street at Baker Street
********************************************************************************
Cycle (sec):         100                Critical Vol./Cap.(X):         0.696
Loss Time (sec):       0                Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        75                Level Of Service:                  B
********************************************************************************
Street Name:               Bear Street                     Baker Street
Approach:        North Bound      South Bound      East Bound       West Bound
Movement:       L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------||----------------||----------------||----------------|
Control:         Protected        Protected        Protected        Protected
Rights:           Include            Ovl            Include          Include
Min. Green:     0     0     0    0     0     0    0     0     0    0     0     0
Y+R:          4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:          1  0  0  1  0    2  0  1  0  2    2  0  1  1  0    1  0  2  1  0
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:     213   195    26  171   174   597  329   589   129   17  1456   229
Growth Adj:  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Initial Bse:  213   195    26  171   174   597  329   589   129   17  1456   229
Added Vol:      0     0     0    0     0     0    0     0     0    0     0     0
PasserByVol:    0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut:  213   195    26  171   174   597  329   589   129   17  1456   229
User Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Volume:   213   195    26  171   174   597  329   589   129   17  1456   229
Reduct Vol:     0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol:  213   195    26  171   174   597  329   589   129   17  1456   229
PCE Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
FinalVolume:  213   195    26  171   174   597  329   589   129   17  1456   229
OvlAdjVol:                                 268
------------|----------------||----------------||----------------||----------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600  1600
Adjustment:  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Lanes:       1.00  0.88  0.12 2.00  1.00  2.00 2.00  1.64  0.36 1.00  2.59  0.41
Final Sat.:  1600  1412   188 3200  1600  3200 3200  2625   575 1600  4148   652
------------|----------------||----------------||----------------||----------------|
Capacity Analysis Module:
Vol/Sat:     0.13  0.14  0.14 0.05  0.11  0.19 0.10  0.22  0.22 0.01  0.35  0.35
OvlAdjV/S:                                0.08
Crit Moves:  ****                   ****       ****                     ****
********************************************************************************
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AM Existing
2.13.3396.1 Orange Coast College
Additional Intersections

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #8 Newport Boulevard/SR-55 SB Ramps at Fair Drive

Cycle (sec):	100	Critical Vol./Cap.(X):	0.351
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	29	Level Of Service:	A

Street Name:	Newport Boulevard/SR-55 SB Ramps						Fair Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Protected		
Rights:	Include			Ignore			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0 0	1 0	3	0 1	0 0	3	1 0	1 0	2	0 0
Volume Module:												
Base Vol:	0	0	0	205	556	559	0	922	43	115	275	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	205	556	559	0	922	43	115	275	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	205	556	559	0	922	43	115	275	0
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	205	556	0	0	922	43	115	275	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	205	556	0	0	922	43	115	275	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	205	556	0	0	922	43	115	275	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	1.00	3.00	1.00	0.00	3.82	0.18	1.00	2.00	0.00
Final Sat.:	0	0	0	1600	4800	1600	0	6115	285	1600	3200	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.13	0.12	0.00	0.00	0.15	0.15	0.07	0.09	0.00
Crit Moves:				****				****		****		

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                              AM Existing Plus Project
                       2.13.3396.1 Orange Coast College
                              Additional Intersections
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                       Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #8 Newport Boulevard/SR-55 SB Ramps at Fair Drive
********************************************************************************
Cycle (sec):         100               Critical Vol./Cap.(X):          0.354
Loss Time (sec):       0               Average Delay (sec/veh):       xxxxxx
Optimal Cycle:        29               Level Of Service:                   A
********************************************************************************
Street Name: Newport Boulevard/SR-55 SB Ramps                 Fair Drive
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:      Split Phase      Split Phase        Permitted        Protected
Rights:          Include          Ignore           Include          Include
Min. Green:     0     0     0    0     0     0    0     0     0    0     0     0
Y+R:          4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:        0  0  0  0  0   1  0  3  0  1   0  0  3  1  0   1  0  2  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0     0  205   556   606    0   937    48  115   329     0
Growth Adj:  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Initial Bse:    0     0     0  205   556   606    0   937    48  115   329     0
Added Vol:      0     0     0    0     0     0    0     0     0    0     0     0
PasserByVol:    0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut:    0     0     0  205   556   606    0   937    48  115   329     0
User Adj:    1.00  1.00  1.00 1.00  1.00  0.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00 1.00  1.00  0.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Volume:     0     0     0  205   556     0    0   937    48  115   329     0
Reduct Vol:     0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol:    0     0     0  205   556     0    0   937    48  115   329     0
PCE Adj:     1.00  1.00  1.00 1.00  1.00  0.00 1.00  1.00  1.00 1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00 1.00  1.00  0.00 1.00  1.00  1.00 1.00  1.00  1.00
FinalVolume:    0     0     0  205   556     0    0   937    48  115   329     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600  1600
Adjustment:  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Lanes:       0.00  0.00  0.00 1.00  3.00  1.00 0.00  3.81  0.19 1.00  2.00  0.00
Final Sat.:     0     0     0 1600  4800  1600    0  6088   312 1600  3200     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00  0.00  0.00 0.13  0.12  0.00 0.00  0.15  0.15 0.07  0.10  0.00
Crit Moves:                   ****                    ****       ****
********************************************************************************
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                              PM Existing
                   2.13.3396.1 Orange Coast College
                       Additional Intersections
---------------------------------------------------------------------------------

                   Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*********************************************************************************
Intersection #8 Newport Boulevard/SR-55 SB Ramps at Fair Drive
*********************************************************************************
Cycle (sec):        100              Critical Vol./Cap.(X):         0.481
Loss Time (sec):      0              Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       36              Level Of Service:                  A
*********************************************************************************
Street Name: Newport Boulevard/SR-55 SB Ramps              Fair Drive
Approach:     North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:      Split Phase      Split Phase       Permitted        Protected
Rights:          Include          Ignore          Include          Include
Min. Green:    0    0     0    0    0     0    0    0     0    0    0     0
Y+R:         4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:       0  0  0  0  0   1  0  3  0  1   0  0  3  1  0   1  0  2  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0    0     0  328 1472  1432    0  582    50  121  353     0
Growth Adj:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Initial Bse:   0    0     0  328 1472  1432    0  582    50  121  353     0
Added Vol:     0    0     0    0    0     0    0    0     0    0    0     0
PasserByVol:   0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:   0    0     0  328 1472  1432    0  582    50  121  353     0
User Adj:    1.00 1.00  1.00 1.00 1.00  0.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00 1.00 1.00  0.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Volume:    0    0     0  328 1472     0    0  582    50  121  353     0
Reduct Vol:    0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:   0    0     0  328 1472     0    0  582    50  121  353     0
PCE Adj:     1.00 1.00  1.00 1.00 1.00  0.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00 1.00 1.00  0.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume:   0    0     0  328 1472     0    0  582    50  121  353     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600 1600 1600  1600 1600 1600  1600 1600 1600  1600
Adjustment:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Lanes:       0.00 0.00  0.00 1.00 3.00  1.00 0.00 3.68  0.32 1.00 2.00  0.00
Final Sat.:    0    0     0 1600 4800  1600    0 5894   506 1600 3200     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.00 0.21 0.31  0.00 0.00 0.10  0.10 0.08 0.11  0.00
Crit Moves:                       ****             ****      ****
*********************************************************************************
```

```
--------------------------------------------------------------------------------
                         PM Existing Plus Project
                     2.13.3396.1 Orange Coast College
                         Additional Intersections
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
     ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #8 Newport Boulevard/SR-55 SB Ramps at Fair Drive
********************************************************************************
Cycle (sec):          100              Critical Vol./Cap.(X):         0.493
Loss Time (sec):        0              Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         37              Level Of Service:                  A
********************************************************************************
Street Name: Newport Boulevard/SR-55 SB Ramps               Fair Drive
Approach:     North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:      Split Phase      Split Phase        Permitted        Protected
Rights:          Include           Ignore           Include          Include
Min. Green:    0    0     0    0    0     0    0    0     0    0    0     0
Y+R:         4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:       0  0  0  0  0   1  0  3  0  1   0  0  3  1  0   1  0  2  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0    0     0  328 1472  1467    0  639    69  121  395     0
Growth Adj:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Initial Bse:   0    0     0  328 1472  1467    0  639    69  121  395     0
Added Vol:     0    0     0    0    0     0    0    0     0    0    0     0
PasserByVol:   0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:   0    0     0  328 1472  1467    0  639    69  121  395     0
User Adj:    1.00 1.00  1.00 1.00 1.00  0.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00 1.00 1.00  0.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Volume:    0    0     0  328 1472     0    0  639    69  121  395     0
Reduct Vol:    0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:   0    0     0  328 1472     0    0  639    69  121  395     0
PCE Adj:     1.00 1.00  1.00 1.00 1.00  0.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00 1.00 1.00  0.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume:   0    0     0  328 1472     0    0  639    69  121  395     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600 1600 1600  1600 1600 1600  1600 1600 1600  1600
Adjustment:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Lanes:       0.00 0.00  0.00 1.00 3.00  1.00 0.00 3.61  0.39 1.00 2.00  0.00
Final Sat.:    0    0     0 1600 4800  1600    0 5776   624 1600 3200     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.00 0.21 0.31  0.00 0.00 0.11  0.11 0.08 0.12  0.00
Crit Moves:                       ****              ****       ****
********************************************************************************
```

AM Existing
2.13.3396.1 Orange Coast College
Additional Intersections

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #9 Newport Boulevard/SR-55 NB Ramps at Del Mar Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.813
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	99	Level Of Service:	D

Street Name: Newport Boulevard/SR-55 NB Ramps — Del Mar Avenue

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	1	1 0	0 0	0	0 0	2 0	2	0 0	0 0	2	0 1
Volume Module:												
Base Vol:	155	1638	122	0	0	0	776	366	0	0	235	274
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	155	1638	122	0	0	0	776	366	0	0	235	274
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	155	1638	122	0	0	0	776	366	0	0	235	274
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	155	1638	122	0	0	0	776	366	0	0	235	274
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	155	1638	122	0	0	0	776	366	0	0	235	274
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	155	1638	122	0	0	0	776	366	0	0	235	274
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.24	2.57	0.19	0.00	0.00	0.00	2.00	2.00	0.00	0.00	2.00	1.00
Final Sat.:	389	4106	306	0	0	0	3200	3200	0	0	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.40	0.40	0.40	0.00	0.00	0.00	0.24	0.11	0.00	0.00	0.07	0.17
Crit Moves:			****				****					****

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                            AM Existing Plus Project
                       2.13.3396.1 Orange Coast College
                           Additional Intersections
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                      Level Of Service Computation Report
         ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #9 Newport Boulevard/SR-55 NB Ramps at Del Mar Avenue
********************************************************************************
Cycle (sec):         100               Critical Vol./Cap.(X):         0.820
Loss Time (sec):       0               Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       104               Level Of Service:                  D
********************************************************************************
Street Name: Newport Boulevard/SR-55 NB Ramps            Del Mar Avenue
Approach:     North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:      Split Phase      Split Phase       Protected        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0    0    0    0    0    0    0    0    0    0    0    0
Y+R:         4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0
Lanes:       0  1  1  1  0   0  0  0  0  0   2  0  2  0  0   0  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:    180 1638  122    0    0    0  784  372    0    0  264  274
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 180 1638  122    0    0    0  784  372    0    0  264  274
Added Vol:     0    0    0    0    0    0    0    0    0    0    0    0
PasserByVol:   0    0    0    0    0    0    0    0    0    0    0    0
Initial Fut: 180 1638  122    0    0    0  784  372    0    0  264  274
User Adj:   1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:    1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume:  180 1638  122    0    0    0  784  372    0    0  264  274
Reduct Vol:    0    0    0    0    0    0    0    0    0    0    0    0
Reduced Vol: 180 1638  122    0    0    0  784  372    0    0  264  274
PCE Adj:    1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj:    1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 180 1638  122    0    0    0  784  372    0    0  264  274
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:   1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes:      0.28 2.53 0.19 0.00 0.00 0.00 2.00 2.00 0.00 0.00 2.00 1.00
Final Sat.:  445 4053  302    0    0    0 3200 3200    0    0 3200 1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.40 0.40 0.40 0.00 0.00 0.00 0.25 0.12 0.00 0.00 0.08 0.17
Crit Moves: ****                           ****                          ****
********************************************************************************
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---------------------------------------------------------------------------------
                                 PM Existing
                      2.13.3396.1 Orange Coast College
                          Additional Intersections
---------------------------------------------------------------------------------
                     Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*********************************************************************************
Intersection #9 Newport Boulevard/SR-55 NB Ramps at Del Mar Avenue
*********************************************************************************
Cycle (sec):          100                Critical Vol./Cap.(X):         0.469
Loss Time (sec):        0                Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         35                Level Of Service:                  A
*********************************************************************************
Street Name: Newport Boulevard/SR-55 NB Ramps          Del Mar Avenue
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Split Phase      Split Phase       Protected        Permitted
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0    0    0     0    0    0     0    0    0     0
Y+R:          4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:        0  1  1  1  0   0  0  0  0  0   2  0  2  0  0   0  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     139  747   121    0    0     0  497  413     0    0  333   155
Growth Adj:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Initial Bse:  139  747   121    0    0     0  497  413     0    0  333   155
Added Vol:      0    0     0    0    0     0    0    0     0    0    0     0
PasserByVol:    0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:  139  747   121    0    0     0  497  413     0    0  333   155
User Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Volume:   139  747   121    0    0     0  497  413     0    0  333   155
Reduct Vol:     0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:  139  747   121    0    0     0  497  413     0    0  333   155
PCE Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume:  139  747   121    0    0     0  497  413     0    0  333   155
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600 1600 1600  1600 1600 1600  1600 1600 1600  1600
Adjustment:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Lanes:       0.41 2.23  0.36 0.00 0.00  0.00 2.00 2.00  0.00 0.00 2.00  1.00
Final Sat.:   663 3561   577    0    0     0 3200 3200     0    0 3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.21 0.21  0.21 0.00 0.00  0.00 0.16 0.13  0.00 0.00 0.10  0.10
Crit Moves:             ****                 ****                  ****
*********************************************************************************
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--------------------------------------------------------------------------------
                          PM Existing Plus Project
                     2.13.3396.1 Orange Coast College
                          Additional Intersections
--------------------------------------------------------------------------------
                     Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #9 Newport Boulevard/SR-55 NB Ramps at Del Mar Avenue
********************************************************************************
Cycle (sec):         100                Critical Vol./Cap.(X):          0.491
Loss Time (sec):       0                Average Delay (sec/veh):       xxxxxx
Optimal Cycle:        37                Level Of Service:                   A
********************************************************************************
Street Name: Newport Boulevard/SR-55 NB Ramps           Del Mar Avenue
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Split Phase      Split Phase       Protected        Permitted
Rights:           Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Y+R:         4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:       0  1  1  1  0   0  0  0  0  0   2  0  2  0  0   0  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     158   747   121     0     0     0   529   440     0     0   357   155
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:  158   747   121     0     0     0   529   440     0     0   357   155
Added Vol:      0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:  158   747   121     0     0     0   529   440     0     0   357   155
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:   158   747   121     0     0     0   529   440     0     0   357   155
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:  158   747   121     0     0     0   529   440     0     0   357   155
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:  158   747   121     0     0     0   529   440     0     0   357   155
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       0.46  2.19  0.35  0.00  0.00  0.00  2.00  2.00  0.00  0.00  2.00  1.00
Final Sat.:   739  3495   566     0     0     0  3200  3200     0     0  3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.21  0.21  0.21  0.00  0.00  0.00  0.17  0.14  0.00  0.00  0.11  0.10
Crit Moves:              ****                    ****                    ****
********************************************************************************
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                           AM Existing Plus Project
                       2.13.3396.1 Orange Coast College
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                      Level Of Service Computation Report
            2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #26 New Driveway at Adams Avenue
********************************************************************************
Average Delay (sec/veh):       0.1       Worst Case Level Of Service: C[ 16.5]
********************************************************************************
Street Name:               New Driveway                        Adams Avenue
Approach:        North Bound      South Bound       East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign        Uncontrolled     Uncontrolled
Rights:          Include          Include          Include          Include
Lanes:         0  0  0  0  1   0  0  0  0  0   0  0  2  1  0   0  0  3  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        0     0     9    0     0     0     0 2309    23     0  616     0
Growth Adj:   1.00  1.00  1.00  1.00  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:     0     0     9    0     0     0     0 2309    23     0  616     0
Added Vol:       0     0     0    0     0     0     0    0     0     0    0     0
PasserByVol:     0     0     0    0     0     0     0    0     0     0    0     0
Initial Fut:     0     0     9    0     0     0     0 2309    23     0  616     0
User Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:      0.95  0.95  0.95  0.95  0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:      0     0     9    0     0     0     0 2431    24     0  648     0
Reduct Vol:      0     0     0    0     0     0     0    0     0     0    0     0
FinalVolume:     0     0     9    0     0     0     0 2431    24     0  648     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx   822  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx   321  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx   321  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  0.03  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx   0.1  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx  16.5 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:     *     *     C     *     *     *     *     *     *     *     *     *
Movement:      LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:      *     *     *     *     *     *     *     *     *     *     *     *
ApproachDel:       16.5            xxxxxx           xxxxxx           xxxxxx
ApproachLOS:         C                *                *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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-------------------------------------------------------------------------------

                           PM Existing Plus Project
                      2.13.3396.1 Orange Coast College
-------------------------------------------------------------------------------

                      Level Of Service Computation Report
           2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #26 New Driveway at Adams Avenue
********************************************************************************
Average Delay (sec/veh):        0.1      Worst Case Level Of Service: B[ 12.1]
********************************************************************************
Street Name:              New Driveway                         Adams Avenue
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R    L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign        Uncontrolled     Uncontrolled
Rights:          Include          Include           Include          Include
Lanes:        0  0  0  0  1   0  0  0  0  0    0  0  2  1  0   0  0  3  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0    28     0     0     0     0 1349    23     0 1744     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0     0    28     0     0     0     0 1349    23     0 1744     0
Added Vol:      0     0     0     0     0     0     0    0     0     0    0     0
PasserByVol:    0     0     0     0     0     0     0    0     0     0    0     0
Initial Fut:    0     0    28     0     0     0     0 1349    23     0 1744     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:     0     0    29     0     0     0     0 1420    24     0 1836     0
Reduct Vol:     0     0     0     0     0     0     0    0     0     0    0     0
FinalVolume:    0     0    29     0     0     0     0 1420    24     0 1836     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx   485  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx   533  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx   533  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  0.06  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx   0.2  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx  12.1 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     B     *    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT   LT - LTR - RT    LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:      12.1            xxxxxx           xxxxxx           xxxxxx
ApproachLOS:        B                *                *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
```

APPENDIX B-II

YEAR 2024 PLUS PROJECT TRAFFIC CONDITIONS

```
--------------------------------------------------------------------------------
                                AM Cumulative
                       2.13.3396.1 Orange Coast College
--------------------------------------------------------------------------------

                     Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #1 Harbor Boulevard at Gisler Avenue
********************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):         0.637
Loss Time (sec):        0               Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         63               Level Of Service:                  B
********************************************************************************
Street Name:            Harbor Boulevard                    Gisler Avenue
Approach:        North Bound      South Bound      East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Protected        Protected        Protected        Protected
Rights:           Include          Include          Include          Include
Min. Green:    0    0     0    0    0     0    0    0     0    0    0     0
Y+R:          4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:         1  0  4  1  0   1  0  3  1  0   2  0  0  1  0   1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       54 2087     2    92 1905   124   637   42    57    33   23   139
Growth Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    54 2087     2    92 1905   124   637   42    57    33   23   139
Added Vol:       0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:     0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    54 2087     2    92 1905   124   637   42    57    33   23   139
User Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     54 2087     2    92 1905   124   637   42    57    33   23   139
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    54 2087     2    92 1905   124   637   42    57    33   23   139
PCE Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:    54 2087     2    92 1905   124   637   42    57    33   23   139
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:     1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:        1.00 4.99  0.01  1.00 3.76  0.24  2.00 0.42  0.58  1.00 1.00  1.00
Final Sat.:   1600 7992     8  1600 6009   391  3200  679   921  1600 1600  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:      0.03 0.26  0.26  0.06 0.32  0.32  0.20 0.06  0.06  0.02 0.01  0.09
Crit Moves:   ****                  ****        ****                        ****
********************************************************************************
```

```
--------------------------------------------------------------------------------
                         AM Cumulative Plus Project
                     2.13.3396.1 Orange Coast College
--------------------------------------------------------------------------------

                    Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #1 Harbor Boulevard at Gisler Avenue
********************************************************************************
Cycle (sec):          100                Critical Vol./Cap.(X):         0.660
Loss Time (sec):        0                Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         67                Level Of Service:                  B
********************************************************************************
Street Name:             Harbor Boulevard                    Gisler Avenue
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected        Protected        Protected
Rights:          Include          Include          Include          Include
Min. Green:     0    0    0    0    0    0    0    0    0    0    0    0
Y+R:          4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0
Lanes:        1  0  4  1  0   1  0  3  1  0   2  0  0  1  0   1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      54 2121    2   92 2056  124  637   42   57   33   23  139
Growth Adj:  1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse:   54 2121    2   92 2056  124  637   42   57   33   23  139
Added Vol:      0    0    0    0    0    0    0    0    0    0    0    0
PasserByVol:    0    0    0    0    0    0    0    0    0    0    0    0
Initial Fut:   54 2121    2   92 2056  124  637   42   57   33   23  139
User Adj:    1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:     1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume:    54 2121    2   92 2056  124  637   42   57   33   23  139
Reduct Vol:     0    0    0    0    0    0    0    0    0    0    0    0
Reduced Vol:   54 2121    2   92 2056  124  637   42   57   33   23  139
PCE Adj:     1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj:     1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume:   54 2121    2   92 2056  124  637   42   57   33   23  139
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600
Adjustment:  1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes:       1.00 4.99 0.01 1.00 3.77 0.23 2.00 0.42 0.58 1.00 1.00 1.00
Final Sat.:  1600 7992    8 1600 6036  364 3200  679  921 1600 1600 1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.03 0.27 0.27 0.06 0.34 0.34 0.20 0.06 0.06 0.02 0.01 0.09
Crit Moves:  ****                ****      ****                          ****
********************************************************************************
```

```
--------------------------------------------------------------------------------
                                PM Cumulative
                      2.13.3396.1 Orange Coast College
--------------------------------------------------------------------------------

                      Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #1 Harbor Boulevard at Gisler Avenue
********************************************************************************
Cycle (sec):        100              Critical Vol./Cap.(X):         0.804
Loss Time (sec):      0              Average Delay (sec/veh):      xxxxxx
Optimal Cycle:      116              Level Of Service:                  D
********************************************************************************
Street Name:            Harbor Boulevard                 Gisler Avenue
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:      L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------||----------------||----------------||----------------|
Control:        Protected        Protected        Protected        Protected
Rights:           Include          Include          Include          Include
Min. Green:    0     0     0     0     0     0     0     0     0     0     0     0
Y+R:         4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0
Lanes:        1  0  4  1  0    1  0  3  1  0    2  0  0  1  0    1  0  1  0  1
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:     129  2412    48   102  2751   436   185    81   102   123    88   268
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:  129  2412    48   102  2751   436   185    81   102   123    88   268
Added Vol:      0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:  129  2412    48   102  2751   436   185    81   102   123    88   268
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:   129  2412    48   102  2751   436   185    81   102   123    88   268
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:  129  2412    48   102  2751   436   185    81   102   123    88   268
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:  129  2412    48   102  2751   436   185    81   102   123    88   268
------------|----------------||----------------||----------------||----------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       1.00  4.90  0.10  1.00  3.45  0.55  2.00  0.44  0.56  1.00  1.00  1.00
Final Sat.:  1600  7844   156  1600  5524   876  3200   708   892  1600  1600  1600
------------|----------------||----------------||----------------||----------------|
Capacity Analysis Module:
Vol/Sat:     0.08  0.31  0.31  0.06  0.50  0.50  0.06  0.11  0.11  0.08  0.06  0.17
Crit Moves:  ****                    ****        ****                          ****
********************************************************************************
```

```
--------------------------------------------------------------------------------
                         PM Cumulative Plus Project
                      2.13.3396.1 Orange Coast College
--------------------------------------------------------------------------------
                     Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #1 Harbor Boulevard at Gisler Avenue
********************************************************************************
Cycle (sec):         100               Critical Vol./Cap.(X):         0.824
Loss Time (sec):       0               Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       129               Level Of Service:                  D
********************************************************************************
Street Name:         Harbor Boulevard                   Gisler Avenue
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Protected        Protected        Protected        Protected
Rights:         Include          Include          Include          Include
Min. Green:    0    0    0     0    0    0     0    0    0     0    0    0
Y+R:         4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0
Lanes:        1  0  4  1  0   1  0  3  1  0   2  0  0  1  0   1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:    130 2549    48   102 2873   436   185   81   103   123   88   268
Growth Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse: 130 2549    48   102 2873   436   185   81   103   123   88   268
Added Vol:     0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:   0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut: 130 2549    48   102 2873   436   185   81   103   123   88   268
User Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:  130 2549    48   102 2873   436   185   81   103   123   88   268
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol: 130 2549    48   102 2873   436   185   81   103   123   88   268
PCE Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume: 130 2549    48   102 2873   436   185   81   103   123   88   268
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:   1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:      1.00 4.91  0.09  1.00 3.47  0.53  2.00 0.44  0.56  1.00 1.00  1.00
Final Sat.: 1600 7852   148  1600 5557   843  3200  704   896  1600 1600  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.08 0.32  0.32  0.06 0.52  0.52  0.06 0.11  0.12  0.08 0.06  0.17
Crit Moves: ****                  ****        ****                         ****
********************************************************************************
```

```
---------------------------------------------------------------------------------
                               AM Cumulative
                       2.13.3396.1 Orange Coast College
---------------------------------------------------------------------------------

                      Level Of Service Computation Report
        ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*********************************************************************************
Intersection #2 Harbor Boulevard at Baker Street
*********************************************************************************
Cycle (sec):          100                Critical Vol./Cap.(X):         0.533
Loss Time (sec):        0                Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         49                Level Of Service:                  A
*********************************************************************************
Street Name:          Harbor Boulevard                     Baker Street
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------||----------------||----------------||----------------|
Control:        Protected        Protected         Protected        Protected
Rights:            Ovl              Ovl             Include          Include
Min. Green:    0    0     0    0    0     0     0    0     0     0    0     0
Y+R:         4.0  4.0   4.0  4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0
Lanes:        2  0  4  0  1   2  0  4  0  1    2  0  1  1  0    2  0  2  0  1
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:     51 1854   273   212 1607   164    252  231    58    199  196   158
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00
Initial Bse:  51 1854   273   212 1607   164    252  231    58    199  196   158
Added Vol:     0    0     0     0    0     0      0    0     0      0    0     0
PasserByVol:   0    0     0     0    0     0      0    0     0      0    0     0
Initial Fut:  51 1854   273   212 1607   164    252  231    58    199  196   158
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00
PHF Volume:   51 1854   273   212 1607   164    252  231    58    199  196   158
Reduct Vol:    0    0     0     0    0     0      0    0     0      0    0     0
Reduced Vol:  51 1854   273   212 1607   164    252  231    58    199  196   158
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00
FinalVolume:  51 1854   273   212 1607   164    252  231    58    199  196   158
OvlAdjVol:              174                38
------------|----------------||----------------||----------------||----------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600   1600 1600  1600   1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00
Lanes:       2.00 4.00  1.00  2.00 4.00  1.00   2.00 1.60  0.40   2.00 2.00  1.00
Final Sat.:  3200 6400  1600  3200 6400  1600   3200 2558   642   3200 3200  1600
------------|----------------||----------------||----------------||----------------|
Capacity Analysis Module:
Vol/Sat:     0.02 0.29  0.17  0.07 0.25  0.10   0.08 0.09  0.09   0.06 0.06  0.10
OvlAdjV/S:              0.11              0.02
Crit Moves:       ****        ****              ****                          ****
*********************************************************************************
```

```
--------------------------------------------------------------------------------
                         AM Cumulative Plus Project
                     2.13.3396.1 Orange Coast College
--------------------------------------------------------------------------------
                     Level Of Service Computation Report
        ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #2 Harbor Boulevard at Baker Street
********************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):         0.539
Loss Time (sec):        0               Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         49               Level Of Service:                  A
********************************************************************************
Street Name:           Harbor Boulevard                    Baker Street
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------||----------------||----------------||----------------|
Control:        Protected        Protected        Protected        Protected
Rights:            Ovl              Ovl             Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Y+R:         4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:        2  0  4  0  1    2  0  4  0  1    2  0  1  1  0    2  0  2  0  1
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:      52  1888   273  212  1758   164  252   231    61  199   196   158
Growth Adj:  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Initial Bse:   52  1888   273  212  1758   164  252   231    61  199   196   158
Added Vol:      0     0     0    0     0     0    0     0     0    0     0     0
PasserByVol:    0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut:   52  1888   273  212  1758   164  252   231    61  199   196   158
User Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Volume:    52  1888   273  212  1758   164  252   231    61  199   196   158
Reduct Vol:     0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol:   52  1888   273  212  1758   164  252   231    61  199   196   158
PCE Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
FinalVolume:   52  1888   273  212  1758   164  252   231    61  199   196   158
OvlAdjVol:                174                38
------------|----------------||----------------||----------------||----------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600  1600
Adjustment:  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Lanes:       2.00  4.00  1.00 2.00  4.00  1.00 2.00  1.58  0.42 2.00  2.00  1.00
Final Sat.:  3200  6400  1600 3200  6400  1600 3200  2532   668 3200  3200  1600
------------|----------------||----------------||----------------||----------------|
Capacity Analysis Module:
Vol/Sat:     0.02  0.30  0.17 0.07  0.27  0.10 0.08  0.09  0.09 0.06  0.06  0.10
OvlAdjV/S:               0.11             0.02
Crit Moves:        ****       ****             ****                         ****
********************************************************************************
```

```
---------------------------------------------------------------------------------
                               PM Cumulative
                     2.13.3396.1 Orange Coast College
---------------------------------------------------------------------------------

                     Level Of Service Computation Report
           ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*********************************************************************************
Intersection #2 Harbor Boulevard at Baker Street
*********************************************************************************
Cycle (sec):          100                Critical Vol./Cap.(X):          0.738
Loss Time (sec):        0                Average Delay (sec/veh):       xxxxxx
Optimal Cycle:         87                Level Of Service:                   C
*********************************************************************************
Street Name:          Harbor Boulevard                     Baker Street
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected         Protected        Protected
Rights:            Ovl              Ovl             Include          Include
Min. Green:    0    0    0     0    0    0     0    0    0     0    0    0
Y+R:         4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0
Lanes:        2  0  4  0  1   2  0  4  0  1   2  0  1  1  0   2  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:    167 2064  280   231 2342  317   218  179   62   569  657  402
Growth Adj: 1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Initial Bse: 167 2064  280   231 2342  317   218  179   62   569  657  402
Added Vol:     0    0    0     0    0    0     0    0    0     0    0    0
PasserByVol:   0    0    0     0    0    0     0    0    0     0    0    0
Initial Fut: 167 2064  280   231 2342  317   218  179   62   569  657  402
User Adj:   1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
PHF Adj:    1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
PHF Volume:  167 2064  280   231 2342  317   218  179   62   569  657  402
Reduct Vol:    0    0    0     0    0    0     0    0    0     0    0    0
Reduced Vol: 167 2064  280   231 2342  317   218  179   62   569  657  402
PCE Adj:    1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
MLF Adj:    1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
FinalVolume: 167 2064  280   231 2342  317   218  179   62   569  657  402
OvlAdjVol:               0               208
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:   1600 1600 1600  1600 1600 1600  1600 1600 1600  1600 1600 1600
Adjustment: 1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Lanes:      2.00 4.00 1.00  2.00 4.00 1.00  2.00 1.49 0.51  2.00 2.00 1.00
Final Sat.: 3200 6400 1600  3200 6400 1600  3200 2377  823  3200 3200 1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.05 0.32 0.17  0.07 0.37 0.20  0.07 0.08 0.08  0.18 0.21 0.25
OvlAdjV/S:            0.00             0.13
Crit Moves: ****                 ****       ****                          ****
*********************************************************************************
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-------------------------------------------------------------------------------
                        PM Cumulative Plus Project
                     2.13.3396.1 Orange Coast College
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                    Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*******************************************************************************
Intersection #2 Harbor Boulevard at Baker Street
*******************************************************************************
Cycle (sec):          100                Critical Vol./Cap.(X):         0.758
Loss Time (sec):        0                Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         94                Level Of Service:                  C
*******************************************************************************
Street Name:             Harbor Boulevard                   Baker Street
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected        Protected        Protected
Rights:            Ovl              Ovl            Include          Include
Min. Green:    0    0     0    0    0     0    0    0     0    0    0     0
Y+R:         4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:       2  0  4  0  1   2  0  4  0  1   2  0  1  1  0   2  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     172 2202   280   231 2465   317   218  179    65   569  657   402
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  172 2202   280   231 2465   317   218  179    65   569  657   402
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  172 2202   280   231 2465   317   218  179    65   569  657   402
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   172 2202   280   231 2465   317   218  179    65   569  657   402
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  172 2202   280   231 2465   317   218  179    65   569  657   402
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  172 2202   280   231 2465   317   218  179    65   569  657   402
OvlAdjVol:                 0                208
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 4.00  1.00  2.00 4.00  1.00  2.00 1.47  0.53  2.00 2.00  1.00
Final Sat.:  3200 6400  1600  3200 6400  1600  3200 2348   852  3200 3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.05 0.34  0.17  0.07 0.39  0.20  0.07 0.08  0.08  0.18 0.21  0.25
OvlAdjV/S:              0.00              0.13
Crit Moves:  ****                  ****        ****                         ****
*******************************************************************************
```

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                              AM Cumulative
                   2.13.3396.1 Orange Coast College
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                   Level Of Service Computation Report
     ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
***************************************************************************
Intersection #3 Harbor Boulevard at Adams Avenue
***************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):        0.749
Loss Time (sec):        0               Average Delay (sec/veh):     xxxxxx
Optimal Cycle:         91               Level Of Service:                 C
***************************************************************************
Street Name:          Harbor Boulevard                 Adams Avenue
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Protected        Protected        Protected        Protected
Rights:          Include           Ovl             Include          Include
Min. Green:    0    0    0     0    0    0     0    0    0     0    0    0
Y+R:         4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0
Lanes:       2  0  2  1  0   2  0  4  0  2   3  0  3  0  1   2  0  3  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:    198 1159  170   214 1291  284   930 1749  228   131  371  114
Growth Adj: 1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Initial Bse: 198 1159  170   214 1291  284   930 1749  228   131  371  114
Added Vol:     0    0    0     0    0    0     0    0    0     0    0    0
PasserByVol:   0    0    0     0    0    0     0    0    0     0    0    0
Initial Fut: 198 1159  170   214 1291  284   930 1749  228   131  371  114
User Adj:   1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
PHF Adj:    1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
PHF Volume:  198 1159  170   214 1291  284   930 1749  228   131  371  114
Reduct Vol:    0    0    0     0    0    0     0    0    0     0    0    0
Reduced Vol: 198 1159  170   214 1291  284   930 1749  228   131  371  114
PCE Adj:    1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
MLF Adj:    1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
FinalVolume: 198 1159  170   214 1291  284   930 1749  228   131  371  114
OvlAdjVol:                                0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:   1600 1600 1600  1600 1600 1600  1600 1600 1600  1600 1600 1600
Adjustment: 1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Lanes:      2.00 2.62 0.38  2.00 4.00 2.00  3.00 3.00 1.00  2.00 3.00 1.00
Final Sat.: 3200 4186  614  3200 6400 3200  4800 4800 1600  3200 4800 1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.06 0.28 0.28  0.07 0.20 0.09  0.19 0.36 0.14  0.04 0.08 0.07
OvlAdjV/S:                             0.00
Crit Moves:       ****      ****                   ****      ****
***************************************************************************
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-------------------------------------------------------------------------------
                       AM Cumulative Plus Project
                   2.13.3396.1 Orange Coast College
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                   Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*******************************************************************************
Intersection #3 Harbor Boulevard at Adams Avenue
*******************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):         0.809
Loss Time (sec):       0              Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       119              Level Of Service:                  D
*******************************************************************************
Street Name:            Harbor Boulevard                   Adams Avenue
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected        Protected        Protected
Rights:          Include            Ovl            Include          Include
Min. Green:     0    0     0    0    0     0    0    0     0    0    0     0
Y+R:          4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:        2  0  2  1  0   2  0  4  0  2   3  0  3  0  1   2  0  3  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     207 1170   204  309 1351   284  930 1835   276  140  390   137
Growth Adj:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Initial Bse:  207 1170   204  309 1351   284  930 1835   276  140  390   137
Added Vol:      0    0     0    0    0     0    0    0     0    0    0     0
PasserByVol:    0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:  207 1170   204  309 1351   284  930 1835   276  140  390   137
User Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Volume:   207 1170   204  309 1351   284  930 1835   276  140  390   137
Reduct Vol:     0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:  207 1170   204  309 1351   284  930 1835   276  140  390   137
PCE Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume:  207 1170   204  309 1351   284  930 1835   276  140  390   137
OvlAdjVol:                                 0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600 1600 1600  1600 1600 1600  1600 1600 1600  1600
Adjustment:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Lanes:       2.00 2.55  0.45 2.00 4.00  2.00 3.00 3.00  1.00 2.00 3.00  1.00
Final Sat.:  3200 4087   713 3200 6400  3200 4800 4800  1600 3200 4800  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.06 0.29  0.29 0.10 0.21  0.09 0.19 0.38  0.17 0.04 0.08  0.09
OvlAdjV/S:                              0.00
Crit Moves:       ****       ****                   ****       ****
*******************************************************************************
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--------------------------------------------------------------------------------
                              PM Cumulative
                   2.13.3396.1 Orange Coast College
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                     Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #3 Harbor Boulevard at Adams Avenue
********************************************************************************
Cycle (sec):          100              Critical Vol./Cap.(X):          0.836
Loss Time (sec):        0              Average Delay (sec/veh):       xxxxxx
Optimal Cycle:        139              Level Of Service:                   D
********************************************************************************
Street Name:           Harbor Boulevard                     Adams Avenue
Approach:      North Bound       South Bound        East Bound        West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Protected         Protected          Protected         Protected
Rights:          Include            Ovl              Include           Include
Min. Green:    0     0     0     0     0     0     0     0     0     0     0     0
Y+R:         4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0
Lanes:        2  0  2  1  0    2  0  4  0  2    3  0  3  0  1    2  0  3  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:    489  1914    90   212  1890   845   380   718   137   161  1309   225
Growth Adj: 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse: 489  1914    90   212  1890   845   380   718   137   161  1309   225
Added Vol:     0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:   0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut: 489  1914    90   212  1890   845   380   718   137   161  1309   225
User Adj:   1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:  489  1914    90   212  1890   845   380   718   137   161  1309   225
Reduct Vol:    0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol: 489  1914    90   212  1890   845   380   718   137   161  1309   225
PCE Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume: 489  1914    90   212  1890   845   380   718   137   161  1309   225
OvlAdjVol:                                 592
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:   1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment: 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:      2.00  2.87  0.13  2.00  4.00  2.00  3.00  3.00  1.00  2.00  3.00  1.00
Final Sat.: 3200  4584   216  3200  6400  3200  4800  4800  1600  3200  4800  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.15  0.42  0.42  0.07  0.30  0.26  0.08  0.15  0.09  0.05  0.27  0.14
OvlAdjV/S:                                0.18
Crit Moves:       ****        ****              ****                    ****
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                        PM Cumulative Plus Project
                    2.13.3396.1 Orange Coast College
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                     Level Of Service Computation Report
        ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*******************************************************************************
Intersection #3 Harbor Boulevard at Adams Avenue
*******************************************************************************
Cycle (sec):          100                Critical Vol./Cap.(X):          0.895
Loss Time (sec):        0                Average Delay (sec/veh):       xxxxxx
Optimal Cycle:        180                Level Of Service:                   D
*******************************************************************************
Street Name:          Harbor Boulevard                     Adams Avenue
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected         Protected        Protected
Rights:           Include           Ovl              Include          Include
Min. Green:     0    0     0    0    0     0    0    0     0    0    0     0
Y+R:          4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:         2  0  2  1  0   2  0  4  0  2   3  0  3  0  1   2  0  3  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     525 1965   122  298 1930   845  380  790   170  192 1380   316
Growth Adj:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Initial Bse:  525 1965   122  298 1930   845  380  790   170  192 1380   316
Added Vol:      0    0     0    0    0     0    0    0     0    0    0     0
PasserByVol:    0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:  525 1965   122  298 1930   845  380  790   170  192 1380   316
User Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Volume:   525 1965   122  298 1930   845  380  790   170  192 1380   316
Reduct Vol:     0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:  525 1965   122  298 1930   845  380  790   170  192 1380   316
PCE Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume:  525 1965   122  298 1930   845  380  790   170  192 1380   316
OvlAdjVol:                                592
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600 1600 1600  1600 1600 1600  1600 1600 1600  1600
Adjustment:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Lanes:       2.00 2.82  0.18 2.00 4.00  2.00 3.00 3.00  1.00 2.00 3.00  1.00
Final Sat.:  3200 4519   281 3200 6400  3200 4800 4800  1600 3200 4800  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.16 0.43  0.43 0.09 0.30  0.26 0.08 0.16  0.11 0.06 0.29  0.20
OvlAdjV/S:                               0.18
Crit Moves:       ****        ****             ****                  ****
*******************************************************************************
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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 Harbor Boulevard at Merrimac Way

Cycle (sec):	100	Critical Vol./Cap.(X):	0.418
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	32	Level Of Service:	A

Street Name:	Harbor Boulevard						Merrimac Way					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2	1 0	2 0	2	1 0	1 0	0	1 0	1 0	0	1 1
Volume Module:												
Base Vol:	37	1205	59	255	1458	32	77	26	21	30	17	68
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	37	1205	59	255	1458	32	77	26	21	30	17	68
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	37	1205	59	255	1458	32	77	26	21	30	17	68
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	37	1205	59	255	1458	32	77	26	21	30	17	68
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	37	1205	59	255	1458	32	77	26	21	30	17	68
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	37	1205	59	255	1458	32	77	26	21	30	17	68
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.86	0.14	2.00	2.94	0.06	1.00	0.55	0.45	1.00	0.40	1.60
Final Sat.:	1600	4576	224	3200	4697	103	1600	885	715	1600	640	2560
Capacity Analysis Module:												
Vol/Sat:	0.02	0.26	0.26	0.08	0.31	0.31	0.05	0.03	0.03	0.02	0.03	0.03
Crit Moves:		****		****			****				****	

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                          AM Cumulative Plus Project
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--------------------------------------------------------------------------------
                      Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #4 Harbor Boulevard at Merrimac Way
********************************************************************************
Cycle (sec):        100                Critical Vol./Cap.(X):         0.468
Loss Time (sec):      0                Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       35                Level Of Service:                  A
********************************************************************************
Street Name:              Harbor Boulevard                  Merrimac Way
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected         Permitted        Permitted
Rights:          Include          Include           Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Y+R:         4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:        1  0  2  1  0    2  0  2  1  0    1  0  0  1  0    1  0  0  1  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      37 1239    74   362 1467    32    77   26    21    33   17    88
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   37 1239    74   362 1467    32    77   26    21    33   17    88
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   37 1239    74   362 1467    32    77   26    21    33   17    88
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    37 1239    74   362 1467    32    77   26    21    33   17    88
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   37 1239    74   362 1467    32    77   26    21    33   17    88
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   37 1239    74   362 1467    32    77   26    21    33   17    88
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.83  0.17  2.00 2.94  0.06  1.00 0.55  0.45  1.00 0.32  1.68
Final Sat.:  1600 4529   271  3200 4698   102  1600  885   715  1600  518  2682
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.02 0.27  0.27  0.11 0.31  0.31  0.05 0.03  0.03  0.02 0.03  0.03
Crit Moves:       ****        ****             ****                  ****
********************************************************************************
```

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                              PM Cumulative
                   2.13.3396.1 Orange Coast College
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                   Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #4 Harbor Boulevard at Merrimac Way
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):           0.698
Loss Time (sec):       0              Average Delay (sec/veh):        xxxxxx
Optimal Cycle:        61              Level Of Service:                    B
********************************************************************************
Street Name:             Harbor Boulevard                   Merrimac Way
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------||----------------||----------------||----------------|
Control:        Protected        Protected         Permitted         Permitted
Rights:          Include          Include           Include           Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Y+R:         4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:       1  0  2  1  0    2  0  2  1  0    1  0  0  1  0    1  0  0  1  1
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:      42  2114    94   262  1854    54    77    18    34    95    43   301
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:   42  2114    94   262  1854    54    77    18    34    95    43   301
Added Vol:      0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:   42  2114    94   262  1854    54    77    18    34    95    43   301
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:    42  2114    94   262  1854    54    77    18    34    95    43   301
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:   42  2114    94   262  1854    54    77    18    34    95    43   301
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:   42  2114    94   262  1854    54    77    18    34    95    43   301
------------|----------------||----------------||----------------||----------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       1.00  2.87  0.13  2.00  2.92  0.08  1.00  0.35  0.65  1.00  0.25  1.75
Final Sat.:  1600  4596   204  3200  4664   136  1600   554  1046  1600   400  2800
------------|----------------||----------------||----------------||----------------|
Capacity Analysis Module:
Vol/Sat:     0.03  0.46  0.46  0.08  0.40  0.40  0.05  0.03  0.03  0.06  0.11  0.11
Crit Moves:        ****        ****              ****                    ****
********************************************************************************
```

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                        PM Cumulative Plus Project
                      2.13.3396.1 Orange Coast College
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                     Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #4 Harbor Boulevard at Merrimac Way
********************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):          0.757
Loss Time (sec):        0               Average Delay (sec/veh):       xxxxxx
Optimal Cycle:         76               Level Of Service:                   C
********************************************************************************
Street Name:           Harbor Boulevard                     Merrimac Way
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Protected        Protected        Permitted        Permitted
Rights:         Include          Include          Include          Include
Min. Green:    0    0    0    0    0    0    0    0    0    0    0    0
Y+R:         4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0
Lanes:        1  0  2  1  0   2  0  2  1  0   1  0  0  1  0   1  0  0  1  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      42 2145  104   336 1884   55    78   18   34   109   43  387
Growth Adj:  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Initial Bse:   42 2145  104   336 1884   55    78   18   34   109   43  387
Added Vol:      0    0    0     0    0    0     0    0    0     0    0    0
PasserByVol:    0    0    0     0    0    0     0    0    0     0    0    0
Initial Fut:   42 2145  104   336 1884   55    78   18   34   109   43  387
User Adj:    1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
PHF Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
PHF Volume:    42 2145  104   336 1884   55    78   18   34   109   43  387
Reduct Vol:     0    0    0     0    0    0     0    0    0     0    0    0
Reduced Vol:   42 2145  104   336 1884   55    78   18   34   109   43  387
PCE Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
MLF Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
FinalVolume:   42 2145  104   336 1884   55    78   18   34   109   43  387
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600 1600  1600 1600 1600  1600 1600 1600  1600 1600 1600
Adjustment:  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Lanes:       1.00 2.86 0.14  2.00 2.91 0.09  1.00 0.35 0.65  1.00 0.20 1.80
Final Sat.:  1600 4578  222  3200 4664  136  1600  554 1046  1600  320 2880
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.03 0.47 0.47  0.11 0.40 0.40  0.05 0.03 0.03  0.07 0.13 0.13
Crit Moves:       ****       ****            ****                  ****
********************************************************************************
```

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                              AM Cumulative
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                     Level Of Service Computation Report
        ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #5 Harbor Boulevard at Fair Drive
********************************************************************************
Cycle (sec):         100               Critical Vol./Cap.(X):         0.404
Loss Time (sec):       0               Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        38               Level Of Service:                  A
********************************************************************************
Street Name:            Harbor Boulevard                     Fair Drive
Approach:        North Bound      South Bound       East Bound       West Bound
Movement:      L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------||----------------||----------------||----------------|
Control:         Protected        Protected        Split Phase      Split Phase
Rights:            Include          Include          Include          Include
Min. Green:     0     0     0     0     0     0     0     0     0     0     0     0
Y+R:          4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0
Lanes:         1  0  3  0  1    2  0  2  1  0    1  0  1  0  1    2  0  0  1  1
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:      31  1084   275   229  1199    59    34    39    37   143    65   198
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:   31  1084   275   229  1199    59    34    39    37   143    65   198
Added Vol:      0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:   31  1084   275   229  1199    59    34    39    37   143    65   198
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:    31  1084   275   229  1199    59    34    39    37   143    65   198
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:   31  1084   275   229  1199    59    34    39    37   143    65   198
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:   31  1084   275   229  1199    59    34    39    37   143    65   198
------------|----------------||----------------||----------------||----------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       1.00  3.00  1.00  2.00  2.86  0.14  1.00  1.00  1.00  2.00  0.49  1.51
Final Sat.:  1600  4800  1600  3200  4575   225  1600  1600  1600  3200   791  2409
------------|----------------||----------------||----------------||----------------|
Capacity Analysis Module:
Vol/Sat:     0.02  0.23  0.17  0.07  0.26  0.26  0.02  0.02  0.02  0.04  0.08  0.08
Crit Moves:        ****        ****                    ****                  ****
********************************************************************************
```

AM Cumulative Plus Project
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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 Harbor Boulevard at Fair Drive

Cycle (sec):	100	Critical Vol./Cap.(X):	0.414
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	39	Level Of Service:	A

Street Name:	Harbor Boulevard						Fair Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	3 0	1	2 0	2 1	0	1 0	1 0	1	2 0	0 1	1
Volume Module:												
Base Vol:	31	1133	275	229	1211	59	34	39	37	143	65	198
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	31	1133	275	229	1211	59	34	39	37	143	65	198
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	31	1133	275	229	1211	59	34	39	37	143	65	198
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	31	1133	275	229	1211	59	34	39	37	143	65	198
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	31	1133	275	229	1211	59	34	39	37	143	65	198
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	31	1133	275	229	1211	59	34	39	37	143	65	198
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	3.00	1.00	2.00	2.86	0.14	1.00	1.00	1.00	2.00	0.49	1.51
Final Sat.:	1600	4800	1600	3200	4577	223	1600	1600	1600	3200	791	2409
Capacity Analysis Module:												
Vol/Sat:	0.02	0.24	0.17	0.07	0.26	0.26	0.02	0.02	0.02	0.04	0.08	0.08
Crit Moves:		****		****				****			****	

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                                PM Cumulative
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                      Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #5 Harbor Boulevard at Fair Drive
********************************************************************************
Cycle (sec):         100                Critical Vol./Cap.(X):         0.612
Loss Time (sec):       0                Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        59                Level Of Service:                  B
********************************************************************************
Street Name:             Harbor Boulevard                    Fair Drive
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected       Split Phase      Split Phase
Rights:          Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Y+R:         4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:        1  0  3  0  1   2  0  2  1  0   1  0  1  0  1   2  0  0  1  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     24  1665   253  200  1792    29   37    42    41  445    30   534
Growth Adj: 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Initial Bse:  24  1665   253  200  1792    29   37    42    41  445    30   534
Added Vol:     0     0     0    0     0     0    0     0     0    0     0     0
PasserByVol:   0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut:  24  1665   253  200  1792    29   37    42    41  445    30   534
User Adj:   1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Volume:   24  1665   253  200  1792    29   37    42    41  445    30   534
Reduct Vol:    0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol:  24  1665   253  200  1792    29   37    42    41  445    30   534
PCE Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
MLF Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
FinalVolume:  24  1665   253  200  1792    29   37    42    41  445    30   534
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:   1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600  1600
Adjustment: 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Lanes:      1.00  3.00  1.00 2.00  2.95  0.05 1.00  1.00  1.00 2.00  0.11  1.89
Final Sat.: 1600  4800  1600 3200  4724    76 1600  1600  1600 3200   170  3030
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.02  0.35  0.16 0.06  0.38  0.38 0.02  0.03  0.03 0.14  0.18  0.18
Crit Moves:       ****       ****                   ****                   ****
********************************************************************************
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                          PM Cumulative Plus Project
                     2.13.3396.1 Orange Coast College
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                      Level Of Service Computation Report
        ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #5 Harbor Boulevard at Fair Drive
********************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):         0.620
Loss Time (sec):        0               Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         60               Level Of Service:                  B
********************************************************************************
Street Name:           Harbor Boulevard                       Fair Drive
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
-------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected       Split Phase      Split Phase
Rights:           Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Y+R:         4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:        1  0  3  0  1    2  0  2  1  0    1  0  1  0  1    2  0  0  1  1
-------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      24  1706   253  200  1836    29   37    42    41  445    30   534
Growth Adj:  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Initial Bse:   24  1706   253  200  1836    29   37    42    41  445    30   534
Added Vol:      0     0     0    0     0     0    0     0     0    0     0     0
PasserByVol:    0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut:   24  1706   253  200  1836    29   37    42    41  445    30   534
User Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Volume:    24  1706   253  200  1836    29   37    42    41  445    30   534
Reduct Vol:     0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol:   24  1706   253  200  1836    29   37    42    41  445    30   534
PCE Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
FinalVolume:   24  1706   253  200  1836    29   37    42    41  445    30   534
-------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600  1600
Adjustment:  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Lanes:       1.00  3.00  1.00 2.00  2.95  0.05 1.00  1.00  1.00 2.00  0.11  1.89
Final Sat.:  1600  4800  1600 3200  4725    75 1600  1600  1600 3200   170  3030
-------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.02  0.36  0.16 0.06  0.39  0.39 0.02  0.03  0.03 0.14  0.18  0.18
Crit Moves:        ****       ****                    ****                  ****
********************************************************************************
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                                AM Cumulative
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                     Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #6 Pinecreek Drive at Adams Avenue
********************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):         0.405
Loss Time (sec):        0               Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         38               Level Of Service:                  A
********************************************************************************
Street Name:                Pinecreek Drive                  Adams Avenue
Approach:         North Bound      South Bound       East Bound       West Bound
Movement:       L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Split Phase      Split Phase        Protected        Protected
Rights:             Include          Include           Ignore           Include
Min. Green:     0     0     0    0     0     0    0     0     0    0     0     0
Y+R:          4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:          1  1  0  0  1   0  1  0  0  1   1  0  3  0  1   2  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      15     3    27   68    10    50   31  1499   740   86   559    60
Growth Adj:  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Initial Bse:   15     3    27   68    10    50   31  1499   740   86   559    60
Added Vol:      0     0     0    0     0     0    0     0     0    0     0     0
PasserByVol:    0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut:   15     3    27   68    10    50   31  1499   740   86   559    60
User Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  0.00 1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  0.00 1.00  1.00  1.00
PHF Volume:    15     3    27   68    10    50   31  1499     0   86   559    60
Reduct Vol:     0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol:   15     3    27   68    10    50   31  1499     0   86   559    60
PCE Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  0.00 1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  0.00 1.00  1.00  1.00
FinalVolume:   15     3    27   68    10    50   31  1499     0   86   559    60
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600  1600
Adjustment:  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Lanes:       1.67  0.33  1.00 0.87  0.13  1.00 1.00  3.00  1.00 2.00  1.81  0.19
Final Sat.:  2667   533  1600 1395   205  1600 1600  4800  1600 3200  2890   310
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.01  0.01  0.02 0.05  0.05  0.03 0.02  0.31  0.00 0.03  0.19  0.19
Crit Moves:              ****  ****                    ****       ****
********************************************************************************
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AM Cumulative Plus Project
2.13.3396.1 Orange Coast College

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #6 Pinecreek Drive at Adams Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.494
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	45	Level Of Service:	A

Street Name:	Pinecreek Drive		Adams Avenue	
Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Split Phase	Split Phase	Protected	Protected
Rights:	Include	Include	Ignore	Include
Lanes:	1 1 0 0 1	0 1 0 0 1	1 0 3 0 1	2 0 1 1 0

Movement:	NB L	NB T	NB R	SB L	SB T	SB R	EB L	EB T	EB R	WB L	WB T	WB R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	58	3	60	68	10	50	31	1528	911	286	568	60
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	58	3	60	68	10	50	31	1528	911	286	568	60
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	58	3	60	68	10	50	31	1528	911	286	568	60
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	58	3	60	68	10	50	31	1528	0	286	568	60
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	58	3	60	68	10	50	31	1528	0	286	568	60
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	58	3	60	68	10	50	31	1528	0	286	568	60
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.90	0.10	1.00	0.87	0.13	1.00	1.00	3.00	1.00	2.00	1.81	0.19
Final Sat.:	3043	157	1600	1395	205	1600	1600	4800	1600	3200	2894	306
Capacity Analysis Module:												
Vol/Sat:	0.02	0.02	0.04	0.05	0.05	0.03	0.02	0.32	0.00	0.09	0.20	0.20
Crit Moves:			****	****				****		****		

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                                PM Cumulative
                      2.13.3396.1 Orange Coast College
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                     Level Of Service Computation Report
        ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*********************************************************************************
Intersection #6 Pinecreek Drive at Adams Avenue
*********************************************************************************
Cycle (sec):          100                  Critical Vol./Cap.(X):          0.681
Loss Time (sec):        0                  Average Delay (sec/veh):       xxxxxx
Optimal Cycle:         72                  Level Of Service:                   B
*********************************************************************************
Street Name:              Pinecreek Drive                   Adams Avenue
Approach:         North Bound      South Bound      East Bound       West Bound
Movement:       L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------||----------------||----------------||----------------|
Control:         Split Phase      Split Phase       Protected        Protected
Rights:             Include          Include          Ignore           Include
Min. Green:      0     0     0     0     0     0     0     0     0     0     0     0
Y+R:           4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0
Lanes:          1  1  0  0  1    0  1  0  0  1    1  0  3  0  1    2  0  1  1  0
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:      248    30   145    68    25   100    79   848   347   153  1346   186
Growth Adj:   1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:   248    30   145    68    25   100    79   848   347   153  1346   186
Added Vol:       0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:     0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:   248    30   145    68    25   100    79   848   347   153  1346   186
User Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  1.00
PHF Adj:      1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  1.00
PHF Volume:    248    30   145    68    25   100    79   848     0   153  1346   186
Reduct Vol:      0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:   248    30   145    68    25   100    79   848     0   153  1346   186
PCE Adj:      1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  1.00
MLF Adj:      1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  1.00
FinalVolume:   248    30   145    68    25   100    79   848     0   153  1346   186
------------|----------------||----------------||----------------||----------------|
Saturation Flow Module:
Sat/Lane:     1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:   1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:        1.78  0.22  1.00  0.73  0.27  1.00  1.00  3.00  1.00  2.00  1.76  0.24
Final Sat.:   2855   345  1600  1170   430  1600  1600  4800  1600  3200  2811   389
------------|----------------||----------------||----------------||----------------|
Capacity Analysis Module:
Vol/Sat:      0.09  0.09  0.09  0.06  0.06  0.06  0.05  0.18  0.00  0.05  0.48  0.48
Crit Moves:               ****              ****  ****                    ****
*********************************************************************************
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                          PM Cumulative Plus Project
                       2.13.3396.1 Orange Coast College
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                       Level Of Service Computation Report
         ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #6 Pinecreek Drive at Adams Avenue
********************************************************************************
Cycle (sec):        100              Critical Vol./Cap.(X):        0.770
Loss Time (sec):      0              Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       99              Level Of Service:                  C
********************************************************************************
Street Name:          Pinecreek Drive                      Adams Avenue
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Split Phase      Split Phase       Protected        Protected
Rights:           Include          Include          Ignore           Include
Min. Green:     0    0     0    0    0     0    0    0     0    0    0     0
Y+R:          4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:        1  1  0  0  1   0  1  0  0  1   1  0  3  0  1   2  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     393   30   263   69   25   100   79  915   475  333 1394   187
Growth Adj:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Initial Bse:  393   30   263   69   25   100   79  915   475  333 1394   187
Added Vol:      0    0     0    0    0     0    0    0     0    0    0     0
PasserByVol:    0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:  393   30   263   69   25   100   79  915   475  333 1394   187
User Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  0.00 1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  0.00 1.00 1.00  1.00
PHF Volume:   393   30   263   69   25   100   79  915     0  333 1394   187
Reduct Vol:     0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:  393   30   263   69   25   100   79  915     0  333 1394   187
PCE Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  0.00 1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  0.00 1.00 1.00  1.00
FinalVolume:  393   30   263   69   25   100   79  915     0  333 1394   187
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600 1600 1600  1600 1600 1600  1600 1600 1600  1600
Adjustment:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Lanes:       1.86 0.14  1.00 0.73 0.27  1.00 1.00 3.00  1.00 2.00 1.76  0.24
Final Sat.:  2973  227  1600 1174  426  1600 1600 4800  1600 3200 2822   378
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.13 0.13  0.16 0.06 0.06  0.06 0.05 0.19  0.00 0.10 0.49  0.49
Crit Moves:             ****              **** ****                  ****
********************************************************************************
```

AM Cumulative
2.13.3396.1 Orange Coast College

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #7 Fairview Road at I-405 NB Ramps

Cycle (sec):	100	Critical Vol./Cap.(X):	0.730
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	69	Level Of Service:	C

Street Name:	Fairview Road						I-405 NB Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	3	0 0	0 0	6	0 1	0 0	0	0 0	2 0	0	0 2
Volume Module:												
Base Vol:	250	831	0	0	1507	393	0	0	0	864	0	1050
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	250	831	0	0	1507	393	0	0	0	864	0	1050
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	250	831	0	0	1507	393	0	0	0	864	0	1050
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	250	831	0	0	1507	393	0	0	0	864	0	1050
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	250	831	0	0	1507	393	0	0	0	864	0	1050
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	250	831	0	0	1507	393	0	0	0	864	0	1050
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	3.00	0.00	0.00	6.00	1.00	0.00	0.00	0.00	2.00	0.00	2.00
Final Sat.:	1600	4800	0	0	9600	1600	0	0	0	3200	0	3200
Capacity Analysis Module:												
Vol/Sat:	0.16	0.17	0.00	0.00	0.16	0.25	0.00	0.00	0.00	0.27	0.00	0.33
Crit Moves:	****					****						****

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                        AM Cumulative Plus Project
                     2.13.3396.1 Orange Coast College
--------------------------------------------------------------------------------
                    Level Of Service Computation Report
        ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #7 Fairview Road at I-405 NB Ramps
********************************************************************************
Cycle (sec):          100              Critical Vol./Cap.(X):         0.751
Loss Time (sec):        0              Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         75              Level Of Service:                  C
********************************************************************************
Street Name:                Fairview Road                   I-405 NB Ramps
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected         Permitted       Split Phase      Split Phase
Rights:           Include           Include          Include          Include
Min. Green:    0    0     0    0    0     0    0    0     0    0    0     0
Y+R:         4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:       1  0  3  0  0   0  0  6  0  1   0  0  0  0  0   2  0  0  0  2
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     266  847     0     0 1578   393     0    0     0  1085    0  1050
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  266  847     0     0 1578   393     0    0     0  1085    0  1050
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  266  847     0     0 1578   393     0    0     0  1085    0  1050
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   266  847     0     0 1578   393     0    0     0  1085    0  1050
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  266  847     0     0 1578   393     0    0     0  1085    0  1050
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  266  847     0     0 1578   393     0    0     0  1085    0  1050
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 3.00  0.00  0.00 6.00  1.00  0.00 0.00  0.00  2.00 0.00  2.00
Final Sat.:  1600 4800     0     0 9600  1600     0    0     0  3200    0  3200
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.17 0.18  0.00  0.00 0.16  0.25  0.00 0.00  0.00  0.34 0.00  0.33
Crit Moves:  ****                        ****                   ****
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                                  PM Cumulative
                        2.13.3396.1 Orange Coast College
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                         Level Of Service Computation Report
        ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #7 Fairview Road at I-405 NB Ramps
********************************************************************************
Cycle (sec):           100               Critical Vol./Cap.(X):          0.763
Loss Time (sec):         0               Average Delay (sec/veh):       xxxxxx
Optimal Cycle:          79               Level Of Service:                   C
********************************************************************************
Street Name:                Fairview Road                  I-405 NB Ramps
Approach:          North Bound      South Bound      East Bound       West Bound
Movement:        L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:          Protected         Permitted       Split Phase      Split Phase
Rights:            Include           Include          Include          Include
Min. Green:      0     0     0   0     0     0   0     0     0   0     0     0
Y+R:           4.0   4.0   4.0 4.0   4.0   4.0 4.0   4.0   4.0 4.0   4.0   4.0
Lanes:           1  0  3  0  0   0  0  6  0  1   0  0  0  0  0   2  0  0  0  2
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      236 1350      0     0 1817    362     0     0     0   963     0  1247
Growth Adj:   1.00 1.00   1.00  1.00 1.00   1.00  1.00 1.00   1.00  1.00 1.00  1.00
Initial Bse:   236 1350      0     0 1817    362     0     0     0   963     0  1247
Added Vol:       0    0      0     0    0      0     0     0     0     0     0     0
PasserByVol:     0    0      0     0    0      0     0     0     0     0     0     0
Initial Fut:   236 1350      0     0 1817    362     0     0     0   963     0  1247
User Adj:     1.00 1.00   1.00  1.00 1.00   1.00  1.00 1.00   1.00  1.00 1.00  1.00
PHF Adj:      1.00 1.00   1.00  1.00 1.00   1.00  1.00 1.00   1.00  1.00 1.00  1.00
PHF Volume:    236 1350      0     0 1817    362     0     0     0   963     0  1247
Reduct Vol:      0    0      0     0    0      0     0     0     0     0     0     0
Reduced Vol:   236 1350      0     0 1817    362     0     0     0   963     0  1247
PCE Adj:      1.00 1.00   1.00  1.00 1.00   1.00  1.00 1.00   1.00  1.00 1.00  1.00
MLF Adj:      1.00 1.00   1.00  1.00 1.00   1.00  1.00 1.00   1.00  1.00 1.00  1.00
FinalVolume:   236 1350      0     0 1817    362     0     0     0   963     0  1247
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:     1600 1600   1600  1600 1600   1600  1600 1600   1600  1600 1600  1600
Adjustment:   1.00 1.00   1.00  1.00 1.00   1.00  1.00 1.00   1.00  1.00 1.00  1.00
Lanes:        1.00 3.00   0.00  0.00 6.00   1.00  0.00 0.00   0.00  2.00 0.00  2.00
Final Sat.:   1600 4800      0     0 9600   1600     0     0     0  3200     0  3200
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:      0.15 0.28   0.00  0.00 0.19   0.23  0.00 0.00   0.00  0.30 0.00  0.39
Crit Moves:   ****                              ****                              ****
********************************************************************************
```

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--------------------------------------------------------------------------------
                         PM Cumulative Plus Project
                       2.13.3396.1 Orange Coast College
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                        Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #7 Fairview Road at I-405 NB Ramps
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):          0.803
Loss Time (sec):       0              Average Delay (sec/veh):        xxxxxx
Optimal Cycle:        95              Level Of Service:                    D
********************************************************************************
Street Name:               Fairview Road                    I-405 NB Ramps
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Permitted        Split Phase      Split Phase
Rights:          Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Y+R:          4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:         1  0  3  0  0    0  0  6  0  1    0  0  0  0  0    2  0  0  0  2
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     300  1407     0     0  1874   362     0     0     0  1127     0  1247
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:  300  1407     0     0  1874   362     0     0     0  1127     0  1247
Added Vol:      0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:  300  1407     0     0  1874   362     0     0     0  1127     0  1247
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:   300  1407     0     0  1874   362     0     0     0  1127     0  1247
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:  300  1407     0     0  1874   362     0     0     0  1127     0  1247
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:  300  1407     0     0  1874   362     0     0     0  1127     0  1247
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       1.00  3.00  0.00  0.00  6.00  1.00  0.00  0.00  0.00  2.00  0.00  2.00
Final Sat.:  1600  4800     0     0  9600  1600     0     0     0  3200     0  3200
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.19  0.29  0.00  0.00  0.20  0.23  0.00  0.00  0.00  0.35  0.00  0.39
Crit Moves:  ****                          ****                                ****
********************************************************************************
```

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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #8 Fairview Road at I-405 SB Ramps

Cycle (sec):	100	Critical Vol./Cap.(X):	0.678
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	58	Level Of Service:	B

Street Name:	Fairview Road		I-405 SB Ramps	
Approach:	North Bound	South Bound	East Bound	West Bound
Control:	Permitted	Protected	Split Phase	Split Phase
Rights:	Include	Include	Include	Include
Lanes:	0 0 3 1 1	3 0 3 0 0	2 0 0 0 2	0 0 0 0 0

Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	785	1076	1191	1300	0	273	0	301	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	785	1076	1191	1300	0	273	0	301	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	785	1076	1191	1300	0	273	0	301	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	785	1076	1191	1300	0	273	0	301	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	785	1076	1191	1300	0	273	0	301	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	785	1076	1191	1300	0	273	0	301	0	0	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	3.00	2.00	3.00	3.00	0.00	2.00	0.00	2.00	0.00	0.00	0.00
Final Sat.:	0	4800	3200	4800	4800	0	3200	0	3200	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.16	0.34	0.25	0.27	0.00	0.09	0.00	0.09	0.00	0.00	0.00
Crit Moves:			****	****					****			

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                   Level Of Service Computation Report
     ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #8 Fairview Road at I-405 SB Ramps
********************************************************************************
Cycle (sec):        100             Critical Vol./Cap.(X):         0.720
Loss Time (sec):      0             Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       66             Level Of Service:                  C
********************************************************************************
Street Name:            Fairview Road                   I-405 SB Ramps
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted         Protected       Split Phase      Split Phase
Rights:          Include           Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Y+R:         4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:       0  0  3  1  1    3  0  3  0  0    2  0  0  0  2    0  0  0  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0   816  1119  1191 1593     0   273     0   390     0     0     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   0   816  1119  1191 1593     0   273     0   390     0     0     0
Added Vol:     0     0     0     0    0     0     0     0     0     0     0     0
PasserByVol:   0     0     0     0    0     0     0     0     0     0     0     0
Initial Fut:   0   816  1119  1191 1593     0   273     0   390     0     0     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    0   816  1119  1191 1593     0   273     0   390     0     0     0
Reduct Vol:    0     0     0     0    0     0     0     0     0     0     0     0
Reduced Vol:   0   816  1119  1191 1593     0   273     0   390     0     0     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   0   816  1119  1191 1593     0   273     0   390     0     0     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 3.00  2.00  3.00 3.00  0.00  2.00 0.00  2.00  0.00 0.00  0.00
Final Sat.:     0 4800  3200  4800 4800     0  3200    0  3200     0    0     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.17  0.35  0.25 0.33  0.00  0.09 0.00  0.12  0.00 0.00  0.00
Crit Moves:             ****  ****                          ****
********************************************************************************
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PM Cumulative
2.13.3396.1 Orange Coast College

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #8 Fairview Road at I-405 SB Ramps

Cycle (sec):	100	Critical Vol./Cap.(X):	0.607
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	47	Level Of Service:	B

Street Name:	Fairview Road						I-405 SB Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	3 1	1	3 0	3 0	0	2 0	0 0	2	0 0	0 0	0
Volume Module:												
Base Vol:	0	1052	582	1163	1594	0	513	0	448	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1052	582	1163	1594	0	513	0	448	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	1052	582	1163	1594	0	513	0	448	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1052	582	1163	1594	0	513	0	448	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1052	582	1163	1594	0	513	0	448	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1052	582	1163	1594	0	513	0	448	0	0	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	3.22	1.78	3.00	3.00	0.00	2.00	0.00	2.00	0.00	0.00	0.00
Final Sat.:	0	5151	2849	4800	4800	0	3200	0	3200	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.20	0.20	0.24	0.33	0.00	0.16	0.00	0.14	0.00	0.00	0.00
Crit Moves:		****		****			****					

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                       PM Cumulative Plus Project
                  2.13.3396.1 Orange Coast College
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                   Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*********************************************************************************
Intersection #8 Fairview Road at I-405 SB Ramps
*********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):          0.643
Loss Time (sec):       0              Average Delay (sec/veh):       xxxxxx
Optimal Cycle:        52              Level Of Service:                   B
*********************************************************************************
Street Name:            Fairview Road                     I-405 SB Ramps
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:      L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Protected        Split Phase      Split Phase
Rights:          Include          Include           Include          Include
Min. Green:    0    0     0    0    0     0    0    0     0    0    0     0
Y+R:         4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:       0  0  3  1  1   3  0  3  0  0   2  0  0  0  2   0  0  0  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0 1173   750 1163 1815     0  513    0   511    0    0     0
Growth Adj: 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Initial Bse:   0 1173   750 1163 1815     0  513    0   511    0    0     0
Added Vol:     0    0     0    0    0     0    0    0     0    0    0     0
PasserByVol:   0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:   0 1173   750 1163 1815     0  513    0   511    0    0     0
User Adj:   1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Volume:    0 1173   750 1163 1815     0  513    0   511    0    0     0
Reduct Vol:    0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:   0 1173   750 1163 1815     0  513    0   511    0    0     0
PCE Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume:   0 1173   750 1163 1815     0  513    0   511    0    0     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:   1600 1600  1600 1600 1600  1600 1600 1600  1600 1600 1600  1600
Adjustment: 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Lanes:      0.00 3.05  1.95 3.00 3.00  0.00 2.00 0.00  2.00 0.00 0.00  0.00
Final Sat.:    0 4880  3120 4800 4800     0 3200    0  3200    0    0     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.00 0.24  0.24 0.24 0.38  0.00 0.16 0.00  0.16 0.00 0.00  0.00
Crit Moves:      ****       ****             ****
*********************************************************************************
```

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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #9 Fairview Road at Baker Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.658
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	67	Level Of Service:	B

Street Name:	Fairview Road						Baker Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Ovl			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	3 0	1	2 0	4 0	1	2 0	2 0	1	2 0	3 0	1
Volume Module:												
Base Vol:	147	1319	691	205	1346	261	255	518	154	314	357	156
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	147	1319	691	205	1346	261	255	518	154	314	357	156
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	147	1319	691	205	1346	261	255	518	154	314	357	156
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	147	1319	691	205	1346	261	255	518	154	314	357	156
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	147	1319	691	205	1346	261	255	518	154	314	357	156
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	147	1319	691	205	1346	261	255	518	154	314	357	156
OvlAdjVol:			534									
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	3.00	1.00	2.00	4.00	1.00	2.00	2.00	1.00	2.00	3.00	1.00
Final Sat.:	3200	4800	1600	3200	6400	1600	3200	3200	1600	3200	4800	1600
Capacity Analysis Module:												
Vol/Sat:	0.05	0.27	0.43	0.06	0.21	0.16	0.08	0.16	0.10	0.10	0.07	0.10
OvlAdjV/S:			0.33									
Crit Moves:			****	****				****		****		

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                     Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #9 Fairview Road at Baker Street
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):          0.667
Loss Time (sec):       0              Average Delay (sec/veh):       xxxxxx
Optimal Cycle:        68              Level Of Service:                   B
********************************************************************************
Street Name:              Fairview Road                   Baker Street
Approach:        North Bound      South Bound      East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Protected        Protected        Protected        Protected
Rights:             Ovl            Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Y+R:          4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:         2  0  3  0  1    2  0  4  0  1    2  0  2  0  1    2  0  3  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     147  1393   705   205  1728   261   255   518   154   370   357   156
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:  147  1393   705   205  1728   261   255   518   154   370   357   156
Added Vol:      0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:  147  1393   705   205  1728   261   255   518   154   370   357   156
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:   147  1393   705   205  1728   261   255   518   154   370   357   156
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:  147  1393   705   205  1728   261   255   518   154   370   357   156
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:  147  1393   705   205  1728   261   255   518   154   370   357   156
OvlAdjVol:                520
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       2.00  3.00  1.00  2.00  4.00  1.00  2.00  2.00  1.00  2.00  3.00  1.00
Final Sat.:  3200  4800  1600  3200  6400  1600  3200  3200  1600  3200  4800  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.05  0.29  0.44  0.06  0.27  0.16  0.08  0.16  0.10  0.12  0.07  0.10
OvlAdjV/S:               0.32
Crit Moves:              ****  ****                   ****        ****
********************************************************************************
```

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-------------------------------------------------------------------------------
                              PM Cumulative
                     2.13.3396.1 Orange Coast College
-------------------------------------------------------------------------------
                   Level Of Service Computation Report
     ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*******************************************************************************
Intersection #9 Fairview Road at Baker Street
*******************************************************************************
Cycle (sec):        100              Critical Vol./Cap.(X):         0.657
Loss Time (sec):      0              Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       66              Level Of Service:                  B
*******************************************************************************
Street Name:              Fairview Road                   Baker Street
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Protected        Protected        Protected        Protected
Rights:           Ovl            Include          Include          Include
Min. Green:    0    0     0    0    0     0    0    0     0    0    0     0
Y+R:         4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:        2  0  3  0  1   2  0  4  0  1   2  0  2  0  1   2  0  3  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     175 1082   316   251 1474   325   292  448   208   681 1093   211
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  175 1082   316   251 1474   325   292  448   208   681 1093   211
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  175 1082   316   251 1474   325   292  448   208   681 1093   211
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   175 1082   316   251 1474   325   292  448   208   681 1093   211
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  175 1082   316   251 1474   325   292  448   208   681 1093   211
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  175 1082   316   251 1474   325   292  448   208   681 1093   211
OvlAdjVol:                 0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 3.00  1.00  2.00 4.00  1.00  2.00 2.00  1.00  2.00 3.00  1.00
Final Sat.:  3200 4800  1600  3200 6400  1600  3200 3200  1600  3200 4800  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.05 0.23  0.20  0.08 0.23  0.20  0.09 0.14  0.13  0.21 0.23  0.13
OvlAdjV/S:                0.00
Crit Moves:       ****        ****                    ****        ****
*******************************************************************************
```

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--------------------------------------------------------------------------------
                        PM Cumulative Plus Project
                     2.13.3396.1 Orange Coast College
--------------------------------------------------------------------------------
                     Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #9 Fairview Road at Baker Street
********************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):          0.732
Loss Time (sec):        0               Average Delay (sec/veh):       xxxxxx
Optimal Cycle:         85               Level Of Service:                   C
********************************************************************************
Street Name:              Fairview Road                     Baker Street
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:       L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Protected        Protected        Protected        Protected
Rights:             Ovl             Include          Include          Include
Min. Green:     0     0     0    0     0     0    0     0     0    0     0     0
Y+R:          4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:        2  0  3  0  1    2  0  4  0  1    2  0  2  0  1    2  0  3  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     175  1373   371  251  1758   325  292   448   208  728  1093   211
Growth Adj:  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Initial Bse:  175  1373   371  251  1758   325  292   448   208  728  1093   211
Added Vol:      0     0     0    0     0     0    0     0     0    0     0     0
PasserByVol:    0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut:  175  1373   371  251  1758   325  292   448   208  728  1093   211
User Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Volume:   175  1373   371  251  1758   325  292   448   208  728  1093   211
Reduct Vol:     0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol:  175  1373   371  251  1758   325  292   448   208  728  1093   211
PCE Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
FinalVolume:  175  1373   371  251  1758   325  292   448   208  728  1093   211
OvlAdjVol:                  7
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600  1600
Adjustment:  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Lanes:       2.00  3.00  1.00 2.00  4.00  1.00 2.00  2.00  1.00 2.00  3.00  1.00
Final Sat.:  3200  4800  1600 3200  6400  1600 3200  3200  1600 3200  4800  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.05  0.29  0.23 0.08  0.27  0.20 0.09  0.14  0.13 0.23  0.23  0.13
OvlAdjV/S:                0.00
Crit Moves:        ****       ****                    ****      ****
********************************************************************************
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------------------------------------------------------------------------------
                              AM Cumulative
                   2.13.3396.1 Orange Coast College
------------------------------------------------------------------------------

                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
******************************************************************************
Intersection #10 Fairview Road at Adams Avenue
******************************************************************************
Cycle (sec):          100              Critical Vol./Cap.(X):         0.744
Loss Time (sec):        0              Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         89              Level Of Service:                  C
******************************************************************************
Street Name:                Fairview Road                     Adams Avenue
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected        Split Phase      Split Phase
Rights:          Include           Ignore           Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Y+R:         4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:        2  0  2  1  0    1  0  3  0  1    2  0  1  0  1    0  1  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     123   750   121    56  1243   553  1225   103   243    90   101   102
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:  123   750   121    56  1243   553  1225   103   243    90   101   102
Added Vol:      0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:  123   750   121    56  1243   553  1225   103   243    90   101   102
User Adj:    1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:   123   750   121    56  1243     0  1225   103   243    90   101   102
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:  123   750   121    56  1243     0  1225   103   243    90   101   102
PCE Adj:     1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:  123   750   121    56  1243     0  1225   103   243    90   101   102
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       2.00  2.58  0.42  1.00  3.00  1.00  2.00  1.00  1.00  0.94  1.06  1.00
Final Sat.:  3200  4133   667  1600  4800  1600  3200  1600  1600  1508  1692  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.04  0.18  0.18  0.04  0.26  0.00  0.38  0.06  0.15  0.06  0.06  0.06
Crit Moves:  ****                    ****        ****                          ****
******************************************************************************
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                         AM Cumulative Plus Project
                      2.13.3396.1 Orange Coast College
--------------------------------------------------------------------------------
                    Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #10 Fairview Road at Adams Avenue
********************************************************************************
Cycle (sec):         100                Critical Vol./Cap.(X):         0.812
Loss Time (sec):       0                Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       121                Level Of Service:                  D
********************************************************************************
Street Name:               Fairview Road                     Adams Avenue
Approach:        North Bound      South Bound      East Bound       West Bound
Movement:       L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Protected        Protected       Split Phase      Split Phase
Rights:           Include          Ignore           Include          Include
Min. Green:     0     0     0   0     0     0   0     0     0   0     0     0
Y+R:          4.0   4.0   4.0 4.0   4.0   4.0 4.0   4.0   4.0 4.0   4.0   4.0
Lanes:        2  0  2  1  0   1  0  3  0  1   2  0  1  0  1   0  1  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     134   796   122    56  1489   746  1267   103   264    93   101   102
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:  134   796   122    56  1489   746  1267   103   264    93   101   102
Added Vol:      0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:  134   796   122    56  1489   746  1267   103   264    93   101   102
User Adj:    1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:   134   796   122    56  1489     0  1267   103   264    93   101   102
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:  134   796   122    56  1489     0  1267   103   264    93   101   102
PCE Adj:     1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:  134   796   122    56  1489     0  1267   103   264    93   101   102
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       2.00  2.60  0.40  1.00  3.00  1.00  2.00  1.00  1.00  0.96  1.04  1.00
Final Sat.:  3200  4162   638  1600  4800  1600  3200  1600  1600  1534  1666  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.04  0.19  0.19  0.04  0.31  0.00  0.40  0.06  0.17  0.06  0.06  0.06
Crit Moves:  ****                    ****        ****                          ****
********************************************************************************
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--------------------------------------------------------------------------------
                              PM Cumulative
                     2.13.3396.1 Orange Coast College
--------------------------------------------------------------------------------
                    Level Of Service Computation Report
     ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #10 Fairview Road at Adams Avenue
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):        0.727
Loss Time (sec):       0              Average Delay (sec/veh):     xxxxxx
Optimal Cycle:        84              Level Of Service:                 C
********************************************************************************
Street Name:              Fairview Road                    Adams Avenue
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Protected        Protected        Split Phase      Split Phase
Rights:          Include          Ignore           Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Y+R:         4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:         2  0  2  1  0   1  0  3  0  1   2  0  1  0  1   0  1  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     547  1104    53   112  1257  1173   724   149   220    67   151    80
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:  547  1104    53   112  1257  1173   724   149   220    67   151    80
Added Vol:      0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:  547  1104    53   112  1257  1173   724   149   220    67   151    80
User Adj:    1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:   547  1104    53   112  1257     0   724   149   220    67   151    80
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:  547  1104    53   112  1257     0   724   149   220    67   151    80
PCE Adj:     1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:  547  1104    53   112  1257     0   724   149   220    67   151    80
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       2.00  2.86  0.14  1.00  3.00  1.00  2.00  1.00  1.00  0.61  1.39  1.00
Final Sat.:  3200  4580   220  1600  4800  1600  3200  1600  1600   983  2217  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.17  0.24  0.24  0.07  0.26  0.00  0.23  0.09  0.14  0.07  0.07  0.05
Crit Moves:  ****                    ****        ****                    ****
********************************************************************************
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                         PM Cumulative Plus Project
                   2.13.3396.1 Orange Coast College
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                     Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*********************************************************************************
Intersection #10 Fairview Road at Adams Avenue
*********************************************************************************
Cycle (sec):          100                  Critical Vol./Cap.(X):         0.822
Loss Time (sec):        0                  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        128                  Level Of Service:                  D
*********************************************************************************
Street Name:              Fairview Road                     Adams Avenue
Approach:          North Bound      South Bound       East Bound       West Bound
Movement:        L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
-------------|-----------------||---------------||---------------||---------------|
Control:          Protected        Protected        Split Phase      Split Phase
Rights:            Include          Ignore            Include          Include
Min. Green:      0     0     0    0     0     0    0     0     0    0     0     0
Y+R:           4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:         2  0  2  1  0    1  0  3  0  1    2  0  1  0  1    0  1  1  0  1
-------------|-----------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      583  1297    57   112  1426  1334   876   150   251    69   152    80
Growth Adj:   1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:   583  1297    57   112  1426  1334   876   150   251    69   152    80
Added Vol:       0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:     0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:   583  1297    57   112  1426  1334   876   150   251    69   152    80
User Adj:     1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:      1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:    583  1297    57   112  1426     0   876   150   251    69   152    80
Reduct Vol:      0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:   583  1297    57   112  1426     0   876   150   251    69   152    80
PCE Adj:      1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:      1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:   583  1297    57   112  1426     0   876   150   251    69   152    80
-------------|-----------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:     1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:   1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:        2.00  2.87  0.13  1.00  3.00  1.00  2.00  1.00  1.00  0.62  1.38  1.00
Final Sat.:   3200  4598   202  1600  4800  1600  3200  1600  1600   999  2201  1600
-------------|-----------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:      0.18  0.28  0.28  0.07  0.30  0.00  0.27  0.09  0.16  0.07  0.07  0.05
Crit Moves:   ****                    ****        ****              ****
*********************************************************************************
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--------------------------------------------------------------------------------
                                 AM Cumulative
                      2.13.3396.1 Orange Coast College
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                       Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #11 Fairview Road at Monitor Way
********************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):          0.374
Loss Time (sec):        0               Average Delay (sec/veh):       xxxxxx
Optimal Cycle:         30               Level Of Service:                   A
********************************************************************************
Street Name:                Fairview Road                     Monitor Way
Approach:        North Bound      South Bound      East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Prot+Permit      Prot+Permit       Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Y+R:         4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:         1  0  2  1  0    1  0  3  0  1    0  1  0  0  1    0  1  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      61  947     2    78 1364   240    23    4     6    26    3    60
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   61  947     2    78 1364   240    23    4     6    26    3    60
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   61  947     2    78 1364   240    23    4     6    26    3    60
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    61  947     2    78 1364   240    23    4     6    26    3    60
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   61  947     2    78 1364   240    23    4     6    26    3    60
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   61  947     2    78 1364   240    23    4     6    26    3    60
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.99  0.01  1.00 3.00  1.00  0.85 0.15  1.00  0.90 0.10  1.00
Final Sat.:  1600 4790    10  1600 4800  1600  1363  237  1600  1434  166  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.04 0.20  0.20  0.05 0.28  0.15  0.01 0.02  0.00  0.02 0.02  0.04
Crit Moves:  ****                  ****        ****                          ****
********************************************************************************
```

AM Cumulative Plus Project
2.13.3396.1 Orange Coast College

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #11 Fairview Road at Monitor Way

Cycle (sec):	100	Critical Vol./Cap.(X):	0.460
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	34	Level Of Service:	A

Street Name:	Fairview Road						Monitor Way					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 1	0	1 0	3 0	1	0 1	0 0	1	0 1	0 0	1
Volume Module:												
Base Vol:	128	985	2	78	1516	359	43	4	17	26	3	60
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	128	985	2	78	1516	359	43	4	17	26	3	60
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	128	985	2	78	1516	359	43	4	17	26	3	60
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	128	985	2	78	1516	359	43	4	17	26	3	60
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	128	985	2	78	1516	359	43	4	17	26	3	60
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	128	985	2	78	1516	359	43	4	17	26	3	60
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.99	0.01	1.00	3.00	1.00	0.91	0.09	1.00	0.90	0.10	1.00
Final Sat.:	1600	4790	10	1600	4800	1600	1464	136	1600	1434	166	1600
Capacity Analysis Module:												
Vol/Sat:	0.08	0.21	0.21	0.05	0.32	0.22	0.03	0.03	0.01	0.02	0.02	0.04
Crit Moves:	****				****		****					****

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                             PM Cumulative
                  2.13.3396.1 Orange Coast College
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                  Level Of Service Computation Report
     ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #11 Fairview Road at Monitor Way
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):         0.500
Loss Time (sec):       0              Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        37              Level Of Service:                  A
********************************************************************************
Street Name:              Fairview Road                    Monitor Way
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:      Prot+Permit      Prot+Permit        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:   0     0     0    0     0     0    0     0     0    0     0     0
Y+R:        4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:        1  0  2  1  0    1  0  3  0  1    0  1  0  0  1    0  1  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      60  1487    11    84  1288   165   165     0    51    12     0    51
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:   60  1487    11    84  1288   165   165     0    51    12     0    51
Added Vol:      0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:   60  1487    11    84  1288   165   165     0    51    12     0    51
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:    60  1487    11    84  1288   165   165     0    51    12     0    51
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:   60  1487    11    84  1288   165   165     0    51    12     0    51
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:   60  1487    11    84  1288   165   165     0    51    12     0    51
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       1.00  2.98  0.02  1.00  3.00  1.00  1.00  0.00  1.00  1.00  0.00  1.00
Final Sat.:  1600  4765    35  1600  4800  1600  1600     0  1600  1600     0  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.04  0.31  0.31  0.05  0.27  0.10  0.10  0.00  0.03  0.01  0.00  0.03
Crit Moves:        ****        ****              ****                          ****
********************************************************************************
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-------------------------------------------------------------------------------
                          PM Cumulative Plus Project
                       2.13.3396.1 Orange Coast College
-------------------------------------------------------------------------------
                        Level Of Service Computation Report
         ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*******************************************************************************
Intersection #11 Fairview Road at Monitor Way
*******************************************************************************
Cycle (sec):          100              Critical Vol./Cap.(X):         0.578
Loss Time (sec):        0              Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         44              Level Of Service:                  A
*******************************************************************************
Street Name:              Fairview Road                   Monitor Way
Approach:        North Bound      South Bound       East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Prot+Permit      Prot+Permit        Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Y+R:         4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:         1  0  2  1  0    1  0  3  0  1    0  1  0  0  1    0  1  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      107 1647    11    84 1406   249   237     0    91    12     0    51
Growth Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   107 1647    11    84 1406   249   237     0    91    12     0    51
Added Vol:       0    0     0     0    0     0     0     0     0     0     0     0
PasserByVol:     0    0     0     0    0     0     0     0     0     0     0     0
Initial Fut:   107 1647    11    84 1406   249   237     0    91    12     0    51
User Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    107 1647    11    84 1406   249   237     0    91    12     0    51
Reduct Vol:      0    0     0     0    0     0     0     0     0     0     0     0
Reduced Vol:   107 1647    11    84 1406   249   237     0    91    12     0    51
PCE Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   107 1647    11    84 1406   249   237     0    91    12     0    51
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:     1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:        1.00 2.98  0.02  1.00 3.00  1.00  1.00 0.00  1.00  1.00 0.00  1.00
Final Sat.:   1600 4768    32  1600 4800  1600  1600    0  1600  1600    0  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:      0.07 0.35  0.35  0.05 0.29  0.16  0.15 0.00  0.06  0.01 0.00  0.03
Crit Moves:        ****        ****             ****                        ****
*******************************************************************************
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--------------------------------------------------------------------------------
                               AM Cumulative
                     2.13.3396.1 Orange Coast College
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                    Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #12 Fairview Road at Pirate Way/Mustang Way
********************************************************************************
Cycle (sec):         100                 Critical Vol./Cap.(X):         0.439
Loss Time (sec):       0                 Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        33                 Level Of Service:                  A
********************************************************************************
Street Name:               Fairview Road                Pirate Way/Mustang Way
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------||----------------||----------------||----------------|
Control:        Protected         Protected          Permitted          Permitted
Rights:          Include           Include            Include            Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Y+R:         4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:        1  0  2  1  0    1  0  3  0  1    0  1  0  0  1    0  0  1!  0  0
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:      71   832    60  102   836   285   71    14    36  162     1    69
Growth Adj:  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Initial Bse:   71   832    60  102   836   285   71    14    36  162     1    69
Added Vol:      0     0     0    0     0     0    0     0     0    0     0     0
PasserByVol:    0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut:   71   832    60  102   836   285   71    14    36  162     1    69
User Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Volume:    71   832    60  102   836   285   71    14    36  162     1    69
Reduct Vol:     0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol:   71   832    60  102   836   285   71    14    36  162     1    69
PCE Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
FinalVolume:   71   832    60  102   836   285   71    14    36  162     1    69
------------|----------------||----------------||----------------||----------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600  1600
Adjustment:  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Lanes:       1.00  2.80  0.20 1.00  3.00  1.00 0.84  0.16  1.00 0.70  0.01  0.29
Final Sat.:  1600  4477   323 1600  4800  1600 1336   264  1600 1117     7   476
------------|----------------||----------------||----------------||----------------|
Capacity Analysis Module:
Vol/Sat:     0.04  0.19  0.19 0.06  0.17  0.18 0.04  0.05  0.02 0.10  0.15  0.14
Crit Moves:        ****       ****             ****                     ****
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                           AM Cumulative Plus Project
                       2.13.3396.1 Orange Coast College
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                     Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #12 Fairview Road at Pirate Way/Mustang Way
********************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):         0.485
Loss Time (sec):        0               Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         36               Level Of Service:                  A
********************************************************************************
Street Name:              Fairview Road               Pirate Way/Mustang Way
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Protected        Protected         Permitted        Permitted
Rights:           Include          Include           Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Y+R:         4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:         1  0  2  1  0    1  0  3  0  1    0  1  0  0  1    0  0  1!  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:    145   932    60  102   970   315   76    14    48  162     1    69
Growth Adj: 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Initial Bse: 145   932    60  102   970   315   76    14    48  162     1    69
Added Vol:     0     0     0    0     0     0    0     0     0    0     0     0
PasserByVol:   0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut: 145   932    60  102   970   315   76    14    48  162     1    69
User Adj:   1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Volume:  145   932    60  102   970   315   76    14    48  162     1    69
Reduct Vol:    0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol: 145   932    60  102   970   315   76    14    48  162     1    69
PCE Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
MLF Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
FinalVolume: 145   932    60  102   970   315   76    14    48  162     1    69
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:   1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600  1600
Adjustment: 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Lanes:      1.00  2.82  0.18 1.00  3.00  1.00 0.84  0.16  1.00 0.70  0.01  0.29
Final Sat.: 1600  4510   290 1600  4800  1600 1351   249  1600 1117     7   476
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.09  0.21  0.21 0.06  0.20  0.20 0.05  0.06  0.03 0.10  0.15  0.14
Crit Moves: ****                  ****        ****                    ****
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                               PM Cumulative
                     2.13.3396.1 Orange Coast College
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                     Level Of Service Computation Report
        ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #12 Fairview Road at Pirate Way/Mustang Way
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):         0.433
Loss Time (sec):       0              Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        33              Level Of Service:                  A
********************************************************************************
Street Name:              Fairview Road                Pirate Way/Mustang Way
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected         Permitted        Permitted
Rights:          Include          Include           Include          Include
Min. Green:     0    0     0    0    0     0    0    0     0    0    0     0
Y+R:          4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:         1  0  2  1  0   1  0  3  0  1   0  1  0  0  1   0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      81 1343     0    13 1071   219  195    0    68   17    0    20
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Initial Bse:   81 1343     0    13 1071   219  195    0    68   17    0    20
Added Vol:      0    0     0     0    0     0    0    0     0    0    0     0
PasserByVol:    0    0     0     0    0     0    0    0     0    0    0     0
Initial Fut:   81 1343     0    13 1071   219  195    0    68   17    0    20
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Volume:    81 1343     0    13 1071   219  195    0    68   17    0    20
Reduct Vol:     0    0     0     0    0     0    0    0     0    0    0     0
Reduced Vol:   81 1343     0    13 1071   219  195    0    68   17    0    20
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume:   81 1343     0    13 1071   219  195    0    68   17    0    20
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600 1600 1600  1600 1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Lanes:       1.00 3.00  0.00  1.00 3.00  1.00 1.00 0.00  1.00 0.46 0.00  0.54
Final Sat.:  1600 4800     0  1600 4800  1600 1600    0  1600  735    0   865
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.05 0.28  0.00  0.01 0.22  0.14 0.12 0.00  0.04 0.01 0.00  0.02
Crit Moves:       ****        ****             ****                        ****
********************************************************************************
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PM Cumulative Plus Project
2.13.3396.1 Orange Coast College

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #12 Fairview Road at Pirate Way/Mustang Way

Cycle (sec):	100	Critical Vol./Cap.(X):	0.492
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	37	Level Of Service:	A

Street Name:	Fairview Road						Pirate Way/Mustang Way					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 1	0	1 0	3 0	1	0 1	0 0	1	0 0	1! 0	0
Volume Module:												
Base Vol:	134	1532	0	13	1209	240	213	0	113	17	0	20
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	134	1532	0	13	1209	240	213	0	113	17	0	20
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	134	1532	0	13	1209	240	213	0	113	17	0	20
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	134	1532	0	13	1209	240	213	0	113	17	0	20
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	134	1532	0	13	1209	240	213	0	113	17	0	20
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	134	1532	0	13	1209	240	213	0	113	17	0	20
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	3.00	0.00	1.00	3.00	1.00	1.00	0.00	1.00	0.46	0.00	0.54
Final Sat.:	1600	4800	0	1600	4800	1600	1600	0	1600	735	0	865
Capacity Analysis Module:												
Vol/Sat:	0.08	0.32	0.00	0.01	0.25	0.15	0.13	0.00	0.07	0.01	0.00	0.02
Crit Moves:	****				****		****					****

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                                  AM Cumulative
                        2.13.3396.1 Orange Coast College
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                       Level Of Service Computation Report
          ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #13 Fairview Road at Arlington Drive
********************************************************************************
Cycle (sec):          100                Critical Vol./Cap.(X):         0.319
Loss Time (sec):        0                Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         27                Level Of Service:                  A
********************************************************************************
Street Name:               Fairview Road                    Arlington Drive
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected         Permitted        Permitted
Rights:          Include          Include           Include          Include
Min. Green:    0    0     0    0    0     0    0    0     0    0    0     0
Y+R:         4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:        2  0  3  0  1   2  0  3  0  1   1  0  1  0  1   1  1  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     53  821   230   111  800    78    13    0     8    65    7   168
Growth Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  53  821   230   111  800    78    13    0     8    65    7   168
Added Vol:     0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:   0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  53  821   230   111  800    78    13    0     8    65    7   168
User Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   53  821   230   111  800    78    13    0     8    65    7   168
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  53  821   230   111  800    78    13    0     8    65    7   168
PCE Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  53  821   230   111  800    78    13    0     8    65    7   168
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:   1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:      2.00 3.00  1.00  2.00 3.00  1.00  1.00 1.00  1.00  1.81 0.19  1.00
Final Sat.: 3200 4800  1600  3200 4800  1600  1600 1600  1600  2889  311  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.02 0.17  0.14  0.03 0.17  0.05  0.01 0.00  0.01  0.02 0.02  0.11
Crit Moves:      ****        ****             ****                        ****
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AM Cumulative Plus Project
2.13.3396.1 Orange Coast College

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #13 Fairview Road at Arlington Drive

Cycle (sec):	100	Critical Vol./Cap.(X):	0.363
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	29	Level Of Service:	A

Street Name:	Fairview Road						Arlington Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	3 0	1	2 0	3 0	1	1 0	1 0	1	1 1	0 0	1
Volume Module:												
Base Vol:	84	975	230	111	859	165	32	0	14	65	7	168
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	84	975	230	111	859	165	32	0	14	65	7	168
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	84	975	230	111	859	165	32	0	14	65	7	168
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	84	975	230	111	859	165	32	0	14	65	7	168
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	84	975	230	111	859	165	32	0	14	65	7	168
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	84	975	230	111	859	165	32	0	14	65	7	168
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	1.00	1.00	1.00	1.81	0.19	1.00
Final Sat.:	3200	4800	1600	3200	4800	1600	1600	1600	1600	2889	311	1600
Capacity Analysis Module:												
Vol/Sat:	0.03	0.20	0.14	0.03	0.18	0.10	0.02	0.00	0.01	0.02	0.02	0.11
Crit Moves:		****		****			****					****

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                      Level Of Service Computation Report
          ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #13 Fairview Road at Arlington Drive
********************************************************************************
Cycle (sec):          100              Critical Vol./Cap.(X):         0.465
Loss Time (sec):        0              Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         35              Level Of Service:                  A
********************************************************************************
Street Name:              Fairview Road                    Arlington Drive
Approach:        North Bound      South Bound      East Bound       West Bound
Movement:       L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Protected        Protected         Permitted        Permitted
Rights:           Include          Include           Include          Include
Min. Green:     0     0     0    0     0     0    0     0     0    0     0     0
Y+R:          4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:          2  0  3  0  1    2  0  3  0  1    1  0  1  0  1    1  1  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      61  1081    127   78   973    85   67     3    38  122    17   278
Growth Adj:  1.00  1.00   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Initial Bse:   61  1081    127   78   973    85   67     3    38  122    17   278
Added Vol:      0     0      0    0     0     0    0     0     0    0     0     0
PasserByVol:    0     0      0    0     0     0    0     0     0    0     0     0
Initial Fut:   61  1081    127   78   973    85   67     3    38  122    17   278
User Adj:    1.00  1.00   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Adj:     1.00  1.00   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Volume:    61  1081    127   78   973    85   67     3    38  122    17   278
Reduct Vol:     0     0      0    0     0     0    0     0     0    0     0     0
Reduced Vol:   61  1081    127   78   973    85   67     3    38  122    17   278
PCE Adj:     1.00  1.00   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
MLF Adj:     1.00  1.00   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
FinalVolume:   61  1081    127   78   973    85   67     3    38  122    17   278
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600   1600 1600  1600  1600 1600  1600  1600 1600  1600  1600
Adjustment:  1.00  1.00   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Lanes:       2.00  3.00   1.00 2.00  3.00  1.00 1.00  1.00  1.00 1.76  0.24  1.00
Final Sat.:  3200  4800   1600 3200  4800  1600 1600  1600  1600 2809   391  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.02  0.23   0.08 0.02  0.20  0.05 0.04  0.00  0.02 0.04  0.04  0.17
Crit Moves:        ****        ****             ****                         ****
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                          PM Cumulative Plus Project
                       2.13.3396.1 Orange Coast College
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                      Level Of Service Computation Report
        ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #13 Fairview Road at Arlington Drive
********************************************************************************
Cycle (sec):         100               Critical Vol./Cap.(X):         0.559
Loss Time (sec):       0               Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        42               Level Of Service:                  A
********************************************************************************
Street Name:               Fairview Road                  Arlington Drive
Approach:         North Bound      South Bound      East Bound       West Bound
Movement:        L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:          Protected        Protected        Permitted        Permitted
Rights:            Include          Include          Include          Include
Min. Green:      0    0     0     0    0     0     0    0     0     0    0     0
Y+R:           4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0
Lanes:         2  0  3  0  1   2  0  3  0  1   1  0  1  0  1   1  1  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       87 1226   127    78 1100   145   169    3    66   122   17   278
Growth Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    87 1226   127    78 1100   145   169    3    66   122   17   278
Added Vol:       0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:     0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    87 1226   127    78 1100   145   169    3    66   122   17   278
User Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     87 1226   127    78 1100   145   169    3    66   122   17   278
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    87 1226   127    78 1100   145   169    3    66   122   17   278
PCE Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:    87 1226   127    78 1100   145   169    3    66   122   17   278
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:     1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:        2.00 3.00  1.00  2.00 3.00  1.00  1.00 1.00  1.00  1.76 0.24  1.00
Final Sat.:   3200 4800  1600  3200 4800  1600  1600 1600  1600  2809  391  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:      0.03 0.26  0.08  0.02 0.23  0.09  0.11 0.00  0.04  0.04 0.04  0.17
Crit Moves:        ****        ****             ****                         ****
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                              AM Cumulative
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                   Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #14 Fairview Road at Merrimac Way
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):          0.264
Loss Time (sec):       0              Average Delay (sec/veh):       xxxxxx
Optimal Cycle:        25              Level Of Service:                   A
********************************************************************************
Street Name:               Fairview Road                    Merrimac Way
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:      L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------||----------------||----------------||----------------|
Control:        Protected        Protected         Permitted         Permitted
Rights:           Include          Include           Include           Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Y+R:         4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:       2  0  3  0  1    2  0  3  0  1    1  1  0  0  1    1  0  0  1  0
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:    180  1059     0    0   678   184   98     0    69    0     0     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse: 180  1059     0    0   678   184   98     0    69    0     0     0
Added Vol:     0     0     0    0     0     0    0     0     0    0     0     0
PasserByVol:   0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut: 180  1059     0    0   678   184   98     0    69    0     0     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:  180  1059     0    0   678   184   98     0    69    0     0     0
Reduct Vol:    0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol: 180  1059     0    0   678   184   98     0    69    0     0     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume: 180  1059     0    0   678   184   98     0    69    0     0     0
------------|----------------||----------------||----------------||----------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 3.00  1.00  2.00 3.00  1.00  2.00 0.00  1.00  1.00 1.00  0.00
Final Sat.:  3200 4800  1600  3200 4800  1600  3200    0  1600  1600 1600     0
------------|----------------||----------------||----------------||----------------|
Capacity Analysis Module:
Vol/Sat:     0.06 0.22  0.00  0.00 0.14  0.12  0.03 0.00  0.04  0.00 0.00  0.00
Crit Moves:       ****        ****                            ****
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                         AM Cumulative Plus Project
                     2.13.3396.1 Orange Coast College
--------------------------------------------------------------------------------
                    Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #14 Fairview Road at Merrimac Way
********************************************************************************
Cycle (sec):           100               Critical Vol./Cap.(X):          0.296
Loss Time (sec):         0               Average Delay (sec/veh):       xxxxxx
Optimal Cycle:          26               Level Of Service:                   A
********************************************************************************
Street Name:              Fairview Road                      Merrimac Way
Approach:        North Bound      South Bound       East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Protected        Protected         Permitted        Permitted
Rights:            Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Y+R:         4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:         2  0  3  0  1   2  0  3  0  1   1  1  0  0  1   1  0  0  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:    210 1186      0     0  705   223  156     0    75     0     0     1
Growth Adj: 1.00 1.00   1.00  1.00 1.00  1.00 1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse: 210 1186      0     0  705   223  156     0    75     0     0     1
Added Vol:     0    0      0     0    0     0    0     0     0     0     0     0
PasserByVol:   0    0      0     0    0     0    0     0     0     0     0     0
Initial Fut: 210 1186      0     0  705   223  156     0    75     0     0     1
User Adj:   1.00 1.00   1.00  1.00 1.00  1.00 1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:    1.00 1.00   1.00  1.00 1.00  1.00 1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:  210 1186      0     0  705   223  156     0    75     0     0     1
Reduct Vol:    0    0      0     0    0     0    0     0     0     0     0     0
Reduced Vol: 210 1186      0     0  705   223  156     0    75     0     0     1
PCE Adj:    1.00 1.00   1.00  1.00 1.00  1.00 1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:    1.00 1.00   1.00  1.00 1.00  1.00 1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume: 210 1186      0     0  705   223  156     0    75     0     0     1
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:   1600 1600   1600  1600 1600  1600 1600  1600  1600  1600  1600  1600
Adjustment: 1.00 1.00   1.00  1.00 1.00  1.00 1.00  1.00  1.00  1.00  1.00  1.00
Lanes:      2.00 3.00   1.00  2.00 3.00  1.00 2.00  0.00  1.00  1.00  0.00  1.00
Final Sat.: 3200 4800   1600  3200 4800  1600 3200     0  1600  1600     0  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.07 0.25   0.00  0.00 0.15  0.14 0.05  0.00  0.05  0.00  0.00  0.00
Crit Moves:      ****         ****              ****                    ****
********************************************************************************
```

```
-------------------------------------------------------------------------------
                              PM Cumulative
                    2.13.3396.1 Orange Coast College
-------------------------------------------------------------------------------
                    Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*******************************************************************************
Intersection #14 Fairview Road at Merrimac Way
*******************************************************************************
Cycle (sec):         100                Critical Vol./Cap.(X):          0.329
Loss Time (sec):       0                Average Delay (sec/veh):       xxxxxx
Optimal Cycle:        28                Level Of Service:                   A
*******************************************************************************
Street Name:            Fairview Road                     Merrimac Way
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0    0     0    0    0     0    0    0     0    0    0     0
Y+R:         4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:       2  0  3  0  1    2  0  3  0  1    1  1  0  0  1    1  0  0  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:    251 1108     3    0  854   282  167    1   117    0    0     0
Growth Adj: 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Initial Bse: 251 1108     3    0  854   282  167    1   117    0    0     0
Added Vol:     0    0     0    0    0     0    0    0     0    0    0     0
PasserByVol:   0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut: 251 1108     3    0  854   282  167    1   117    0    0     0
User Adj:   1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Volume:  251 1108     3    0  854   282  167    1   117    0    0     0
Reduct Vol:    0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol: 251 1108     3    0  854   282  167    1   117    0    0     0
PCE Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume: 251 1108     3    0  854   282  167    1   117    0    0     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:   1600 1600  1600 1600 1600  1600 1600 1600  1600 1600 1600  1600
Adjustment: 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Lanes:      2.00 3.00  1.00 2.00 3.00  1.00 1.99 0.01  1.00 1.00 1.00  0.00
Final Sat.: 3200 4800  1600 3200 4800  1600 3181   19  1600 1600 1600     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.08 0.23  0.00 0.00 0.18  0.18 0.05 0.05  0.07 0.00 0.00  0.00
Crit Moves: ****                 ****                  ****
*******************************************************************************
```

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---------------------------------------------------------------------------
                       PM Cumulative Plus Project
                    2.13.3396.1 Orange Coast College
---------------------------------------------------------------------------
                   Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
***************************************************************************
Intersection #14 Fairview Road at Merrimac Way
***************************************************************************
Cycle (sec):         100             Critical Vol./Cap.(X):         0.384
Loss Time (sec):       0             Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        30             Level Of Service:                  A
***************************************************************************
Street Name:           Fairview Road                    Merrimac Way
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected         Permitted        Permitted
Rights:          Include          Include           Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Y+R:         4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:        2  0  3  0  1    2  0  3  0  1    1  1  0  0  1    1  0  0  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:    272  1210     3    0   954   334  232     1   145    0     0     0
Growth Adj: 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Initial Bse: 272  1210     3    0   954   334  232     1   145    0     0     0
Added Vol:     0     0     0    0     0     0    0     0     0    0     0     0
PasserByVol:   0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut: 272  1210     3    0   954   334  232     1   145    0     0     0
User Adj:   1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Volume:  272  1210     3    0   954   334  232     1   145    0     0     0
Reduct Vol:    0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol: 272  1210     3    0   954   334  232     1   145    0     0     0
PCE Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
MLF Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
FinalVolume: 272  1210     3    0   954   334  232     1   145    0     0     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:   1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600  1600
Adjustment: 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Lanes:      2.00  3.00  1.00 2.00  3.00  1.00 1.99  0.01  1.00 1.00  1.00  0.00
Final Sat.: 3200  4800  1600 3200  4800  1600 3186    14  1600 1600  1600     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.09  0.25  0.00 0.00  0.20  0.21 0.07  0.07  0.09 0.00  0.00  0.00
Crit Moves: ****                         ****               ****
***************************************************************************
```

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------------------------------------------------------------------------------
                               AM Cumulative
                     2.13.3396.1 Orange Coast College
------------------------------------------------------------------------------

                     Level Of Service Computation Report
     ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #15 Fairview Road at Fair Drive
********************************************************************************
Cycle (sec):          100                Critical Vol./Cap.(X):        0.446
Loss Time (sec):        0                Average Delay (sec/veh):     xxxxxx
Optimal Cycle:         41                Level Of Service:                 A
********************************************************************************
Street Name:               Fairview Road                      Fair Drive
Approach:        North Bound      South Bound       East Bound       West Bound
Movement:      L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected         Protected         Protected         Protected
Rights:           Include           Include           Include           Include
Min. Green:     0    0    0     0    0    0     0    0    0     0    0    0
Y+R:          4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0
Lanes:         1  0  3  0  1   2  0  3  0  1   1  0  2  0  1   1  0  1  1  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      39  543  159   276  451  153   182  642   37    18  266  373
Growth Adj:  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Initial Bse:   39  543  159   276  451  153   182  642   37    18  266  373
Added Vol:      0    0    0     0    0    0     0    0    0     0    0    0
PasserByVol:    0    0    0     0    0    0     0    0    0     0    0    0
Initial Fut:   39  543  159   276  451  153   182  642   37    18  266  373
User Adj:    1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
PHF Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
PHF Volume:    39  543  159   276  451  153   182  642   37    18  266  373
Reduct Vol:     0    0    0     0    0    0     0    0    0     0    0    0
Reduced Vol:   39  543  159   276  451  153   182  642   37    18  266  373
PCE Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
MLF Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
FinalVolume:   39  543  159   276  451  153   182  642   37    18  266  373
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600 1600  1600 1600 1600  1600 1600 1600  1600 1600 1600
Adjustment:  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Lanes:       1.00 3.00 1.00  2.00 3.00 1.00  1.00 2.00 1.00  1.00 1.25 1.75
Final Sat.:  1600 4800 1600  3200 4800 1600  1600 3200 1600  1600 1998 2802
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.02 0.11 0.10  0.09 0.09 0.10  0.11 0.20 0.02  0.01 0.13 0.13
Crit Moves:       ****       ****             ****                  ****
********************************************************************************
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                          AM Cumulative Plus Project
                     2.13.3396.1 Orange Coast College
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                      Level Of Service Computation Report
          ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #15 Fairview Road at Fair Drive
********************************************************************************
Cycle (sec):           100               Critical Vol./Cap.(X):         0.487
Loss Time (sec):         0               Average Delay (sec/veh):      xxxxxx
Optimal Cycle:          44               Level Of Service:                  A
********************************************************************************
Street Name:               Fairview Road                      Fair Drive
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Protected        Protected        Protected        Protected
Rights:            Include          Include          Include          Include
Min. Green:     0     0     0    0     0     0    0     0     0    0     0     0
Y+R:          4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:         1  0  3  0  1   2  0  3  0  1   1  0  2  0  1   1  0  1  1  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      39   595   159   297   462   154   185   642    37    18   266   475
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:   39   595   159   297   462   154   185   642    37    18   266   475
Added Vol:      0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:   39   595   159   297   462   154   185   642    37    18   266   475
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:    39   595   159   297   462   154   185   642    37    18   266   475
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:   39   595   159   297   462   154   185   642    37    18   266   475
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:   39   595   159   297   462   154   185   642    37    18   266   475
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       1.00  3.00  1.00  2.00  3.00  1.00  1.00  2.00  1.00  1.00  1.08  1.92
Final Sat.:  1600  4800  1600  3200  4800  1600  1600  3200  1600  1600  1723  3077
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.02  0.12  0.10  0.09  0.10  0.10  0.12  0.20  0.02  0.01  0.15  0.15
Crit Moves:        ****        ****              ****                    ****
********************************************************************************
```

PM Cumulative
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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #15 Fairview Road at Fair Drive

Cycle (sec):	100	Critical Vol./Cap.(X):	0.577
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	54	Level Of Service:	A

Street Name:	Fairview Road						Fair Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	3 0	1	2 0	3 0	1	1 0	2 0	1	1 0	1 1	1
Volume Module:												
Base Vol:	57	532	48	258	529	92	111	309	36	94	931	587
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	57	532	48	258	529	92	111	309	36	94	931	587
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	57	532	48	258	529	92	111	309	36	94	931	587
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	57	532	48	258	529	92	111	309	36	94	931	587
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	57	532	48	258	529	92	111	309	36	94	931	587
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	57	532	48	258	529	92	111	309	36	94	931	587
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	3.00	1.00	2.00	3.00	1.00	1.00	2.00	1.00	1.00	1.84	1.16
Final Sat.:	1600	4800	1600	3200	4800	1600	1600	3200	1600	1600	2944	1856
Capacity Analysis Module:												
Vol/Sat:	0.04	0.11	0.03	0.08	0.11	0.06	0.07	0.10	0.02	0.06	0.32	0.32
Crit Moves:		****		****			****				****	

PM Cumulative Plus Project
2.13.3396.1 Orange Coast College

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #15 Fairview Road at Fair Drive

Cycle (sec):	100	Critical Vol./Cap.(X):	0.627
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	61	Level Of Service:	B

Street Name:	Fairview Road						Fair Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	3 0	1	2 0	3 0	1	1 0	2 0	1	1 0	1 1	1
Volume Module:												
Base Vol:	57	574	48	333	577	97	114	309	36	94	931	664
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	57	574	48	333	577	97	114	309	36	94	931	664
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	57	574	48	333	577	97	114	309	36	94	931	664
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	57	574	48	333	577	97	114	309	36	94	931	664
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	57	574	48	333	577	97	114	309	36	94	931	664
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	57	574	48	333	577	97	114	309	36	94	931	664
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	3.00	1.00	2.00	3.00	1.00	1.00	2.00	1.00	1.00	1.75	1.25
Final Sat.:	1600	4800	1600	3200	4800	1600	1600	3200	1600	1600	2802	1998
Capacity Analysis Module:												
Vol/Sat:	0.04	0.12	0.03	0.10	0.12	0.06	0.07	0.10	0.02	0.06	0.33	0.33
Crit Moves:		****		****			****				****	

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                              AM Cumulative
                    2.13.3396.1 Orange Coast College
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                   Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
**********************************************************************************
Intersection #16 Driveway 1 at Merrimac Way
**********************************************************************************
Average Delay (sec/veh):      0.7      Worst Case Level Of Service: B[ 10.7]
**********************************************************************************
Street Name:              Driveway 1                      Merrimac Way
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:      L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:          Include          Include          Include          Include
Lanes:         0  0  0  0  0    0  0  1! 0  0    1  0  2  0  0    0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        0    0    0     5    0    22    21  150     0     0  442    34
Growth Adj:   1.00 1.00 1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:     0    0    0     5    0    22    21  150     0     0  442    34
Added Vol:       0    0    0     0    0     0     0    0     0     0    0     0
PasserByVol:     0    0    0     0    0     0     0    0     0     0    0     0
Initial Fut:     0    0    0     5    0    22    21  150     0     0  442    34
User Adj:     1.00 1.00 1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:      0.95 0.95 0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:      0    0    0     5    0    23    22  158     0     0  465    36
Reduct Vol:      0    0    0     0    0     0     0    0     0     0    0     0
FinalVolume:     0    0    0     5    0    23    22  158     0     0  465    36
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.8  6.5   6.9   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5  4.0   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   606  685   251   501 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx   433  373   755  1074 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx   426  365   755  1074 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  0.01 0.00  0.03  0.02 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.1 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx   8.4 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:     *    *    *     *    *     *     A    *     *     *    *     *
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx  661 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx  0.1 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx 10.7 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:      *    *    *     *    B     *     *    *     *     *    *     *
ApproachDel:      xxxxxx            10.7             xxxxxx           xxxxxx
ApproachLOS:        *                B                 *                *
**********************************************************************************
Note: Queue reported is the number of cars per lane.
**********************************************************************************
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                        AM Cumulative Plus Project
                    2.13.3396.1 Orange Coast College
--------------------------------------------------------------------------------
                     Level Of Service Computation Report
         2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #16 Driveway 1 at Merrimac Way
********************************************************************************
Average Delay (sec/veh):      1.3      Worst Case Level Of Service: B[ 12.4]
********************************************************************************
Street Name:                Driveway 1                     Merrimac Way
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign        Uncontrolled     Uncontrolled
Rights:          Include          Include          Include          Include
Lanes:        0  0  0  0  0   0  0  1! 0  0   1  0  2  0  0   0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0    12    0    32    62  207     0     0  480    64
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     0    12    0    32    62  207     0     0  480    64
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0    0     0    12    0    32    62  207     0     0  480    64
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:     0    0     0    13    0    34    65  218     0     0  505    67
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0    0     0    13    0    34    65  218     0     0  505    67
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.8  6.5   6.9   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5  4.0   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   778  887   286   573 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx   337  285   716  1010 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx   320  267   716  1010 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  0.04 0.00  0.05  0.06 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.2 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx   8.8 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     *     A    *     *     *    *     *
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx  536 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx  0.3 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx 12.4 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    B     *     *    *     *     *    *     *
ApproachDel:     xxxxxx            12.4            xxxxxx           xxxxxx
ApproachLOS:        *                B                *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                              PM Cumulative
                    2.13.3396.1 Orange Coast College
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                   Level Of Service Computation Report
         2000 HCM Unsignalized Method (Future Volume Alternative)
*******************************************************************************
Intersection #16 Driveway 1 at Merrimac Way
*******************************************************************************
Average Delay (sec/veh):      1.6     Worst Case Level Of Service: B[ 13.3]
*******************************************************************************
Street Name:              Driveway 1                      Merrimac Way
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------||----------------||----------------||----------------|
Control:       Stop Sign        Stop Sign        Uncontrolled     Uncontrolled
Rights:          Include          Include          Include          Include
Lanes:       0  0  0  0  0    0  0  1! 0  0    1  0  2  0  0    0  0  1  1  0
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:       0    0     0     34    0    57     25  233     0     0  486    41
Growth Adj:  1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     0     34    0    57     25  233     0     0  486    41
Added Vol:      0    0     0      0    0     0      0    0     0     0    0     0
PasserByVol:    0    0     0      0    0     0      0    0     0     0    0     0
Initial Fut:    0    0     0     34    0    57     25  233     0     0  486    41
User Adj:    1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.95   0.95 0.95  0.95   0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:     0    0     0     36    0    60     26  245     0     0  512    43
Reduct Vol:     0    0     0      0    0     0      0    0     0     0    0     0
FinalVolume:    0    0     0     36    0    60     26  245     0     0  512    43
------------|----------------||----------------||----------------||----------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx    6.8  6.5   6.9    4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx    3.5  4.0   3.3    2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|----------------||----------------||----------------||----------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx    708  831   277    555 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx    373  307   726   1026 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx    366  300   726   1026 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx   0.10 0.00  0.08   0.03 xxxx  xxxx  xxxx xxxx  xxxx
------------|----------------||----------------||----------------||----------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   xxxx xxxx xxxxx    0.1 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx    8.6 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *      *    *     *      A    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx   xxxx  531 xxxxx   xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx  0.7 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx 13.3 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *      *    B     *      *    *     *     *    *     *
ApproachDel:    xxxxxx               13.3             xxxxxx           xxxxxx
ApproachLOS:       *                   B                 *                *
*******************************************************************************
Note: Queue reported is the number of cars per lane.
*******************************************************************************
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                          PM Cumulative Plus Project
                      2.13.3396.1 Orange Coast College
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
           2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #16 Driveway 1 at Merrimac Way
********************************************************************************
Average Delay (sec/veh):       3.5      Worst Case Level Of Service: C[ 19.2]
********************************************************************************
Street Name:              Driveway 1                      Merrimac Way
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:          Include          Include          Include          Include
Lanes:        0  0  0  0  0   0  0  1! 0  0   1  0  2  0  0   0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        0     0     0    72     0   108    51   288     0     0   539    60
Growth Adj:   1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:     0     0     0    72     0   108    51   288     0     0   539    60
Added Vol:       0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:     0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:     0     0     0    72     0   108    51   288     0     0   539    60
User Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:      0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95
PHF Volume:      0     0     0    76     0   114    54   303     0     0   567    63
Reduct Vol:      0     0     0     0     0     0     0     0     0     0     0     0
FinalVolume:     0     0     0    76     0   114    54   303     0     0   567    63
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.8   6.5   6.9   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5   4.0   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   858  1009   315   631 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx   300   242   686   962 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx   287   228   686   962 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  0.26  0.00  0.17  0.06 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx    0.2 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx    9.0 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:     *    *     *     *    *     *     A    *     *     *    *     *
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx   441 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx   2.1 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx  19.2 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:      *    *     *     *     C     *     *    *     *     *    *     *
ApproachDel:       xxxxxx            19.2             xxxxxx           xxxxxx
ApproachLOS:          *                 C                *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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--------------------------------------------------------------------------------
                              AM Cumulative
                    2.13.3396.1 Orange Coast College
--------------------------------------------------------------------------------
                   Level Of Service Computation Report
         2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #17 Driveway 2 at Merrimac Way
********************************************************************************
Average Delay (sec/veh):       1.1      Worst Case Level Of Service: B[ 12.6]
********************************************************************************
Street Name:                  Driveway 2                    Merrimac Way
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:          Include          Include          Include          Include
Lanes:         0  0  0  0  0   0  0  1! 0  0   1  0  2  0  0   0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0    8    0     7   70  167     0    0  407    33
Growth Adj:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Initial Bse:    0    0     0    8    0     7   70  167     0    0  407    33
Added Vol:      0    0     0    0    0     0    0    0     0    0    0     0
PasserByVol:    0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:    0    0     0    8    0     7   70  167     0    0  407    33
User Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.95 0.95 0.95  0.95 0.95 0.95  0.95 0.95 0.95  0.95
PHF Volume:     0    0     0    8    0     7   74  176     0    0  428    35
Reduct Vol:     0    0     0    0    0     0    0    0     0    0    0     0
FinalVolume:    0    0     0    8    0     7   74  176     0    0  428    35
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx  6.8  6.5   6.9  4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx  3.5  4.0   3.3  2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  681  769   232  463 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx  389  334   777 1109 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx  369  312   777 1109 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx 0.02 0.00  0.01 0.07 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  0.2 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx  8.5 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *    *    *     *    A    *     *     *    *     *
Movement:    LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx  489 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx  0.1 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx 12.6 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *    *    B     *    *    *     *     *    *     *
ApproachDel:     xxxxxx             12.6              xxxxxx           xxxxxx
ApproachLOS:        *                 B                  *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                       AM Cumulative Plus Project
                    2.13.3396.1 Orange Coast College
--------------------------------------------------------------------------------
                     Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #17 Driveway 2 at Merrimac Way
********************************************************************************
Average Delay (sec/veh):      1.0      Worst Case Level Of Service: B[ 13.6]
********************************************************************************
Street Name:                Driveway 2                      Merrimac Way
Approach:        North Bound      South Bound       East Bound       West Bound
Movement:       L  -  T  -  R   L  -  T  -  R    L  -  T  -  R   L  -  T  -  R
------------|----------------||----------------||----------------||----------------|
Control:          Stop Sign        Stop Sign        Uncontrolled     Uncontrolled
Rights:             Include          Include          Include          Include
Lanes:          0  0  0  0  0   0  0  1! 0  0    1  0  2  0  0   0  0  1  1  0
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:         0    0     0     8    0     7    70  265     0     0  455    33
Growth Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:      0    0     0     8    0     7    70  265     0     0  455    33
Added Vol:        0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:      0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:      0    0     0     8    0     7    70  265     0     0  455    33
User Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:       0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:       0    0     0     8    0     7    74  279     0     0  479    35
Reduct Vol:       0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:      0    0     0     8    0     7    74  279     0     0  479    35
------------|----------------||----------------||----------------||----------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.8  6.5   6.9   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5  4.0   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|----------------||----------------||----------------||----------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   783  923   257   514 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx   335  272   748  1062 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx   317  253   748  1062 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  0.03 0.00  0.01  0.07 xxxx  xxxx  xxxx xxxx  xxxx
------------|----------------||----------------||----------------||----------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.2 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx   8.6 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:      *    *     *     *    *     *     A    *     *     *    *     *
Movement:      LT - LTR - RT   LT - LTR - RT    LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx  434 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx  0.1 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx 13.6 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:       *    *     *     *    B     *     *    *     *     *    *     *
ApproachDel:       xxxxxx            13.6             xxxxxx           xxxxxx
ApproachLOS:          *                B                 *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                        Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #17 Driveway 2 at Merrimac Way
********************************************************************************
Average Delay (sec/veh):       1.4      Worst Case Level Of Service: B[ 14.1]
********************************************************************************
Street Name:              Driveway 2                      Merrimac Way
Approach:       North Bound       South Bound       East Bound        West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign         Stop Sign        Uncontrolled      Uncontrolled
Rights:          Include           Include           Include           Include
Lanes:        0  0  0  0  0    0  0  1! 0  0    1  0  2  0  0    0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0     0    28     0    26    51   219     0     0   490    32
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:    0     0     0    28     0    26    51   219     0     0   490    32
Added Vol:      0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:    0     0     0    28     0    26    51   219     0     0   490    32
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95
PHF Volume:     0     0     0    29     0    27    54   231     0     0   516    34
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
FinalVolume:    0     0     0    29     0    27    54   231     0     0   516    34
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx    6.8   6.5   6.9   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx    3.5   4.0   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx    755   871   275   549 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx    349   292   729  1030 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx    335   276   729  1030 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx   0.09  0.00  0.04  0.05 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2WayQ95thQ:  xxxx xxxx xxxxx   xxxx xxxx xxxxx   0.2 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx  xxxxx xxxx xxxxx   8.7 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *     *     *     *     *     *     A     *     *     *     *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx   xxxx   453 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx  xxxxx   0.4 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx  xxxxx  14.1 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *     *     *     *     B     *     *     *     *     *     *     *
ApproachDel:      xxxxxx             14.1            xxxxxx            xxxxxx
ApproachLOS:         *                  B                 *                 *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                        PM Cumulative Plus Project
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--------------------------------------------------------------------------------
                       Level Of Service Computation Report
        2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #17 Driveway 2 at Merrimac Way
********************************************************************************
Average Delay (sec/veh):        1.3      Worst Case Level Of Service: C[ 16.3]
********************************************************************************
Street Name:               Driveway 2                        Merrimac Way
Approach:        North Bound     South Bound      East Bound       West Bound
Movement:       L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:           Include          Include          Include          Include
Lanes:          0  0  0  0  0   0  0  1! 0  0   1  0  2  0  0   0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:         0    0     0    28    0    26    51  300     0     0  594    32
Growth Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:      0    0     0    28    0    26    51  300     0     0  594    32
Added Vol:        0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:      0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:      0    0     0    28    0    26    51  300     0     0  594    32
User Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:       0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:       0    0     0    29    0    27    54  316     0     0  625    34
Reduct Vol:       0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:      0    0     0    29    0    27    54  316     0     0  625    34
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.8  6.5   6.9   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5  4.0   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   907 1065   329   659 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx   279  224   672   939 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx   267  211   672   939 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  0.11 0.00  0.04  0.06 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.2 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx   9.1 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     *     A    *     *     *    *     *
Movement:       LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx  376 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx  0.5 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx 16.3 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    C     *     *    *     *     *    *     *
ApproachDel:      xxxxxx              16.3             xxxxxx           xxxxxx
ApproachLOS:         *                  C                 *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                                  AM Cumulative
                        2.13.3396.1 Orange Coast College
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                      Level Of Service Computation Report
            2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #18 Driveway 3 at Merrimac Way
********************************************************************************
Average Delay (sec/veh):       0.1     Worst Case Level Of Service: A[  9.6]
********************************************************************************
Street Name:              Driveway 3                      Merrimac Way
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:           Include          Include          Include          Include
Lanes:        0  0  0  0  0   0  0  0  0  1   0  0  2  0  0   0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0     0    0     9     0  244     0     0  323    83
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     0     0    0     9     0  244     0     0  323    83
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0    0     0     0    0     9     0  244     0     0  323    83
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:     0    0     0     0    0     9     0  257     0     0  340    87
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0    0     0     0    0     9     0  257     0     0  340    87
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxx   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  xxxx xxxx   214  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx  xxxx xxxx   798  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx  xxxx xxxx   798  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  xxxx xxxx  0.01  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx   0.0  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx   9.6 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     A     *    *     *     *    *     *
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:     xxxxxx              9.6             xxxxxx           xxxxxx
ApproachLOS:        *                 A                 *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                       AM Cumulative Plus Project
                     2.13.3396.1 Orange Coast College
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                    Level Of Service Computation Report
        2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #18 Driveway 3 at Merrimac Way
********************************************************************************
Average Delay (sec/veh):        0.1     Worst Case Level Of Service: A[  9.7]
********************************************************************************
Street Name:              Driveway 3                     Merrimac Way
Approach:     North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign       Stop Sign       Uncontrolled     Uncontrolled
Rights:          Include         Include          Include          Include
Lanes:       0  0  0  0  0   0  0  0  0  1   0  0  2  0  0   0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0    0     0     0    0     9     0  342     0     0  371    83
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   0    0     0     0    0     9     0  342     0     0  371    83
Added Vol:     0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:   0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   0    0     0     0    0     9     0  342     0     0  371    83
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:    0    0     0     0    0     9     0  360     0     0  391    87
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:   0    0     0     0    0     9     0  360     0     0  391    87
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxx   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  xxxx xxxx   239  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx  xxxx xxxx   768  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx  xxxx xxxx   768  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  xxxx xxxx  0.01  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx   0.0  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx   9.7 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:   *    *     *     *    *     A     *    *     *     *    *     *
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:    *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:     xxxxxx              9.7            xxxxxx           xxxxxx
ApproachLOS:        *                 A                *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                                 PM Cumulative
                      2.13.3396.1 Orange Coast College
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                      Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #18 Driveway 3 at Merrimac Way
********************************************************************************
Average Delay (sec/veh):      0.5      Worst Case Level Of Service: B[ 10.2]
********************************************************************************
Street Name:             Driveway 3                     Merrimac Way
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------||----------------||----------------||----------------|
Control:       Stop Sign        Stop Sign        Uncontrolled     Uncontrolled
Rights:          Include          Include          Include          Include
Lanes:        0  0  0  0  0    0  0  0  0  1    0  0  2  0  0    0  0  1  1  0
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:       0    0     0     0    0    38     0  275     0     0  455    57
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     0     0    0    38     0  275     0     0  455    57
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0    0     0     0    0    38     0  275     0     0  455    57
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:     0    0     0     0    0    40     0  289     0     0  479    60
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0    0     0     0    0    40     0  289     0     0  479    60
------------|----------------||----------------||----------------||----------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxx   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
------------|----------------||----------------||----------------||----------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  xxxx xxxx   269  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx  xxxx xxxx   735  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx  xxxx xxxx   735  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  xxxx xxxx  0.05  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|----------------||----------------||----------------||----------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx   0.2  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx  10.2 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     B     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:      xxxxxx            10.2            xxxxxx            xxxxxx
ApproachLOS:        *                 B                 *                 *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                         PM Cumulative Plus Project
                     2.13.3396.1 Orange Coast College
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                    Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
*********************************************************************************
Intersection #18 Driveway 3 at Merrimac Way
*********************************************************************************
Average Delay (sec/veh):        0.4      Worst Case Level Of Service: B[ 10.6]
*********************************************************************************
Street Name:               Driveway 3                         Merrimac Way
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:           Include          Include          Include          Include
Lanes:        0  0  0  0  0   0  0  0  0  1   0  0  2  0  0   0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0    0    0    38     0  356     0     0  559    57
Growth Adj:  1.00 1.00  1.00 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     0    0    0    38     0  356     0     0  559    57
Added Vol:      0    0     0    0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0    0    0     0     0    0     0     0    0     0
Initial Fut:    0    0     0    0    0    38     0  356     0     0  559    57
User Adj:    1.00 1.00  1.00 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.95 0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:     0    0     0    0    0    40     0  375     0     0  588    60
Reduct Vol:     0    0     0    0    0     0     0    0     0     0    0     0
FinalVolume:    0    0     0    0    0    40     0  375     0     0  588    60
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxx   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  xxxx xxxx   324  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx  xxxx xxxx   677  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx  xxxx xxxx   677  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  xxxx xxxx  0.06  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx   0.2  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx  10.6 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     B     *    *     *     *    *     *
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:     xxxxxx            10.6            xxxxxx           xxxxxx
ApproachLOS:        *                B                *                *
*********************************************************************************
Note: Queue reported is the number of cars per lane.
*********************************************************************************
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------------------------------------------------------------------------------
                               AM Cumulative
                     2.13.3396.1 Orange Coast College
------------------------------------------------------------------------------
                      Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #19 Driveway 4 at Merrimac Way
********************************************************************************
Average Delay (sec/veh):       0.9     Worst Case Level Of Service: A[  9.6]
********************************************************************************
Street Name:               Driveway 4                       Merrimac Way
Approach:       North Bound       South Bound       East Bound        West Bound
Movement:     L  -  T  -  R     L  -  T  -  R     L  -  T  -  R     L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign         Stop Sign        Uncontrolled      Uncontrolled
Rights:           Include           Include           Include           Include
Lanes:        0  0  0  0  0     0  0  0  0  1     0  0  2  0  0     0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0      0     0    0     58     0  244      0     0  211    110
Growth Adj:  1.00 1.00   1.00  1.00 1.00   1.00  1.00 1.00   1.00  1.00 1.00   1.00
Initial Bse:    0    0      0     0    0     58     0  244      0     0  211    110
Added Vol:      0    0      0     0    0      0     0    0      0     0    0      0
PasserByVol:    0    0      0     0    0      0     0    0      0     0    0      0
Initial Fut:    0    0      0     0    0     58     0  244      0     0  211    110
User Adj:    1.00 1.00   1.00  1.00 1.00   1.00  1.00 1.00   1.00  1.00 1.00   1.00
PHF Adj:     0.95 0.95   0.95  0.95 0.95   0.95  0.95 0.95   0.95  0.95 0.95   0.95
PHF Volume:     0    0      0     0    0     61     0  257      0     0  222    116
Reduct Vol:     0    0      0     0    0      0     0    0      0     0    0      0
FinalVolume:    0    0      0     0    0     61     0  257      0     0  222    116
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx    6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxx    3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  xxxx xxxx    169  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx  xxxx xxxx    852  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx  xxxx xxxx    852  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  xxxx xxxx   0.07  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx    0.2  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx    9.6 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *      *     *    *      A     *    *      *     *    *      *
Movement:     LT - LTR - RT     LT - LTR - RT     LT - LTR - RT     LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *      *     *    *      *     *    *      *     *    *      *
ApproachDel:     xxxxxx               9.6              xxxxxx            xxxxxx
ApproachLOS:        *                  A                 *                  *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                          AM Cumulative Plus Project
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--------------------------------------------------------------------------------
                       Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #19 Driveway 4 at Merrimac Way
********************************************************************************
Average Delay (sec/veh):      0.7      Worst Case Level Of Service: A[  9.7]
********************************************************************************
Street Name:                 Driveway 4                    Merrimac Way
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:          Include          Include          Include          Include
Lanes:        0  0  0  0  0   0  0  0  0  1   0  0  2  0  0   0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0     0    0    58     0  342     0     0  259   110
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     0     0    0    58     0  342     0     0  259   110
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0    0     0     0    0    58     0  342     0     0  259   110
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:     0    0     0     0    0    61     0  360     0     0  273   116
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0    0     0     0    0    61     0  360     0     0  273   116
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxx   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  xxxx xxxx   194  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx  xxxx xxxx   821  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx  xxxx xxxx   821  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  xxxx xxxx  0.07  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx   0.2  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx   9.7 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     A     *    *     *     *    *     *
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:     xxxxxx             9.7            xxxxxx           xxxxxx
ApproachLOS:        *                A                *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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---------------------------------------------------------------------------------
                              PM Cumulative
                     2.13.3396.1 Orange Coast College
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                    Level Of Service Computation Report
         2000 HCM Unsignalized Method (Future Volume Alternative)
*********************************************************************************
Intersection #19 Driveway 4 at Merrimac Way
*********************************************************************************
Average Delay (sec/veh):       0.8      Worst Case Level Of Service: B[ 10.3]
*********************************************************************************
Street Name:             Driveway 4                        Merrimac Way
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:      L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------||----------------||----------------||----------------|
Control:        Stop Sign        Stop Sign        Uncontrolled     Uncontrolled
Rights:          Include          Include           Include          Include
Lanes:         0  0  0  0  0    0  0  0  0  1    0  0  2  0  0    0  0  1  1  0
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:       0     0     0     0     0    61     0   275     0     0   446    46
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:    0     0     0     0     0    61     0   275     0     0   446    46
Added Vol:      0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:    0     0     0     0     0    61     0   275     0     0   446    46
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95
PHF Volume:     0     0     0     0     0    64     0   289     0     0   469    48
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
FinalVolume:    0     0     0     0     0    64     0   289     0     0   469    48
------------|----------------||----------------||----------------||----------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxx   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
------------|----------------||----------------||----------------||----------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  xxxx xxxx   259  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx  xxxx xxxx   746  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx  xxxx xxxx   746  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  xxxx xxxx  0.09  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|----------------||----------------||----------------||----------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx   0.3  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx  10.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *     *     *     *     *     B     *     *     *     *     *     *
Movement:      LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *     *     *     *     *     *     *     *     *     *     *     *
ApproachDel:     xxxxxx             10.3             xxxxxx           xxxxxx
ApproachLOS:        *                 B                 *                *
*********************************************************************************
Note: Queue reported is the number of cars per lane.
*********************************************************************************
```

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------------------------------------------------------------------------------
                         PM Cumulative Plus Project
                     2.13.3396.1 Orange Coast College
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                     Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
******************************************************************************
Intersection #19 Driveway 4 at Merrimac Way
******************************************************************************
Average Delay (sec/veh):        0.6      Worst Case Level Of Service: B[ 10.8]
******************************************************************************
Street Name:               Driveway 4                    Merrimac Way
Approach:     North Bound     South Bound      East Bound      West Bound
Movement:    L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Stop Sign       Stop Sign       Uncontrolled    Uncontrolled
Rights:          Include         Include          Include         Include
Lanes:       0  0  0  0  0   0  0  0  0  1   0  0  2  0  0   0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0     0    0    61     0  356     0     0  550    46
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     0     0    0    61     0  356     0     0  550    46
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0    0     0     0    0    61     0  356     0     0  550    46
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:     0    0     0     0    0    64     0  375     0     0  579    48
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0    0     0     0    0    64     0  375     0     0  579    48
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxx   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  xxxx xxxx   314  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx  xxxx xxxx   688  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx  xxxx xxxx   688  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  xxxx xxxx  0.09  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx   0.3  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx  10.8 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     B     *    *     *     *    *     *
Movement:    LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:     xxxxxx            10.8             xxxxxx          xxxxxx
ApproachLOS:        *                B                 *               *
******************************************************************************
Note: Queue reported is the number of cars per lane.
******************************************************************************
```

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--------------------------------------------------------------------------------
                                 AM Cumulative
                        2.13.3396.1 Orange Coast College
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                      Level Of Service Computation Report
           2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #20 Driveway 5 at Merrimac Way
********************************************************************************
Average Delay (sec/veh):       0.8      Worst Case Level Of Service: B[ 11.5]
********************************************************************************
Street Name:              Driveway 5                         Merrimac Way
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------||----------------||----------------||----------------|
Control:        Stop Sign        Stop Sign        Uncontrolled     Uncontrolled
Rights:          Include          Include           Include          Include
Lanes:        0  0  0  0  0    0  0  1! 0  0    1  0  2  0  0    0  0  1  1  0
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:       0    0     0    17    0     1    23  188     0     0  226    59
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     0    17    0     1    23  188     0     0  226    59
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0    0     0    17    0     1    23  188     0     0  226    59
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:     0    0     0    18    0     1    24  198     0     0  238    62
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0    0     0    18    0     1    24  198     0     0  238    62
------------|----------------||----------------||----------------||----------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.8  6.5   6.9   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5  4.0   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|----------------||----------------||----------------||----------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   416  515   150   300 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx   570  466   876  1273 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx   561  457   876  1273 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  0.03 0.00  0.00  0.02 xxxx  xxxx  xxxx xxxx  xxxx
------------|----------------||----------------||----------------||----------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.1 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx   7.9 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     *     A    *     *     *    *     *
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx  573 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx  0.1 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx 11.5 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    B     *     *    *     *     *    *     *
ApproachDel:     xxxxxx             11.5            xxxxxx           xxxxxx
ApproachLOS:        *                 B                *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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-------------------------------------------------------------------------------
                         AM Cumulative Plus Project
                     2.13.3396.1 Orange Coast College
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                     Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
*******************************************************************************
Intersection #20 Driveway 5 at Merrimac Way
*******************************************************************************
Average Delay (sec/veh):       0.9     Worst Case Level Of Service: B[ 12.9]
*******************************************************************************
Street Name:               Driveway 5                      Merrimac Way
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:          Include          Include          Include          Include
Lanes:        0  0  0  0  0   0  0  1! 0  0   1  0  2  0  0   0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0    20    0     2    38  283     0     0  267    66
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     0    20    0     2    38  283     0     0  267    66
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0    0     0    20    0     2    38  283     0     0  267    66
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:     0    0     0    21    0     2    40  298     0     0  281    69
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0    0     0    21    0     2    40  298     0     0  281    69
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.8  6.5   6.9   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5  4.0   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   545  694   175   351 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx   473  369   844  1220 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx   462  357   844  1220 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  0.05 0.00  0.00  0.03 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.1 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx   8.1 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     *     A    *     *     *    *     *
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx  481 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx  0.2 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx 12.9 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    B     *     *    *     *     *    *     *
ApproachDel:     xxxxxx              12.9             xxxxxx           xxxxxx
ApproachLOS:        *                  B                *                *
*******************************************************************************
Note: Queue reported is the number of cars per lane.
*******************************************************************************
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                               PM Cumulative
                      2.13.3396.1 Orange Coast College
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                     Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #20 Driveway 5 at Merrimac Way
********************************************************************************
Average Delay (sec/veh):      0.2      Worst Case Level Of Service: B[ 14.0]
********************************************************************************
Street Name:                Driveway 5                      Merrimac Way
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|----------------||----------------||----------------||----------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:          Include          Include          Include          Include
Lanes:        0  0  0  0  0   0  0  1! 0  0   1  0  2  0  0   0  0  1  1  0
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:       0    0     0    11    0     1     0  261     0     0  504     3
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     0    11    0     1     0  261     0     0  504     3
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0    0     0    11    0     1     0  261     0     0  504     3
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:     0    0     0    12    0     1     0  275     0     0  531     3
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0    0     0    12    0     1     0  275     0     0  531     3
------------|----------------||----------------||----------------||----------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.8  6.5   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5  4.0   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
------------|----------------||----------------||----------------||----------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   669  807   267  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx   395  318   737  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx   395  318   737  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  0.03 0.00  0.00  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|----------------||----------------||----------------||----------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     *     *    *     *     *    *     *
Movement:      LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx  411 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx  0.1 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx 14.0 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    B     *     *    *     *     *    *     *
ApproachDel:     xxxxxx              14.0            xxxxxx           xxxxxx
ApproachLOS:        *                  B                *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                        PM Cumulative Plus Project
                    2.13.3396.1 Orange Coast College
--------------------------------------------------------------------------------
                    Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #20 Driveway 5 at Merrimac Way
********************************************************************************
Average Delay (sec/veh):       0.5     Worst Case Level Of Service: C[ 16.3]
********************************************************************************
Street Name:              Driveway 5                          Merrimac Way
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:          Include          Include          Include          Include
Lanes:        0  0  0  0  0   0  0  1! 0  0   1  0  2  0  0   0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0    20    0     5    11  333     0     0  602     8
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     0    20    0     5    11  333     0     0  602     8
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0    0     0    20    0     5    11  333     0     0  602     8
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:     0    0     0    21    0     5    12  351     0     0  634     8
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0    0     0    21    0     5    12  351     0     0  634     8
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.8  6.5   6.9   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5  4.0   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   836 1012   321   642 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx   310  241   681   952 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx   307  238   681   952 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  0.07 0.00  0.01  0.01 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.0 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx   8.8 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     *     A    *     *     *    *     *
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx  345 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx  0.2 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx 16.3 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    C     *     *    *     *     *    *     *
ApproachDel:     xxxxxx             16.3             xxxxxx           xxxxxx
ApproachLOS:        *                 C                 *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                              AM Cumulative
                    2.13.3396.1 Orange Coast College
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                   Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
******************************************************************************
Intersection #21 Driveway 6 at Merrimac Way
******************************************************************************
Average Delay (sec/veh):       0.1     Worst Case Level Of Service: A[  8.9]
******************************************************************************
Street Name:              Driveway 6                     Merrimac Way
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------||----------------||----------------||----------------|
Control:        Stop Sign         Stop Sign        Uncontrolled     Uncontrolled
Rights:          Include           Include           Include          Include
Lanes:        0  0  0  0  0    0  0  0  0  1    0  0  2  0  0    0  0  1  1  0
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:       0     0     0     0     0     3     0   213     0     0   158    63
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:    0     0     0     0     0     3     0   213     0     0   158    63
Added Vol:      0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:    0     0     0     0     0     3     0   213     0     0   158    63
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95
PHF Volume:     0     0     0     0     0     3     0   224     0     0   166    66
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
FinalVolume:    0     0     0     0     0     3     0   224     0     0   166    66
------------|----------------||----------------||----------------||----------------|
Critical Gap Module:
Critical Gp:xxxxx  xxxx xxxxx xxxxx  xxxx   6.9 xxxxx  xxxx xxxxx xxxxx  xxxx xxxxx
FollowUpTim:xxxxx  xxxx xxxxx xxxxx  xxxx   3.3 xxxxx  xxxx xxxxx xxxxx  xxxx xxxxx
------------|----------------||----------------||----------------||----------------|
Capacity Module:
Cnflict Vol: xxxx  xxxx xxxxx  xxxx  xxxx   116  xxxx  xxxx xxxxx  xxxx  xxxx xxxxx
Potent Cap.: xxxx  xxxx xxxxx  xxxx  xxxx   920  xxxx  xxxx xxxxx  xxxx  xxxx xxxxx
Move Cap.:   xxxx  xxxx xxxxx  xxxx  xxxx   920  xxxx  xxxx xxxxx  xxxx  xxxx xxxxx
Volume/Cap:  xxxx  xxxx  xxxx  xxxx  xxxx  0.00  xxxx  xxxx  xxxx  xxxx  xxxx  xxxx
------------|----------------||----------------||----------------||----------------|
Level Of Service Module:
2Way95thQ:   xxxx  xxxx xxxxx  xxxx  xxxx   0.0  xxxx  xxxx xxxxx  xxxx  xxxx xxxxx
Control Del:xxxxx  xxxx xxxxx xxxxx  xxxx   8.9 xxxxx  xxxx xxxxx xxxxx  xxxx xxxxx
LOS by Move:    *     *     *     *     *     A     *     *     *     *     *     *
Movement:      LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx  xxxx xxxxx  xxxx  xxxx xxxxx  xxxx  xxxx xxxxx  xxxx  xxxx xxxxx
SharedQueue:xxxxx  xxxx xxxxx xxxxx  xxxx xxxxx xxxxx  xxxx xxxxx xxxxx  xxxx xxxxx
Shrd ConDel:xxxxx  xxxx xxxxx xxxxx  xxxx xxxxx xxxxx  xxxx xxxxx xxxxx  xxxx xxxxx
Shared LOS:     *     *     *     *     *     *     *     *     *     *     *     *
ApproachDel:      xxxxxx               8.9            xxxxxx           xxxxxx
ApproachLOS:        *                   A                *                *
******************************************************************************
Note: Queue reported is the number of cars per lane.
******************************************************************************
```

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--------------------------------------------------------------------------------
                         AM Cumulative Plus Project
                     2.13.3396.1 Orange Coast College
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
           2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #21 Driveway 6 at Merrimac Way
********************************************************************************
Average Delay (sec/veh):       0.1      Worst Case Level Of Service: A[  9.1]
********************************************************************************
Street Name:                Driveway 6                    Merrimac Way
Approach:      North Bound     South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Stop Sign       Stop Sign       Uncontrolled     Uncontrolled
Rights:          Include         Include          Include          Include
Lanes:        0  0  0  0  0   0  0  0  0  1   0  0  2  0  0   0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0     0    0     4     0  323     0     0  193    70
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     0     0    0     4     0  323     0     0  193    70
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0    0     0     0    0     4     0  323     0     0  193    70
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:     0    0     0     0    0     4     0  340     0     0  203    74
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0    0     0     0    0     4     0  340     0     0  203    74
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxx   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  xxxx xxxx   138  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx  xxxx xxxx   891  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx  xxxx xxxx   891  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  xxxx xxxx  0.00  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx   0.0  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx   9.1 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     A     *    *     *     *    *     *
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:     xxxxxx             9.1            xxxxxx           xxxxxx
ApproachLOS:        *                A                *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                              PM Cumulative
                     2.13.3396.1 Orange Coast College
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                    Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #21 Driveway 6 at Merrimac Way
********************************************************************************
Average Delay (sec/veh):      0.2      Worst Case Level Of Service: A[ 10.0]
********************************************************************************
Street Name:               Driveway 6                     Merrimac Way
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:         Include          Include          Include          Include
Lanes:        0  0  0  0  0   0  0  0  0  1   0  0  2  0  0   0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0     0    0    17     0  261     0     0  456    44
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     0     0    0    17     0  261     0     0  456    44
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0    0     0     0    0    17     0  261     0     0  456    44
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:     0    0     0     0    0    18     0  275     0     0  480    46
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0    0     0     0    0    18     0  275     0     0  480    46
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxx   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  xxxx xxxx   263  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx  xxxx xxxx   741  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx  xxxx xxxx   741  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  xxxx xxxx  0.02  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx   0.1  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx  10.0 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     A     *    *     *     *    *     *
Movement:    LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:     xxxxxx             10.0            xxxxxx           xxxxxx
ApproachLOS:        *                 A                *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                         PM Cumulative Plus Project
                     2.13.3396.1 Orange Coast College
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                     Level Of Service Computation Report
        2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #21 Driveway 6 at Merrimac Way
********************************************************************************
Average Delay (sec/veh):        0.2     Worst Case Level Of Service: B[ 10.4]
********************************************************************************
Street Name:               Driveway 6                       Merrimac Way
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:          Include          Include          Include          Include
Lanes:        0  0  0  0  0   0  0  0  0  1   0  0  2  0  0   0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0     0    0    22     0  343     0     0  554    49
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     0     0    0    22     0  343     0     0  554    49
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0    0     0     0    0    22     0  343     0     0  554    49
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:     0    0     0     0    0    23     0  361     0     0  583    52
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0    0     0     0    0    23     0  361     0     0  583    52
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxx   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  xxxx xxxx   317  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx  xxxx xxxx   684  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx  xxxx xxxx   684  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  xxxx xxxx  0.03  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx   0.1  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx  10.4 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     B     *    *     *     *    *     *
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:     xxxxxx             10.4             xxxxxx           xxxxxx
ApproachLOS:        *                 B                *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                                 AM Cumulative
                      2.13.3396.1 Orange Coast College
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                       Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
*********************************************************************************
Intersection #22 Driveway 7 at Merrimac Way
*********************************************************************************
Average Delay (sec/veh):       1.9      Worst Case Level Of Service: A[  8.7]
*********************************************************************************
Street Name:                  Driveway 7                       Merrimac Way
Approach:        North Bound      South Bound       East Bound        West Bound
Movement:      L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Stop Sign        Stop Sign       Uncontrolled      Uncontrolled
Rights:           Include          Include           Include           Include
Lanes:         0  0  1! 0  0    0  0  0  0  1    1  0  1  1  0    1  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        0    0     0     0    0    11   134  315     2     3  114    19
Growth Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:     0    0     0     0    0    11   134  315     2     3  114    19
Added Vol:       0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:     0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:     0    0     0     0    0    11   134  315     2     3  114    19
User Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:      0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:      0    0     0     0    0    12   141  332     2     3  120    20
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:     0    0     0     0    0    12   141  332     2     3  120    20
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:   7.5  6.5   6.9 xxxxx xxxx   6.9   4.1 xxxx xxxxx   4.1 xxxx xxxxx
FollowUpTim:   3.5  4.0   3.3 xxxxx xxxx   3.3   2.2 xxxx xxxxx   2.2 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:   681  761   167  xxxx xxxx    70   140 xxxx xxxxx   334 xxxx xxxxx
Potent Cap.:   340  337   854  xxxx xxxx   985  1456 xxxx xxxxx  1237 xxxx xxxxx
Move Cap.:     311  304   854  xxxx xxxx   985  1456 xxxx xxxxx  1237 xxxx xxxxx
Volume/Cap:   0.00 0.00  0.00  xxxx xxxx  0.01  0.10 xxxx  xxxx  0.00 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:    xxxx xxxx xxxxx  xxxx xxxx   0.0   0.3 xxxx xxxxx   0.0 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx    8.7   7.7 xxxx xxxxx   7.9 xxxx xxxxx
LOS by Move:     *    *     *     *    *     A     A    *     *     A    *     *
Movement:      LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx     0 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:      *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:       xxxxxx             8.7            xxxxxx            xxxxxx
ApproachLOS:          *                A                *                 *
*********************************************************************************
Note: Queue reported is the number of cars per lane.
*********************************************************************************
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                        AM Cumulative Plus Project
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                    Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #22 Driveway 7 at Merrimac Way
********************************************************************************
Average Delay (sec/veh):       1.8      Worst Case Level Of Service: B[ 10.2]
********************************************************************************
Street Name:              Driveway 7                        Merrimac Way
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:           Include          Include          Include          Include
Lanes:        0  0  1! 0  0    0  0  1! 0  0    1  0  1  1  0    1  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0     0     3     0    12   149   423     2     3   143    26
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:    0     0     0     3     0    12   149   423     2     3   143    26
Added Vol:      0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:    0     0     0     3     0    12   149   423     2     3   143    26
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95
PHF Volume:     0     0     0     3     0    13   157   445     2     3   151    27
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
FinalVolume:    0     0     0     3     0    13   157   445     2     3   151    27
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  7.5   6.5   6.9   6.8   6.5   6.9   4.1  xxxx  xxxxx   4.1  xxxx  xxxxx
FollowUpTim:  3.5   4.0   3.3   3.5   4.0   3.3   2.2  xxxx  xxxxx   2.2  xxxx  xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  842   944   224   707   932    89   178  xxxx  xxxxx   447  xxxx  xxxxx
Potent Cap.:  261   264   786   374   269   958  1410  xxxx  xxxxx  1124  xxxx  xxxxx
Move Cap.:    235   234   786   342   238   958  1410  xxxx  xxxxx  1124  xxxx  xxxxx
Volume/Cap:  0.00  0.00  0.00  0.01  0.00  0.01  0.11  xxxx  xxxx   0.00  xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2WayNinetyfifthQ:   xxxx  xxxx  xxxxx  xxxx  xxxx  xxxxx   0.4  xxxx  xxxxx   0.0  xxxx  xxxxx
Control Del:xxxxx  xxxx  xxxxx xxxxx  xxxx  xxxxx   7.9  xxxx  xxxxx   8.2  xxxx  xxxxx
LOS by Move:    *     *     *     *     *     *     A     *     *     A     *     *
Movement:     LT  - LTR  - RT    LT  - LTR  - RT    LT  - LTR  - RT    LT  - LTR  - RT
Shared Cap.: xxxx     0 xxxxx  xxxx   704 xxxxx  xxxx  xxxx  xxxxx  xxxx  xxxx  xxxxx
SharedQueue:xxxxx  xxxx  xxxxx xxxxx   0.1 xxxxx xxxxx  xxxx  xxxxx xxxxx  xxxx  xxxxx
Shrd ConDel:xxxxx  xxxx  xxxxx xxxxx  10.2 xxxxx xxxxx  xxxx  xxxxx xxxxx  xxxx  xxxxx
Shared LOS:     *     *     *     *     B     *     *     *     *     *     *     *
ApproachDel:      xxxxxx             10.2             xxxxxx            xxxxxx
ApproachLOS:         *                  B                 *                 *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                              PM Cumulative
                     2.13.3396.1 Orange Coast College
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                     Level Of Service Computation Report
         2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #22 Driveway 7 at Merrimac Way
********************************************************************************
Average Delay (sec/veh):       2.0      Worst Case Level Of Service: B[ 14.5]
********************************************************************************
Street Name:               Driveway 7                      Merrimac Way
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign        Uncontrolled     Uncontrolled
Rights:          Include          Include           Include          Include
Lanes:        1  0  0  0  0    0  0  1! 0  0    1  0  1  1  0    1  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       1    0     0    19    0    37    80  171     0     4  364    31
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    1    0     0    19    0    37    80  171     0     4  364    31
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    1    0     0    19    0    37    80  171     0     4  364    31
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:     1    0     0    20    0    39    84  180     0     4  383    33
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    1    0     0    20    0    39    84  180     0     4  383    33
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  7.5 xxxx xxxxx   7.5  6.5   6.9   4.1 xxxx xxxxx   4.1 xxxx xxxxx
FollowUpTim:  3.5 xxxx xxxxx   3.5  4.0   3.3   2.2 xxxx xxxxx   2.2 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  548 xxxx xxxxx   666  756   208   416 xxxx xxxxx   180 xxxx xxxxx
Potent Cap.:  423 xxxx xxxxx   349  340   804  1154 xxxx xxxxx  1408 xxxx xxxxx
Move Cap.:    380 xxxx xxxxx   329  314   804  1154 xxxx xxxxx  1408 xxxx xxxxx
Volume/Cap:  0.00 xxxx  xxxx  0.06 0.00  0.05  0.07 xxxx  xxxx  0.00 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:    0.0 xxxx xxxxx  xxxx xxxx xxxxx   0.2 xxxx xxxxx   0.0 xxxx xxxxx
Control Del: 14.5 xxxx xxxxx xxxxx xxxx xxxxx   8.4 xxxx xxxxx   7.6 xxxx xxxxx
LOS by Move:    B    *     *     *    *     *     A    *     *     A    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx  539 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx  0.4 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx 12.5 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    B     *     *    *     *     *    *     *
ApproachDel:       14.5             12.5             xxxxxx           xxxxxx
ApproachLOS:         B                B                 *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                     Level Of Service Computation Report
        2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #22 Driveway 7 at Merrimac Way
********************************************************************************
Average Delay (sec/veh):       2.1      Worst Case Level Of Service: C[ 17.5]
********************************************************************************
Street Name:               Driveway 7                      Merrimac Way
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------||----------------||----------------||----------------|
Control:        Stop Sign        Stop Sign        Uncontrolled     Uncontrolled
Rights:          Include          Include           Include          Include
Lanes:        1  0  0  0  0    0  0  1! 0  0    1  0  1  1  0    1  0  1  1  0
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:       1    0     0    28    0    42    90  244     0     4  461    36
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    1    0     0    28    0    42    90  244     0     4  461    36
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    1    0     0    28    0    42    90  244     0     4  461    36
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:     1    0     0    29    0    44    95  257     0     4  485    38
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    1    0     0    29    0    44    95  257     0     4  485    38
------------|----------------||----------------||----------------||----------------|
Critical Gap Module:
Critical Gp:  7.5 xxxx xxxxx   7.5  6.5   6.9   4.1 xxxx xxxxx   4.1 xxxx xxxxx
FollowUpTim:  3.5 xxxx xxxxx   3.5  4.0   3.3   2.2 xxxx xxxxx   2.2 xxxx xxxxx
------------|----------------||----------------||----------------||----------------|
Capacity Module:
Cnflict Vol:  697 xxxx xxxxx   831  959   262   523 xxxx xxxxx   257 xxxx xxxxx
Potent Cap.:  331 xxxx xxxxx   266  259   743  1054 xxxx xxxxx  1320 xxxx xxxxx
Move Cap.:    289 xxxx xxxxx   247  235   743  1054 xxxx xxxxx  1320 xxxx xxxxx
Volume/Cap:  0.00 xxxx  xxxx  0.12 0.00  0.06  0.09 xxxx  xxxx  0.00 xxxx  xxxx
------------|----------------||----------------||----------------||----------------|
Level Of Service Module:
2Way95thQ:    0.0 xxxx xxxxx  xxxx xxxx xxxxx   0.3 xxxx xxxxx   0.0 xxxx xxxxx
Control Del: 17.5 xxxx xxxxx xxxxx xxxx xxxxx   8.8 xxxx xxxxx   7.7 xxxx xxxxx
LOS by Move:    C    *     *     *    *     *     A    *     *     A    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx  412 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx  0.6 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx 15.6 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    C     *     *    *     *     *    *     *
ApproachDel:        17.5              15.6            xxxxxx           xxxxxx
ApproachLOS:          C                 C                *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                    Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #23 Driveway 8 at Merrimac Way
********************************************************************************
Average Delay (sec/veh):      0.3      Worst Case Level Of Service: A[  8.7]
********************************************************************************
Street Name:              Driveway 8                       Merrimac Way
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:          Include          Include          Include          Include
Lanes:       0  0  0  0  0   0  0  0  0  1   0  0  2  0  0   0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0    0    0    18     0  466     0     0  120     6
Growth Adj:  1.00 1.00  1.00 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     0    0    0    18     0  466     0     0  120     6
Added Vol:      0    0     0    0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0    0    0     0     0    0     0     0    0     0
Initial Fut:    0    0     0    0    0    18     0  466     0     0  120     6
User Adj:    1.00 1.00  1.00 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.95 0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:     0    0     0    0    0    19     0  491     0     0  126     6
Reduct Vol:     0    0     0    0    0     0     0    0     0     0    0     0
FinalVolume:    0    0     0    0    0    19     0  491     0     0  126     6
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxx   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  xxxx xxxx    66  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx  xxxx xxxx   990  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx  xxxx xxxx   990  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  xxxx xxxx  0.02  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx   0.1  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx   8.7 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     A     *    *     *     *    *     *
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:     xxxxxx             8.7             xxxxxx           xxxxxx
ApproachLOS:        *                A                 *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                     Level Of Service Computation Report
        2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #23 Driveway 8 at Merrimac Way
********************************************************************************
Average Delay (sec/veh):        0.2     Worst Case Level Of Service: A[  8.8]
********************************************************************************
Street Name:                Driveway 8                        Merrimac Way
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R    L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:         Include          Include          Include          Include
Lanes:        0  0  0  0  0   0  0  0  0  1    0  0  2  0  0   0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0     0     0     0    19     0   589     0     0   142    13
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:    0     0     0     0     0    19     0   589     0     0   142    13
Added Vol:      0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:    0     0     0     0     0    19     0   589     0     0   142    13
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95
PHF Volume:     0     0     0     0     0    20     0   620     0     0   149    14
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
FinalVolume:    0     0     0     0     0    20     0   620     0     0   149    14
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxx   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  xxxx xxxx    82  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx  xxxx xxxx   968  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx  xxxx xxxx   968  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  xxxx xxxx  0.02  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx   0.1  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx   8.8 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *     *     *     *     *     A     *     *     *     *     *     *
Movement:     LT - LTR - RT   LT - LTR - RT    LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *     *     *     *     *     *     *     *     *     *     *     *
ApproachDel:     xxxxxx              8.8             xxxxxx           xxxxxx
ApproachLOS:        *                 A                 *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                     Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #23 Driveway 8 at Merrimac Way
********************************************************************************
Average Delay (sec/veh):        0.7     Worst Case Level Of Service: A[  9.8]
********************************************************************************
Street Name:              Driveway 8                     Merrimac Way
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:          Include          Include          Include          Include
Lanes:        0  0  0  0  0    0  0  0  0  1    0  0  2  0  0    0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0     0    0    51     0  260     0     0  403     3
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     0     0    0    51     0  260     0     0  403     3
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0    0     0     0    0    51     0  260     0     0  403     3
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:     0    0     0     0    0    54     0  274     0     0  424     3
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0    0     0     0    0    54     0  274     0     0  424     3
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxx   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  xxxx xxxx   214  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx  xxxx xxxx   798  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx  xxxx xxxx   798  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  xxxx xxxx  0.07  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx   0.2  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx   9.8 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     A     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:     xxxxxx               9.8             xxxxxx           xxxxxx
ApproachLOS:        *                  A                 *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                      Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
**********************************************************************************
Intersection #23 Driveway 8 at Merrimac Way
**********************************************************************************
Average Delay (sec/veh):        0.6      Worst Case Level Of Service: B[ 10.3]
**********************************************************************************
Street Name:               Driveway 8                        Merrimac Way
Approach:       North Bound      South Bound       East Bound        West Bound
Movement:      L  -  T  -  R   L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign        Uncontrolled      Uncontrolled
Rights:           Include          Include          Include           Include
Lanes:         0  0  0  0  0   0  0  0  0  1    0  0  2  0  0    0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0     0     0     0    56     0   344     0     0   499     8
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:    0     0     0     0     0    56     0   344     0     0   499     8
Added Vol:      0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:    0     0     0     0     0    56     0   344     0     0   499     8
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95
PHF Volume:     0     0     0     0     0    59     0   362     0     0   525     8
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
FinalVolume:    0     0     0     0     0    59     0   362     0     0   525     8
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxx   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  xxxx xxxx   267  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx  xxxx xxxx   737  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx  xxxx xxxx   737  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  xxxx xxxx  0.08  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx   0.3  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx  10.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *     *     *     *     *     B     *     *     *     *     *     *
Movement:      LT - LTR - RT   LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *     *     *     *     *     *     *     *     *     *     *     *
ApproachDel:     xxxxxx             10.3             xxxxxx            xxxxxx
ApproachLOS:        *                 B                 *                 *
**********************************************************************************
Note: Queue reported is the number of cars per lane.
**********************************************************************************
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                    Level Of Service Computation Report
           2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #24 Recycling Center Driveway No. 1 (Inbound Only) at Adams Avenue
********************************************************************************
Average Delay (sec/veh):       0.0       Worst Case Level Of Service: A[  0.0]
********************************************************************************
Street Name:Recycling Center Driveway No. 1 (           Adams Avenue
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------||----------------||----------------||----------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:          Include          Include          Include          Include
Lanes:        0  0  0  0  0    0  0  0  0  0    0  0  2  1  0    0  0  2  0  0
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:       0    0     0     0    0     0     0 1591     5     0  715     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     0     0    0     0     0 1591     5     0  715     0
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0    0     0     0    0     0     0 1591     5     0  715     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:     0    0     0     0    0     0     0 1675     5     0  753     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0    0     0     0    0     0     0 1675     5     0  753     0
------------|----------------||----------------||----------------||----------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
------------|----------------||----------------||----------------||----------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|----------------||----------------||----------------||----------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:     xxxxxx           xxxxxx           xxxxxx           xxxxxx
ApproachLOS:        *                *                *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                       Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #24 Recycling Center Driveway No. 1 (Inbound Only) at Adams Avenue
********************************************************************************
Average Delay (sec/veh):        0.0       Worst Case Level Of Service: A[  0.0]
********************************************************************************
Street Name:Recycling Center Driveway No. 1 (          Adams Avenue
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign        Uncontrolled     Uncontrolled
Rights:           Include          Include          Include          Include
Lanes:        0  0  0  0  0   0  0  0  0  0   0  0  2  1  0   0  0  2  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0    0    0     0    0 1649    15    0  924     0
Growth Adj:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Initial Bse:    0    0     0    0    0     0    0 1649    15    0  924     0
Added Vol:      0    0     0    0    0     0    0    0     0    0    0     0
PasserByVol:    0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:    0    0     0    0    0     0    0 1649    15    0  924     0
User Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.95 0.95 0.95  0.95 0.95 0.95  0.95 0.95 0.95  0.95
PHF Volume:     0    0     0    0    0     0    0 1736    16    0  973     0
Reduct Vol:     0    0     0    0    0     0    0    0     0    0    0     0
FinalVolume:    0    0     0    0    0     0    0 1736    16    0  973     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *    *    *     *    *    *     *    *    *     *
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *    *    *     *    *    *     *    *    *     *
ApproachDel:      xxxxxx           xxxxxx           xxxxxx           xxxxxx
ApproachLOS:         *                *                *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                                 PM Cumulative
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                      Level Of Service Computation Report
            2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #24 Recycling Center Driveway No. 1 (Inbound Only) at Adams Avenue
********************************************************************************
Average Delay (sec/veh):        0.0       Worst Case Level Of Service: A[  0.0]
********************************************************************************
Street Name:Recycling Center Driveway No. 1 (              Adams Avenue
Approach:       North Bound       South Bound        East Bound        West Bound
Movement:     L  -  T  -  R    L  -  T  -  R     L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign         Stop Sign        Uncontrolled      Uncontrolled
Rights:          Include           Include           Include           Include
Lanes:        0  0  0  0  0    0  0  0  0  0     0  0  2  1  0    0  0  2  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0     0    0     0      0 1043    30      0 1703     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00
Initial Bse:    0    0     0     0    0     0      0 1043    30      0 1703     0
Added Vol:      0    0     0     0    0     0      0    0     0      0    0     0
PasserByVol:    0    0     0     0    0     0      0    0     0      0    0     0
Initial Fut:    0    0     0     0    0     0      0 1043    30      0 1703     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.95  0.95 0.95  0.95   0.95 0.95  0.95   0.95 0.95  0.95
PHF Volume:     0    0     0     0    0     0      0 1098    32      0 1793     0
Reduct Vol:     0    0     0     0    0     0      0    0     0      0    0     0
FinalVolume:    0    0     0     0    0     0      0 1098    32      0 1793     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     *      *    *     *      *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *      *    *     *      *    *     *
ApproachDel:     xxxxxx           xxxxxx            xxxxxx            xxxxxx
ApproachLOS:        *                *                 *                 *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                         PM Cumulative Plus Project
                     2.13.3396.1 Orange Coast College
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                      Level Of Service Computation Report
           2000 HCM Unsignalized Method (Future Volume Alternative)
*******************************************************************************
Intersection #24 Recycling Center Driveway No. 1 (Inbound Only) at Adams Avenue
*******************************************************************************
Average Delay (sec/veh):       0.0      Worst Case Level Of Service: A[  0.0]
*******************************************************************************
Street Name:Recycling Center Driveway No. 1 (          Adams Avenue
Approach:     North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:          Include          Include          Include          Include
Lanes:        0  0  0  0  0    0  0  0  0  0    0  0  2  1  0    0  0  2  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0     0    0     0     0 1198    90     0 1933     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     0     0    0     0     0 1198    90     0 1933     0
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0    0     0     0    0     0     0 1198    90     0 1933     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:     0    0     0     0    0     0     0 1261    95     0 2035     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0    0     0     0    0     0     0 1261    95     0 2035     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:     xxxxxx           xxxxxx           xxxxxx           xxxxxx
ApproachLOS:        *                *                *                *
*******************************************************************************
Note: Queue reported is the number of cars per lane.
*******************************************************************************
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                              AM Cumulative
                     2.13.3396.1 Orange Coast College
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                    Level Of Service Computation Report
         2000 HCM Unsignalized Method (Future Volume Alternative)
*******************************************************************************
Intersection #25 Recycling Center Driveway No. 2 (Outbound Only) at Adams Avenue
*******************************************************************************
Average Delay (sec/veh):       0.0       Worst Case Level Of Service: B[ 12.6]
*******************************************************************************
Street Name:Recycling Center Driveway No. 2 (           Adams Avenue
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:          Include          Include          Include          Include
Lanes:        0  0  0  0  1    0  0  0  0  0    0  0  3  0  0    0  0  2  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0     5     0     0     0     0  1591     0     0   715     0
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:    0     0     5     0     0     0     0  1591     0     0   715     0
Added Vol:      0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:    0     0     5     0     0     0     0  1591     0     0   715     0
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95
PHF Volume:     0     0     5     0     0     0     0  1675     0     0   753     0
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
FinalVolume:    0     0     5     0     0     0     0  1675     0     0   753     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx   558  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx   478  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx   478  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  0.01  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx   0.0  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx  12.6 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:     *    *     B     *    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:      *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:        12.6            xxxxxx           xxxxxx           xxxxxx
ApproachLOS:          B                *                *                *
*******************************************************************************
Note: Queue reported is the number of cars per lane.
*******************************************************************************
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                      Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #25 Recycling Center Driveway No. 2 (Outbound Only) at Adams Avenue
********************************************************************************
Average Delay (sec/veh):        0.1        Worst Case Level Of Service: B[ 13.0]
********************************************************************************
Street Name:Recycling Center Driveway No. 2 (             Adams Avenue
Approach:      North Bound      South Bound       East Bound        West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled      Uncontrolled
Rights:           Include          Include          Include           Include
Lanes:        0  0  0  0  1   0  0  0  0  0   0  0  3  0  0   0  0  2  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0    15     0     0     0     0  1649     0     0   924     0
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:    0     0    15     0     0     0     0  1649     0     0   924     0
Added Vol:      0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:    0     0    15     0     0     0     0  1649     0     0   924     0
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95
PHF Volume:     0     0    16     0     0     0     0  1736     0     0   973     0
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
FinalVolume:    0     0    16     0     0     0     0  1736     0     0   973     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx   579  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx   464  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx   464  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  0.03  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx   0.1  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx  13.0 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *     *     B     *     *     *     *     *     *     *     *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *     *     *     *     *     *     *     *     *     *     *     *
ApproachDel:       13.0            xxxxxx            xxxxxx            xxxxxx
ApproachLOS:          B                 *                 *                 *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                      Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #25 Recycling Center Driveway No. 2 (Outbound Only) at Adams Avenue
********************************************************************************
Average Delay (sec/veh):      0.1      Worst Case Level Of Service: B[ 10.9]
********************************************************************************
Street Name:Recycling Center Driveway No. 2 (           Adams Avenue
Approach:     North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:         Include          Include          Include          Include
Lanes:       0  0  0  0  1    0  0  0  0  0    0  0  3  0  0    0  0  2  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0   30     0    0     0     0 1043     0     0 1703     0
Growth Adj:  1.00 1.00 1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0   30     0    0     0     0 1043     0     0 1703     0
Added Vol:      0    0    0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0    0     0    0     0     0    0     0     0    0     0
Initial Fut:    0    0   30     0    0     0     0 1043     0     0 1703     0
User Adj:    1.00 1.00 1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.95 0.95 0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:     0    0   32     0    0     0     0 1098     0     0 1793     0
Reduct Vol:     0    0    0     0    0     0     0    0     0     0    0     0
FinalVolume:    0    0   32     0    0     0     0 1098     0     0 1793     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx  6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx  3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx  366  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx  637  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx  637  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx 0.05  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx  0.2  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx 10.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *    B     *    *     *     *    *     *     *    *     *
Movement:    LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *    *     *    *     *     *    *     *     *    *     *
ApproachDel:      10.9            xxxxxx           xxxxxx           xxxxxx
ApproachLOS:        B                *                *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                        PM Cumulative Plus Project
                     2.13.3396.1 Orange Coast College
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                      Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
*********************************************************************************
Intersection #25 Recycling Center Driveway No. 2 (Outbound Only) at Adams Avenue
*********************************************************************************
Average Delay (sec/veh):       0.3       Worst Case Level Of Service: B[ 12.3]
*********************************************************************************
Street Name:Recycling Center Driveway No. 2 (           Adams Avenue
Approach:     North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------||----------------||----------------||----------------|
Control:       Stop Sign        Stop Sign        Uncontrolled     Uncontrolled
Rights:          Include          Include          Include          Include
Lanes:        0  0  0  0  1    0  0  0  0  0    0  0  3  0  0    0  0  2  0  0
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:        0     0    90     0     0     0     0  1198     0     0  1933     0
Growth Adj:   1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:     0     0    90     0     0     0     0  1198     0     0  1933     0
Added Vol:       0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:     0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:     0     0    90     0     0     0     0  1198     0     0  1933     0
User Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:      0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95
PHF Volume:      0     0    95     0     0     0     0  1261     0     0  2035     0
Reduct Vol:      0     0     0     0     0     0     0     0     0     0     0     0
FinalVolume:     0     0    95     0     0     0     0  1261     0     0  2035     0
------------|----------------||----------------||----------------||----------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
------------|----------------||----------------||----------------||----------------|
Capacity Module:
Cnflict Vol: xxxx xxxx   420  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx   587  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx   587  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  0.16  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|----------------||----------------||----------------||----------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx   0.6  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx  12.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:     *     *     B     *     *     *     *     *     *     *     *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:      *     *     *     *     *     *     *     *     *     *     *     *
ApproachDel:        12.3            xxxxxx           xxxxxx           xxxxxx
ApproachLOS:           B               *                *                *
*********************************************************************************
Note: Queue reported is the number of cars per lane.
*********************************************************************************
```

AM Cum
2.13.3396.1 Orange Coast College
Additional Intersections

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Mesa Verde Drive/Placentia Avenue at Adams Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.807
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	118	Level Of Service:	D

Street Name:	Mesa Verde Drive/Placentia Avenue						Adams Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:		Protected			Protected			Protected			Protected	
Rights:		Include			Include			Ovl			Include	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0 1 0 1			1 0 2 0 1			1 0 3 0 1			1 0 2 1 0		
Volume Module:												
Base Vol:	204	262	252	27	268	122	111	2475	226	177	701	25
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	204	262	252	27	268	122	111	2475	226	177	701	25
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	204	262	252	27	268	122	111	2475	226	177	701	25
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	204	262	252	27	268	122	111	2475	226	177	701	25
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	204	262	252	27	268	122	111	2475	226	177	701	25
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	204	262	252	27	268	122	111	2475	226	177	701	25
OvlAdjVol:									124			
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	1.00	1.00	1.00	2.00	1.00	1.00	3.00	1.00	1.00	2.90	0.10
Final Sat.:	3200	1600	1600	1600	3200	1600	1600	4800	1600	1600	4635	165
Capacity Analysis Module:												
Vol/Sat:	0.06	0.16	0.16	0.02	0.08	0.08	0.07	0.52	0.14	0.11	0.15	0.15
OvlAdjV/S:									0.08			
Crit Moves:		****		****				****		****		

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--------------------------------------------------------------------------------
                         AM Cum Plus Project
                  2.13.3396.1 Orange Coast College
                     Additional Intersections
--------------------------------------------------------------------------------

                 Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #1 Mesa Verde Drive/Placentia Avenue at Adams Avenue
********************************************************************************
Cycle (sec):          100                 Critical Vol./Cap.(X):         0.832
Loss Time (sec):        0                 Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        136                 Level Of Service:                  D
********************************************************************************
Street Name:Mesa Verde Drive/Placentia Avenue          Adams Avenue
Approach:     North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Protected        Protected        Protected        Protected
Rights:          Include          Include           Ovl             Include
Min. Green:    0    0    0    0    0    0    0    0    0    0    0    0
Y+R:         4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0
Lanes:       2  0  1  0  1   1  0  2  0  1   1  0  3  0  1   1  0  2  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:    204  262  261   37  268  122  111 2562  226  178  719   27
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 204  262  261   37  268  122  111 2562  226  178  719   27
Added Vol:     0    0    0    0    0    0    0    0    0    0    0    0
PasserByVol:   0    0    0    0    0    0    0    0    0    0    0    0
Initial Fut: 204  262  261   37  268  122  111 2562  226  178  719   27
User Adj:   1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:    1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume:  204  262  261   37  268  122  111 2562  226  178  719   27
Reduct Vol:    0    0    0    0    0    0    0    0    0    0    0    0
Reduced Vol: 204  262  261   37  268  122  111 2562  226  178  719   27
PCE Adj:    1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj:    1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 204  262  261   37  268  122  111 2562  226  178  719   27
OvlAdjVol:                                                124
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:   1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes:      2.00 1.00 1.00 1.00 2.00 1.00 1.00 3.00 1.00 1.00 2.89 0.11
Final Sat.: 3200 1600 1600 1600 3200 1600 1600 4800 1600 1600 4626  174
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.06 0.16 0.16 0.02 0.08 0.08 0.07 0.53 0.14 0.11 0.16 0.16
OvlAdjV/S:                                                0.08
Crit Moves:       ****  ****                       ****       ****
********************************************************************************
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---------------------------------------------------------------------------------
                                 PM Cum
                   2.13.3396.1 Orange Coast College
                       Additional Intersections
---------------------------------------------------------------------------------

                  Level Of Service Computation Report
     ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*********************************************************************************
Intersection #1 Mesa Verde Drive/Placentia Avenue at Adams Avenue
*********************************************************************************
Cycle (sec):          100              Critical Vol./Cap.(X):          0.811
Loss Time (sec):        0              Average Delay (sec/veh):       xxxxxx
Optimal Cycle:        121              Level Of Service:                   D
*********************************************************************************
Street Name:Mesa Verde Drive/Placentia Avenue          Adams Avenue
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected        Protected        Protected
Rights:          Include          Include            Ovl            Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Y+R:         4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:         2  0  1  0  1    1  0  2  0  1    1  0  3  0  1    1  0  2  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:    275   133   245   28   150   237   78   799   203  188  2499    38
Growth Adj: 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Initial Bse: 275   133   245   28   150   237   78   799   203  188  2499    38
Added Vol:     0     0     0    0     0     0    0     0     0    0     0     0
PasserByVol:   0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut: 275   133   245   28   150   237   78   799   203  188  2499    38
User Adj:   1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Volume:  275   133   245   28   150   237   78   799   203  188  2499    38
Reduct Vol:    0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol: 275   133   245   28   150   237   78   799   203  188  2499    38
PCE Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
MLF Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
FinalVolume: 275   133   245   28   150   237   78   799   203  188  2499    38
OvlAdjVol:                                                    65
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:   1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600  1600
Adjustment: 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Lanes:      2.00  1.00  1.00 1.00  2.00  1.00 1.00  3.00  1.00 1.00  2.96  0.04
Final Sat.: 3200  1600  1600 1600  3200  1600 1600  4800  1600 1600  4728    72
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.09  0.08  0.15 0.02  0.05  0.15 0.05  0.17  0.13 0.12  0.53  0.53
OvlAdjV/S:                                                  0.04
Crit Moves: ****                          **** ****                    ****
*********************************************************************************
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--------------------------------------------------------------------------------
                            PM Cum Plus Project
                     2.13.3396.1 Orange Coast College
                         Additional Intersections
--------------------------------------------------------------------------------
                    Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #1 Mesa Verde Drive/Placentia Avenue at Adams Avenue
********************************************************************************
Cycle (sec):         100                Critical Vol./Cap.(X):          0.828
Loss Time (sec):       0                Average Delay (sec/veh):       xxxxxx
Optimal Cycle:       133                Level Of Service:                   D
********************************************************************************
Street Name:Mesa Verde Drive/Placentia Avenue             Adams Avenue
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Protected        Protected        Protected        Protected
Rights:          Include          Include           Ovl             Include
Min. Green:    0    0     0    0    0     0    0    0     0    0    0     0
Y+R:         4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:       2  0  1  0  1   1  0  2  0  1   1  0  3  0  1   1  0  2  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:    275  133   252   36  150   237   78  869   203  197 2568    49
Growth Adj: 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Initial Bse: 275  133   252   36  150   237   78  869   203  197 2568    49
Added Vol:     0    0     0    0    0     0    0    0     0    0    0     0
PasserByVol:   0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut: 275  133   252   36  150   237   78  869   203  197 2568    49
User Adj:   1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Volume:  275  133   252   36  150   237   78  869   203  197 2568    49
Reduct Vol:    0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol: 275  133   252   36  150   237   78  869   203  197 2568    49
PCE Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume: 275  133   252   36  150   237   78  869   203  197 2568    49
OvlAdjVol:                                                 65
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:   1600 1600  1600 1600 1600  1600 1600 1600  1600 1600 1600  1600
Adjustment: 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Lanes:      2.00 1.00  1.00 1.00 2.00  1.00 1.00 3.00  1.00 1.00 2.94  0.06
Final Sat.: 3200 1600  1600 1600 3200  1600 1600 4800  1600 1600 4710    90
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.09 0.08  0.16 0.02 0.05  0.15 0.05 0.18  0.13 0.12 0.55  0.55
OvlAdjV/S:                                               0.04
Crit Moves: ****                       **** ****                     ****
********************************************************************************
```

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--------------------------------------------------------------------------------
                                   AM Cum
                        2.13.3396.1 Orange Coast College
                          Additional Intersections
--------------------------------------------------------------------------------
                     Level Of Service Computation Report
        ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #2 Harbor Boulevard at South Coast Drive
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):         0.507
Loss Time (sec):       0              Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        38              Level Of Service:                  A
********************************************************************************
Street Name:             Harbor Boulevard                 South Coast Drive
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected        Permitted        Protected
Rights:            Ovl             Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Y+R:         4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:        2  0  3  1  1   2  0  4  0  1   1  0  0  1  1   2  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     284 1727   245    99 2016    72    13   38   222    69  161    51
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  284 1727   245    99 2016    72    13   38   222    69  161    51
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  284 1727   245    99 2016    72    13   38   222    69  161    51
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   284 1727   245    99 2016    72    13   38   222    69  161    51
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  284 1727   245    99 2016    72    13   38   222    69  161    51
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  284 1727   245    99 2016    72    13   38   222    69  161    51
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 4.00  1.00  2.00 4.00  1.00  1.00 0.29  1.71  2.00 2.00  1.00
Final Sat.:  3200 6400  1600  3200 6400  1600  1600  468  2732  3200 3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.09 0.27  0.15  0.03 0.32  0.05  0.01 0.08  0.08  0.02 0.05  0.03
Crit Moves:  ****                    ****             ****       ****
********************************************************************************
```

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--------------------------------------------------------------------------------
                             AM Cum Plus Project
                      2.13.3396.1 Orange Coast College
                          Additional Intersections
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                      Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #2 Harbor Boulevard at South Coast Drive
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):         0.515
Loss Time (sec):       0              Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        38              Level Of Service:                  A
********************************************************************************
Street Name:              Harbor Boulevard                South Coast Drive
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected         Permitted        Protected
Rights:            Ovl             Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Y+R:         4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:        2  0  3  1  1   2  0  4  0  1   1  0  0  1  1   2  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     284 1741   245    99 2072    72    13    38   222    69   161    51
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  284 1741   245    99 2072    72    13    38   222    69   161    51
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  284 1741   245    99 2072    72    13    38   222    69   161    51
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   284 1741   245    99 2072    72    13    38   222    69   161    51
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  284 1741   245    99 2072    72    13    38   222    69   161    51
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  284 1741   245    99 2072    72    13    38   222    69   161    51
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 4.00  1.00  2.00 4.00  1.00  1.00 0.29  1.71  2.00 2.00  1.00
Final Sat.:  3200 6400  1600  3200 6400  1600  1600  468  2732  3200 3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.09 0.27  0.15  0.03 0.32  0.05  0.01 0.08  0.08  0.02 0.05  0.03
Crit Moves:  ****                  ****              ****        ****
********************************************************************************
```

PM Cum
2.13.3396.1 Orange Coast College
Additional Intersections

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Harbor Boulevard at South Coast Drive

Cycle (sec):	100	Critical Vol./Cap.(X):	0.732
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	150	Level Of Service:	C

Street Name:	Harbor Boulevard						South Coast Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Protected		
Rights:	Ovl			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	3 1	1	2 0	4 0	1	1 0	0 1	1	2 0	2 0	1
Volume Module:												
Base Vol:	431	2046	233	148	1732	118	35	76	386	410	1044	261
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	431	2046	233	148	1732	118	35	76	386	410	1044	261
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	431	2046	233	148	1732	118	35	76	386	410	1044	261
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	431	2046	233	148	1732	118	35	76	386	410	1044	261
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	431	2046	233	148	1732	118	35	76	386	410	1044	261
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	431	2046	233	148	1732	118	35	76	386	410	1044	261
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	4.00	1.00	2.00	4.00	1.00	1.00	0.33	1.67	2.00	2.00	1.00
Final Sat.:	3200	6400	1600	3200	6400	1600	1600	526	2674	3200	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.13	0.32	0.15	0.05	0.27	0.07	0.02	0.14	0.14	0.13	0.33	0.16
Crit Moves:	****				****						****	

```
-------------------------------------------------------------------------------
                            PM Cum Plus Project
                      2.13.3396.1 Orange Coast College
                         Additional Intersections
-------------------------------------------------------------------------------
                     Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*******************************************************************************
Intersection #2 Harbor Boulevard at South Coast Drive
*******************************************************************************
Cycle (sec):           100               Critical Vol./Cap.(X):         0.738
Loss Time (sec):         0               Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         159               Level Of Service:                  C
*******************************************************************************
Street Name:           Harbor Boulevard               South Coast Drive
Approach:        North Bound      South Bound      East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected         Permitted        Protected
Rights:            Ovl             Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Y+R:         4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:         2  0  3  1  1   2  0  4  0  1   1  0  0  1  1   2  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     431  2098   233   148  1776   118    35    76   386   410  1044   261
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:  431  2098   233   148  1776   118    35    76   386   410  1044   261
Added Vol:      0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:  431  2098   233   148  1776   118    35    76   386   410  1044   261
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:   431  2098   233   148  1776   118    35    76   386   410  1044   261
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:  431  2098   233   148  1776   118    35    76   386   410  1044   261
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:  431  2098   233   148  1776   118    35    76   386   410  1044   261
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       2.00  4.00  1.00  2.00  4.00  1.00  1.00  0.33  1.67  2.00  2.00  1.00
Final Sat.:  3200  6400  1600  3200  6400  1600  1600   526  2674  3200  3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.13  0.33  0.15  0.05  0.28  0.07  0.02  0.14  0.14  0.13  0.33  0.16
Crit Moves:  ****                    ****                                ****
*******************************************************************************
```

AM Cum
2.13.3396.1 Orange Coast College
Additional Intersections

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Harbor Boulevard at I-405 NB Ramps

Cycle (sec):	100	Critical Vol./Cap.(X):	0.502
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	37	Level Of Service:	A

Street Name:	Harbor Boulevard						I-405 NB Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Ignore			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	4	0 0	0 0	4	0 1	0 0	0	0 0	1 0	1!	0 1
Volume Module:												
Base Vol:	0	1389	0	0	1418	1334	0	0	0	498	0	850
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1389	0	0	1418	1334	0	0	0	498	0	850
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	1389	0	0	1418	1334	0	0	0	498	0	850
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1389	0	0	1418	0	0	0	0	498	0	850
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1389	0	0	1418	0	0	0	0	498	0	850
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1389	0	0	1418	0	0	0	0	498	0	850
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	4.00	0.00	0.00	4.00	1.00	0.00	0.00	0.00	1.11	xxxx	1.89
Final Sat.:	0	6400	0	0	6400	1600	0	0	0	1773	0	3027
Capacity Analysis Module:												
Vol/Sat:	0.00	0.22	0.00	0.00	0.22	0.00	0.00	0.00	0.00	0.28	0.00	0.28
Crit Moves:	****				****							****

AM Cum Plus Project
2.13.3396.1 Orange Coast College
Additional Intersections

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Harbor Boulevard at I-405 NB Ramps

Cycle (sec):	100	Critical Vol./Cap.(X):	0.511
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	38	Level Of Service:	A

Street Name:	Harbor Boulevard						I-405 NB Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Ignore			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	4	0 0	0 0	4	0 1	0 0	0	0 0	1 0	1!	0 1
Volume Module:												
Base Vol:	0	1403	0	0	1474	1334	0	0	0	498	0	850
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1403	0	0	1474	1334	0	0	0	498	0	850
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	1403	0	0	1474	1334	0	0	0	498	0	850
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1403	0	0	1474	0	0	0	0	498	0	850
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1403	0	0	1474	0	0	0	0	498	0	850
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1403	0	0	1474	0	0	0	0	498	0	850
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	4.00	0.00	0.00	4.00	1.00	0.00	0.00	0.00	1.11	xxxx	1.89
Final Sat.:	0	6400	0	0	6400	1600	0	0	0	1773	0	3027
Capacity Analysis Module:												
Vol/Sat:	0.00	0.22	0.00	0.00	0.23	0.00	0.00	0.00	0.00	0.28	0.00	0.28
Crit Moves:	****				****							****

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--------------------------------------------------------------------------------
                                    PM Cum
                       2.13.3396.1 Orange Coast College
                          Additional Intersections
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                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #3 Harbor Boulevard at I-405 NB Ramps
********************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):         0.654
Loss Time (sec):        0               Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         54               Level Of Service:                  B
********************************************************************************
Street Name:              Harbor Boulevard                  I-405 NB Ramps
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Permitted        Permitted       Split Phase      Split Phase
Rights:           Include          Ignore           Include          Include
Min. Green:    0    0    0    0    0    0    0    0    0    0    0    0
Y+R:         4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0
Lanes:       0  0  4  0  0   0  0  4  0  1   0  0  0  0  0   1  0  1! 0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0 1685    0     0 1742  1128     0    0     0   798    0  1037
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0 1685    0     0 1742  1128     0    0     0   798    0  1037
Added Vol:      0    0    0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0    0     0    0     0     0    0     0     0    0     0
Initial Fut:    0 1685    0     0 1742  1128     0    0     0   798    0  1037
User Adj:    1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0 1685    0     0 1742     0     0    0     0   798    0  1037
Reduct Vol:     0    0    0     0    0     0     0    0     0     0    0     0
Reduced Vol:    0 1685    0     0 1742     0     0    0     0   798    0  1037
PCE Adj:     1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:    0 1685    0     0 1742     0     0    0     0   798    0  1037
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 4.00  0.00  0.00 4.00  1.00  0.00 0.00  0.00  1.30 0.00  1.70
Final Sat.:     0 6400     0     0 6400  1600     0    0     0  2087    0  2713
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.26  0.00  0.00 0.27  0.00  0.00 0.00  0.00  0.38 0.00  0.38
Crit Moves:  ****                  ****                          ****
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--------------------------------------------------------------------------------
                               PM Cum Plus Project
                         2.13.3396.1 Orange Coast College
                            Additional Intersections
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                       Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #3 Harbor Boulevard at I-405 NB Ramps
********************************************************************************
Cycle (sec):          100                 Critical Vol./Cap.(X):         0.661
Loss Time (sec):        0                 Average Delay (sec/veh):       xxxxxx
Optimal Cycle:         55                 Level Of Service:                  B
********************************************************************************
Street Name:              Harbor Boulevard                  I-405 NB Ramps
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted         Permitted       Split Phase      Split Phase
Rights:          Include           Ignore           Include          Include
Min. Green:    0    0     0    0    0     0    0    0     0    0    0     0
Y+R:         4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:       0  0  4  0  0    0  0  4  0  1    0  0  0  0  0    1  0  1! 0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0 1737     0     0 1786  1128     0    0     0   798    0  1037
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   0 1737     0     0 1786  1128     0    0     0   798    0  1037
Added Vol:     0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:   0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   0 1737     0     0 1786  1128     0    0     0   798    0  1037
User Adj:    1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    0 1737     0     0 1786     0     0    0     0   798    0  1037
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   0 1737     0     0 1786     0     0    0     0   798    0  1037
PCE Adj:     1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   0 1737     0     0 1786     0     0    0     0   798    0  1037
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 4.00  0.00  0.00 4.00  1.00  0.00 0.00  0.00  1.30 0.00  1.70
Final Sat.:    0 6400     0     0 6400  1600     0    0     0  2087    0  2713
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.27  0.00  0.00 0.28  0.00  0.00 0.00  0.00  0.38 0.00  0.38
Crit Moves:  ****                    ****                         ****
********************************************************************************
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                                    AM Cum
                      2.13.3396.1 Orange Coast College
                          Additional Intersections
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #4 Harbor Boulevard at I-405 SB Ramps
********************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):         0.468
Loss Time (sec):        0               Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         35               Level Of Service:                  A
********************************************************************************
Street Name:          Harbor Boulevard                    I-405 SB Ramps
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted       Split Phase      Split Phase
Rights:           Ignore          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Y+R:         4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:        0  0  3  0  1    0  0  4  0  0    1  0  1! 0  1    0  0  0  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0  1033   548    0  1941     0  308     0   482    0     0     0
Growth Adj:  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Initial Bse:   0  1033   548    0  1941     0  308     0   482    0     0     0
Added Vol:     0     0     0    0     0     0    0     0     0    0     0     0
PasserByVol:   0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut:   0  1033   548    0  1941     0  308     0   482    0     0     0
User Adj:    1.00  1.00  0.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Adj:     1.00  1.00  0.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Volume:    0  1033     0    0  1941     0  308     0   482    0     0     0
Reduct Vol:    0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol:   0  1033     0    0  1941     0  308     0   482    0     0     0
PCE Adj:     1.00  1.00  0.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
MLF Adj:     1.00  1.00  0.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
FinalVolume:   0  1033     0    0  1941     0  308     0   482    0     0     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600  1600
Adjustment:  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Lanes:       0.00  3.00  1.00 0.00  4.00  0.00 1.17  xxxx  1.83 0.00  0.00  0.00
Final Sat.:    0  4800  1600    0  6400     0 1871     0  2929    0     0     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00  0.22  0.00 0.00  0.30  0.00 0.16  0.00  0.16 0.00  0.00  0.00
Crit Moves:  ****                   ****                   ****
********************************************************************************
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                              AM Cum Plus Project
                       2.13.3396.1 Orange Coast College
                           Additional Intersections
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                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #4 Harbor Boulevard at I-405 SB Ramps
********************************************************************************
Cycle (sec):          100              Critical Vol./Cap.(X):         0.497
Loss Time (sec):        0              Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         37              Level Of Service:                  A
********************************************************************************
Street Name:          Harbor Boulevard                    I-405 SB Ramps
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted       Split Phase      Split Phase
Rights:           Ignore          Include          Include          Include
Min. Green:    0     0     0   0     0     0   0     0     0   0     0     0
Y+R:         4.0   4.0   4.0 4.0   4.0   4.0 4.0   4.0   4.0 4.0   4.0   4.0
Lanes:         0  0  3  0  1   0  0  4  0  0   1  0  1! 0  1   0  0  0  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0  1047   570   0  1997     0   308     0   578   0     0     0
Growth Adj:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Initial Bse:   0  1047   570   0  1997     0   308     0   578   0     0     0
Added Vol:     0     0     0   0     0     0     0     0     0   0     0     0
PasserByVol:   0     0     0   0     0     0     0     0     0   0     0     0
Initial Fut:   0  1047   570   0  1997     0   308     0   578   0     0     0
User Adj:    1.00 1.00  0.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:     1.00 1.00  0.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Volume:    0  1047     0   0  1997     0   308     0   578   0     0     0
Reduct Vol:    0     0     0   0     0     0     0     0     0   0     0     0
Reduced Vol:   0  1047     0   0  1997     0   308     0   578   0     0     0
PCE Adj:     1.00 1.00  0.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:     1.00 1.00  0.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume:   0  1047     0   0  1997     0   308     0   578   0     0     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600 1600 1600  1600 1600 1600  1600 1600 1600  1600
Adjustment:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Lanes:       0.00 3.00  1.00 0.00 4.00  0.00 1.04 xxxx  1.96 0.00 0.00  0.00
Final Sat.:    0  4800  1600   0  6400     0  1669    0  3131    0    0     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.22  0.00 0.00 0.31  0.00 0.18 0.00  0.18 0.00 0.00  0.00
Crit Moves:  ****                  ****        ****
********************************************************************************
```

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--------------------------------------------------------------------------------
                                    PM Cum
                     2.13.3396.1 Orange Coast College
                           Additional Intersections
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                      Level Of Service Computation Report
          ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #4 Harbor Boulevard at I-405 SB Ramps
********************************************************************************
Cycle (sec):          100                Critical Vol./Cap.(X):         0.672
Loss Time (sec):        0                Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         57                Level Of Service:                  B
********************************************************************************
Street Name:          Harbor Boulevard                    I-405 SB Ramps
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted       Split Phase      Split Phase
Rights:           Ignore           Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Y+R:         4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:         0  0  3  0  1    0  0  4  0  0    1  0  1! 0  1    0  0  0  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0  1461   707     0  2566     0  178     0   868     0     0     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   0  1461   707     0  2566     0  178     0   868     0     0     0
Added Vol:     0     0     0     0     0     0    0     0     0     0     0     0
PasserByVol:   0     0     0     0     0     0    0     0     0     0     0     0
Initial Fut:   0  1461   707     0  2566     0  178     0   868     0     0     0
User Adj:    1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    0  1461     0     0  2566     0  178     0   868     0     0     0
Reduct Vol:    0     0     0     0     0     0    0     0     0     0     0     0
Reduced Vol:   0  1461     0     0  2566     0  178     0   868     0     0     0
PCE Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   0  1461     0     0  2566     0  178     0   868     0     0     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 3.00  1.00  0.00 4.00  0.00  1.00 0.00  2.00  0.00 0.00  0.00
Final Sat.:    0  4800  1600     0  6400     0 1600     0  3200     0     0     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.30  0.00  0.00 0.40  0.00  0.11 0.00  0.27  0.00 0.00  0.00
Crit Moves:  ****                    ****                   ****
********************************************************************************
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--------------------------------------------------------------------------------
                              PM Cum Plus Project
                        2.13.3396.1 Orange Coast College
                           Additional Intersections
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                      Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #4 Harbor Boulevard at I-405 SB Ramps
********************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):         0.704
Loss Time (sec):        0               Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         63               Level Of Service:                  C
********************************************************************************
Street Name:          Harbor Boulevard                  I-405 SB Ramps
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted         Permitted       Split Phase      Split Phase
Rights:           Ignore           Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Y+R:         4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:        0  0  3  0  1    0  0  4  0  0    1  0  1! 0  1    0  0  0  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        0 1513   791     0 2610     0   178     0   947     0     0     0
Growth Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:     0 1513   791     0 2610     0   178     0   947     0     0     0
Added Vol:       0    0     0     0    0     0     0     0     0     0     0     0
PasserByVol:     0    0     0     0    0     0     0     0     0     0     0     0
Initial Fut:     0 1513   791     0 2610     0   178     0   947     0     0     0
User Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:      1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:      0 1513     0     0 2610     0   178     0   947     0     0     0
Reduct Vol:      0    0     0     0    0     0     0     0     0     0     0     0
Reduced Vol:     0 1513     0     0 2610     0   178     0   947     0     0     0
PCE Adj:      1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:      1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:     0 1513     0     0 2610     0   178     0   947     0     0     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:     1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:        0.00 3.00  1.00  0.00 4.00  0.00  1.00 0.00  2.00  0.00 0.00  0.00
Final Sat.:      0 4800  1600     0 6400     0  1600    0  3200     0     0     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:      0.00 0.32  0.00  0.00 0.41  0.00  0.11 0.00  0.30  0.00 0.00  0.00
Crit Moves:   ****                  ****                    ****
********************************************************************************
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--------------------------------------------------------------------------------
                                  AM Cum
                      2.13.3396.1 Orange Coast College
                         Additional Intersections
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                       Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #5 Harbor Boulevard at Victoria Street
********************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):         0.745
Loss Time (sec):        0               Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         90               Level Of Service:                  C
********************************************************************************
Street Name:          Harbor Boulevard                  Victoria Street
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Protected        Protected         Protected        Protected
Rights:          Include           Ovl             Include          Include
Min. Green:    0    0     0    0    0     0    0    0     0    0    0     0
Y+R:         4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:        1  0  3  0  1   1  0  3  0  1   2  0  2  0  1   2  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     59  652    48  144 1046   198  313 1420   148  150  690   132
Growth Adj:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Initial Bse:  59  652    48  144 1046   198  313 1420   148  150  690   132
Added Vol:     0    0     0    0    0     0    0    0     0    0    0     0
PasserByVol:   0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:  59  652    48  144 1046   198  313 1420   148  150  690   132
User Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Volume:   59  652    48  144 1046   198  313 1420   148  150  690   132
Reduct Vol:    0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:  59  652    48  144 1046   198  313 1420   148  150  690   132
PCE Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume:  59  652    48  144 1046   198  313 1420   148  150  690   132
OvlAdjVol:                                 42
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600 1600 1600  1600 1600 1600  1600 1600 1600  1600
Adjustment:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Lanes:       1.00 3.00  1.00 1.00 3.00  1.00 2.00 2.00  1.00 2.00 2.00  1.00
Final Sat.:  1600 4800  1600 1600 4800  1600 3200 3200  1600 3200 3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.04 0.14  0.03 0.09 0.22  0.12 0.10 0.44  0.09 0.05 0.22  0.08
OvlAdjV/S:                              0.03
Crit Moves:  ****                 ****            ****       ****
********************************************************************************
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--------------------------------------------------------------------------------
                           AM Cum Plus Project
                    2.13.3396.1 Orange Coast College
                        Additional Intersections
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                    Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #5 Harbor Boulevard at Victoria Street
********************************************************************************
Cycle (sec):          100              Critical Vol./Cap.(X):         0.746
Loss Time (sec):        0              Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         90              Level Of Service:                  C
********************************************************************************
Street Name:            Harbor Boulevard                  Victoria Street
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected        Protected        Protected
Rights:           Include           Ovl            Include          Include
Min. Green:     0    0     0    0    0     0    0    0     0    0    0     0
Y+R:          4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:         1  0  3  0  1   1  0  3  0  1   2  0  2  0  1   2  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      59  673    48  145 1050   201  331 1420   148  150  690   133
Growth Adj:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Initial Bse:   59  673    48  145 1050   201  331 1420   148  150  690   133
Added Vol:      0    0     0    0    0     0    0    0     0    0    0     0
PasserByVol:    0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:   59  673    48  145 1050   201  331 1420   148  150  690   133
User Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Volume:    59  673    48  145 1050   201  331 1420   148  150  690   133
Reduct Vol:     0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:   59  673    48  145 1050   201  331 1420   148  150  690   133
PCE Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume:   59  673    48  145 1050   201  331 1420   148  150  690   133
OvlAdjVol:                                  35
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600 1600 1600  1600 1600 1600  1600 1600 1600  1600
Adjustment:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Lanes:       1.00 3.00  1.00 1.00 3.00  1.00 2.00 2.00  1.00 2.00 2.00  1.00
Final Sat.:  1600 4800  1600 1600 4800  1600 3200 3200  1600 3200 3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.04 0.14  0.03 0.09 0.22  0.13 0.10 0.44  0.09 0.05 0.22  0.08
OvlAdjV/S:                              0.02
Crit Moves:  ****                ****             ****       ****
********************************************************************************
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--------------------------------------------------------------------------------
                                   PM Cum
                      2.13.3396.1 Orange Coast College
                         Additional Intersections
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
        ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #5 Harbor Boulevard at Victoria Street
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):         0.898
Loss Time (sec):       0              Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       180              Level Of Service:                  D
********************************************************************************
Street Name:           Harbor Boulevard                  Victoria Street
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected        Protected        Protected
Rights:          Include            Ovl            Include          Include
Min. Green:     0    0    0    0    0    0    0    0    0    0    0    0
Y+R:          4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0
Lanes:        1  0  3  0  1   1  0  3  0  1   2  0  2  0  1   2  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     206 1268  135   115 1348  354   257  583  145    94 1306  124
Growth Adj:  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Initial Bse:  206 1268  135   115 1348  354   257  583  145    94 1306  124
Added Vol:      0    0    0     0    0    0     0    0    0     0    0    0
PasserByVol:    0    0    0     0    0    0     0    0    0     0    0    0
Initial Fut:  206 1268  135   115 1348  354   257  583  145    94 1306  124
User Adj:    1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
PHF Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
PHF Volume:   206 1268  135   115 1348  354   257  583  145    94 1306  124
Reduct Vol:     0    0    0     0    0    0     0    0    0     0    0    0
Reduced Vol:  206 1268  135   115 1348  354   257  583  145    94 1306  124
PCE Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
MLF Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
FinalVolume:  206 1268  135   115 1348  354   257  583  145    94 1306  124
OvlAdjVol:                                226
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600 1600  1600 1600 1600  1600 1600 1600  1600 1600 1600
Adjustment:  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Lanes:       1.00 3.00 1.00  1.00 3.00 1.00  2.00 2.00 1.00  2.00 2.00 1.00
Final Sat.:  1600 4800 1600  1600 4800 1600  3200 3200 1600  3200 3200 1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.13 0.26 0.08  0.07 0.28 0.22  0.08 0.18 0.09  0.03 0.41 0.08
OvlAdjV/S:                               0.14
Crit Moves:  ****                 ****       ****                   ****
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--------------------------------------------------------------------------------
                              PM Cum Plus Project
                        2.13.3396.1 Orange Coast College
                            Additional Intersections
--------------------------------------------------------------------------------

                       Level Of Service Computation Report
          ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #5 Harbor Boulevard at Victoria Street
********************************************************************************
Cycle (sec):         100             Critical Vol./Cap.(X):        0.907
Loss Time (sec):       0             Average Delay (sec/veh):     xxxxxx
Optimal Cycle:       180             Level Of Service:                 E
********************************************************************************
Street Name:         Harbor Boulevard                 Victoria Street
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected        Protected        Protected
Rights:          Include            Ovl            Include          Include
Min. Green:    0    0     0    0    0     0    0    0     0    0    0     0
Y+R:          4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:        1  0  3  0  1   1  0  3  0  1   2  0  2  0  1   2  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     206 1286   135   117 1368   367   271  583   145    94 1306   126
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  206 1286   135   117 1368   367   271  583   145    94 1306   126
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  206 1286   135   117 1368   367   271  583   145    94 1306   126
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   206 1286   135   117 1368   367   271  583   145    94 1306   126
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  206 1286   135   117 1368   367   271  583   145    94 1306   126
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  206 1286   135   117 1368   367   271  583   145    94 1306   126
OvlAdjVol:                                232
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 3.00  1.00  1.00 3.00  1.00  2.00 2.00  1.00  2.00 2.00  1.00
Final Sat.:  1600 4800  1600  1600 4800  1600  3200 3200  1600  3200 3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.13 0.27  0.08  0.07 0.28  0.23  0.08 0.18  0.09  0.03 0.41  0.08
OvlAdjV/S:                                0.14
Crit Moves:  ****                  ****        ****                   ****
********************************************************************************
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AM Cum
2.13.3396.1 Orange Coast College
Additional Intersections

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #6 Fairview Road at South Coast Drive

Cycle (sec):	100	Critical Vol./Cap.(X):	0.767
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	98	Level Of Service:	C

Street Name:	Fairview Road						South Coast Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0 3 0 1			2 0 2 1 0			1 0 1 1 1			2 0 2 0 1		
Volume Module:												
Base Vol:	44	2105	68	250	1342	177	299	109	71	13	72	101
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	44	2105	68	250	1342	177	299	109	71	13	72	101
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	44	2105	68	250	1342	177	299	109	71	13	72	101
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	44	2105	68	250	1342	177	299	109	71	13	72	101
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	44	2105	68	250	1342	177	299	109	71	13	72	101
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	44	2105	68	250	1342	177	299	109	71	13	72	101
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	3.00	1.00	2.00	2.65	0.35	1.00	1.82	1.18	2.00	2.00	1.00
Final Sat.:	3200	4800	1600	3200	4241	559	1600	2907	1893	3200	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.01	0.44	0.04	0.08	0.32	0.32	0.19	0.04	0.04	0.00	0.02	0.06
Crit Moves:		****		****			****					****

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--------------------------------------------------------------------------------
                              AM Cum Plus Project
                       2.13.3396.1 Orange Coast College
                           Additional Intersections
--------------------------------------------------------------------------------

                     Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #6 Fairview Road at South Coast Drive
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):          0.770
Loss Time (sec):       0              Average Delay (sec/veh):       xxxxxx
Optimal Cycle:        99              Level Of Service:                   C
********************************************************************************
Street Name:             Fairview Road                  South Coast Drive
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected        Protected        Protected
Rights:          Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Y+R:          4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:         2  0  3  0  1   2  0  2  1  0   1  0  1  1  1   2  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      44 2121    68   250 1413   177   299  109    71    13   72   101
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   44 2121    68   250 1413   177   299  109    71    13   72   101
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   44 2121    68   250 1413   177   299  109    71    13   72   101
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    44 2121    68   250 1413   177   299  109    71    13   72   101
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   44 2121    68   250 1413   177   299  109    71    13   72   101
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   44 2121    68   250 1413   177   299  109    71    13   72   101
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 3.00  1.00  2.00 2.67  0.33  1.00 1.82  1.18  2.00 2.00  1.00
Final Sat.:  3200 4800  1600  3200 4266   534  1600 2907  1893  3200 3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.01 0.44  0.04  0.08 0.33  0.33  0.19 0.04  0.04  0.00 0.02  0.06
Crit Moves:       ****        ****             ****                         ****
********************************************************************************
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---------------------------------------------------------------------------------
                                   PM Cum
                      2.13.3396.1 Orange Coast College
                          Additional Intersections
---------------------------------------------------------------------------------

                      Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*********************************************************************************
Intersection #6 Fairview Road at South Coast Drive
*********************************************************************************
Cycle (sec):           100              Critical Vol./Cap.(X):            0.746
Loss Time (sec):         0              Average Delay (sec/veh):         xxxxxx
Optimal Cycle:          90              Level Of Service:                     C
*********************************************************************************
Street Name:              Fairview Road                  South Coast Drive
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Protected        Protected        Protected        Protected
Rights:          Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Y+R:         4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:        2  0  3  0  1    2  0  2  1  0    1  0  1  1  1    2  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     132  2149   399    82  1596    64    84   229   548   326   296   172
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:  132  2149   399    82  1596    64    84   229   548   326   296   172
Added Vol:      0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:  132  2149   399    82  1596    64    84   229   548   326   296   172
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:   132  2149   399    82  1596    64    84   229   548   326   296   172
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:  132  2149   399    82  1596    64    84   229   548   326   296   172
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:  132  2149   399    82  1596    64    84   229   548   326   296   172
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       2.00  3.00  1.00  2.00  2.88  0.12  1.00  1.00  2.00  2.00  2.00  1.00
Final Sat.:  3200  4800  1600  3200  4615   185  1600  1600  3200  3200  3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.04  0.45  0.25  0.03  0.35  0.35  0.05  0.14  0.17  0.10  0.09  0.11
Crit Moves:        ****        ****                          ****  ****
*********************************************************************************
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PM Cum Plus Project
2.13.3396.1 Orange Coast College
Additional Intersections

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #6 Fairview Road at South Coast Drive

Cycle (sec):	100	Critical Vol./Cap.(X):	0.758
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	94	Level Of Service:	C

Street Name:	Fairview Road						South Coast Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0 3 0 1			2 0 2 1 0			1 0 1 1 1			2 0 2 0 1		
Volume Module:												
Base Vol:	132	2206	399	82	1653	64	84	229	548	326	296	172
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	132	2206	399	82	1653	64	84	229	548	326	296	172
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	132	2206	399	82	1653	64	84	229	548	326	296	172
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	132	2206	399	82	1653	64	84	229	548	326	296	172
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	132	2206	399	82	1653	64	84	229	548	326	296	172
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	132	2206	399	82	1653	64	84	229	548	326	296	172
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	3.00	1.00	2.00	2.89	0.11	1.00	1.00	2.00	2.00	2.00	1.00
Final Sat.:	3200	4800	1600	3200	4621	179	1600	1600	3200	3200	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.04	0.46	0.25	0.03	0.36	0.36	0.05	0.14	0.17	0.10	0.09	0.11
Crit Moves:		****		****					****	****		

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-------------------------------------------------------------------------------
                                    AM Cum
                       2.13.3396.1 Orange Coast College
                           Additional Intersections
-------------------------------------------------------------------------------
                      Level Of Service Computation Report
        ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*******************************************************************************
Intersection #7 Bear Street at Baker Street
*******************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):         0.617
Loss Time (sec):        0               Average Delay (sec/veh):       xxxxxx
Optimal Cycle:         60               Level Of Service:                   B
*******************************************************************************
Street Name:                Bear Street                     Baker Street
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Protected        Protected        Protected        Protected
Rights:           Include            Ovl            Include          Include
Min. Green:     0     0     0    0     0     0    0     0     0    0     0     0
Y+R:          4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:         1  0  0  1  0   2  0  1  0  2   2  0  1  1  0   1  0  2  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      63   107    19   192   221   359   354  1079   279    24   461   104
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:   63   107    19   192   221   359   354  1079   279    24   461   104
Added Vol:      0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:   63   107    19   192   221   359   354  1079   279    24   461   104
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:    63   107    19   192   221   359   354  1079   279    24   461   104
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:   63   107    19   192   221   359   354  1079   279    24   461   104
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:   63   107    19   192   221   359   354  1079   279    24   461   104
OvlAdjVol:                                      5
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       1.00  0.85  0.15  2.00  1.00  2.00  2.00  1.59  0.41  1.00  2.45  0.55
Final Sat.:  1600  1359   241  3200  1600  3200  3200  2543   657  1600  3916   884
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.04  0.08  0.08  0.06  0.14  0.11  0.11  0.42  0.42  0.02  0.12  0.12
OvlAdjV/S:                                   0.00
Crit Moves:  ****                    ****              ****        ****
*******************************************************************************
```

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                              AM Cum Plus Project
                      2.13.3396.1 Orange Coast College
                          Additional Intersections
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
        ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #7 Bear Street at Baker Street
********************************************************************************
Cycle (sec):         100                 Critical Vol./Cap.(X):         0.618
Loss Time (sec):       0                 Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        60                 Level Of Service:                  B
********************************************************************************
Street Name:             Bear Street                        Baker Street
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Protected        Protected         Protected        Protected
Rights:            Include           Ovl              Include          Include
Min. Green:     0     0     0    0     0     0     0     0     0     0     0     0
Y+R:          4.0   4.0   4.0  4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0
Lanes:        1  0  0  1  0    2  0  1  0  2    2  0  1  1  0    1  0  2  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      63   107    19   192   221   370   357  1083   279    24   484   104
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:   63   107    19   192   221   370   357  1083   279    24   484   104
Added Vol:      0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:   63   107    19   192   221   370   357  1083   279    24   484   104
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:    63   107    19   192   221   370   357  1083   279    24   484   104
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:   63   107    19   192   221   370   357  1083   279    24   484   104
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:   63   107    19   192   221   370   357  1083   279    24   484   104
OvlAdjVol:                                     13
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       1.00  0.85  0.15  2.00  1.00  2.00  2.00  1.59  0.41  1.00  2.47  0.53
Final Sat.:  1600  1359   241  3200  1600  3200  3200  2544   656  1600  3951   849
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.04  0.08  0.08  0.06  0.14  0.12  0.11  0.43  0.43  0.02  0.12  0.12
OvlAdjV/S:                                   0.00
Crit Moves:  ****                    ****              ****        ****
********************************************************************************
```

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--------------------------------------------------------------------------------
                                   PM Cum
                      2.13.3396.1 Orange Coast College
                          Additional Intersections
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #7 Bear Street at Baker Street
********************************************************************************
Cycle (sec):          100                Critical Vol./Cap.(X):         0.755
Loss Time (sec):        0                Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         93                Level Of Service:                  C
********************************************************************************
Street Name:                Bear Street                    Baker Street
Approach:         North Bound      South Bound      East Bound       West Bound
Movement:       L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Protected        Protected        Protected        Protected
Rights:            Include           Ovl            Include          Include
Min. Green:     0     0     0   0     0     0   0     0     0   0     0     0
Y+R:          4.0   4.0   4.0 4.0   4.0   4.0 4.0   4.0   4.0 4.0   4.0   4.0
Lanes:         1  0  0  1  0   2  0  1  0  2   2  0  1  1  0   1  0  2  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     233   213    28   186   190   642   347   632   142    19  1585   250
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:  233   213    28   186   190   642   347   632   142    19  1585   250
Added Vol:      0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:  233   213    28   186   190   642   347   632   142    19  1585   250
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:   233   213    28   186   190   642   347   632   142    19  1585   250
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:  233   213    28   186   190   642   347   632   142    19  1585   250
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:  233   213    28   186   190   642   347   632   142    19  1585   250
OvlAdjVol:                                  295
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       1.00  0.88  0.12  2.00  1.00  2.00  2.00  1.63  0.37  1.00  2.59  0.41
Final Sat.:  1600  1414   186  3200  1600  3200  3200  2613   587  1600  4146   654
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.15  0.15  0.15  0.06  0.12  0.20  0.11  0.24  0.24  0.01  0.38  0.38
OvlAdjV/S:                                 0.09
Crit Moves:  ****                    ****        ****                    ****
********************************************************************************
```

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--------------------------------------------------------------------------------
                             PM Cum Plus Project
                       2.13.3396.1 Orange Coast College
                           Additional Intersections
--------------------------------------------------------------------------------

                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #7 Bear Street at Baker Street
********************************************************************************
Cycle (sec):          100                 Critical Vol./Cap.(X):         0.763
Loss Time (sec):        0                 Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         96                 Level Of Service:                  C
********************************************************************************
Street Name:                 Bear Street                     Baker Street
Approach:        North Bound      South Bound      East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Protected        Protected        Protected        Protected
Rights:            Include           Ovl            Include          Include
Min. Green:     0     0     0    0     0     0    0     0     0    0     0     0
Y+R:          4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:         1  0  0  1  0   2  0  1  0  2   2  0  1  1  0   1  0  2  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      233   213    28   186   190   651   359   655   142    19  1604   250
Growth Adj:   1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:   233   213    28   186   190   651   359   655   142    19  1604   250
Added Vol:       0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:     0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:   233   213    28   186   190   651   359   655   142    19  1604   250
User Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:      1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:    233   213    28   186   190   651   359   655   142    19  1604   250
Reduct Vol:      0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:   233   213    28   186   190   651   359   655   142    19  1604   250
PCE Adj:      1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:      1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:   233   213    28   186   190   651   359   655   142    19  1604   250
OvlAdjVol:                                   292
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:     1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:   1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:        1.00  0.88  0.12  2.00  1.00  2.00  2.00  1.64  0.36  1.00  2.60  0.40
Final Sat.:   1600  1414   186  3200  1600  3200  3200  2630   570  1600  4153   647
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:      0.15  0.15  0.15  0.06  0.12  0.20  0.11  0.25  0.25  0.01  0.39  0.39
OvlAdjV/S:                                  0.09
Crit Moves:   ****                    ****  ****                          ****
********************************************************************************
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--------------------------------------------------------------------------------
                                    AM Cum
                     2.13.3396.1 Orange Coast College
                        Additional Intersections
--------------------------------------------------------------------------------
                     Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #8 Newport Boulevard/SR-55 SB Ramps at Fair Drive
********************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):          0.382
Loss Time (sec):        0               Average Delay (sec/veh):       xxxxxx
Optimal Cycle:         30               Level Of Service:                   A
********************************************************************************
Street Name: Newport Boulevard/SR-55 SB Ramps                Fair Drive
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Split Phase      Split Phase        Permitted        Protected
Rights:           Include          Ignore           Include          Include
Min. Green:     0     0     0    0     0     0    0     0     0    0     0     0
Y+R:          4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:        0  0  0  0  0    1  0  3  0  1    0  0  3  1  0    1  0  2  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0     0  223   606   609    0  1005    47  125   300     0
Growth Adj:  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Initial Bse:    0     0     0  223   606   609    0  1005    47  125   300     0
Added Vol:      0     0     0    0     0     0    0     0     0    0     0     0
PasserByVol:    0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut:    0     0     0  223   606   609    0  1005    47  125   300     0
User Adj:    1.00  1.00  1.00 1.00  1.00  0.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00 1.00  1.00  0.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Volume:     0     0     0  223   606     0    0  1005    47  125   300     0
Reduct Vol:     0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol:    0     0     0  223   606     0    0  1005    47  125   300     0
PCE Adj:     1.00  1.00  1.00 1.00  1.00  0.00 1.00  1.00  1.00 1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00 1.00  1.00  0.00 1.00  1.00  1.00 1.00  1.00  1.00
FinalVolume:    0     0     0  223   606     0    0  1005    47  125   300     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600  1600
Adjustment:  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Lanes:       0.00  0.00  0.00 1.00  3.00  1.00 0.00  3.82  0.18 1.00  2.00  0.00
Final Sat.:     0     0     0 1600  4800  1600    0  6114   286 1600  3200     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00  0.00  0.00 0.14  0.13  0.00 0.00  0.16  0.16 0.08  0.09  0.00
Crit Moves:                   ****                    ****      ****
********************************************************************************
```

AM Cum Plus Project
2.13.3396.1 Orange Coast College
Additional Intersections

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #8 Newport Boulevard/SR-55 SB Ramps at Fair Drive

Cycle (sec):	100	Critical Vol./Cap.(X):	0.385
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	30	Level Of Service:	A

Street Name:	Newport Boulevard/SR-55 SB Ramps						Fair Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:		Split Phase			Split Phase			Permitted			Protected	
Rights:		Include			Ignore			Include			Include	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0 0 0 0			1 0 3 0 1			0 0 3 1 0			1 0 2 0 0		
Volume Module:												
Base Vol:	0	0	0	223	606	656	0	1020	52	125	354	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	223	606	656	0	1020	52	125	354	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	223	606	656	0	1020	52	125	354	0
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	223	606	0	0	1020	52	125	354	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	223	606	0	0	1020	52	125	354	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	223	606	0	0	1020	52	125	354	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	1.00	3.00	1.00	0.00	3.81	0.19	1.00	2.00	0.00
Final Sat.:	0	0	0	1600	4800	1600	0	6090	310	1600	3200	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.14	0.13	0.00	0.00	0.17	0.17	0.08	0.11	0.00
Crit Moves:				****				****		****		

PM Cum
2.13.3396.1 Orange Coast College
Additional Intersections

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #8 Newport Boulevard/SR-55 SB Ramps at Fair Drive

Cycle (sec):	100	Critical Vol./Cap.(X):	0.524
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	39	Level Of Service:	A

Street Name: Newport Boulevard/SR-55 SB Ramps — Fair Drive

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Protected		
Rights:	Include			Ignore			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0 0	1 0	3	0 1	0 0	3	1 0	1 0	2	0 0
Volume Module:												
Base Vol:	0	0	0	358	1604	1561	0	634	55	132	385	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	358	1604	1561	0	634	55	132	385	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	358	1604	1561	0	634	55	132	385	0
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	358	1604	0	0	634	55	132	385	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	358	1604	0	0	634	55	132	385	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	358	1604	0	0	634	55	132	385	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	1.00	3.00	1.00	0.00	3.68	0.32	1.00	2.00	0.00
Final Sat.:	0	0	0	1600	4800	1600	0	5889	511	1600	3200	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.22	0.33	0.00	0.00	0.11	0.11	0.08	0.12	0.00
Crit Moves:					****			****		****		

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--------------------------------------------------------------------------------
                          PM Cum Plus Project
                   2.13.3396.1 Orange Coast College
                       Additional Intersections
--------------------------------------------------------------------------------
                    Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #8 Newport Boulevard/SR-55 SB Ramps at Fair Drive
********************************************************************************
Cycle (sec):          100              Critical Vol./Cap.(X):          0.536
Loss Time (sec):        0              Average Delay (sec/veh):       xxxxxx
Optimal Cycle:         40              Level Of Service:                   A
********************************************************************************
Street Name: Newport Boulevard/SR-55 SB Ramps              Fair Drive
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:      Split Phase      Split Phase        Permitted        Protected
Rights:          Include           Ignore           Include          Include
Min. Green:    0    0    0    0    0    0    0    0    0    0    0    0
Y+R:         4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0
Lanes:        0  0  0  0  0   1  0  3  0  1   0  0  3  1  0   1  0  2  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0    0    0  358 1604 1596    0  691   74  132  427    0
Growth Adj:  1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse:   0    0    0  358 1604 1596    0  691   74  132  427    0
Added Vol:     0    0    0    0    0    0    0    0    0    0    0    0
PasserByVol:   0    0    0    0    0    0    0    0    0    0    0    0
Initial Fut:   0    0    0  358 1604 1596    0  691   74  132  427    0
User Adj:    1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:     1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume:    0    0    0  358 1604    0    0  691   74  132  427    0
Reduct Vol:    0    0    0    0    0    0    0    0    0    0    0    0
Reduced Vol:   0    0    0  358 1604    0    0  691   74  132  427    0
PCE Adj:     1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj:     1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume:   0    0    0  358 1604    0    0  691   74  132  427    0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600
Adjustment:  1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes:       0.00 0.00 0.00 1.00 3.00 1.00 0.00 3.61 0.39 1.00 2.00 0.00
Final Sat.:    0    0    0 1600 4800 1600    0 5781  619 1600 3200    0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00 0.00 0.22 0.33 0.00 0.00 0.12 0.12 0.08 0.13 0.00
Crit Moves:                       ****                ****      ****
********************************************************************************
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---------------------------------------------------------------------------
                                 AM Cum
                  2.13.3396.1 Orange Coast College
                      Additional Intersections
---------------------------------------------------------------------------

                   Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
***************************************************************************
Intersection #9 Newport Boulevard/SR-55 NB Ramps at Del Mar Avenue
***************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):        0.886
Loss Time (sec):        0               Average Delay (sec/veh):     xxxxxx
Optimal Cycle:        163               Level Of Service:                 D
***************************************************************************
Street Name: Newport Boulevard/SR-55 NB Ramps          Del Mar Avenue
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
-------------|---------------||---------------||---------------||---------------|
Control:       Split Phase      Split Phase       Protected        Permitted
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0    0    0     0    0    0     0    0    0     0
Y+R:          4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:        0  1  1  1  0   0  0  0  0  0   2  0  2  0  0   0  0  2  0  1
-------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     169 1785   133    0    0     0  846  399     0    0  256   299
Growth Adj:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Initial Bse:  169 1785   133    0    0     0  846  399     0    0  256   299
Added Vol:      0    0     0    0    0     0    0    0     0    0    0     0
PasserByVol:    0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:  169 1785   133    0    0     0  846  399     0    0  256   299
User Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Volume:   169 1785   133    0    0     0  846  399     0    0  256   299
Reduct Vol:     0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:  169 1785   133    0    0     0  846  399     0    0  256   299
PCE Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume:  169 1785   133    0    0     0  846  399     0    0  256   299
-------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600 1600 1600  1600 1600 1600  1600 1600 1600  1600
Adjustment:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Lanes:       0.24 2.57  0.19 0.00 0.00  0.00 2.00 2.00  0.00 0.00 2.00  1.00
Final Sat.:   389 4105   306    0    0     0 3200 3200     0    0 3200  1600
-------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.43 0.43  0.43 0.00 0.00  0.00 0.26 0.12  0.00 0.00 0.08  0.19
Crit Moves:  ****                           ****                          ****
***************************************************************************
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--------------------------------------------------------------------------------
                              AM Cum Plus Project
                       2.13.3396.1 Orange Coast College
                           Additional Intersections
--------------------------------------------------------------------------------
                        Level Of Service Computation Report
        ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #9 Newport Boulevard/SR-55 NB Ramps at Del Mar Avenue
********************************************************************************
Cycle (sec):           100               Critical Vol./Cap.(X):          0.894
Loss Time (sec):         0               Average Delay (sec/veh):       xxxxxx
Optimal Cycle:         175               Level Of Service:                   D
********************************************************************************
Street Name: Newport Boulevard/SR-55 NB Ramps           Del Mar Avenue
Approach:      North Bound       South Bound       East Bound        West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Split Phase       Split Phase       Protected         Permitted
Rights:          Include           Include          Include           Include
Min. Green:    0     0     0     0     0     0     0     0     0     0     0     0
Y+R:         4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0
Lanes:        0  1  1  1  0    0  0  0  0  0    2  0  2  0  0    0  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:    194  1785   133     0     0     0   854   405     0     0   285   299
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse: 194  1785   133     0     0     0   854   405     0     0   285   299
Added Vol:     0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:   0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut: 194  1785   133     0     0     0   854   405     0     0   285   299
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:  194  1785   133     0     0     0   854   405     0     0   285   299
Reduct Vol:    0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol: 194  1785   133     0     0     0   854   405     0     0   285   299
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume: 194  1785   133     0     0     0   854   405     0     0   285   299
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.28 2.53  0.19  0.00 0.00  0.00  2.00 2.00  0.00  0.00 2.00  1.00
Final Sat.:   441 4057   302     0     0     0  3200 3200     0     0 3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.44 0.44  0.44  0.00 0.00  0.00  0.27 0.13  0.00  0.00 0.09  0.19
Crit Moves:  ****                              ****                          ****
********************************************************************************
```

PM Cum
2.13.3396.1 Orange Coast College
Additional Intersections

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #9 Newport Boulevard/SR-55 NB Ramps at Del Mar Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.512
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	38	Level Of Service:	A

Street Name: Newport Boulevard/SR-55 NB Ramps — Del Mar Avenue

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	1	1 0	0 0	0	0 0	2 0	2	0 0	0 0	2	0 1
Volume Module:												
Base Vol:	152	814	132	0	0	0	542	450	0	0	363	169
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	152	814	132	0	0	0	542	450	0	0	363	169
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	152	814	132	0	0	0	542	450	0	0	363	169
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	152	814	132	0	0	0	542	450	0	0	363	169
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	152	814	132	0	0	0	542	450	0	0	363	169
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	152	814	132	0	0	0	542	450	0	0	363	169
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.42	2.22	0.36	0.00	0.00	0.00	2.00	2.00	0.00	0.00	2.00	1.00
Final Sat.:	664	3558	577	0	0	0	3200	3200	0	0	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.23	0.23	0.23	0.00	0.00	0.00	0.17	0.14	0.00	0.00	0.11	0.11
Crit Moves:	****						****				****	

```
--------------------------------------------------------------------------------
                          PM Cum Plus Project
                    2.13.3396.1 Orange Coast College
                       Additional Intersections
--------------------------------------------------------------------------------
                    Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #9 Newport Boulevard/SR-55 NB Ramps at Del Mar Avenue
********************************************************************************
Cycle (sec):          100              Critical Vol./Cap.(X):           0.533
Loss Time (sec):        0              Average Delay (sec/veh):        xxxxxx
Optimal Cycle:         40              Level Of Service:                    A
********************************************************************************
Street Name: Newport Boulevard/SR-55 NB Ramps           Del Mar Avenue
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
-------------|-----------------||---------------||---------------||---------------|
Control:       Split Phase      Split Phase       Protected         Permitted
Rights:          Include          Include          Include           Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Y+R:          4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:        0  1  1  1  0    0  0  0  0  0    2  0  2  0  0    0  0  2  0  1
-------------|-----------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     171   814   132    0     0     0   574   477     0    0   387   169
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:  171   814   132    0     0     0   574   477     0    0   387   169
Added Vol:      0     0     0    0     0     0     0     0     0    0     0     0
PasserByVol:    0     0     0    0     0     0     0     0     0    0     0     0
Initial Fut:  171   814   132    0     0     0   574   477     0    0   387   169
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:   171   814   132    0     0     0   574   477     0    0   387   169
Reduct Vol:     0     0     0    0     0     0     0     0     0    0     0     0
Reduced Vol:  171   814   132    0     0     0   574   477     0    0   387   169
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:  171   814   132    0     0     0   574   477     0    0   387   169
-------------|-----------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       0.46  2.19  0.35  0.00  0.00  0.00  2.00  2.00  0.00  0.00  2.00  1.00
Final Sat.:   735  3498   567    0     0     0  3200  3200     0    0  3200  1600
-------------|-----------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.23  0.23  0.23  0.00  0.00  0.00  0.18  0.15  0.00  0.00  0.12  0.11
Crit Moves:               ****                   ****                    ****
********************************************************************************
```

```
-------------------------------------------------------------------------------
                        AM Cumulative Plus Project
                      2.13.3396.1 Orange Coast College
-------------------------------------------------------------------------------
                    Level Of Service Computation Report
         2000 HCM Unsignalized Method (Future Volume Alternative)
*******************************************************************************
Intersection #26 New Driveway at Adams Avenue
*******************************************************************************
Average Delay (sec/veh):      0.1      Worst Case Level Of Service: C[ 18.1]
*******************************************************************************
Street Name:              New Driveway                      Adams Avenue
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:          Include          Include          Include          Include
Lanes:        0  0  0  0  1   0  0  0  0  0   0  0  2  1  0   0  0  3  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     9     0    0     0     0 2542    23     0  678     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     9     0    0     0     0 2542    23     0  678     0
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0    0     9     0    0     0     0 2542    23     0  678     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:     0    0     9     0    0     0     0 2676    24     0  714     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0    0     9     0    0     0     0 2676    24     0  714     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx   904  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx   284  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx   284  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  0.03  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx   0.1  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx  18.1 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     C     *    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:      18.1            xxxxxx           xxxxxx           xxxxxx
ApproachLOS:        C                *                *                *
*******************************************************************************
Note: Queue reported is the number of cars per lane.
*******************************************************************************
```

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--------------------------------------------------------------------------------
                       PM Cumulative Plus Project
                    2.13.3396.1 Orange Coast College
--------------------------------------------------------------------------------
                   Level Of Service Computation Report
         2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #26 New Driveway at Adams Avenue
********************************************************************************
Average Delay (sec/veh):        0.1       Worst Case Level Of Service: B[ 12.7]
********************************************************************************
Street Name:            New Driveway                        Adams Avenue
Approach:      North Bound      South Bound       East Bound        West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
-------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled      Uncontrolled
Rights:          Include          Include          Include           Include
Lanes:        0  0  0  0  1    0  0  0  0  0    0  0  2  1  0    0  0  3  0  0
-------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0    28      0    0     0      0 1479    23      0 1915     0
Growth Adj:  1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00
Initial Bse:    0    0    28      0    0     0      0 1479    23      0 1915     0
Added Vol:      0    0     0      0    0     0      0    0     0      0    0     0
PasserByVol:    0    0     0      0    0     0      0    0     0      0    0     0
Initial Fut:    0    0    28      0    0     0      0 1479    23      0 1915     0
User Adj:    1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.95   0.95 0.95  0.95   0.95 0.95  0.95   0.95 0.95  0.95
PHF Volume:     0    0    29      0    0     0      0 1557    24      0 2016     0
Reduct Vol:     0    0     0      0    0     0      0    0     0      0    0     0
FinalVolume:    0    0    29      0    0     0      0 1557    24      0 2016     0
-------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
-------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx   531  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx   498  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx   498  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  0.06  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
-------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx   0.2  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx  12.7 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     B     *    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:       12.7           xxxxxx            xxxxxx            xxxxxx
ApproachLOS:         B               *                 *                 *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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APPENDIX C

CALTRANS INTERSECTION LEVEL OF SERVICE CALCULATION WORKSHEETS

APPENDIX C-I

EXISTING PLUS PROJECT TRAFFIC CONDITIONS

AM Existing
2.13.3396.1 Orange Coast College
Caltrans

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 Fairview Road at I-405 NB Ramps

Cycle (sec):	90	Critical Vol./Cap.(X):	0.822
Loss Time (sec):	12	Average Delay (sec/veh):	26.7
Optimal Cycle:	79	Level Of Service:	C

Street Name:	Fairview Road						I-405 NB Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:		Protected			Permitted			Split Phase			Split Phase	
Rights:		Include			Include			Include			Include	
Min. Green:	6	21	0	0	14	14	0	0	0	6	0	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:		1 0 3 0 0			0 0 6 0 1			0 0 0 0 0			2 0 0 0 2	
Volume Module:												
Base Vol:	225	741	0	0	1351	354	0	0	0	778	0	946
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	225	741	0	0	1351	354	0	0	0	778	0	946
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	225	741	0	0	1351	354	0	0	0	778	0	946
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	237	780	0	0	1422	373	0	0	0	819	0	996
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	237	780	0	0	1422	373	0	0	0	819	0	996
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	237	780	0	0	1422	373	0	0	0	819	0	996
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.91	1.00	1.00	0.91	0.85	1.00	1.00	1.00	0.92	1.00	0.75
Lanes:	1.00	3.00	0.00	0.00	6.00	1.00	0.00	0.00	0.00	2.00	0.00	2.00
Final Sat.:	1805	5187	0	0	xxxx	1615	0	0	0	3502	0	2842
Capacity Analysis Module:												
Vol/Sat:	0.13	0.15	0.00	0.00	0.14	0.23	0.00	0.00	0.00	0.23	0.00	0.35
Crit Moves:	****					****						****
Green/Cycle:	0.16	0.44	0.00	0.00	0.28	0.28	0.00	0.00	0.00	0.43	0.00	0.43
Volume/Cap:	0.82	0.34	0.00	0.00	0.49	0.82	0.00	0.00	0.00	0.55	0.00	0.82
Delay/Veh:	53.5	16.7	0.0	0.0	27.1	41.7	0.0	0.0	0.0	19.8	0.0	27.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	53.5	16.7	0.0	0.0	27.1	41.7	0.0	0.0	0.0	19.8	0.0	27.4
LOS by Move:	D	B	A	A	C	D	A	A	A	B	A	C
HCM2k95thQ:	16	10	0	0	12	22	0	0	0	17	0	28

AM Existing Plus Project
2.13.3396.1 Orange Coast College
Caltrans

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 Fairview Road at I-405 NB Ramps

Cycle (sec):	90		Critical Vol./Cap.(X):	0.833
Loss Time (sec):	12		Average Delay (sec/veh):	27.6
Optimal Cycle:	82		Level Of Service:	C

Street Name:	Fairview Road						I-405 NB Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	6	21	0	0	14	14	0	0	0	6	0	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	3 0	0	0 0	6 0	1	0 0	0 0	0	2 0	0 0	2
Volume Module:												
Base Vol:	241	757	0	0	1422	354	0	0	0	999	0	946
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	241	757	0	0	1422	354	0	0	0	999	0	946
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	241	757	0	0	1422	354	0	0	0	999	0	946
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	254	797	0	0	1497	373	0	0	0	1052	0	996
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	254	797	0	0	1497	373	0	0	0	1052	0	996
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	254	797	0	0	1497	373	0	0	0	1052	0	996
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.91	1.00	1.00	0.91	0.85	1.00	1.00	1.00	0.92	1.00	0.75
Lanes:	1.00	3.00	0.00	0.00	6.00	1.00	0.00	0.00	0.00	2.00	0.00	2.00
Final Sat.:	1805	5187	0	0	xxxx	1615	0	0	0	3502	0	2842
Capacity Analysis Module:												
Vol/Sat:	0.14	0.15	0.00	0.00	0.14	0.23	0.00	0.00	0.00	0.30	0.00	0.35
Crit Moves:	****					****						****
Green/Cycle:	0.17	0.45	0.00	0.00	0.28	0.28	0.00	0.00	0.00	0.42	0.00	0.42
Volume/Cap:	0.83	0.34	0.00	0.00	0.52	0.83	0.00	0.00	0.00	0.71	0.00	0.83
Delay/Veh:	53.6	16.4	0.0	0.0	27.7	43.1	0.0	0.0	0.0	23.3	0.0	28.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	53.6	16.4	0.0	0.0	27.7	43.1	0.0	0.0	0.0	23.3	0.0	28.4
LOS by Move:	D	B	A	A	C	D	A	A	A	C	A	C
HCM2k95thQ:	17	10	0	0	13	22	0	0	0	24	0	29

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                              PM Existing
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                               Caltrans
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                     Level Of Service Computation Report
         2000 HCM Operations Method (Future Volume Alternative)
********************************************************************************
Intersection #7 Fairview Road at I-405 NB Ramps
********************************************************************************
Cycle (sec):          90              Critical Vol./Cap.(X):          0.868
Loss Time (sec):      12              Average Delay (sec/veh):         28.7
Optimal Cycle:        92              Level Of Service:                   C
********************************************************************************
Street Name:          Fairview Road                  I-405 NB Ramps
Approach:     North Bound     South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Permitted       Split Phase      Split Phase
Rights:          Include          Include          Include          Include
Min. Green:    6   21     0    0   14    14    0    0     0    6    0     6
Y+R:         4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:        1  0  3  0  0   0  0  6  0  1   0  0  0  0  0   2  0  0  0  2
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     213 1205     0     0 1628   326    0    0     0  868    0  1123
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Initial Bse:  213 1205     0     0 1628   326    0    0     0  868    0  1123
Added Vol:      0    0     0     0    0     0    0    0     0    0    0     0
PasserByVol:    0    0     0     0    0     0    0    0     0    0    0     0
Initial Fut:  213 1205     0     0 1628   326    0    0     0  868    0  1123
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.95  0.95 0.95  0.95 0.95 0.95  0.95 0.95 0.95  0.95
PHF Volume:   224 1268     0     0 1714   343    0    0     0  914    0  1182
Reduct Vol:     0    0     0     0    0     0    0    0     0    0    0     0
Reduced Vol:  224 1268     0     0 1714   343    0    0     0  914    0  1182
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume:  224 1268     0     0 1714   343    0    0     0  914    0  1182
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900 1900 1900  1900 1900 1900  1900
Adjustment:  0.95 0.91  1.00  1.00 0.91  0.85 1.00 1.00  1.00 0.92 1.00  0.75
Lanes:       1.00 3.00  0.00  0.00 6.00  1.00 0.00 0.00  0.00 2.00 0.00  2.00
Final Sat.:  1805 5187     0     0 xxxx  1615    0    0     0 3502    0  2842
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.12 0.24  0.00  0.00 0.17  0.21 0.00 0.00  0.00 0.26 0.00  0.42
Crit Moves:  ****                        ****                               ****
Green/Cycle: 0.14 0.39  0.00  0.00 0.24  0.24 0.00 0.00  0.00 0.48 0.00  0.48
Volume/Cap:  0.87 0.63  0.00  0.00 0.68  0.87 0.00 0.00  0.00 0.54 0.00  0.87
Delay/Veh:   63.2 23.0   0.0   0.0 31.5  50.7  0.0  0.0   0.0 16.9  0.0  27.2
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
AdjDel/Veh:  63.2 23.0   0.0   0.0 31.5  50.7  0.0  0.0   0.0 16.9  0.0  27.2
LOS by Move:    E    C     A     A    C     D    A    A     A    B    A     C
HCM2k95thQ:    17   20     0     0   17    22    0    0     0   18    0    34
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                    Level Of Service Computation Report
          2000 HCM Operations Method (Future Volume Alternative)
******************************************************************************
Intersection #7 Fairview Road at I-405 NB Ramps
******************************************************************************
Cycle (sec):           90              Critical Vol./Cap.(X):         0.911
Loss Time (sec):       12              Average Delay (sec/veh):        31.2
Optimal Cycle:        109              Level Of Service:                  C
******************************************************************************
Street Name:               Fairview Road                  I-405 NB Ramps
Approach:         North Bound      South Bound      East Bound       West Bound
Movement:       L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Protected        Permitted       Split Phase      Split Phase
Rights:            Include          Include          Include          Include
Min. Green:     6   21     0    0   14    14    0    0     0    6    0     6
Y+R:          4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:        1  0  3  0  0   0  0  6  0  1   0  0  0  0  0   2  0  0  0  2
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     277 1262     0    0 1685   326    0    0     0 1032    0  1123
Growth Adj:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Initial Bse:  277 1262     0    0 1685   326    0    0     0 1032    0  1123
Added Vol:      0    0     0    0    0     0    0    0     0    0    0     0
PasserByVol:    0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:  277 1262     0    0 1685   326    0    0     0 1032    0  1123
User Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.95 0.95 0.95  0.95 0.95 0.95  0.95 0.95 0.95  0.95
PHF Volume:   292 1328     0    0 1774   343    0    0     0 1086    0  1182
Reduct Vol:     0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:  292 1328     0    0 1774   343    0    0     0 1086    0  1182
PCE Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume:  292 1328     0    0 1774   343    0    0     0 1086    0  1182
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900 1900 1900  1900 1900 1900  1900 1900 1900  1900
Adjustment:  0.95 0.91  1.00 1.00 0.91  0.85 1.00 1.00  1.00 0.92 1.00  0.75
Lanes:       1.00 3.00  0.00 0.00 6.00  1.00 0.00 0.00  0.00 2.00 0.00  2.00
Final Sat.:  1805 5187     0    0 xxxx  1615    0    0     0 3502    0  2842
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.16 0.26  0.00 0.00 0.17  0.21 0.00 0.00  0.00 0.31 0.00  0.42
Crit Moves:  ****                       ****                              ****
Green/Cycle: 0.18 0.41  0.00 0.00 0.23  0.23 0.00 0.00  0.00 0.46 0.00  0.46
Volume/Cap:  0.91 0.62  0.00 0.00 0.73  0.91 0.00 0.00  0.00 0.68 0.00  0.91
Delay/Veh:   65.2 21.6   0.0  0.0 33.1  59.3  0.0  0.0   0.0 20.5  0.0  32.6
User DelAdj: 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
AdjDel/Veh:  65.2 21.6   0.0  0.0 33.1  59.3  0.0  0.0   0.0 20.5  0.0  32.6
LOS by Move:    E    C     A    A    C     E    A    A     A    C    A     C
HCM2k95thQ:    21   20     0    0   18    24    0    0     0   23    0    36
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                    Level Of Service Computation Report
          2000 HCM Operations Method (Future Volume Alternative)
********************************************************************************
Intersection #8 Fairview Road at I-405 SB Ramps
********************************************************************************
Cycle (sec):          90                Critical Vol./Cap.(X):         0.737
Loss Time (sec):      12                Average Delay (sec/veh):        20.9
Optimal Cycle:        63                Level Of Service:                  C
********************************************************************************
Street Name:            Fairview Road                  I-405 SB Ramps
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Protected       Split Phase      Split Phase
Rights:          Include          Include          Include          Include
Min. Green:    0    18    18    6    21     0    6     0     6    0     0     0
Y+R:         4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:       0  0  3  1  1    3  0  3  0  0    2  0  0  0  2    0  0  0  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0   700   969 1073  1165     0  246     0   271    0     0     0
Growth Adj: 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Initial Bse:   0   700   969 1073  1165     0  246     0   271    0     0     0
Added Vol:     0     0     0    0     0     0    0     0     0    0     0     0
PasserByVol:   0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut:   0   700   969 1073  1165     0  246     0   271    0     0     0
User Adj:   1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Adj:    0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95
PHF Volume:    0   737  1020 1129  1226     0  259     0   285    0     0     0
Reduct Vol:    0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol:   0   737  1020 1129  1226     0  259     0   285    0     0     0
PCE Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
MLF Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
FinalVolume:   0   737  1020 1129  1226     0  259     0   285    0     0     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:   1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900  1900
Adjustment: 1.00  0.83  0.83 0.92  0.91  1.00 0.92  1.00  0.75 1.00  1.00  1.00
Lanes:      0.00  3.00  2.00 3.00  3.00  0.00 2.00  0.00  2.00 0.00  0.00  0.00
Final Sat.:    0  4736  3157 5253  5187     0 3502     0  2842    0     0     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.00  0.16  0.32 0.22  0.24  0.00 0.07  0.00  0.10 0.00  0.00  0.00
Crit Moves:             **** ****                             ****
Green/Cycle: 0.00 0.44  0.44 0.29  0.73  0.00 0.14  0.00  0.14 0.00  0.00  0.00
Volume/Cap: 0.00  0.35  0.74 0.74  0.32  0.00 0.54  0.00  0.74 0.00  0.00  0.00
Delay/Veh:   0.0  16.8  22.2 30.7   4.3   0.0 37.5   0.0  44.6  0.0   0.0   0.0
User DelAdj: 1.00 1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
AdjDel/Veh:  0.0  16.8  22.2 30.7   4.3   0.0 37.5   0.0  44.6  0.0   0.0   0.0
LOS by Move:   A     B     C    C     A     A    D     A     D    A     A     A
HCM2k95thQ:    0    10    25   20     9     0    8     0    12    0     0     0
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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 Fairview Road at I-405 SB Ramps

Cycle (sec):	90	Critical Vol./Cap.(X):	0.791
Loss Time (sec):	12	Average Delay (sec/veh):	21.8
Optimal Cycle:	73	Level Of Service:	C

Street Name:	Fairview Road						I-405 SB Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	18	18	6	21	0	6	0	6	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0 3 1 1			3 0 3 0 0			2 0 0 0 2			0 0 0 0 0		
Volume Module:												
Base Vol:	0	731	1012	1073	1458	0	246	0	360	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	731	1012	1073	1458	0	246	0	360	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	731	1012	1073	1458	0	246	0	360	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	769	1065	1129	1535	0	259	0	379	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	769	1065	1129	1535	0	259	0	379	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	769	1065	1129	1535	0	259	0	379	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.83	0.83	0.92	0.91	1.00	0.92	1.00	0.75	1.00	1.00	1.00
Lanes:	0.00	3.00	2.00	3.00	3.00	0.00	2.00	0.00	2.00	0.00	0.00	0.00
Final Sat.:	0	4736	3157	5253	5187	0	3502	0	2842	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.16	0.34	0.22	0.30	0.00	0.07	0.00	0.13	0.00	0.00	0.00
Crit Moves:			****	****					****			
Green/Cycle:	0.00	0.43	0.43	0.27	0.70	0.00	0.17	0.00	0.17	0.00	0.00	0.00
Volume/Cap:	0.00	0.38	0.79	0.79	0.42	0.00	0.44	0.00	0.79	0.00	0.00	0.00
Delay/Veh:	0.0	17.7	24.3	33.5	5.9	0.0	34.1	0.0	44.6	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	17.7	24.3	33.5	5.9	0.0	34.1	0.0	44.6	0.0	0.0	0.0
LOS by Move:	A	B	C	C	A	A	C	A	D	A	A	A
HCM2k95thQ:	0	11	28	22	13	0	7	0	15	0	0	0

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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 Fairview Road at I-405 SB Ramps

Cycle (sec):	90	Critical Vol./Cap.(X):	0.632
Loss Time (sec):	12	Average Delay (sec/veh):	22.6
Optimal Cycle:	50	Level Of Service:	C

Street Name:	Fairview Road						I-405 SB Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	18	18	6	21	0	6	0	6	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0 3 1 1			3 0 3 0 0			2 0 0 0 2			0 0 0 0 0		
Volume Module:												
Base Vol:	0	937	524	1048	1427	0	462	0	404	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	937	524	1048	1427	0	462	0	404	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	937	524	1048	1427	0	462	0	404	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	986	552	1103	1502	0	486	0	425	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	986	552	1103	1502	0	486	0	425	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	986	552	1103	1502	0	486	0	425	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.86	0.86	0.92	0.91	1.00	0.92	1.00	0.75	1.00	1.00	1.00
Lanes:	0.00	3.21	1.79	3.00	3.00	0.00	2.00	0.00	2.00	0.00	0.00	0.00
Final Sat.:	0	5245	2933	5253	5187	0	3502	0	2842	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.19	0.19	0.21	0.29	0.00	0.14	0.00	0.15	0.00	0.00	0.00
Crit Moves:		****		****					****			
Green/Cycle:	0.00	0.30	0.30	0.33	0.63	0.00	0.24	0.00	0.24	0.00	0.00	0.00
Volume/Cap:	0.00	0.63	0.63	0.63	0.46	0.00	0.59	0.00	0.63	0.00	0.00	0.00
Delay/Veh:	0.0	27.9	27.9	26.2	8.8	0.0	31.5	0.0	32.8	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	27.9	27.9	26.2	8.8	0.0	31.5	0.0	32.8	0.0	0.0	0.0
LOS by Move:	A	C	C	C	A	A	C	A	C	A	A	A
HCM2k95thQ:	0	17	17	18	15	0	13	0	13	0	0	0

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                     Level Of Service Computation Report
           2000 HCM Operations Method (Future Volume Alternative)
********************************************************************************
Intersection #8 Fairview Road at I-405 SB Ramps
********************************************************************************
Cycle (sec):          90                Critical Vol./Cap.(X):         0.703
Loss Time (sec):      12                Average Delay (sec/veh):        23.4
Optimal Cycle:        58                Level Of Service:                  C
********************************************************************************
Street Name:              Fairview Road                   I-405 SB Ramps
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Protected       Split Phase      Split Phase
Rights:           Include          Include          Include          Include
Min. Green:     0   18    18    6   21     0    6    0     6    0    0     0
Y+R:          4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:        0  0  3  1  1   3  0  3  0  0   2  0  0  0  2   0  0  0  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0 1058   692 1048 1648     0  462    0   467    0    0     0
Growth Adj:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Initial Bse:    0 1058   692 1048 1648     0  462    0   467    0    0     0
Added Vol:      0    0     0    0    0     0    0    0     0    0    0     0
PasserByVol:    0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:    0 1058   692 1048 1648     0  462    0   467    0    0     0
User Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.95 0.95 0.95  0.95 0.95 0.95  0.95 0.95 0.95  0.95
PHF Volume:     0 1114   728 1103 1735     0  486    0   492    0    0     0
Reduct Vol:     0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:    0 1114   728 1103 1735     0  486    0   492    0    0     0
PCE Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume:    0 1114   728 1103 1735     0  486    0   492    0    0     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900 1900 1900  1900 1900 1900  1900 1900 1900  1900
Adjustment:  1.00 0.86  0.86 0.92 0.91  1.00 0.92 1.00  0.75 1.00 1.00  1.00
Lanes:       0.00 3.02  1.98 3.00 3.00  0.00 2.00 0.00  2.00 0.00 0.00  0.00
Final Sat.:     0 4918  3217 5253 5187     0 3502    0  2842    0    0     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.23  0.23 0.21 0.33  0.00 0.14 0.00  0.17 0.00 0.00  0.00
Crit Moves:       ****       ****                           ****
Green/Cycle: 0.00 0.32  0.32 0.30 0.62  0.00 0.25 0.00  0.25 0.00 0.00  0.00
Volume/Cap:  0.00 0.70  0.70 0.70 0.54  0.00 0.56 0.00  0.70 0.00 0.00  0.00
Delay/Veh:    0.0 27.6  27.6 29.5  9.9   0.0 30.6  0.0  34.2  0.0  0.0   0.0
User DelAdj: 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
AdjDel/Veh:   0.0 27.6  27.6 29.5  9.9   0.0 30.6  0.0  34.2  0.0  0.0   0.0
LOS by Move:    A    C     C    C    A     A    C    A     C    A    A     A
HCM2k95thQ:     0   20    20   19   19     0   13    0    16    0    0     0
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                      Level Of Service Computation Report
            2000 HCM Operations Method (Future Volume Alternative)
********************************************************************************
Intersection #28 Harbor Boulevard at I-405 NB Ramps
********************************************************************************
Cycle (sec):          90               Critical Vol./Cap.(X):         0.544
Loss Time (sec):       8               Average Delay (sec/veh):        19.6
Optimal Cycle:        36               Level Of Service:                  B
********************************************************************************
Street Name:              Harbor Boulevard                 I-405 NB Ramps
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Permitted        Permitted       Split Phase      Split Phase
Rights:           Include          Ignore           Include          Include
Min. Green:     0   22     0    0    6     6    0    0     0    6    6     6
Y+R:          4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:         0  0  4  0  0   0  0  4  0  1   0  0  0  0  0   1  0  1! 0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0 1261     0    0 1298  1224    0    0     0  454    0   780
Growth Adj:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Initial Bse:    0 1261     0    0 1298  1224    0    0     0  454    0   780
Added Vol:      0    0     0    0    0     0    0    0     0    0    0     0
PasserByVol:    0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:    0 1261     0    0 1298  1224    0    0     0  454    0   780
User Adj:    1.00 1.00  1.00 1.00 1.00  0.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.95 0.95 0.95  0.00 0.95 0.95  0.95 0.95 0.95  0.95
PHF Volume:     0 1327     0    0 1366     0    0    0     0  478    0   821
Reduct Vol:     0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:    0 1327     0    0 1366     0    0    0     0  478    0   821
PCE Adj:     1.00 1.00  1.00 1.00 1.00  0.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00 1.00 1.00  0.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume:    0 1327     0    0 1366     0    0    0     0  478    0   821
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900 1900 1900  1900 1900 1900  1900 1900 1900  1900
Adjustment:  1.00 0.91  1.00 1.00 0.91  1.00 1.00 1.00  1.00 0.89 1.00  0.89
Lanes:       0.00 4.00  0.00 0.00 4.00  1.00 0.00 0.00  0.00 1.37 0.00  1.63
Final Sat.:     0 6916     0    0 6916  1900    0    0     0 2310    0  2756
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.19  0.00 0.00 0.20  0.00 0.00 0.00  0.00 0.21 0.00  0.30
Crit Moves:                       ****                                    ****
Green/Cycle: 0.00 0.36  0.00 0.00 0.36  0.00 0.00 0.00  0.00 0.55 0.00  0.55
Volume/Cap:  0.00 0.53  0.00 0.00 0.54  0.00 0.00 0.00  0.00 0.38 0.00  0.54
Delay/Veh:    0.0 22.8   0.0  0.0 23.0   0.0  0.0  0.0   0.0 11.7  0.0  13.4
User DelAdj: 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
AdjDel/Veh:   0.0 22.8   0.0  0.0 23.0   0.0  0.0  0.0   0.0 11.7  0.0  13.4
LOS by Move:    A    C     A    A    C     A    A    A     A    B    A     B
HCM2k95thQ:     0   16     0    0   16     0    0    0     0   11    0    17
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                    Level Of Service Computation Report
          2000 HCM Operations Method (Future Volume Alternative)
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Intersection #28 Harbor Boulevard at I-405 NB Ramps
*******************************************************************************
Cycle (sec):          90                Critical Vol./Cap.(X):        0.553
Loss Time (sec):       8                Average Delay (sec/veh):       19.5
Optimal Cycle:        36                Level Of Service:                 B
*******************************************************************************
Street Name:          Harbor Boulevard                I-405 NB Ramps
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:      L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted       Split Phase      Split Phase
Rights:          Include          Ignore           Include          Include
Min. Green:    0    22    0    0     6     6    0     0     0    6     6     6
Y+R:         4.0   4.0  4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:       0  0  4  0  0   0  0  4  0  1    0  0  0  0  0   1  0  1! 0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0  1275    0    0  1354  1224    0     0     0  454     0   780
Growth Adj:  1.00 1.00 1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   0  1275    0    0  1354  1224    0     0     0  454     0   780
Added Vol:     0     0    0    0     0     0    0     0     0    0     0     0
PasserByVol:   0     0    0    0     0     0    0     0     0    0     0     0
Initial Fut:   0  1275    0    0  1354  1224    0     0     0  454     0   780
User Adj:    1.00 1.00 1.00  1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.95 0.95 0.95  0.95 0.95  0.00  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:    0  1342    0    0  1425     0    0     0     0  478     0   821
Reduct Vol:    0     0    0    0     0     0    0     0     0    0     0     0
Reduced Vol:   0  1342    0    0  1425     0    0     0     0  478     0   821
PCE Adj:     1.00 1.00 1.00  1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00 1.00  1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   0  1342    0    0  1425     0    0     0     0  478     0   821
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900 1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  1.00 0.91 1.00  1.00 0.91  1.00  1.00 1.00  1.00  0.89 1.00  0.89
Lanes:       0.00 4.00 0.00  0.00 4.00  1.00  0.00 0.00  0.00  1.37 0.00  1.63
Final Sat.:    0  6916    0    0  6916  1900    0     0     0  2310    0  2756
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.19 0.00  0.00 0.21  0.00  0.00 0.00  0.00  0.21 0.00  0.30
Crit Moves:                       ****                                     ****
Green/Cycle: 0.00 0.37 0.00  0.00 0.37  0.00  0.00 0.00  0.00  0.54 0.00  0.54
Volume/Cap:  0.00 0.52 0.00  0.00 0.55  0.00  0.00 0.00  0.00  0.38 0.00  0.55
Delay/Veh:    0.0 22.2  0.0   0.0 22.6   0.0   0.0  0.0   0.0  12.2  0.0  13.9
User DelAdj: 1.00 1.00 1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:   0.0 22.2  0.0   0.0 22.6   0.0   0.0  0.0   0.0  12.2  0.0  13.9
LOS by Move:    A    C    A     A    C     A     A    A     A     B    A     B
HCM2k95thQ:     0   15    0     0   17     0     0    0     0    11    0    18
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                      Level Of Service Computation Report
            2000 HCM Operations Method (Future Volume Alternative)
********************************************************************************
Intersection #28 Harbor Boulevard at I-405 NB Ramps
********************************************************************************
Cycle (sec):          90              Critical Vol./Cap.(X):         0.677
Loss Time (sec):       8              Average Delay (sec/veh):        21.3
Optimal Cycle:        45              Level Of Service:                  C
********************************************************************************
Street Name:         Harbor Boulevard                    I-405 NB Ramps
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Permitted        Permitted       Split Phase      Split Phase
Rights:           Include          Ignore           Include          Include
Min. Green:    0    22     0    0     6     6    0     0     0    6     6     6
Y+R:          4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:         0  0  4  0  0   0  0  4  0  1   0  0  0  0  0   1  0  1! 0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        0 1537     0     0 1585  1035     0     0     0  727     0   951
Growth Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00 1.00 1.00  1.00
Initial Bse:     0 1537     0     0 1585  1035     0     0     0  727     0   951
Added Vol:       0    0     0     0    0     0     0     0     0    0     0     0
PasserByVol:     0    0     0     0    0     0     0     0     0    0     0     0
Initial Fut:     0 1537     0     0 1585  1035     0     0     0  727     0   951
User Adj:     1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:      0.95 0.95  0.95  0.95 0.95  0.00  0.95 0.95  0.95 0.95 0.95  0.95
PHF Volume:      0 1618     0     0 1668     0     0     0     0  765     0  1001
Reduct Vol:      0    0     0     0    0     0     0     0     0    0     0     0
Reduced Vol:     0 1618     0     0 1668     0     0     0     0  765     0  1001
PCE Adj:      1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:      1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume:     0 1618     0     0 1668     0     0     0     0  765     0  1001
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:     1900 1900  1900  1900 1900  1900  1900 1900  1900 1900 1900  1900
Adjustment:   1.00 0.91  1.00  1.00 0.91  1.00  1.00 1.00  1.00 0.90 1.00  0.90
Lanes:        0.00 4.00  0.00  0.00 4.00  1.00  0.00 0.00  0.00 1.43 0.00  1.57
Final Sat.:      0 6916     0     0 6916  1900     0     0     0 2439     0  2667
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:      0.00 0.23  0.00  0.00 0.24  0.00  0.00 0.00  0.00 0.31 0.00  0.38
Crit Moves:                         ****                                     ****
Green/Cycle:  0.00 0.36  0.00  0.00 0.36  0.00  0.00 0.00  0.00 0.55 0.00  0.55
Volume/Cap:   0.00 0.66  0.00  0.00 0.68  0.00  0.00 0.00  0.00 0.57 0.00  0.68
Delay/Veh:     0.0 25.0   0.0   0.0 25.3   0.0   0.0  0.0   0.0 13.2  0.0  15.0
User DelAdj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00 1.00 1.00  1.00
AdjDel/Veh:    0.0 25.0   0.0   0.0 25.3   0.0   0.0  0.0   0.0 13.2  0.0  15.0
LOS by Move:     A    C     A     A    C     A     A    A     A    B    A     B
HCM2k95thQ:      0   20     0     0   21     0     0    0     0   18    0    24
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                      Level Of Service Computation Report
           2000 HCM Operations Method (Future Volume Alternative)
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Intersection #28 Harbor Boulevard at I-405 NB Ramps
*******************************************************************************
Cycle (sec):          90                 Critical Vol./Cap.(X):        0.684
Loss Time (sec):       8                 Average Delay (sec/veh):       21.4
Optimal Cycle:        46                 Level Of Service:                 C
*******************************************************************************
Street Name:            Harbor Boulevard                I-405 NB Ramps
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted       Split Phase      Split Phase
Rights:          Include          Ignore           Include          Include
Min. Green:    0   22     0    0    6     6    0    0     0    6    6     6
Y+R:         4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:       0  0  4  0  0   0  0  4  0  1   0  0  0  0  0   1  0  1! 0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0 1589     0     0 1629  1035     0    0     0   727    0   951
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   0 1589     0     0 1629  1035     0    0     0   727    0   951
Added Vol:     0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:   0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   0 1589     0     0 1629  1035     0    0     0   727    0   951
User Adj:    1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.95  0.95 0.95  0.00  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:    0 1673     0     0 1715     0     0    0     0   765    0  1001
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   0 1673     0     0 1715     0     0    0     0   765    0  1001
PCE Adj:     1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   0 1673     0     0 1715     0     0    0     0   765    0  1001
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  1.00 0.91  1.00  1.00 0.91  1.00  1.00 1.00  1.00  0.90 1.00  0.90
Lanes:       0.00 4.00  0.00  0.00 4.00  1.00  0.00 0.00  0.00  1.43 0.00  1.57
Final Sat.:    0 6916     0     0 6916  1900     0    0     0  2439    0  2667
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.24  0.00  0.00 0.25  0.00  0.00 0.00  0.00  0.31 0.00  0.38
Crit Moves:                        ****                                     ****
Green/Cycle: 0.00 0.36  0.00  0.00 0.36  0.00  0.00 0.00  0.00  0.55 0.00  0.55
Volume/Cap:  0.00 0.67  0.00  0.00 0.68  0.00  0.00 0.00  0.00  0.57 0.00  0.68
Delay/Veh:    0.0 24.8   0.0   0.0 25.1   0.0   0.0  0.0   0.0  13.6  0.0  15.4
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:   0.0 24.8   0.0   0.0 25.1   0.0   0.0  0.0   0.0  13.6  0.0  15.4
LOS by Move:   A    C     A     A    C     A     A    A     A     B    A     B
HCM2k95thQ:    0   21     0     0   22     0     0    0     0    19    0    24
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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #29 Harbor Boulevard at I-405 SB Ramps

Cycle (sec):	90	Critical Vol./Cap.(X):	0.481
Loss Time (sec):	8	Average Delay (sec/veh):	13.8
Optimal Cycle:	31	Level Of Service:	B

Street Name:	Harbor Boulevard						I-405 SB Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Ignore			Include			Include			Include		
Min. Green:	0	6	6	0	6	0	6	6	6	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0 3 0 1			0 0 4 0 0			1 0 1! 0 1			0 0 0 0 0		
Volume Module:												
Base Vol:	0	934	472	0	1775	0	283	0	433	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	934	472	0	1775	0	283	0	433	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	934	472	0	1775	0	283	0	433	0	0	0
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.00	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	983	0	0	1868	0	298	0	456	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	983	0	0	1868	0	298	0	456	0	0	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	983	0	0	1868	0	298	0	456	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.91	1.00	1.00	0.91	1.00	0.89	1.00	0.89	1.00	1.00	1.00
Lanes:	0.00	3.00	1.00	0.00	4.00	0.00	1.40	0.00	1.60	0.00	0.00	0.00
Final Sat.:	0	5187	1900	0	6916	0	2364	0	2719	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.19	0.00	0.00	0.27	0.00	0.13	0.00	0.17	0.00	0.00	0.00
Crit Moves:					****				****			
Green/Cycle:	0.00	0.56	0.00	0.00	0.56	0.00	0.35	0.00	0.35	0.00	0.00	0.00
Volume/Cap:	0.00	0.34	0.00	0.00	0.48	0.00	0.36	0.00	0.48	0.00	0.00	0.00
Delay/Veh:	0.0	10.7	0.0	0.0	11.9	0.0	21.9	0.0	23.2	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	10.7	0.0	0.0	11.9	0.0	21.9	0.0	23.2	0.0	0.0	0.0
LOS by Move:	A	B	A	A	B	A	C	A	C	A	A	A
HCM2k95thQ:	0	10	0	0	16	0	9	0	12	0	0	0

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                       Level Of Service Computation Report
           2000 HCM Operations Method (Future Volume Alternative)
********************************************************************************
Intersection #29 Harbor Boulevard at I-405 SB Ramps
********************************************************************************
Cycle (sec):           90                Critical Vol./Cap.(X):          0.526
Loss Time (sec):        8                Average Delay (sec/veh):         15.2
Optimal Cycle:         33                Level Of Service:                   B
********************************************************************************
Street Name:          Harbor Boulevard                     I-405 SB Ramps
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|----------------||----------------||----------------||----------------|
Control:        Permitted        Permitted       Split Phase      Split Phase
Rights:           Ignore           Include          Include          Include
Min. Green:    0    6     6    0    6     0    6    6     6    0    0     0
Y+R:         4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:         0  0  3  0  1   0  0  4  0  0   1  0  1! 0  1   0  0  0  0  0
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:      0  948   494     0 1831     0   283    0   529     0    0     0
Growth Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   0  948   494     0 1831     0   283    0   529     0    0     0
Added Vol:     0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:   0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   0  948   494     0 1831     0   283    0   529     0    0     0
User Adj:   1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:    0.95 0.95  0.00  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:    0  998     0     0 1927     0   298    0   557     0    0     0
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   0  998     0     0 1927     0   298    0   557     0    0     0
PCE Adj:    1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:    1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   0  998     0     0 1927     0   298    0   557     0    0     0
------------|----------------||----------------||----------------||----------------|
Saturation Flow Module:
Sat/Lane:   1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment: 1.00 0.91  1.00  1.00 0.91  1.00  0.89 1.00  0.89  1.00 1.00  1.00
Lanes:      0.00 3.00  1.00  0.00 4.00  0.00  1.35 0.00  1.65  0.00 0.00  0.00
Final Sat.:    0 5187  1900     0 6916     0  2272    0  2782     0    0     0
------------|----------------||----------------||----------------||----------------|
Capacity Analysis Module:
Vol/Sat:    0.00 0.19  0.00  0.00 0.28  0.00  0.13 0.00  0.20  0.00 0.00  0.00
Crit Moves:                       ****                     ****
Green/Cycle: 0.00 0.53 0.00  0.00 0.53  0.00  0.38 0.00  0.38  0.00 0.00  0.00
Volume/Cap: 0.00 0.36  0.00  0.00 0.53  0.00  0.34 0.00  0.53  0.00 0.00  0.00
Delay/Veh:   0.0 12.4   0.0   0.0 13.9   0.0  19.9  0.0  21.9   0.0  0.0   0.0
User DelAdj: 1.00 1.00 1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  0.0 12.4   0.0   0.0 13.9   0.0  19.9  0.0  21.9   0.0  0.0   0.0
LOS by Move:   A    B     A     A    B     A     B    A     C     A    A     A
HCM2k95thQ:    0   11     0     0   18     0     9    0    14     0    0     0
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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #29 Harbor Boulevard at I-405 SB Ramps

Cycle (sec):	90	Critical Vol./Cap.(X):	0.686
Loss Time (sec):	8	Average Delay (sec/veh):	17.4
Optimal Cycle:	46	Level Of Service:	B

Street Name:		Harbor Boulevard						I-405 SB Ramps				
Approach:		North Bound			South Bound			East Bound			West Bound	
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:		Permitted			Permitted			Split Phase			Split Phase	
Rights:		Ignore			Include			Include			Include	
Min. Green:	0	6	6	0	6	0	6	6	6	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0 3 0 1			0 0 4 0 0			1 0 1! 0 1			0 0 0 0 0		
Volume Module:												
Base Vol:	0	1331	628	0	2336	0	163	0	771	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1331	628	0	2336	0	163	0	771	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	1331	628	0	2336	0	163	0	771	0	0	0
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.00	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	1401	0	0	2459	0	172	0	812	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1401	0	0	2459	0	172	0	812	0	0	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1401	0	0	2459	0	172	0	812	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.91	1.00	1.00	0.91	1.00	0.87	1.00	0.87	1.00	1.00	1.00
Lanes:	0.00	3.00	1.00	0.00	4.00	0.00	1.17	0.00	1.83	0.00	0.00	0.00
Final Sat.:	0	5187	1900	0	6916	0	1937	0	3011	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.27	0.00	0.00	0.36	0.00	0.09	0.00	0.27	0.00	0.00	0.00
Crit Moves:					****				****			
Green/Cycle:	0.00	0.52	0.00	0.00	0.52	0.00	0.39	0.00	0.39	0.00	0.00	0.00
Volume/Cap:	0.00	0.52	0.00	0.00	0.69	0.00	0.23	0.00	0.69	0.00	0.00	0.00
Delay/Veh:	0.0	14.5	0.0	0.0	16.8	0.0	18.2	0.0	24.1	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	14.5	0.0	0.0	16.8	0.0	18.2	0.0	24.1	0.0	0.0	0.0
LOS by Move:	A	B	A	A	B	A	B	A	C	A	A	A
HCM2k95thQ:	0	18	0	0	26	0	5	0	21	0	0	0

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                    Level Of Service Computation Report
          2000 HCM Operations Method (Future Volume Alternative)
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Intersection #29 Harbor Boulevard at I-405 SB Ramps
********************************************************************************
Cycle (sec):          90               Critical Vol./Cap.(X):         0.722
Loss Time (sec):       8               Average Delay (sec/veh):        18.6
Optimal Cycle:        50               Level Of Service:                  B
********************************************************************************
Street Name:             Harbor Boulevard                I-405 SB Ramps
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Permitted        Permitted       Split Phase      Split Phase
Rights:          Ignore          Include          Include          Include
Min. Green:    0    6     6    0    6     0    6    6     6    0    0     0
Y+R:         4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:       0  0  3  0  1   0  0  4  0  0   1  0  1! 0  1   0  0  0  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0 1383   712    0 2380     0  163    0   850    0    0     0
Growth Adj:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Initial Bse:   0 1383   712    0 2380     0  163    0   850    0    0     0
Added Vol:     0    0     0    0    0     0    0    0     0    0    0     0
PasserByVol:   0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:   0 1383   712    0 2380     0  163    0   850    0    0     0
User Adj:    1.00 1.00  0.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.00 0.95 0.95  0.95 0.95 0.95  0.95 0.95 0.95  0.95
PHF Volume:    0 1456     0    0 2505     0  172    0   895    0    0     0
Reduct Vol:    0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:   0 1456     0    0 2505     0  172    0   895    0    0     0
PCE Adj:     1.00 1.00  0.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:     1.00 1.00  0.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume:   0 1456     0    0 2505     0  172    0   895    0    0     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900 1900 1900  1900 1900 1900  1900 1900 1900  1900
Adjustment:  1.00 0.91  1.00 1.00 0.91  1.00 0.87 1.00  0.87 1.00 1.00  1.00
Lanes:       0.00 3.00  1.00 0.00 4.00  0.00 1.16 0.00  1.84 0.00 0.00  0.00
Final Sat.:    0 5187  1900    0 6916     0 1912    0  3030    0    0     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.28  0.00 0.00 0.36  0.00 0.09 0.00  0.30 0.00 0.00  0.00
Crit Moves:                       ****                    ****
Green/Cycle: 0.00 0.50  0.00 0.00 0.50  0.00 0.41 0.00  0.41 0.00 0.00  0.00
Volume/Cap:  0.00 0.56  0.00 0.00 0.72  0.00 0.22 0.00  0.72 0.00 0.00  0.00
Delay/Veh:    0.0 15.8   0.0  0.0 18.3   0.0 17.3  0.0  24.1  0.0  0.0   0.0
User DelAdj: 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
AdjDel/Veh:   0.0 15.8   0.0  0.0 18.3   0.0 17.3  0.0  24.1  0.0  0.0   0.0
LOS by Move:   A    B     A    A    B     A    B    A     C    A    A     A
HCM2k95thQ:    0   19     0    0   28     0    5    0    23    0    0     0
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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #33 Newport Boulevard/SR-55 SB Ramps at Fair Drive

Cycle (sec):	90	Critical Vol./Cap.(X):	0.402
Loss Time (sec):	12	Average Delay (sec/veh):	21.4
Optimal Cycle:	71	Level Of Service:	C

Street Name:	Newport Boulevard/SR-55 SB Ramps						Fair Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Protected		
Rights:	Include			Ignore			Include			Include		
Min. Green:	0	0	0	34	34	34	0	19	19	6	6	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	1 0	3 0	1	0 0	3 1	0	1 0	2 0	0
Volume Module:												
Base Vol:	0	0	0	205	556	559	0	922	43	115	275	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	205	556	559	0	922	43	115	275	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	205	556	559	0	922	43	115	275	0
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.00	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	216	585	0	0	971	45	121	289	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	216	585	0	0	971	45	121	289	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	216	585	0	0	971	45	121	289	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.85	0.91	1.00	1.00	0.90	0.90	0.95	0.95	1.00
Lanes:	0.00	0.00	0.00	1.00	3.00	1.00	0.00	3.82	0.18	1.00	2.00	0.00
Final Sat.:	0	0	0	1615	5187	1900	0	6562	306	1805	3610	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.13	0.11	0.00	0.00	0.15	0.15	0.07	0.08	0.00
Crit Moves:				****				****		****		
Green/Cycle:	0.00	0.00	0.00	0.38	0.38	0.00	0.00	0.34	0.34	0.15	0.49	0.00
Volume/Cap:	0.00	0.00	0.00	0.35	0.30	0.00	0.00	0.44	0.44	0.44	0.16	0.00
Delay/Veh:	0.0	0.0	0.0	20.5	19.7	0.0	0.0	23.4	23.4	35.8	12.8	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	20.5	19.7	0.0	0.0	23.4	23.4	35.8	12.8	0.0
LOS by Move:	A	A	A	C	B	A	A	C	C	D	B	A
HCM2k95thQ:	0	0	0	9	8	0	0	12	12	7	5	0

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                       Level Of Service Computation Report
             2000 HCM Operations Method (Future Volume Alternative)
********************************************************************************
Intersection #33 Newport Boulevard/SR-55 SB Ramps at Fair Drive
********************************************************************************
Cycle (sec):          90              Critical Vol./Cap.(X):          0.406
Loss Time (sec):      12              Average Delay (sec/veh):         21.3
Optimal Cycle:        71              Level Of Service:                   C
********************************************************************************
Street Name: Newport Boulevard/SR-55 SB Ramps              Fair Drive
Approach:     North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:      Split Phase      Split Phase       Permitted        Protected
Rights:         Include           Ignore          Include          Include
Min. Green:    0     0     0   34    34    34    0    19    19    6     6     0
Y+R:         4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:        0  0  0  0  0    1  0  3  0  1    0  0  3  1  0    1  0  2  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0     0     0  205   556   606    0   937    48  115   329     0
Growth Adj: 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Initial Bse:   0     0     0  205   556   606    0   937    48  115   329     0
Added Vol:     0     0     0    0     0     0    0     0     0    0     0     0
PasserByVol:   0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut:   0     0     0  205   556   606    0   937    48  115   329     0
User Adj:   1.00  1.00  1.00 1.00  1.00  0.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Adj:    0.95  0.95  0.95 0.95  0.95  0.00 0.95  0.95  0.95 0.95  0.95  0.95
PHF Volume:    0     0     0  216   585     0    0   986    51  121   346     0
Reduct Vol:    0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol:   0     0     0  216   585     0    0   986    51  121   346     0
PCE Adj:    1.00  1.00  1.00 1.00  1.00  0.00 1.00  1.00  1.00 1.00  1.00  1.00
MLF Adj:    1.00  1.00  1.00 1.00  1.00  0.00 1.00  1.00  1.00 1.00  1.00  1.00
FinalVolume:   0     0     0  216   585     0    0   986    51  121   346     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:   1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900  1900
Adjustment: 1.00  1.00  1.00 0.85  0.91  1.00 1.00  0.90  0.90 0.95  0.95  1.00
Lanes:      0.00  0.00  0.00 1.00  3.00  1.00 0.00  3.81  0.19 1.00  2.00  0.00
Final Sat.:    0     0     0 1615  5187  1900    0  6533   335 1805  3610     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.00  0.00  0.00 0.13  0.11  0.00 0.00  0.15  0.15 0.07  0.10  0.00
Crit Moves:                  ****                   ****       ****
Green/Cycle: 0.00 0.00  0.00 0.38  0.38  0.00 0.00  0.34  0.34 0.15  0.49  0.00
Volume/Cap: 0.00  0.00  0.00 0.35  0.30  0.00 0.00  0.45  0.45 0.45  0.20  0.00
Delay/Veh:   0.0   0.0   0.0 20.5  19.7   0.0  0.0  23.3  23.3 36.0  13.1   0.0
User DelAdj: 1.00 1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
AdjDel/Veh:  0.0   0.0   0.0 20.5  19.7   0.0  0.0  23.3  23.3 36.0  13.1   0.0
LOS by Move:   A     A     A    C     B     A    A     C     C    D     B     A
HCM2k95thQ:    0     0     0    9     8     0    0    12    12    7     6     0
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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #33 Newport Boulevard/SR-55 SB Ramps at Fair Drive

Cycle (sec):	90	Critical Vol./Cap.(X):	0.538
Loss Time (sec):	12	Average Delay (sec/veh):	19.9
Optimal Cycle:	71	Level Of Service:	B

Street Name: Newport Boulevard/SR-55 SB Ramps — Fair Drive

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Protected		
Rights:	Include			Ignore			Include			Include		
Min. Green:	0	0	0	34	34	34	0	19	19	6	6	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0 0	1 0	3	0 1	0 0	3	1 0	1 0	2	0 0
Volume Module:												
Base Vol:	0	0	0	328	1472	1432	0	582	50	121	353	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	328	1472	1432	0	582	50	121	353	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	328	1472	1432	0	582	50	121	353	0
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.00	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	345	1549	0	0	613	53	127	372	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	345	1549	0	0	613	53	127	372	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	345	1549	0	0	613	53	127	372	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.85	0.91	1.00	1.00	0.90	0.90	0.95	0.95	1.00
Lanes:	0.00	0.00	0.00	1.00	3.00	1.00	0.00	3.68	0.32	1.00	2.00	0.00
Final Sat.:	0	0	0	1615	5187	1900	0	6292	541	1805	3610	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.21	0.30	0.00	0.00	0.10	0.10	0.07	0.10	0.00
Crit Moves:					****			****		****		
Green/Cycle:	0.00	0.00	0.00	0.53	0.53	0.00	0.00	0.21	0.21	0.13	0.34	0.00
Volume/Cap:	0.00	0.00	0.00	0.40	0.56	0.00	0.00	0.46	0.46	0.56	0.31	0.00
Delay/Veh:	0.0	0.0	0.0	12.9	14.4	0.0	0.0	31.3	31.3	40.3	22.2	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	12.9	14.4	0.0	0.0	31.3	31.3	40.3	22.2	0.0
LOS by Move:	A	A	A	B	B	A	A	C	C	D	C	A
HCM2k95thQ:	0	0	0	11	20	0	0	9	9	8	8	0

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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #33 Newport Boulevard/SR-55 SB Ramps at Fair Drive

Cycle (sec):	90	Critical Vol./Cap.(X):	0.552
Loss Time (sec):	12	Average Delay (sec/veh):	20.4
Optimal Cycle:	71	Level Of Service:	C

Street Name:	Newport Boulevard/SR-55 SB Ramps						Fair Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Protected		
Rights:	Include			Ignore			Include			Include		
Min. Green:	0	0	0	34	34	34	0	19	19	6	6	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0 0	1 0	3	0 1	0 0	3	1 0	1 0	2	0 0
Volume Module:												
Base Vol:	0	0	0	328	1472	1467	0	639	69	121	395	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	328	1472	1467	0	639	69	121	395	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	328	1472	1467	0	639	69	121	395	0
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.00	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	345	1549	0	0	673	73	127	416	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	345	1549	0	0	673	73	127	416	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	345	1549	0	0	673	73	127	416	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.85	0.91	1.00	1.00	0.90	0.90	0.95	0.95	1.00
Lanes:	0.00	0.00	0.00	1.00	3.00	1.00	0.00	3.61	0.39	1.00	2.00	0.00
Final Sat.:	0	0	0	1615	5187	1900	0	6148	664	1805	3610	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.21	0.30	0.00	0.00	0.11	0.11	0.07	0.12	0.00
Crit Moves:					****			****		****		
Green/Cycle:	0.00	0.00	0.00	0.53	0.53	0.00	0.00	0.21	0.21	0.13	0.34	0.00
Volume/Cap:	0.00	0.00	0.00	0.40	0.56	0.00	0.00	0.52	0.52	0.56	0.34	0.00
Delay/Veh:	0.0	0.0	0.0	12.9	14.4	0.0	0.0	31.8	31.8	40.3	22.6	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	12.9	14.4	0.0	0.0	31.8	31.8	40.3	22.6	0.0
LOS by Move:	A	A	A	B	B	A	A	C	C	D	C	A
HCM2k95thQ:	0	0	0	11	20	0	0	11	11	8	9	0

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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #34 Newport Boulevard/SR-55 NB Ramps at Fair Drive/Del Mar Avenue

Cycle (sec):	90	Critical Vol./Cap.(X):	0.934
Loss Time (sec):	12	Average Delay (sec/veh):	37.6
Optimal Cycle:	119	Level Of Service:	D

Street Name:	Newport Boulevard/SR-55 NB Ramps						Fair Drive/Del Mar Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	19	19	19	0	0	0	6	20	0	0	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1 1 1 0			0 0 0 0 0			2 0 2 0 0			0 0 2 0 1		
Volume Module:												
Base Vol:	155	1638	122	0	0	0	776	366	0	0	235	274
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	155	1638	122	0	0	0	776	366	0	0	235	274
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	155	1638	122	0	0	0	776	366	0	0	235	274
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	163	1724	128	0	0	0	817	385	0	0	247	288
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	163	1724	128	0	0	0	817	385	0	0	247	288
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	163	1724	128	0	0	0	817	385	0	0	247	288
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.89	0.89	0.89	1.00	1.00	1.00	0.92	0.95	1.00	1.00	0.95	0.85
Lanes:	0.24	2.57	0.19	0.00	0.00	0.00	2.00	2.00	0.00	0.00	2.00	1.00
Final Sat.:	411	4340	323	0	0	0	3502	3610	0	0	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.40	0.40	0.40	0.00	0.00	0.00	0.23	0.11	0.00	0.00	0.07	0.18
Crit Moves:		****					****					****
Green/Cycle:	0.43	0.43	0.43	0.00	0.00	0.00	0.25	0.44	0.00	0.00	0.19	0.19
Volume/Cap:	0.93	0.93	0.93	0.00	0.00	0.00	0.93	0.24	0.00	0.00	0.36	0.93
Delay/Veh:	32.9	32.9	32.9	0.0	0.0	0.0	49.7	15.8	0.0	0.0	31.9	70.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	32.9	32.9	32.9	0.0	0.0	0.0	49.7	15.8	0.0	0.0	31.9	70.0
LOS by Move:	C	C	C	A	A	A	D	B	A	A	C	E
HCM2k95thQ:	40	40	40	0	0	0	28	7	0	0	7	22

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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #34 Newport Boulevard/SR-55 NB Ramps at Fair Drive/Del Mar Avenue

Cycle (sec):	90	Critical Vol./Cap.(X):	0.943
Loss Time (sec):	12	Average Delay (sec/veh):	38.6
Optimal Cycle:	125	Level Of Service:	D

Street Name: Newport Boulevard/SR-55 NB Ramps — Fair Drive/Del Mar Avenue

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	19	19	19	0	0	0	6	20	0	0	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	1	1 0	0 0	0	0 0	2 0	2	0 0	0 0	2	0 1
Volume Module:												
Base Vol:	180	1638	122	0	0	0	784	372	0	0	264	274
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	180	1638	122	0	0	0	784	372	0	0	264	274
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	180	1638	122	0	0	0	784	372	0	0	264	274
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	189	1724	128	0	0	0	825	392	0	0	278	288
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	189	1724	128	0	0	0	825	392	0	0	278	288
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	189	1724	128	0	0	0	825	392	0	0	278	288
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.89	0.89	0.89	1.00	1.00	1.00	0.92	0.95	1.00	1.00	0.95	0.85
Lanes:	0.28	2.53	0.19	0.00	0.00	0.00	2.00	2.00	0.00	0.00	2.00	1.00
Final Sat.:	470	4279	319	0	0	0	3502	3610	0	0	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.40	0.40	0.40	0.00	0.00	0.00	0.24	0.11	0.00	0.00	0.08	0.18
Crit Moves:			****				****					****
Green/Cycle:	0.43	0.43	0.43	0.00	0.00	0.00	0.25	0.44	0.00	0.00	0.19	0.19
Volume/Cap:	0.94	0.94	0.94	0.00	0.00	0.00	0.94	0.25	0.00	0.00	0.41	0.94
Delay/Veh:	33.9	33.9	33.9	0.0	0.0	0.0	51.3	15.9	0.0	0.0	32.4	72.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	33.9	33.9	33.9	0.0	0.0	0.0	51.3	15.9	0.0	0.0	32.4	72.5
LOS by Move:	C	C	C	A	A	A	D	B	A	A	C	E
HCM2k95thQ:	42	42	42	0	0	0	28	7	0	0	8	22

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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #34 Newport Boulevard/SR-55 NB Ramps at Fair Drive/Del Mar Avenue

Cycle (sec):	90		Critical Vol./Cap.(X):	0.530
Loss Time (sec):	12		Average Delay (sec/veh):	24.0
Optimal Cycle:	51		Level Of Service:	C

Street Name: Newport Boulevard/SR-55 NB Ramps — Fair Drive/Del Mar Avenue

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	19	19	19	0	0	0	6	20	0	0	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	1	1 0	0 0	0	0 0	2 0	2	0 0	0 0	2	0 1
Volume Module:												
Base Vol:	139	747	121	0	0	0	497	413	0	0	333	155
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	139	747	121	0	0	0	497	413	0	0	333	155
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	139	747	121	0	0	0	497	413	0	0	333	155
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	146	786	127	0	0	0	523	435	0	0	351	163
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	146	786	127	0	0	0	523	435	0	0	351	163
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	146	786	127	0	0	0	523	435	0	0	351	163
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.87	0.87	0.87	1.00	1.00	1.00	0.92	0.95	1.00	1.00	0.95	0.85
Lanes:	0.41	2.23	0.36	0.00	0.00	0.00	2.00	2.00	0.00	0.00	2.00	1.00
Final Sat.:	688	3699	599	0	0	0	3502	3610	0	0	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.21	0.21	0.21	0.00	0.00	0.00	0.15	0.12	0.00	0.00	0.10	0.10
Crit Moves:	****						****				****	
Green/Cycle:	0.40	0.40	0.40	0.00	0.00	0.00	0.28	0.47	0.00	0.00	0.18	0.18
Volume/Cap:	0.53	0.53	0.53	0.00	0.00	0.00	0.53	0.26	0.00	0.00	0.53	0.55
Delay/Veh:	20.8	20.8	20.8	0.0	0.0	0.0	27.8	14.7	0.0	0.0	34.1	35.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	20.8	20.8	20.8	0.0	0.0	0.0	27.8	14.7	0.0	0.0	34.1	35.6
LOS by Move:	C	C	C	A	A	A	C	B	A	A	C	D
HCM2k95thQ:	16	16	16	0	0	0	13	8	0	0	10	10

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2000 HCM Operations Method (Future Volume Alternative)

Intersection #34 Newport Boulevard/SR-55 NB Ramps at Fair Drive/Del Mar Avenue

Cycle (sec):	90		Critical Vol./Cap.(X):	0.554
Loss Time (sec):	12		Average Delay (sec/veh):	24.3
Optimal Cycle:	51		Level Of Service:	C

Street Name: Newport Boulevard/SR-55 NB Ramps; Fair Drive/Del Mar Avenue

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	19	19	19	0	0	0	6	20	0	0	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	1	1 0	0 0	0	0 0	2 0	2	0 0	0 0	2	0 1
Volume Module:												
Base Vol:	158	747	121	0	0	0	529	440	0	0	357	155
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	158	747	121	0	0	0	529	440	0	0	357	155
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	158	747	121	0	0	0	529	440	0	0	357	155
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	166	786	127	0	0	0	557	463	0	0	376	163
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	166	786	127	0	0	0	557	463	0	0	376	163
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	166	786	127	0	0	0	557	463	0	0	376	163
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.87	0.87	0.87	1.00	1.00	1.00	0.92	0.95	1.00	1.00	0.95	0.85
Lanes:	0.46	2.19	0.35	0.00	0.00	0.00	2.00	2.00	0.00	0.00	2.00	1.00
Final Sat.:	766	3623	587	0	0	0	3502	3610	0	0	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.22	0.22	0.22	0.00	0.00	0.00	0.16	0.13	0.00	0.00	0.10	0.10
Crit Moves:		****					****				****	
Green/Cycle:	0.39	0.39	0.39	0.00	0.00	0.00	0.29	0.47	0.00	0.00	0.19	0.19
Volume/Cap:	0.55	0.55	0.55	0.00	0.00	0.00	0.55	0.27	0.00	0.00	0.55	0.54
Delay/Veh:	21.6	21.6	21.6	0.0	0.0	0.0	27.9	14.3	0.0	0.0	34.1	34.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	21.6	21.6	21.6	0.0	0.0	0.0	27.9	14.3	0.0	0.0	34.1	34.9
LOS by Move:	C	C	C	A	A	A	C	B	A	A	C	C
HCM2k95thQ:	17	17	17	0	0	0	14	8	0	0	11	9

APPENDIX C-II

YEAR 2024 PLUS PROJECT TRAFFIC CONDITIONS

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------------------------------------------------------------------------------
                               AM Cumulative
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                                 Caltrans
------------------------------------------------------------------------------

                      Level Of Service Computation Report
            2000 HCM Operations Method (Future Volume Alternative)
******************************************************************************
Intersection #7 Fairview Road at I-405 NB Ramps
******************************************************************************
Cycle (sec):          90                  Critical Vol./Cap.(X):         0.912
Loss Time (sec):      12                  Average Delay (sec/veh):        30.4
Optimal Cycle:       109                  Level Of Service:                  C
******************************************************************************
Street Name:             Fairview Road                     I-405 NB Ramps
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------||----------------||----------------||----------------|
Control:        Protected         Permitted        Split Phase      Split Phase
Rights:           Include           Include          Include           Include
Min. Green:    6    21     0     0    14    14     0     0     0     6     0     6
Y+R:         4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0
Lanes:        1  0  3  0  0    0  0  6  0  1    0  0  0  0  0    2  0  0  0  2
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:     250   831     0     0  1507   393     0     0     0   864     0  1050
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:  250   831     0     0  1507   393     0     0     0   864     0  1050
Added Vol:      0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:  250   831     0     0  1507   393     0     0     0   864     0  1050
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95
PHF Volume:   263   875     0     0  1586   414     0     0     0   909     0  1105
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:  263   875     0     0  1586   414     0     0     0   909     0  1105
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:  263   875     0     0  1586   414     0     0     0   909     0  1105
------------|----------------||----------------||----------------||----------------|
Saturation Flow Module:
Sat/Lane:    1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900
Adjustment:  0.95  0.91  1.00  1.00  0.91  0.85  1.00  1.00  1.00  0.92  1.00  0.75
Lanes:       1.00  3.00  0.00  0.00  6.00  1.00  0.00  0.00  0.00  2.00  0.00  2.00
Final Sat.:  1805  5187     0     0  xxxx  1615     0     0     0  3502     0  2842
------------|----------------||----------------||----------------||----------------|
Capacity Analysis Module:
Vol/Sat:     0.15  0.17  0.00  0.00  0.15  0.26  0.00  0.00  0.00  0.26  0.00  0.39
Crit Moves:  ****                          ****                                ****
Green/Cycle: 0.16  0.44  0.00  0.00  0.28  0.28  0.00  0.00  0.00  0.43  0.00  0.43
Volume/Cap:  0.91  0.38  0.00  0.00  0.54  0.91  0.00  0.00  0.00  0.61  0.00  0.91
Delay/Veh:   68.4  17.1   0.0   0.0  27.7  53.9   0.0   0.0   0.0  20.8   0.0  34.7
User DelAdj: 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
AdjDel/Veh:  68.4  17.1   0.0   0.0  27.7  53.9   0.0   0.0   0.0  20.8   0.0  34.7
LOS by Move:    E     B     A     A     C     D     A     A     A     C     A     C
HCM2k95thQ:    20    12     0     0    14    27     0     0     0    19     0    35
******************************************************************************
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AM Cumulative Plus Project
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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 Fairview Road at I-405 NB Ramps

Cycle (sec):	90	Critical Vol./Cap.(X):	0.923
Loss Time (sec):	12	Average Delay (sec/veh):	31.6
Optimal Cycle:	114	Level Of Service:	C

Street Name:	Fairview Road						I-405 NB Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:		Protected			Permitted			Split Phase			Split Phase	
Rights:		Include			Include			Include			Include	
Min. Green:	6	21	0	0	14	14	0	0	0	6	0	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	3 0	0	0 0	6 0	1	0 0	0 0	0	2 0	0 0	2
Volume Module:												
Base Vol:	266	847	0	0	1578	393	0	0	0	1085	0	1050
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	266	847	0	0	1578	393	0	0	0	1085	0	1050
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	266	847	0	0	1578	393	0	0	0	1085	0	1050
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	280	892	0	0	1661	414	0	0	0	1142	0	1105
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	280	892	0	0	1661	414	0	0	0	1142	0	1105
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	280	892	0	0	1661	414	0	0	0	1142	0	1105
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.91	1.00	1.00	0.91	0.85	1.00	1.00	1.00	0.92	1.00	0.75
Lanes:	1.00	3.00	0.00	0.00	6.00	1.00	0.00	0.00	0.00	2.00	0.00	2.00
Final Sat.:	1805	5187	0	0	xxxx	1615	0	0	0	3502	0	2842
Capacity Analysis Module:												
Vol/Sat:	0.16	0.17	0.00	0.00	0.16	0.26	0.00	0.00	0.00	0.33	0.00	0.39
Crit Moves:	****					****						****
Green/Cycle:	0.17	0.45	0.00	0.00	0.28	0.28	0.00	0.00	0.00	0.42	0.00	0.42
Volume/Cap:	0.92	0.39	0.00	0.00	0.58	0.92	0.00	0.00	0.00	0.77	0.00	0.92
Delay/Veh:	69.2	16.8	0.0	0.0	28.3	56.3	0.0	0.0	0.0	25.0	0.0	36.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	69.2	16.8	0.0	0.0	28.3	56.3	0.0	0.0	0.0	25.0	0.0	36.5
LOS by Move:	E	B	A	A	C	E	A	A	A	C	A	D
HCM2k95thQ:	21	12	0	0	15	27	0	0	0	27	0	35

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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 Fairview Road at I-405 NB Ramps

Cycle (sec):	90	Critical Vol./Cap.(X):	0.964
Loss Time (sec):	12	Average Delay (sec/veh):	34.1
Optimal Cycle:	139	Level Of Service:	C

Street Name:	Fairview Road						I-405 NB Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	6	21	0	0	14	14	0	0	0	6	0	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0 3 0 0			0 0 6 0 1			0 0 0 0 0			2 0 0 0 2		
Volume Module:												
Base Vol:	236	1350	0	0	1817	362	0	0	0	963	0	1247
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	236	1350	0	0	1817	362	0	0	0	963	0	1247
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	236	1350	0	0	1817	362	0	0	0	963	0	1247
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	248	1421	0	0	1913	381	0	0	0	1014	0	1313
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	248	1421	0	0	1913	381	0	0	0	1014	0	1313
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	248	1421	0	0	1913	381	0	0	0	1014	0	1313
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.91	1.00	1.00	0.91	0.85	1.00	1.00	1.00	0.92	1.00	0.75
Lanes:	1.00	3.00	0.00	0.00	6.00	1.00	0.00	0.00	0.00	2.00	0.00	2.00
Final Sat.:	1805	5187	0	0	xxxx	1615	0	0	0	3502	0	2842
Capacity Analysis Module:												
Vol/Sat:	0.14	0.27	0.00	0.00	0.18	0.24	0.00	0.00	0.00	0.29	0.00	0.46
Crit Moves:	****					****						****
Green/Cycle:	0.14	0.39	0.00	0.00	0.24	0.24	0.00	0.00	0.00	0.48	0.00	0.48
Volume/Cap:	0.96	0.71	0.00	0.00	0.75	0.96	0.00	0.00	0.00	0.60	0.00	0.96
Delay/Veh:	84.2	24.4	0.0	0.0	32.8	69.3	0.0	0.0	0.0	17.8	0.0	39.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	84.2	24.4	0.0	0.0	32.8	69.3	0.0	0.0	0.0	17.8	0.0	39.2
LOS by Move:	F	C	A	A	C	E	A	A	A	B	A	D
HCM2k95thQ:	20	24	0	0	20	27	0	0	0	20	0	43

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---------------------------------------------------------------------------------
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                     Level Of Service Computation Report
           2000 HCM Operations Method (Future Volume Alternative)
*********************************************************************************
Intersection #7 Fairview Road at I-405 NB Ramps
*********************************************************************************
Cycle (sec):          90              Critical Vol./Cap.(X):         1.007
Loss Time (sec):      12              Average Delay (sec/veh):        38.4
Optimal Cycle:       179              Level Of Service:                  D
*********************************************************************************
Street Name:              Fairview Road                    I-405 NB Ramps
Approach:        North Bound      South Bound       East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Protected        Permitted       Split Phase      Split Phase
Rights:           Include          Include          Include          Include
Min. Green:     6   21     0     0   14    14     0    0     0     6    0     6
Y+R:          4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0
Lanes:        1  0  3  0  0   0  0  6  0  1    0  0  0  0  0    2  0  0  0  2
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     300 1407     0     0 1874   362     0    0     0  1127    0  1247
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  300 1407     0     0 1874   362     0    0     0  1127    0  1247
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  300 1407     0     0 1874   362     0    0     0  1127    0  1247
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:   316 1481     0     0 1973   381     0    0     0  1186    0  1313
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  316 1481     0     0 1973   381     0    0     0  1186    0  1313
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  316 1481     0     0 1973   381     0    0     0  1186    0  1313
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.95 0.91  1.00  1.00 0.91  0.85  1.00 1.00  1.00  0.92 1.00  0.75
Lanes:       1.00 3.00  0.00  0.00 6.00  1.00  0.00 0.00  0.00  2.00 0.00  2.00
Final Sat.:  1805 5187     0     0 xxxx  1615     0    0     0  3502    0  2842
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.17 0.29  0.00  0.00 0.19  0.24  0.00 0.00  0.00  0.34 0.00  0.46
Crit Moves:  ****                        ****                                ****
Green/Cycle: 0.17 0.41  0.00  0.00 0.23  0.23  0.00 0.00  0.00  0.46 0.00  0.46
Volume/Cap:  1.01 0.70  0.00  0.00 0.81  1.01  0.00 0.00  0.00  0.74 0.00  1.01
Delay/Veh:   89.8 23.1   0.0   0.0 34.8  82.5   0.0  0.0   0.0  21.8  0.0  51.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  89.8 23.1   0.0   0.0 34.8  82.5   0.0  0.0   0.0  21.8  0.0  51.0
LOS by Move:    F    C     A     A    C     F     A    A     A     C    A     D
HCM2k95thQ:    25   24     0     0   21    29     0    0     0    27    0    46
*********************************************************************************
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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 Fairview Road at I-405 SB Ramps

Cycle (sec):	90	Critical Vol./Cap.(X):	0.818
Loss Time (sec):	12	Average Delay (sec/veh):	22.5
Optimal Cycle:	78	Level Of Service:	C

Street Name:	Fairview Road						I-405 SB Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:		Permitted			Protected			Split Phase			Split Phase	
Rights:		Include			Include			Include			Include	
Min. Green:	0	18	18	6	21	0	6	0	6	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0 3 1 1			3 0 3 0 0			2 0 0 0 2			0 0 0 0 0		
Volume Module:												
Base Vol:	0	785	1076	1191	1300	0	273	0	301	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	785	1076	1191	1300	0	273	0	301	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	785	1076	1191	1300	0	273	0	301	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	826	1133	1254	1368	0	287	0	317	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	826	1133	1254	1368	0	287	0	317	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	826	1133	1254	1368	0	287	0	317	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.83	0.83	0.92	0.91	1.00	0.92	1.00	0.75	1.00	1.00	1.00
Lanes:	0.00	3.00	2.00	3.00	3.00	0.00	2.00	0.00	2.00	0.00	0.00	0.00
Final Sat.:	0	4736	3157	5253	5187	0	3502	0	2842	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.17	0.36	0.24	0.26	0.00	0.08	0.00	0.11	0.00	0.00	0.00
Crit Moves:			****	****					****			
Green/Cycle:	0.00	0.44	0.44	0.29	0.73	0.00	0.14	0.00	0.14	0.00	0.00	0.00
Volume/Cap:	0.00	0.40	0.82	0.82	0.36	0.00	0.60	0.00	0.82	0.00	0.00	0.00
Delay/Veh:	0.0	17.2	24.4	33.2	4.5	0.0	38.7	0.0	50.6	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	17.2	24.4	33.2	4.5	0.0	38.7	0.0	50.6	0.0	0.0	0.0
LOS by Move:	A	B	C	C	A	A	D	A	D	A	A	A
HCM2k95thQ:	0	11	30	24	10	0	9	0	14	0	0	0

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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 Fairview Road at I-405 SB Ramps

Cycle (sec):	90	Critical Vol./Cap.(X):	0.873
Loss Time (sec):	12	Average Delay (sec/veh):	24.1
Optimal Cycle:	94	Level Of Service:	C

Street Name:	Fairview Road						I-405 SB Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:		Permitted			Protected			Split Phase			Split Phase	
Rights:		Include			Include			Include			Include	
Min. Green:	0	18	18	6	21	0	6	0	6	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	3	1 1	3 0	3	0 0	2 0	0	0 2	0 0	0	0 0
Volume Module:												
Base Vol:	0	816	1119	1191	1593	0	273	0	390	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	816	1119	1191	1593	0	273	0	390	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	816	1119	1191	1593	0	273	0	390	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	859	1178	1254	1677	0	287	0	411	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	859	1178	1254	1677	0	287	0	411	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	859	1178	1254	1677	0	287	0	411	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.83	0.83	0.92	0.91	1.00	0.92	1.00	0.75	1.00	1.00	1.00
Lanes:	0.00	3.00	2.00	3.00	3.00	0.00	2.00	0.00	2.00	0.00	0.00	0.00
Final Sat.:	0	4736	3157	5253	5187	0	3502	0	2842	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.18	0.37	0.24	0.32	0.00	0.08	0.00	0.14	0.00	0.00	0.00
Crit Moves:			****	****					****			
Green/Cycle:	0.00	0.43	0.43	0.27	0.70	0.00	0.17	0.00	0.17	0.00	0.00	0.00
Volume/Cap:	0.00	0.42	0.87	0.87	0.46	0.00	0.50	0.00	0.87	0.00	0.00	0.00
Delay/Veh:	0.0	18.1	27.4	37.4	6.0	0.0	34.8	0.0	52.9	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	18.1	27.4	37.4	6.0	0.0	34.8	0.0	52.9	0.0	0.0	0.0
LOS by Move:	A	B	C	D	A	A	C	A	D	A	A	A
HCM2k95thQ:	0	12	33	26	14	0	8	0	17	0	0	0

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                   Level Of Service Computation Report
         2000 HCM Operations Method (Future Volume Alternative)
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Intersection #8 Fairview Road at I-405 SB Ramps
********************************************************************************
Cycle (sec):         90               Critical Vol./Cap.(X):         0.703
Loss Time (sec):     12               Average Delay (sec/veh):        23.6
Optimal Cycle:       58               Level Of Service:                  C
********************************************************************************
Street Name:         Fairview Road                    I-405 SB Ramps
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------||----------------||----------------||----------------|
Control:        Permitted        Protected        Split Phase      Split Phase
Rights:          Include          Include           Include          Include
Min. Green:    0    18    18    6    21     0    6     0     6    0     0     0
Y+R:         4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:        0  0  3  1  1    3  0  3  0  0    2  0  0  0  2    0  0  0  0  0
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:      0  1052   582 1163  1594     0  513     0   448    0     0     0
Growth Adj:  1.00 1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Initial Bse:   0  1052   582 1163  1594     0  513     0   448    0     0     0
Added Vol:     0     0     0    0     0     0    0     0     0    0     0     0
PasserByVol:   0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut:   0  1052   582 1163  1594     0  513     0   448    0     0     0
User Adj:    1.00 1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Adj:     0.95 0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95
PHF Volume:    0  1107   613 1224  1678     0  540     0   472    0     0     0
Reduct Vol:    0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol:   0  1107   613 1224  1678     0  540     0   472    0     0     0
PCE Adj:     1.00 1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
MLF Adj:     1.00 1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
FinalVolume:   0  1107   613 1224  1678     0  540     0   472    0     0     0
------------|----------------||----------------||----------------||----------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900 1900  1900  1900 1900  1900  1900 1900  1900  1900
Adjustment:  1.00 0.86  0.86 0.92  0.91  1.00 0.92  1.00  0.75 1.00  1.00  1.00
Lanes:       0.00 3.22  1.78 3.00  3.00  0.00 2.00  0.00  2.00 0.00  0.00  0.00
Final Sat.:    0  5271  2916 5253  5187     0 3502     0  2842    0     0     0
------------|----------------||----------------||----------------||----------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.21  0.21 0.23  0.32  0.00 0.15  0.00  0.17 0.00  0.00  0.00
Crit Moves:       ****       ****                            ****
Green/Cycle: 0.00 0.30  0.30 0.33  0.63  0.00 0.24  0.00  0.24 0.00  0.00  0.00
Volume/Cap:  0.00 0.70  0.70 0.70  0.51  0.00 0.65  0.00  0.70 0.00  0.00  0.00
Delay/Veh:    0.0 28.9  28.9 27.5   9.2   0.0 32.9   0.0  34.8  0.0   0.0   0.0
User DelAdj: 1.00 1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
AdjDel/Veh:   0.0 28.9  28.9 27.5   9.2   0.0 32.9   0.0  34.8  0.0   0.0   0.0
LOS by Move:    A    C     C    C     A     A    C     A     C    A     A     A
HCM2k95thQ:     0   19    19   21    17     0   15     0    15    0     0     0
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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 Fairview Road at I-405 SB Ramps

Cycle (sec):	90	Critical Vol./Cap.(X):	0.774
Loss Time (sec):	12	Average Delay (sec/veh):	24.7
Optimal Cycle:	69	Level Of Service:	C

Street Name:	Fairview Road						I-405 SB Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	18	18	6	21	0	6	0	6	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	3	1 1	3 0	3	0 0	2 0	0	0 2	0 0	0	0 0
Volume Module:												
Base Vol:	0	1173	750	1163	1815	0	513	0	511	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1173	750	1163	1815	0	513	0	511	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	1173	750	1163	1815	0	513	0	511	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	1235	789	1224	1911	0	540	0	538	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1235	789	1224	1911	0	540	0	538	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1235	789	1224	1911	0	540	0	538	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.86	0.86	0.92	0.91	1.00	0.92	1.00	0.75	1.00	1.00	1.00
Lanes:	0.00	3.05	1.95	3.00	3.00	0.00	2.00	0.00	2.00	0.00	0.00	0.00
Final Sat.:	0	4967	3176	5253	5187	0	3502	0	2842	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.25	0.25	0.23	0.37	0.00	0.15	0.00	0.19	0.00	0.00	0.00
Crit Moves:		****		****					****			
Green/Cycle:	0.00	0.32	0.32	0.30	0.62	0.00	0.24	0.00	0.24	0.00	0.00	0.00
Volume/Cap:	0.00	0.77	0.77	0.77	0.59	0.00	0.63	0.00	0.77	0.00	0.00	0.00
Delay/Veh:	0.0	29.1	29.1	31.1	10.5	0.0	31.9	0.0	37.1	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	29.1	29.1	31.1	10.5	0.0	31.9	0.0	37.1	0.0	0.0	0.0
LOS by Move:	A	C	C	C	B	A	C	A	D	A	A	A
HCM2k95thQ:	0	23	23	22	22	0	15	0	18	0	0	0

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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #28 Harbor Boulevard at I-405 NB Ramps

Cycle (sec):	90	Critical Vol./Cap.(X):	0.594
Loss Time (sec):	8	Average Delay (sec/veh):	20.2
Optimal Cycle:	37	Level Of Service:	C

Street Name:	Harbor Boulevard						I-405 NB Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Ignore			Include			Include		
Min. Green:	0	22	0	0	6	6	0	0	0	6	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	4	0 0	0 0	4	0 1	0 0	0	0 0	1 0	1!	0 1
Volume Module:												
Base Vol:	0	1389	0	0	1418	1334	0	0	0	498	0	850
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1389	0	0	1418	1334	0	0	0	498	0	850
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	1389	0	0	1418	1334	0	0	0	498	0	850
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.00	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	1462	0	0	1493	0	0	0	0	524	0	895
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1462	0	0	1493	0	0	0	0	524	0	895
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1462	0	0	1493	0	0	0	0	524	0	895
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	0.89	1.00	0.89
Lanes:	0.00	4.00	0.00	0.00	4.00	1.00	0.00	0.00	0.00	1.37	0.00	1.63
Final Sat.:	0	6916	0	0	6916	1900	0	0	0	2312	0	2753
Capacity Analysis Module:												
Vol/Sat:	0.00	0.21	0.00	0.00	0.22	0.00	0.00	0.00	0.00	0.23	0.00	0.32
Crit Moves:					****							****
Green/Cycle:	0.00	0.36	0.00	0.00	0.36	0.00	0.00	0.00	0.00	0.55	0.00	0.55
Volume/Cap:	0.00	0.58	0.00	0.00	0.59	0.00	0.00	0.00	0.00	0.41	0.00	0.59
Delay/Veh:	0.0	23.5	0.0	0.0	23.6	0.0	0.0	0.0	0.0	12.0	0.0	14.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	23.5	0.0	0.0	23.6	0.0	0.0	0.0	0.0	12.0	0.0	14.1
LOS by Move:	A	C	A	A	C	A	A	A	A	B	A	B
HCM2k95thQ:	0	18	0	0	18	0	0	0	0	12	0	19

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                     Level Of Service Computation Report
          2000 HCM Operations Method (Future Volume Alternative)
********************************************************************************
Intersection #28 Harbor Boulevard at I-405 NB Ramps
********************************************************************************
Cycle (sec):          90                Critical Vol./Cap.(X):         0.603
Loss Time (sec):       8                Average Delay (sec/veh):        20.1
Optimal Cycle:        38                Level Of Service:                  C
********************************************************************************
Street Name:             Harbor Boulevard                    I-405 NB Ramps
Approach:        North Bound      South Bound      East Bound       West Bound
Movement:       L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Permitted        Permitted       Split Phase      Split Phase
Rights:           Include           Ignore          Include          Include
Min. Green:     0    22     0    0     6     6    0     0     0    6     6     6
Y+R:          4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:         0  0  4  0  0   0  0  4  0  1   0  0  0  0  0   1  0  1! 0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        0 1403     0     0 1474  1334     0     0     0   498     0   850
Growth Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:     0 1403     0     0 1474  1334     0     0     0   498     0   850
Added Vol:       0    0     0     0    0     0     0     0     0     0     0     0
PasserByVol:     0    0     0     0    0     0     0     0     0     0     0     0
Initial Fut:     0 1403     0     0 1474  1334     0     0     0   498     0   850
User Adj:     1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:      0.95 0.95  0.95  0.95 0.95  0.00  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:      0 1477     0     0 1552     0     0     0     0   524     0   895
Reduct Vol:      0    0     0     0    0     0     0     0     0     0     0     0
Reduced Vol:     0 1477     0     0 1552     0     0     0     0   524     0   895
PCE Adj:      1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:      1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:     0 1477     0     0 1552     0     0     0     0   524     0   895
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:     1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:   1.00 0.91  1.00  1.00 0.91  1.00  1.00 1.00  1.00  0.89 1.00  0.89
Lanes:        0.00 4.00  0.00  0.00 4.00  1.00  0.00 0.00  0.00  1.37 0.00  1.63
Final Sat.:      0 6916     0     0 6916  1900     0     0     0  2312     0  2753
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:      0.00 0.21  0.00  0.00 0.22  0.00  0.00 0.00  0.00  0.23 0.00  0.32
Crit Moves:                         ****                                    ****
Green/Cycle:  0.00 0.37  0.00  0.00 0.37  0.00  0.00 0.00  0.00  0.54 0.00  0.54
Volume/Cap:   0.00 0.57  0.00  0.00 0.60  0.00  0.00 0.00  0.00  0.42 0.00  0.60
Delay/Veh:     0.0 22.9   0.0   0.0 23.3   0.0   0.0  0.0   0.0  12.5  0.0  14.6
User DelAdj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:    0.0 22.9   0.0   0.0 23.3   0.0   0.0  0.0   0.0  12.5  0.0  14.6
LOS by Move:     A    C     A     A    C     A     A    A     A     B    A     B
HCM2k95thQ:      0   17     0     0   19     0     0    0     0    12    0    20
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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #28 Harbor Boulevard at I-405 NB Ramps

Cycle (sec):	90	Critical Vol./Cap.(X):	0.741
Loss Time (sec):	8	Average Delay (sec/veh):	22.4
Optimal Cycle:	53	Level Of Service:	C

Street Name:	Harbor Boulevard						I-405 NB Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Ignore			Include			Include		
Min. Green:	0	22	0	0	6	6	0	0	0	6	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	4	0 0	0 0	4	0 1	0 0	0	0 0	1 0	1!	0 1
Volume Module:												
Base Vol:	0	1685	0	0	1742	1128	0	0	0	798	0	1037
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1685	0	0	1742	1128	0	0	0	798	0	1037
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	1685	0	0	1742	1128	0	0	0	798	0	1037
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.00	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	1774	0	0	1834	0	0	0	0	840	0	1092
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1774	0	0	1834	0	0	0	0	840	0	1092
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1774	0	0	1834	0	0	0	0	840	0	1092
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	0.90	1.00	0.90
Lanes:	0.00	4.00	0.00	0.00	4.00	1.00	0.00	0.00	0.00	1.43	0.00	1.57
Final Sat.:	0	6916	0	0	6916	1900	0	0	0	2442	0	2664
Capacity Analysis Module:												
Vol/Sat:	0.00	0.26	0.00	0.00	0.27	0.00	0.00	0.00	0.00	0.34	0.00	0.41
Crit Moves:					****							****
Green/Cycle:	0.00	0.36	0.00	0.00	0.36	0.00	0.00	0.00	0.00	0.55	0.00	0.55
Volume/Cap:	0.00	0.72	0.00	0.00	0.74	0.00	0.00	0.00	0.00	0.62	0.00	0.74
Delay/Veh:	0.0	26.0	0.0	0.0	26.5	0.0	0.0	0.0	0.0	14.1	0.0	16.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	26.0	0.0	0.0	26.5	0.0	0.0	0.0	0.0	14.1	0.0	16.4
LOS by Move:	A	C	A	A	C	A	A	A	A	B	A	B
HCM2k95thQ:	0	23	0	0	24	0	0	0	0	21	0	28

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                   Level Of Service Computation Report
          2000 HCM Operations Method (Future Volume Alternative)
*********************************************************************************
Intersection #28 Harbor Boulevard at I-405 NB Ramps
*********************************************************************************
Cycle (sec):          90              Critical Vol./Cap.(X):          0.748
Loss Time (sec):       8              Average Delay (sec/veh):         22.6
Optimal Cycle:        54              Level Of Service:                   C
*********************************************************************************
Street Name:           Harbor Boulevard                 I-405 NB Ramps
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
-------------|----------------||----------------||----------------||----------------|
Control:        Permitted         Permitted        Split Phase      Split Phase
Rights:          Include           Ignore            Include          Include
Min. Green:    0    22    0     0     6     6     0     0     0     6     6     6
Y+R:          4.0  4.0  4.0    4.0  4.0  4.0    4.0  4.0  4.0    4.0  4.0  4.0
Lanes:        0  0  4  0  0    0  0  4  0  1    0  0  0  0  0    1  0  1! 0  1
-------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:        0 1737    0      0 1786 1128      0    0    0    798    0 1037
Growth Adj:   1.00 1.00 1.00   1.00 1.00 1.00   1.00 1.00 1.00   1.00 1.00 1.00
Initial Bse:     0 1737    0      0 1786 1128      0    0    0    798    0 1037
Added Vol:       0    0    0      0    0    0      0    0    0      0    0    0
PasserByVol:     0    0    0      0    0    0      0    0    0      0    0    0
Initial Fut:     0 1737    0      0 1786 1128      0    0    0    798    0 1037
User Adj:     1.00 1.00 1.00   1.00 1.00 0.00   1.00 1.00 1.00   1.00 1.00 1.00
PHF Adj:      0.95 0.95 0.95   0.95 0.95 0.00   0.95 0.95 0.95   0.95 0.95 0.95
PHF Volume:      0 1828    0      0 1880    0      0    0    0    840    0 1092
Reduct Vol:      0    0    0      0    0    0      0    0    0      0    0    0
Reduced Vol:     0 1828    0      0 1880    0      0    0    0    840    0 1092
PCE Adj:      1.00 1.00 1.00   1.00 1.00 0.00   1.00 1.00 1.00   1.00 1.00 1.00
MLF Adj:      1.00 1.00 1.00   1.00 1.00 0.00   1.00 1.00 1.00   1.00 1.00 1.00
FinalVolume:     0 1828    0      0 1880    0      0    0    0    840    0 1092
-------------|----------------||----------------||----------------||----------------|
Saturation Flow Module:
Sat/Lane:     1900 1900 1900   1900 1900 1900   1900 1900 1900   1900 1900 1900
Adjustment:   1.00 0.91 1.00   1.00 0.91 1.00   1.00 1.00 1.00   0.90 1.00 0.90
Lanes:        0.00 4.00 0.00   0.00 4.00 1.00   0.00 0.00 0.00   1.43 0.00 1.57
Final Sat.:      0 6916    0      0 6916 1900      0    0    0   2442    0 2664
-------------|----------------||----------------||----------------||----------------|
Capacity Analysis Module:
Vol/Sat:      0.00 0.26 0.00   0.00 0.27 0.00   0.00 0.00 0.00   0.34 0.00 0.41
Crit Moves:                         ****                                      ****
Green/Cycle:  0.00 0.36 0.00   0.00 0.36 0.00   0.00 0.00 0.00   0.55 0.00 0.55
Volume/Cap:   0.00 0.73 0.00   0.00 0.75 0.00   0.00 0.00 0.00   0.63 0.00 0.75
Delay/Veh:     0.0 25.9  0.0    0.0 26.3  0.0    0.0  0.0  0.0   14.4  0.0 16.8
User DelAdj:  1.00 1.00 1.00   1.00 1.00 1.00   1.00 1.00 1.00   1.00 1.00 1.00
AdjDel/Veh:    0.0 25.9  0.0    0.0 26.3  0.0    0.0  0.0  0.0   14.4  0.0 16.8
LOS by Move:     A    C    A      A    C    A      A    A    A      B    A    B
HCM2k95thQ:      0   24    0      0   25    0      0    0    0     21    0   28
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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #29 Harbor Boulevard at I-405 SB Ramps

Cycle (sec):	90	Critical Vol./Cap.(X):	0.528
Loss Time (sec):	8	Average Delay (sec/veh):	14.4
Optimal Cycle:	33	Level Of Service:	B

Street Name:	Harbor Boulevard						I-405 SB Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Ignore			Include			Include			Include		
Min. Green:	0	6	6	0	6	0	6	6	6	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	3 0	1	0 0	4 0	0	1 0	1! 0	1	0 0	0 0	0
Volume Module:												
Base Vol:	0	1033	548	0	1941	0	308	0	482	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1033	548	0	1941	0	308	0	482	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	1033	548	0	1941	0	308	0	482	0	0	0
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.00	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	1087	0	0	2043	0	324	0	507	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1087	0	0	2043	0	324	0	507	0	0	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1087	0	0	2043	0	324	0	507	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.91	1.00	1.00	0.91	1.00	0.89	1.00	0.89	1.00	1.00	1.00
Lanes:	0.00	3.00	1.00	0.00	4.00	0.00	1.39	0.00	1.61	0.00	0.00	0.00
Final Sat.:	0	5187	1900	0	6916	0	2355	0	2728	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.21	0.00	0.00	0.30	0.00	0.14	0.00	0.19	0.00	0.00	0.00
Crit Moves:					****				****			
Green/Cycle:	0.00	0.56	0.00	0.00	0.56	0.00	0.35	0.00	0.35	0.00	0.00	0.00
Volume/Cap:	0.00	0.37	0.00	0.00	0.53	0.00	0.39	0.00	0.53	0.00	0.00	0.00
Delay/Veh:	0.0	11.1	0.0	0.0	12.6	0.0	22.0	0.0	23.6	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	11.1	0.0	0.0	12.6	0.0	22.0	0.0	23.6	0.0	0.0	0.0
LOS by Move:	A	B	A	A	B	A	C	A	C	A	A	A
HCM2k95thQ:	0	12	0	0	18	0	10	0	14	0	0	0

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                      Level Of Service Computation Report
            2000 HCM Operations Method (Future Volume Alternative)
*********************************************************************************
Intersection #29 Harbor Boulevard at I-405 SB Ramps
*********************************************************************************
Cycle (sec):          90                Critical Vol./Cap.(X):          0.573
Loss Time (sec):       8                Average Delay (sec/veh):         15.7
Optimal Cycle:        36                Level Of Service:                   B
*********************************************************************************
Street Name:         Harbor Boulevard                      I-405 SB Ramps
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted       Split Phase      Split Phase
Rights:           Ignore          Include          Include          Include
Min. Green:    0     6     6    0     6     0    6     6     6    0     0     0
Y+R:         4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:       0  0  3  0  1    0  0  4  0  0    1  0  1! 0  1    0  0  0  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0 1047   570     0 1997     0   308     0   578     0     0     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0 1047   570     0 1997     0   308     0   578     0     0     0
Added Vol:      0    0     0     0    0     0     0     0     0     0     0     0
PasserByVol:    0    0     0     0    0     0     0     0     0     0     0     0
Initial Fut:    0 1047   570     0 1997     0   308     0   578     0     0     0
User Adj:    1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.00  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:     0 1102     0     0 2102     0   324     0   608     0     0     0
Reduct Vol:     0    0     0     0    0     0     0     0     0     0     0     0
Reduced Vol:    0 1102     0     0 2102     0   324     0   608     0     0     0
PCE Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:    0 1102     0     0 2102     0   324     0   608     0     0     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  1.00 0.91  1.00  1.00 0.91  1.00  0.89 1.00  0.89  1.00 1.00  1.00
Lanes:       0.00 3.00  1.00  0.00 4.00  0.00  1.35 0.00  1.65  0.00 0.00  0.00
Final Sat.:     0 5187  1900     0 6916     0  2270    0  2784     0     0     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.21  0.00  0.00 0.30  0.00  0.14 0.00  0.22  0.00 0.00  0.00
Crit Moves:                        ****                    ****
Green/Cycle: 0.00 0.53  0.00  0.00 0.53  0.00  0.38 0.00  0.38  0.00 0.00  0.00
Volume/Cap:  0.00 0.40  0.00  0.00 0.57  0.00  0.37 0.00  0.57  0.00 0.00  0.00
Delay/Veh:    0.0 12.7   0.0   0.0 14.5   0.0  20.2  0.0  22.6   0.0  0.0   0.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:   0.0 12.7   0.0   0.0 14.5   0.0  20.2  0.0  22.6   0.0  0.0   0.0
LOS by Move:    A    B     A     A    B     A     C    A     C     A    A     A
HCM2k95thQ:     0   13     0     0   20     0    10    0    16     0    0     0
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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #29 Harbor Boulevard at I-405 SB Ramps

Cycle (sec):	90	Critical Vol./Cap.(X):	0.761
Loss Time (sec):	8	Average Delay (sec/veh):	18.8
Optimal Cycle:	56	Level Of Service:	B

Street Name:	Harbor Boulevard						I-405 SB Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Ignore			Include			Include			Include		
Min. Green:	0	6	6	0	6	0	6	6	6	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	3	0 1	0 0	4	0 0	1 0	1!	0 1	0 0	0	0 0
Volume Module:												
Base Vol:	0	1461	707	0	2566	0	178	0	868	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1461	707	0	2566	0	178	0	868	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	1461	707	0	2566	0	178	0	868	0	0	0
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.00	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	1538	0	0	2701	0	187	0	914	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1538	0	0	2701	0	187	0	914	0	0	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1538	0	0	2701	0	187	0	914	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.91	1.00	1.00	0.91	1.00	0.87	1.00	0.87	1.00	1.00	1.00
Lanes:	0.00	3.00	1.00	0.00	4.00	0.00	1.17	0.00	1.83	0.00	0.00	0.00
Final Sat.:	0	5187	1900	0	6916	0	1932	0	3021	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.30	0.00	0.00	0.39	0.00	0.10	0.00	0.30	0.00	0.00	0.00
Crit Moves:					****				****			
Green/Cycle:	0.00	0.51	0.00	0.00	0.51	0.00	0.40	0.00	0.40	0.00	0.00	0.00
Volume/Cap:	0.00	0.58	0.00	0.00	0.76	0.00	0.24	0.00	0.76	0.00	0.00	0.00
Delay/Veh:	0.0	15.5	0.0	0.0	18.5	0.0	18.1	0.0	25.8	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	15.5	0.0	0.0	18.5	0.0	18.1	0.0	25.8	0.0	0.0	0.0
LOS by Move:	A	B	A	A	B	A	B	A	C	A	A	A
HCM2k95thQ:	0	20	0	0	31	0	6	0	24	0	0	0

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                       Level Of Service Computation Report
              2000 HCM Operations Method (Future Volume Alternative)
*********************************************************************************
Intersection #29 Harbor Boulevard at I-405 SB Ramps
*********************************************************************************
Cycle (sec):          90                 Critical Vol./Cap.(X):         0.797
Loss Time (sec):       8                 Average Delay (sec/veh):        20.2
Optimal Cycle:        63                 Level Of Service:                  C
*********************************************************************************
Street Name:          Harbor Boulevard                   I-405 SB Ramps
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------||----------------||----------------||----------------|
Control:         Permitted         Permitted        Split Phase      Split Phase
Rights:            Ignore            Include          Include           Include
Min. Green:      0     6     6    0     6     0    6     6     6    0     0     0
Y+R:           4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:         0  0  3  0  1    0  0  4  0  0    1  0  1! 0  1    0  0  0  0  0
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:        0  1513   791     0  2610     0   178     0   947     0     0     0
Growth Adj:   1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:     0  1513   791     0  2610     0   178     0   947     0     0     0
Added Vol:       0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:     0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:     0  1513   791     0  2610     0   178     0   947     0     0     0
User Adj:     1.00  1.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:      0.95  0.95  0.00  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95
PHF Volume:      0  1593     0     0  2747     0   187     0   997     0     0     0
Reduct Vol:      0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:     0  1593     0     0  2747     0   187     0   997     0     0     0
PCE Adj:      1.00  1.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:      1.00  1.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:     0  1593     0     0  2747     0   187     0   997     0     0     0
------------|----------------||----------------||----------------||----------------|
Saturation Flow Module:
Sat/Lane:     1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900
Adjustment:   1.00  0.91  1.00  1.00  0.91  1.00  0.87  1.00  0.87  1.00  1.00  1.00
Lanes:        0.00  3.00  1.00  0.00  4.00  0.00  1.16  0.00  1.84  0.00  0.00  0.00
Final Sat.:      0  5187  1900     0  6916     0  1908     0  3034     0     0     0
------------|----------------||----------------||----------------||----------------|
Capacity Analysis Module:
Vol/Sat:      0.00  0.31  0.00  0.00  0.40  0.00  0.10  0.00  0.33  0.00  0.00  0.00
Crit Moves:                         ****                    ****
Green/Cycle:  0.00  0.50  0.00  0.00  0.50  0.00  0.41  0.00  0.41  0.00  0.00  0.00
Volume/Cap:   0.00  0.62  0.00  0.00  0.80  0.00  0.24  0.00  0.80  0.00  0.00  0.00
Delay/Veh:     0.0  16.8   0.0   0.0  20.1   0.0  17.3   0.0  26.2   0.0   0.0   0.0
User DelAdj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
AdjDel/Veh:    0.0  16.8   0.0   0.0  20.1   0.0  17.3   0.0  26.2   0.0   0.0   0.0
LOS by Move:     A     B     A     A     C     A     B     A     C     A     A     A
HCM2k95thQ:      0    22     0     0    33     0     6     0    27     0     0     0
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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #33 Newport Boulevard/SR-55 SB Ramps at Fair Drive

Cycle (sec):	90	Critical Vol./Cap.(X):	0.438
Loss Time (sec):	12	Average Delay (sec/veh):	21.7
Optimal Cycle:	71	Level Of Service:	C

Street Name: Newport Boulevard/SR-55 SB Ramps — Fair Drive

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:		Split Phase			Split Phase			Permitted			Protected	
Rights:		Include			Ignore			Include			Include	
Min. Green:	0	0	0	34	34	34	0	19	19	6	6	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0 0 0 0			1 0 3 0 1			0 0 3 1 0			1 0 2 0 0		
Volume Module:												
Base Vol:	0	0	0	223	606	609	0	1005	47	125	300	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	223	606	609	0	1005	47	125	300	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	223	606	609	0	1005	47	125	300	0
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.00	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	235	638	0	0	1058	49	132	316	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	235	638	0	0	1058	49	132	316	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	235	638	0	0	1058	49	132	316	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.85	0.91	1.00	1.00	0.90	0.90	0.95	0.95	1.00
Lanes:	0.00	0.00	0.00	1.00	3.00	1.00	0.00	3.82	0.18	1.00	2.00	0.00
Final Sat.:	0	0	0	1615	5187	1900	0	6561	307	1805	3610	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.15	0.12	0.00	0.00	0.16	0.16	0.07	0.09	0.00
Crit Moves:				****				****		****		
Green/Cycle:	0.00	0.00	0.00	0.38	0.38	0.00	0.00	0.34	0.34	0.15	0.49	0.00
Volume/Cap:	0.00	0.00	0.00	0.38	0.33	0.00	0.00	0.48	0.48	0.48	0.18	0.00
Delay/Veh:	0.0	0.0	0.0	20.8	20.0	0.0	0.0	23.8	23.8	36.2	12.9	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	20.8	20.0	0.0	0.0	23.8	23.8	36.2	12.9	0.0
LOS by Move:	A	A	A	C	B	A	A	C	C	D	B	A
HCM2k95thQ:	0	0	0	10	9	0	0	13	13	8	5	0

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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #33 Newport Boulevard/SR-55 SB Ramps at Fair Drive

Cycle (sec):	90	Critical Vol./Cap.(X):	0.441
Loss Time (sec):	12	Average Delay (sec/veh):	21.6
Optimal Cycle:	71	Level Of Service:	C

Street Name: Newport Boulevard/SR-55 SB Ramps — Fair Drive

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Protected		
Rights:	Include			Ignore			Include			Include		
Min. Green:	0	0	0	34	34	34	0	19	19	6	6	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0 0	1 0	3	0 1	0 0	3	1 0	1 0	2	0 0
Volume Module:												
Base Vol:	0	0	0	223	606	656	0	1020	52	125	354	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	223	606	656	0	1020	52	125	354	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	223	606	656	0	1020	52	125	354	0
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.00	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	235	638	0	0	1074	55	132	373	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	235	638	0	0	1074	55	132	373	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	235	638	0	0	1074	55	132	373	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.85	0.91	1.00	1.00	0.90	0.90	0.95	0.95	1.00
Lanes:	0.00	0.00	0.00	1.00	3.00	1.00	0.00	3.81	0.19	1.00	2.00	0.00
Final Sat.:	0	0	0	1615	5187	1900	0	6534	333	1805	3610	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.15	0.12	0.00	0.00	0.16	0.16	0.07	0.10	0.00
Crit Moves:				****				****		****		
Green/Cycle:	0.00	0.00	0.00	0.38	0.38	0.00	0.00	0.34	0.34	0.15	0.49	0.00
Volume/Cap:	0.00	0.00	0.00	0.38	0.33	0.00	0.00	0.49	0.49	0.49	0.21	0.00
Delay/Veh:	0.0	0.0	0.0	20.8	20.0	0.0	0.0	23.7	23.7	36.4	13.2	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	20.8	20.0	0.0	0.0	23.7	23.7	36.4	13.2	0.0
LOS by Move:	A	A	A	C	B	A	A	C	C	D	B	A
HCM2k95thQ:	0	0	0	10	9	0	0	13	13	8	6	0

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                    Level Of Service Computation Report
          2000 HCM Operations Method (Future Volume Alternative)
********************************************************************************
Intersection #33 Newport Boulevard/SR-55 SB Ramps at Fair Drive
********************************************************************************
Cycle (sec):          90              Critical Vol./Cap.(X):         0.587
Loss Time (sec):      12              Average Delay (sec/veh):        20.5
Optimal Cycle:        71              Level Of Service:                  C
********************************************************************************
Street Name: Newport Boulevard/SR-55 SB Ramps               Fair Drive
Approach:      North Bound      South Bound       East Bound        West Bound
Movement:     L  -  T  -  R   L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Split Phase      Split Phase        Permitted         Protected
Rights:          Include           Ignore           Include           Include
Min. Green:    0     0     0   34    34    34     0    19    19     6     6     0
Y+R:         4.0   4.0   4.0  4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0
Lanes:        0  0  0  0  0   1  0  3  0  1    0  0  3  1  0    1  0  2  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0     0     0  358  1604  1561     0   634    55   132   385     0
Growth Adj:  1.00  1.00  1.00 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:   0     0     0  358  1604  1561     0   634    55   132   385     0
Added Vol:     0     0     0    0     0     0     0     0     0     0     0     0
PasserByVol:   0     0     0    0     0     0     0     0     0     0     0     0
Initial Fut:   0     0     0  358  1604  1561     0   634    55   132   385     0
User Adj:    1.00  1.00  1.00 1.00  1.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     0.95  0.95  0.95 0.95  0.95  0.00  0.95  0.95  0.95  0.95  0.95  0.95
PHF Volume:    0     0     0  377  1688     0     0   667    58   139   405     0
Reduct Vol:    0     0     0    0     0     0     0     0     0     0     0     0
Reduced Vol:   0     0     0  377  1688     0     0   667    58   139   405     0
PCE Adj:     1.00  1.00  1.00 1.00  1.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00 1.00  1.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:   0     0     0  377  1688     0     0   667    58   139   405     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900  1900  1900 1900  1900  1900  1900  1900  1900  1900  1900  1900
Adjustment:  1.00  1.00  1.00 0.85  0.91  1.00  1.00  0.90  0.90  0.95  0.95  1.00
Lanes:       0.00  0.00  0.00 1.00  3.00  1.00  0.00  3.68  0.32  1.00  2.00  0.00
Final Sat.:    0     0     0  1615  5187  1900     0  6288   545  1805  3610     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00  0.00  0.00 0.23  0.33  0.00  0.00  0.11  0.11  0.08  0.11  0.00
Crit Moves:                         ****              ****        ****
Green/Cycle: 0.00  0.00  0.00 0.53  0.53  0.00  0.00  0.21  0.21  0.13  0.34  0.00
Volume/Cap:  0.00  0.00  0.00 0.44  0.61  0.00  0.00  0.50  0.50  0.61  0.33  0.00
Delay/Veh:    0.0   0.0   0.0 13.3  15.1   0.0   0.0  31.6  31.6  42.2  22.5   0.0
User DelAdj: 1.00  1.00  1.00 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
AdjDel/Veh:   0.0   0.0   0.0 13.3  15.1   0.0   0.0  31.6  31.6  42.2  22.5   0.0
LOS by Move:   A     A     A    B     B     A     A     C     C     D     C     A
HCM2k95thQ:    0     0     0   13    22     0     0    10    10     9     9     0
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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #33 Newport Boulevard/SR-55 SB Ramps at Fair Drive

Cycle (sec):	90	Critical Vol./Cap.(X):	0.601
Loss Time (sec):	12	Average Delay (sec/veh):	21.0
Optimal Cycle:	71	Level Of Service:	C

Street Name: Newport Boulevard/SR-55 SB Ramps — Fair Drive

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Protected		
Rights:	Include			Ignore			Include			Include		
Min. Green:	0	0	0	34	34	34	0	19	19	6	6	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	1 0	3 0	1	0 0	3 1	0	1 0	2 0	0
Volume Module:												
Base Vol:	0	0	0	358	1604	1596	0	691	74	132	427	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	358	1604	1596	0	691	74	132	427	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	358	1604	1596	0	691	74	132	427	0
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.00	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	377	1688	0	0	727	78	139	449	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	377	1688	0	0	727	78	139	449	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	377	1688	0	0	727	78	139	449	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.85	0.91	1.00	1.00	0.90	0.90	0.95	0.95	1.00
Lanes:	0.00	0.00	0.00	1.00	3.00	1.00	0.00	3.61	0.39	1.00	2.00	0.00
Final Sat.:	0	0	0	1615	5187	1900	0	6153	659	1805	3610	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.23	0.33	0.00	0.00	0.12	0.12	0.08	0.12	0.00
Crit Moves:					****			****		****		
Green/Cycle:	0.00	0.00	0.00	0.53	0.53	0.00	0.00	0.21	0.21	0.13	0.34	0.00
Volume/Cap:	0.00	0.00	0.00	0.44	0.61	0.00	0.00	0.56	0.56	0.61	0.37	0.00
Delay/Veh:	0.0	0.0	0.0	13.3	15.1	0.0	0.0	32.3	32.3	42.2	22.8	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	13.3	15.1	0.0	0.0	32.3	32.3	42.2	22.8	0.0
LOS by Move:	A	A	A	B	B	A	A	C	C	D	C	A
HCM2k95thQ:	0	0	0	13	22	0	0	12	12	9	10	0

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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #34 Newport Boulevard/SR-55 NB Ramps at Fair Drive/Del Mar Avenue

Cycle (sec):	105	Critical Vol./Cap.(X):	0.996
Loss Time (sec):	12	Average Delay (sec/veh):	51.8
Optimal Cycle:	180	Level Of Service:	D

Street Name: Newport Boulevard/SR-55 NB Ramps — Fair Drive/Del Mar Avenue

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	19	19	19	0	0	0	6	20	0	0	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1 1 1 0			0 0 0 0 0			2 0 2 0 0			0 0 2 0 1		
Volume Module:												
Base Vol:	169	1785	133	0	0	0	846	399	0	0	256	299
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	169	1785	133	0	0	0	846	399	0	0	256	299
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	169	1785	133	0	0	0	846	399	0	0	256	299
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	178	1879	140	0	0	0	891	420	0	0	269	315
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	178	1879	140	0	0	0	891	420	0	0	269	315
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	178	1879	140	0	0	0	891	420	0	0	269	315
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.89	0.89	0.89	1.00	1.00	1.00	0.92	0.95	1.00	1.00	0.95	0.85
Lanes:	0.24	2.57	0.19	0.00	0.00	0.00	2.00	2.00	0.00	0.00	2.00	1.00
Final Sat.:	411	4339	323	0	0	0	3502	3610	0	0	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.43	0.43	0.43	0.00	0.00	0.00	0.25	0.12	0.00	0.00	0.07	0.19
Crit Moves:	****						****					****
Green/Cycle:	0.43	0.43	0.43	0.00	0.00	0.00	0.26	0.45	0.00	0.00	0.20	0.20
Volume/Cap:	1.00	1.00	1.00	0.00	0.00	0.00	1.00	0.26	0.00	0.00	0.38	1.00
Delay/Veh:	47.8	47.8	47.8	0.0	0.0	0.0	68.1	18.0	0.0	0.0	37.0	91.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	47.8	47.8	47.8	0.0	0.0	0.0	68.1	18.0	0.0	0.0	37.0	91.6
LOS by Move:	D	D	D	A	A	A	E	B	A	A	D	F
HCM2k95thQ:	53	53	53	0	0	0	35	9	0	0	8	27

AM Cumulative Plus Project
2.13.3396.1 Orange Coast College
Caltrans

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #34 Newport Boulevard/SR-55 NB Ramps at Fair Drive/Del Mar Avenue

Cycle (sec):	105		Critical Vol./Cap.(X):	1.005
Loss Time (sec):	12		Average Delay (sec/veh):	53.6
Optimal Cycle:	180		Level Of Service:	D

Street Name:	Newport Boulevard/SR-55 NB Ramps						Fair Drive/Del Mar Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	19	19	19	0	0	0	6	20	0	0	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	1	1 0	0 0	0	0 0	2 0	2	0 0	0 0	2	0 1
Volume Module:												
Base Vol:	194	1785	133	0	0	0	854	405	0	0	285	299
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	194	1785	133	0	0	0	854	405	0	0	285	299
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	194	1785	133	0	0	0	854	405	0	0	285	299
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	204	1879	140	0	0	0	899	426	0	0	300	315
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	204	1879	140	0	0	0	899	426	0	0	300	315
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	204	1879	140	0	0	0	899	426	0	0	300	315
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.89	0.89	0.89	1.00	1.00	1.00	0.92	0.95	1.00	1.00	0.95	0.85
Lanes:	0.28	2.53	0.19	0.00	0.00	0.00	2.00	2.00	0.00	0.00	2.00	1.00
Final Sat.:	466	4284	319	0	0	0	3502	3610	0	0	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.44	0.44	0.44	0.00	0.00	0.00	0.26	0.12	0.00	0.00	0.08	0.19
Crit Moves:			****				****					****
Green/Cycle:	0.44	0.44	0.44	0.00	0.00	0.00	0.26	0.45	0.00	0.00	0.19	0.19
Volume/Cap:	1.01	1.01	1.01	0.00	0.00	0.00	1.01	0.26	0.00	0.00	0.43	1.01
Delay/Veh:	50.0	50.0	50.0	0.0	0.0	0.0	70.4	18.1	0.0	0.0	37.6	94.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	50.0	50.0	50.0	0.0	0.0	0.0	70.4	18.1	0.0	0.0	37.6	94.5
LOS by Move:	D	D	D	A	A	A	E	B	A	A	D	F
HCM2k95thQ:	54	54	54	0	0	0	36	9	0	0	9	27

PM Cumulative
2.13.3396.1 Orange Coast College
Caltrans

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #34 Newport Boulevard/SR-55 NB Ramps at Fair Drive/Del Mar Avenue

Cycle (sec):	90	Critical Vol./Cap.(X):	0.578
Loss Time (sec):	12	Average Delay (sec/veh):	24.6
Optimal Cycle:	51	Level Of Service:	C

Street Name:	Newport Boulevard/SR-55 NB Ramps						Fair Drive/Del Mar Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	19	19	19	0	0	0	6	20	0	0	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	1	1 0	0 0	0	0 0	2 0	2	0 0	0 0	2	0 1
Volume Module:												
Base Vol:	152	814	132	0	0	0	542	450	0	0	363	169
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	152	814	132	0	0	0	542	450	0	0	363	169
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	152	814	132	0	0	0	542	450	0	0	363	169
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	160	857	139	0	0	0	571	474	0	0	382	178
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	160	857	139	0	0	0	571	474	0	0	382	178
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	160	857	139	0	0	0	571	474	0	0	382	178
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.87	0.87	0.87	1.00	1.00	1.00	0.92	0.95	1.00	1.00	0.95	0.85
Lanes:	0.42	2.22	0.36	0.00	0.00	0.00	2.00	2.00	0.00	0.00	2.00	1.00
Final Sat.:	690	3697	599	0	0	0	3502	3610	0	0	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.23	0.23	0.23	0.00	0.00	0.00	0.16	0.13	0.00	0.00	0.11	0.11
Crit Moves:	****						****				****	
Green/Cycle:	0.40	0.40	0.40	0.00	0.00	0.00	0.28	0.47	0.00	0.00	0.18	0.18
Volume/Cap:	0.58	0.58	0.58	0.00	0.00	0.00	0.58	0.28	0.00	0.00	0.58	0.60
Delay/Veh:	21.4	21.4	21.4	0.0	0.0	0.0	28.6	14.9	0.0	0.0	34.8	37.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	21.4	21.4	21.4	0.0	0.0	0.0	28.6	14.9	0.0	0.0	34.8	37.2
LOS by Move:	C	C	C	A	A	A	C	B	A	A	C	D
HCM2k95thQ:	18	18	18	0	0	0	14	8	0	0	11	11

PM Cumulative Plus Project
2.13.3396.1 Orange Coast College
Caltrans

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #34 Newport Boulevard/SR-55 NB Ramps at Fair Drive/Del Mar Avenue

Cycle (sec):	90	Critical Vol./Cap.(X):	0.602
Loss Time (sec):	12	Average Delay (sec/veh):	25.0
Optimal Cycle:	51	Level Of Service:	C

Street Name:	Newport Boulevard/SR-55 NB Ramps						Fair Drive/Del Mar Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	19	19	19	0	0	0	6	20	0	0	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	1	1 0	0 0	0	0 0	2 0	2	0 0	0 0	2	0 1
Volume Module:												
Base Vol:	171	814	132	0	0	0	574	477	0	0	387	169
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	171	814	132	0	0	0	574	477	0	0	387	169
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	171	814	132	0	0	0	574	477	0	0	387	169
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	180	857	139	0	0	0	604	502	0	0	407	178
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	180	857	139	0	0	0	604	502	0	0	407	178
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	180	857	139	0	0	0	604	502	0	0	407	178
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.87	0.87	0.87	1.00	1.00	1.00	0.92	0.95	1.00	1.00	0.95	0.85
Lanes:	0.46	2.19	0.35	0.00	0.00	0.00	2.00	2.00	0.00	0.00	2.00	1.00
Final Sat.:	762	3627	588	0	0	0	3502	3610	0	0	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.24	0.24	0.24	0.00	0.00	0.00	0.17	0.14	0.00	0.00	0.11	0.11
Crit Moves:		****					****				****	
Green/Cycle:	0.39	0.39	0.39	0.00	0.00	0.00	0.29	0.47	0.00	0.00	0.19	0.19
Volume/Cap:	0.60	0.60	0.60	0.00	0.00	0.00	0.60	0.29	0.00	0.00	0.60	0.59
Delay/Veh:	22.3	22.3	22.3	0.0	0.0	0.0	28.7	14.6	0.0	0.0	35.0	36.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	22.3	22.3	22.3	0.0	0.0	0.0	28.7	14.6	0.0	0.0	35.0	36.4
LOS by Move:	C	C	C	A	A	A	C	B	A	A	D	D
HCM2k95thQ:	18	18	18	0	0	0	15	9	0	0	12	10

APPENDIX D

SATURDAY TRAFFIC COUNT DATA AND LOS CALCULATION WORKSHEETS

APPENDIX D-I

SATURDAY TRAFFIC COUNT DATA

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S- Direction: PINECREEK DRIVE
E-W Direction: ADAMS AVENUE

File Name : H1503029
Site Code : 00003874
Start Date : 3/7/2015
Page No : 1

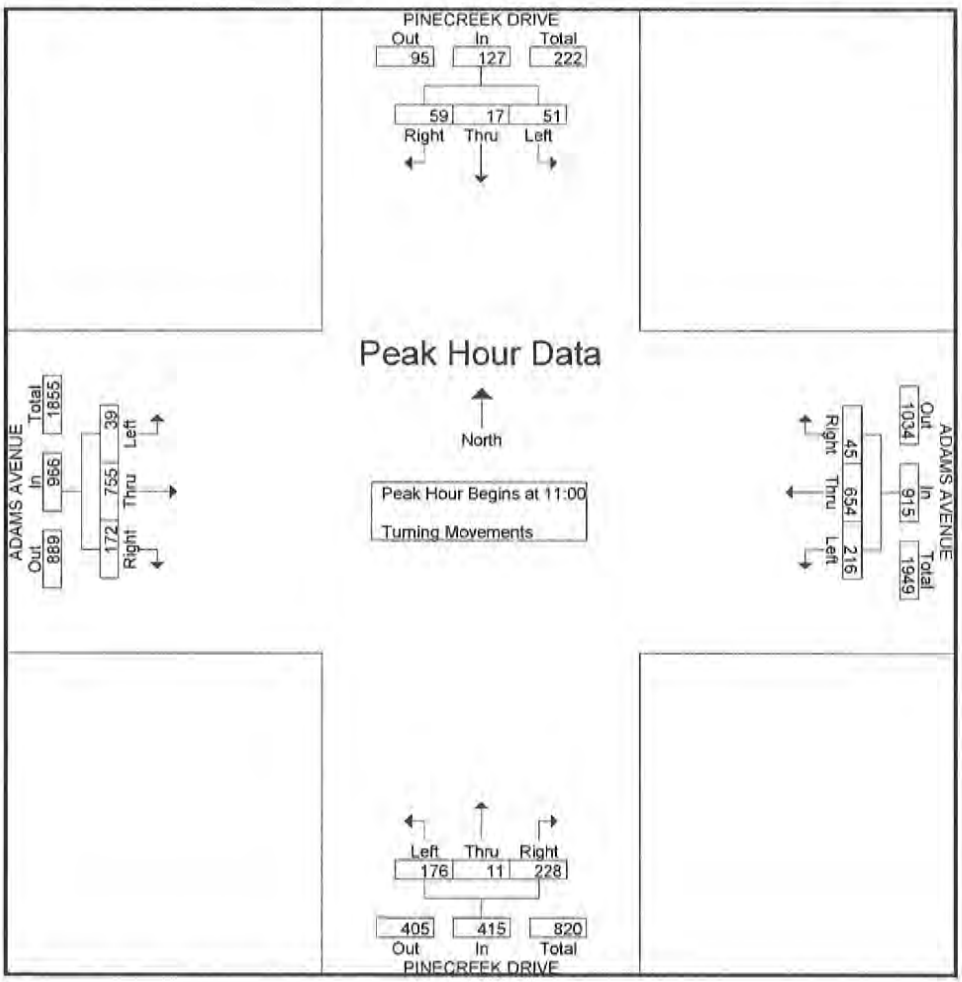
Groups Printed- Turning Movements

	PINECREEK DRIVE Southbound			ADAMS AVENUE Westbound			PINECREEK DRIVE Northbound			ADAMS AVENUE Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
11:00	14	6	12	13	161	55	62	0	37	34	185	12	591
11:15	17	1	13	7	187	56	45	3	57	45	198	9	638
11:30	14	9	14	11	149	53	58	5	39	53	189	10	604
11:45	14	1	12	14	157	52	63	3	43	40	183	8	590
Total	59	17	51	45	654	216	228	11	176	172	755	39	2423
12:00	14	1	17	19	175	41	72	2	36	34	151	15	577
12:15	20	2	8	15	157	56	64	1	43	29	179	9	583
12:30	21	3	10	9	186	36	66	3	40	26	161	13	574
12:45	24	1	7	14	174	37	62	2	35	35	202	7	600
Total	79	7	42	57	692	170	264	8	154	124	693	44	2334
13:00	26	0	5	15	203	40	66	7	31	24	166	10	593
13:15	23	2	11	11	140	30	50	1	47	24	154	11	504
13:30	23	3	12	18	174	31	59	3	29	23	179	12	566
13:45	18	3	7	12	187	25	47	0	35	30	163	9	536
Total	90	8	35	56	704	126	222	11	142	101	662	42	2199
Grand Total	228	32	128	158	2050	512	714	30	472	397	2110	125	6956
Apprch %	58.8	8.2	33	5.8	75.4	18.8	58.7	2.5	38.8	15.1	80.2	4.7	
Total %	3.3	0.5	1.8	2.3	29.5	7.4	10.3	0.4	6.8	5.7	30.3	1.8	

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

File Name : H1503029
Site Code : 00003874
Start Date : 3/7/2015
Page No : 2

	PINECREEK DRIVE Southbound				ADAMS AVENUE Westbound				PINECREEK DRIVE Northbound				ADAMS AVENUE Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 11:00 to 13:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 11:00																	
11:00	14	6	12	32	13	161	55	229	62	0	37	99	34	185	**12**	231	591
11:15	**17**	1	13	31	7	**187**	**56**	**250**	45	3	**57**	105	45	**198**	9	**252**	**638**
11:30	14	**9**	**14**	**37**	11	149	53	213	58	**5**	39	102	**53**	189	10	252	604
11:45	14	1	12	27	**14**	157	52	223	**63**	3	43	**109**	40	183	8	231	590
Total Volume	59	17	51	127	45	654	216	915	228	11	176	415	172	755	39	966	2423
% App. Total	46.5	13.4	40.2		4.9	71.5	23.6		54.9	2.7	42.4		17.8	78.2	4		
PHF	.868	.472	.911	.858	.804	.874	.964	.915	.905	.550	.772	.952	.811	.953	.813	.958	.949



Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S- Direction: FAIRVIEW ROAD
E-W Direction: ADAMS AVENUE

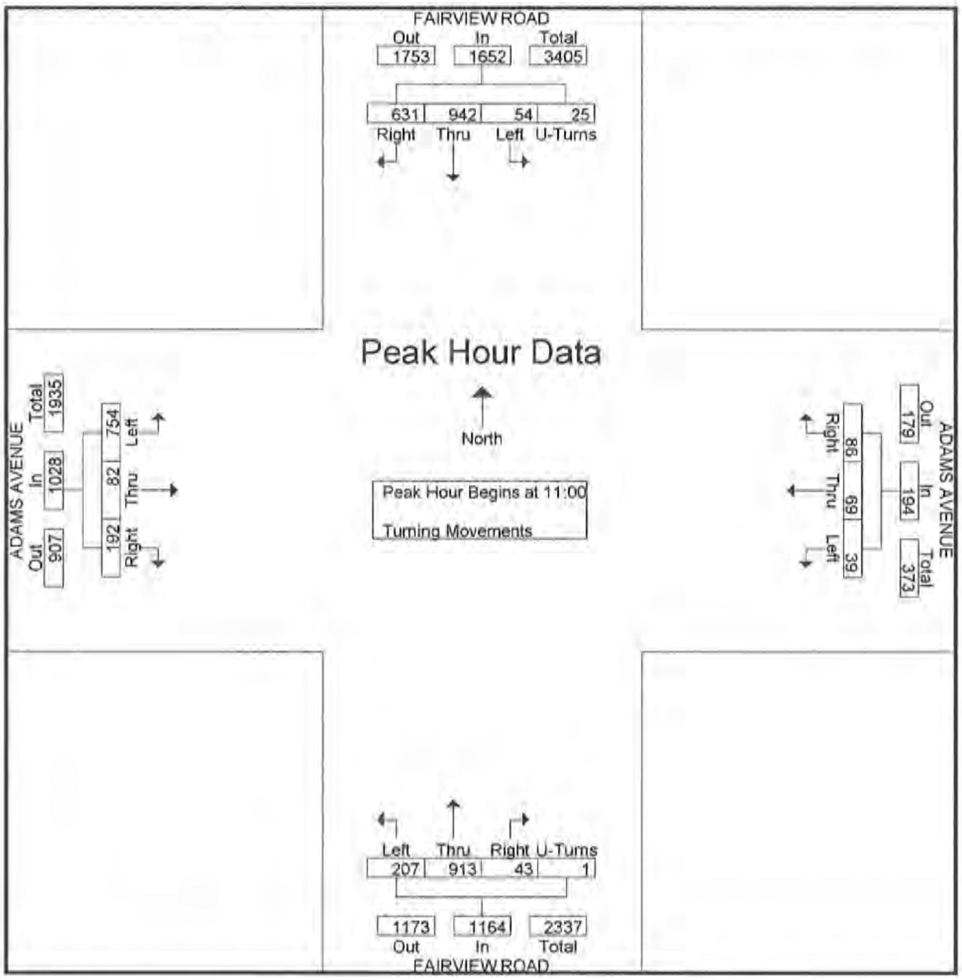
File Name : h1503030
Site Code : 00000000
Start Date : 3/7/2015
Page No : 1

Groups Printed- Turning Movements

	FAIRVIEW ROAD Southbound				ADAMS AVENUE Westbound			FAIRVIEW ROAD Northbound				ADAMS AVENUE Eastbound			
Start Time	Right	Thru	Left	U-Turns	Right	Thru	Left	Right	Thru	Left	U-Turns	Right	Thru	Left	Int. Total
11:00	154	256	13	9	29	24	11	14	263	51	0	52	11	190	1077
11:15	167	205	18	3	23	7	4	7	226	60	0	56	25	185	986
11:30	151	263	12	5	15	22	10	12	217	51	0	46	24	183	1011
11:45	159	218	11	8	19	16	14	10	207	45	1	38	22	196	964
Total	631	942	54	25	86	69	39	43	913	207	1	192	82	754	4038
12:00	169	249	9	5	20	14	12	3	233	51	0	56	16	171	1008
12:15	148	210	7	4	18	18	9	8	200	52	1	33	23	213	944
12:30	163	256	10	8	16	14	12	8	266	37	4	33	17	147	991
12:45	154	204	9	4	17	23	6	5	205	52	1	41	24	217	962
Total	634	919	35	21	71	69	39	24	904	192	6	163	80	748	3905
13:00	173	209	9	3	19	14	13	12	222	50	1	42	18	151	936
13:15	129	173	8	5	17	17	11	11	199	53	0	40	22	122	807
13:30	146	192	14	5	22	23	11	9	224	47	1	40	16	105	855
13:45	152	198	10	3	14	19	9	16	222	60	0	33	18	116	870
Total	600	772	41	16	72	73	44	48	867	210	2	155	74	494	3468
Grand Total	1865	2633	130	62	229	211	122	115	2684	609	9	510	236	1996	11411
Apprch %	39.8	56.1	2.8	1.3	40.7	37.5	21.7	3.4	78.5	17.8	0.3	18.6	8.6	72.8	
Total %	16.3	23.1	1.1	0.5	2	1.8	1.1	1	23.5	5.3	0.1	4.5	2.1	17.5	

File Name : h1503030
Site Code : 00000000
Start Date : 3/7/2015
Page No : 2

	FAIRVIEW ROAD Southbound					ADAMS AVENUE Westbound				FAIRVIEW ROAD Northbound					ADAMS AVENUE Eastbound				
Start Time	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 11:00 to 12:45 - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 11:00																			
11:00	154	256	13	**9**	**432**	**29**	**24**	11	**64**	**14**	**263**	51	0	**328**	52	11	190	253	**1077**
11:15	**167**	205	**18**	3	393	23	7	4	34	7	226	**60**			**56**	**25**	185	**266**	986
11:30	151	**263**	12	5	431	15	22	10	47	12	217	51	0	280	46	24	183	253	1011
11:45	159	218	11	8	396	19	16	**14**	49	10	207	45	**1**	263	38	22	**196**	256	964
Total Volume	631	942	54	25	1652	86	69	39	194	43	913	207	1	1164	192	82	754	1028	4038
% App. Total	38.2	57	3.3	1.5		44.3	35.6	20.1		3.7	78.4	17.8	0.1		18.7	8	73.3		
PHF	.945	.895	.750	.694	.956	.741	.719	.696	.758	.768	.868	.863	.250	.887	.857	.820	.962	.966	.937



City: COSTA MESA
N-S- Direction: FAIRVIEW ROAD
E-W Direction: MONITOR WAY

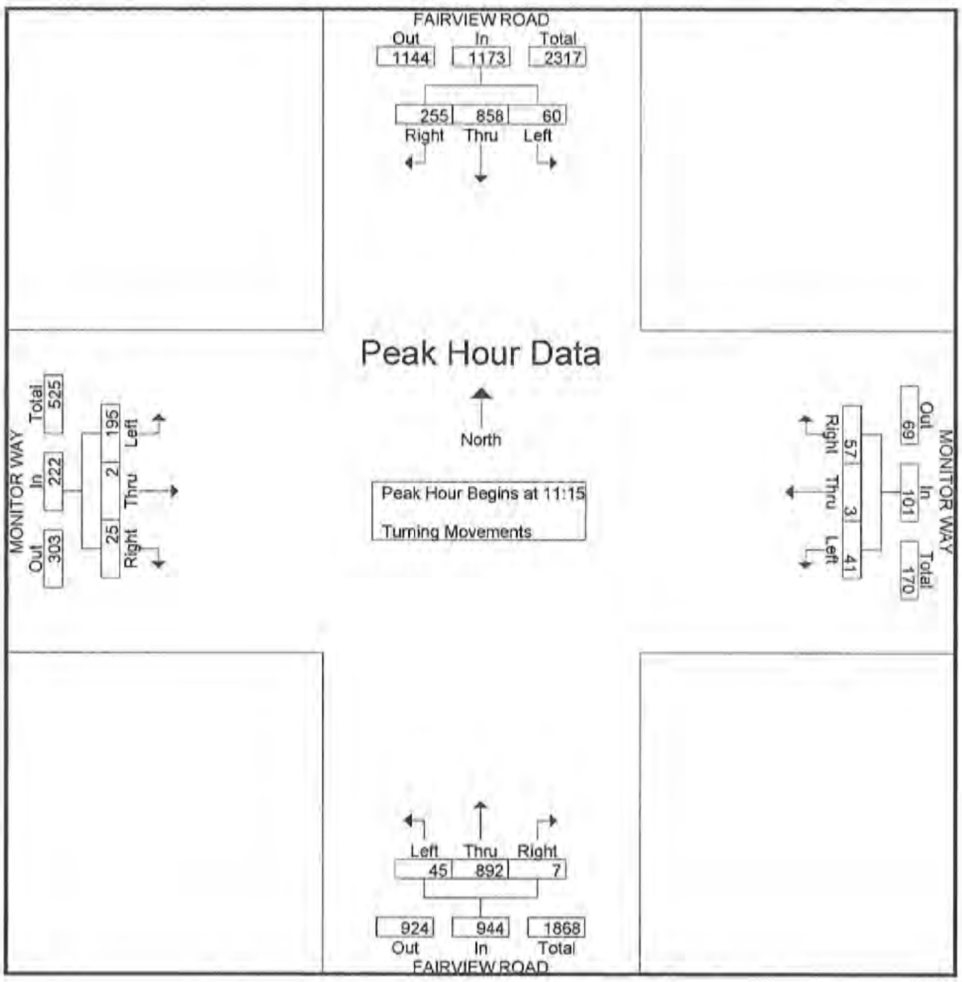
File Name : H1503031
Site Code : 00000554
Start Date : 3/7/2015
Page No : 1

Groups Printed- Turning Movements

	FAIRVIEW ROAD Southbound			MONITOR WAY Westbound			FAIRVIEW ROAD Northbound			MONITOR WAY Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
11:00	51	206	19	13	0	11	1	228	10	10	0	47	596
11:15	63	230	17	19	0	13	2	223	14	7	0	61	649
11:30	50	197	26	13	1	9	0	226	8	9	2	43	584
11:45	78	221	13	10	1	7	3	192	9	3	0	41	578
Total	242	854	75	55	2	40	6	869	41	29	2	192	2407
12:00	64	210	4	15	1	12	2	251	14	6	0	50	629
12:15	75	212	15	4	0	8	1	221	8	10	0	38	592
12:30	58	192	17	35	0	11	1	214	10	5	0	49	592
12:45	44	215	18	27	0	2	1	224	5	11	0	42	589
Total	241	829	54	81	1	33	5	910	37	32	0	179	2402
13:00	31	217	9	8	0	6	3	267	6	11	0	45	603
13:15	32	202	13	12	0	6	1	214	13	9	0	45	547
13:30	29	190	9	16	0	13	2	251	12	6	0	43	571
13:45	37	208	13	3	0	6	5	234	15	10	1	33	565
Total	129	817	44	39	0	31	11	966	46	36	1	166	2286
Grand Total	612	2500	173	175	3	104	22	2745	124	97	3	537	7095
Apprch %	18.6	76.1	5.3	62.1	1.1	36.9	0.8	94.9	4.3	15.2	0.5	84.3	
Total %	8.6	35.2	2.4	2.5	0	1.5	0.3	38.7	1.7	1.4	0	7.6	

File Name : H1503031
Site Code : 00000554
Start Date : 3/7/2015
Page No : 2

	FAIRVIEW ROAD Southbound				MONITOR WAY Westbound				FAIRVIEW ROAD Northbound				MONITOR WAY Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 11:00 to 13:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 11:15																	
11:15	63	230	17	310	19	0	13	32	2	223	14	239	7	0	61	68	649
11:30	50	197	26	273	13	1	9	23	0	226	8	234	9	2	43	54	584
11:45	78	221	13	312	10	1	7	18	3	192	9	204	3	0	41	44	578
12:00	64	210	4	278	15	1	12	28	2	251	14	267	6	0	50	56	629
Total Volume	255	858	60	1173	57	3	41	101	7	892	45	944	25	2	195	222	2440
% App. Total	21.7	73.1	5.1		56.4	3	40.6		0.7	94.5	4.8		11.3	0.9	87.8		
PHF	.817	.933	.577	.940	.750	.750	.788	.789	.583	.888	.804	.884	.694	.250	.799	.816	.940



Transportation Studies, Inc.
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Tustin, CA. 92780

City: COSTA MESA
N-S- Direction: FAIRVIEW ROAD
E-W Direction: PIRATE WAY / MUSTANG WAY

File Name : H1503032
Site Code : 00005163
Start Date : 3/7/2015
Page No : 1

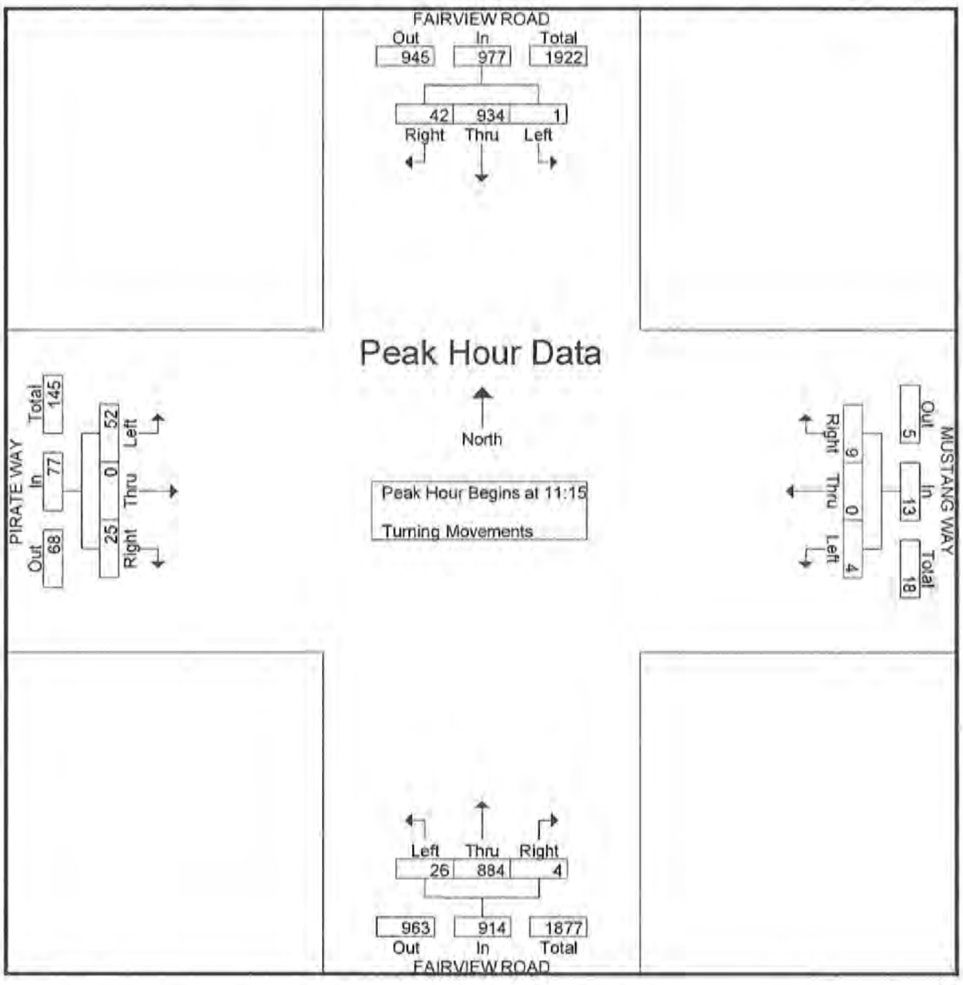
Groups Printed- Turning Movements

	FAIRVIEW ROAD Southbound			MUSTANG WAY Westbound			FAIRVIEW ROAD Northbound			PIRATE WAY Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
11:00	15	207	1	1	0	0	0	190	11	9	0	13	447
11:15	11	246	0	4	0	1	1	216	5	7	0	12	503
11:30	8	225	1	2	0	1	1	235	9	2	0	15	499
11:45	15	228	0	2	0	2	1	211	7	6	0	10	482
Total	49	906	2	9	0	4	3	852	32	24	0	50	1931
12:00	8	235	0	1	0	0	1	222	5	10	0	15	497
12:15	19	202	0	0	0	0	0	218	8	8	0	25	480
12:30	19	219	0	0	0	0	0	219	6	10	0	13	486
12:45	20	221	0	2	0	1	1	244	3	3	0	15	510
Total	66	877	0	3	0	1	2	903	22	31	0	68	1973
13:00	5	201	0	1	0	0	1	222	4	7	0	20	461
13:15	11	210	1	2	0	0	0	182	6	7	0	15	434
13:30	2	222	4	5	0	2	0	236	7	8	0	14	500
13:45	5	236	1	0	0	0	0	219	4	9	0	9	483
Total	23	869	6	8	0	2	1	859	21	31	0	58	1878
Grand Total	138	2652	8	20	0	7	6	2614	75	86	0	176	5782
Apprch %	4.9	94.8	0.3	74.1	0	25.9	0.2	97	2.8	32.8	0	67.2	
Total %	2.4	45.9	0.1	0.3	0	0.1	0.1	45.2	1.3	1.5	0	3	

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

File Name : H1503032
Site Code : 00005163
Start Date : 3/7/2015
Page No : 2

	FAIRVIEW ROAD Southbound				MUSTANG WAY Westbound				FAIRVIEW ROAD Northbound				PIRATE WAY Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 11:00 to 13:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 11:15																	
11:15	11	**246**	0	**257**	**4**	0	1	**5**	**1**	216	5	222	7	0	12	19	**503**
11:30	8	225	**1**	234	2	0	1	3	1	**235**	**9**	**245**	2	0	**15**	17	499
11:45	**15**	228	0	243	2	0	**2**	4	1	211	7	219	6	0	10	16	482
12:00	8	235	0	243	1	0	0	1	1	222	5	228	**10**	0	15	**25**	497
Total Volume	42	934	1	977	9	0	4	13	4	884	26	914	25	0	52	77	1981
% App. Total	4.3	95.6	0.1		69.2	0	30.8		0.4	96.7	2.8		32.5	0	67.5		
PHF	.700	.949	.250	.950	.563	.000	.500	.650	1.00	.940	.722	.933	.625	.000	.867	.770	.985



City: COSTA MESA
N-S- Direction: FAIRVIEW ROAD
E-W Direction: ARLINGTON DRIVE

File Name : H1503033
Site Code : 00000000
Start Date : 3/7/2015
Page No : 1

Groups Printed- Turning Movements

	FAIRVIEW ROAD Southbound			ARLINGTON DRIVE Westbound			FAIRVIEW ROAD Northbound			ARLINGTON DRIVE Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
11:00	5	202	30	40	0	16	31	182	2	1	0	0	509
11:15	6	188	36	22	0	23	31	199	1	0	0	1	507
11:30	5	185	52	30	0	22	35	184	1	0	0	3	517
11:45	4	177	32	18	0	22	32	218	0	2	0	4	509
Total	20	752	150	110	0	83	129	783	4	3	0	8	2042
12:00	5	219	33	31	0	22	29	178	3	4	0	4	528
12:15	4	176	11	35	0	15	17	194	1	0	0	2	455
12:30	2	180	27	55	0	5	21	181	0	1	0	1	473
12:45	2	188	35	63	0	25	29	176	3	0	0	1	522
Total	13	763	106	184	0	67	96	729	7	5	0	8	1978
13:00	3	179	31	51	0	16	46	210	2	1	0	2	541
13:15	3	165	41	26	0	15	27	172	0	0	0	4	453
13:30	4	199	16	31	0	30	28	175	0	1	0	3	487
13:45	2	186	27	33	0	17	26	181	1	2	1	3	479
Total	12	729	115	141	0	78	127	738	3	4	1	12	1960
Grand Total	45	2244	371	435	0	228	352	2250	14	12	1	28	5980
Apprch %	1.7	84.4	13.9	65.6	0	34.4	13.5	86	0.5	29.3	2.4	68.3	
Total %	0.8	37.5	6.2	7.3	0	3.8	5.9	37.6	0.2	0.2	0	0.5	

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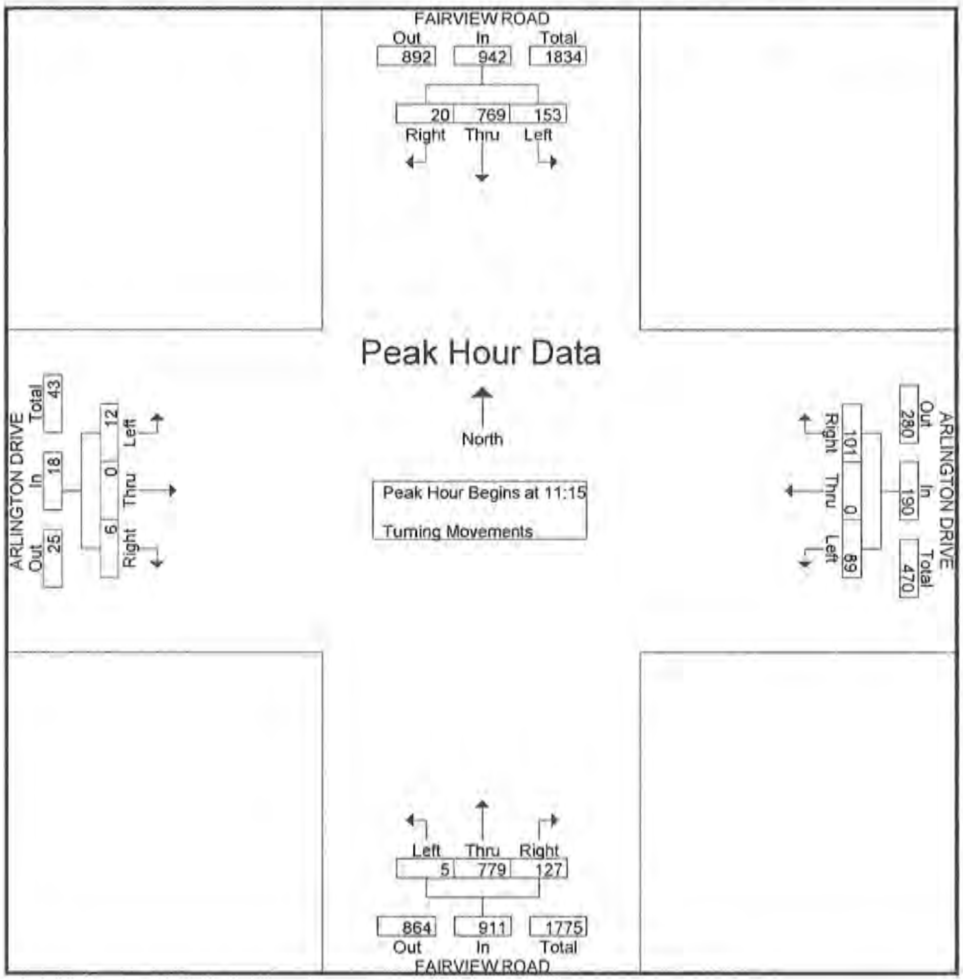
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

File Name : H1503033
Site Code : 00000000
Start Date : 3/7/2015
Page No : 2

	FAIRVIEW ROAD Southbound				ARLINGTON DRIVE Westbound				FAIRVIEW ROAD Northbound				ARLINGTON DRIVE Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 11:00 to 12:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 11:15																	
11:15	**6**	188	36	230	22	0	**23**	45	31	199	1	231	0	0	1	1	507
11:30	5	185	**52**	242	30	0	22	52	**35**	184	1	220	0	0	3	3	517
11:45	4	177	32	213	18	0	22	40	32	**218**	0	**250**	2	0	4	6	509
12:00	5	**219**	33	**257**	**31**	0	22	**53**	29	178	**3**	210	**4**	0	4	**8**	**528**
Total Volume	20	769	153	942	101	0	89	190	127	779	5	911	6	0	12	18	2061
% App. Total	2.1	81.6	16.2		53.2	0	46.8		13.9	85.5	0.5		33.3	0	66.7		
PHF	.833	.878	.736	.916	.815	.000	.967	.896	.907	.893	.417	.911	.375	.000	.750	.563	.976



City: COSTA MESA
N-S- Direction: FAIRVIEW ROAD
E-W Direction: MERRIMAC WAY

File Name : h1503034
Site Code : 00000000
Start Date : 3/7/2015
Page No : 1

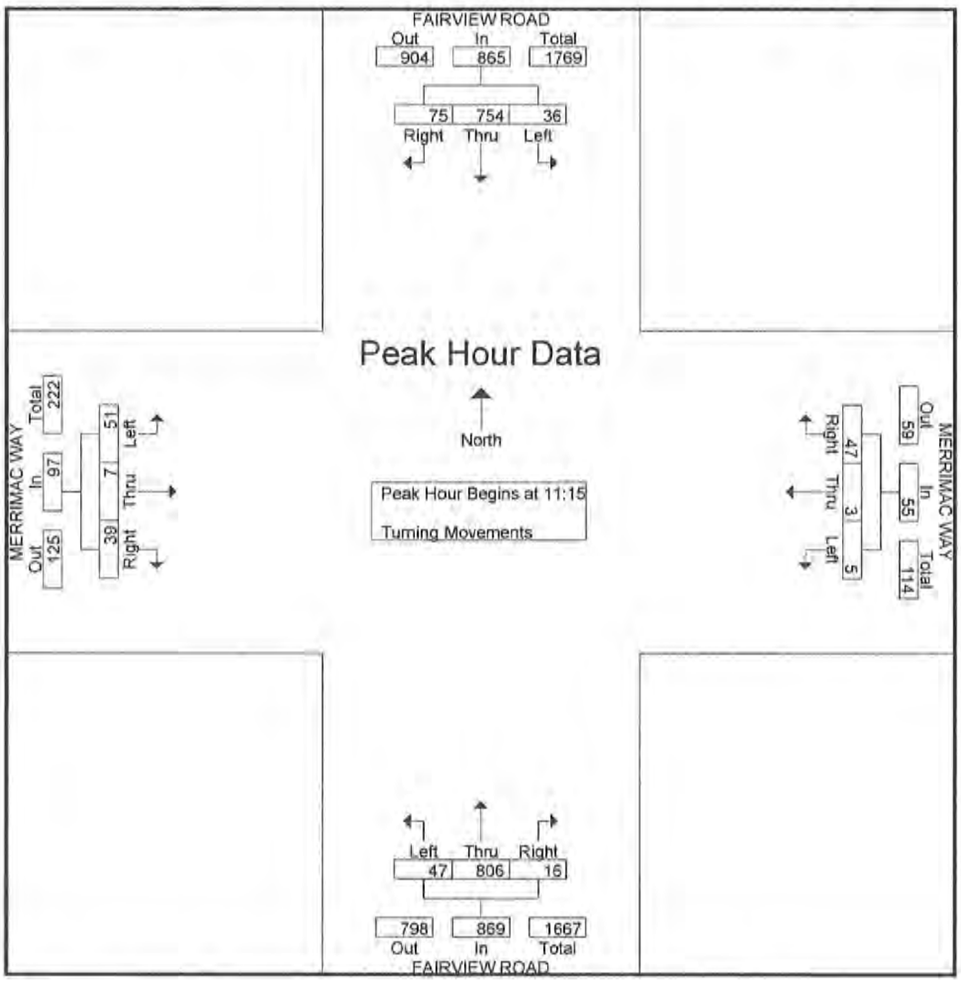
Groups Printed- Turning Movements

	FAIRVIEW ROAD Southbound			MERRIMAC WAY Westbound			FAIRVIEW ROAD Northbound			MERRIMAC WAY Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
11:00	11	189	13	10	0	1	6	197	6	11	3	14	461
11:15	18	193	17	11	1	1	7	209	11	7	0	3	478
11:30	14	176	8	14	1	0	5	197	9	8	5	14	451
11:45	16	184	3	18	1	3	4	214	19	12	2	18	494
Total	59	742	41	53	3	5	22	817	45	38	10	49	1884
12:00	27	201	8	4	0	1	0	186	8	12	0	16	463
12:15	16	166	5	10	1	1	5	189	12	13	2	14	434
12:30	15	185	11	7	1	0	1	189	13	12	0	11	445
12:45	20	169	7	9	1	0	4	183	10	9	3	12	427
Total	78	721	31	30	3	2	10	747	43	46	5	53	1769
13:00	16	169	6	14	0	0	4	225	11	14	2	11	472
13:15	15	168	2	7	1	0	1	187	10	12	2	8	413
13:30	11	207	4	12	1	1	0	185	6	11	0	13	451
13:45	19	180	7	9	0	1	3	189	11	9	0	7	435
Total	61	724	19	42	2	2	8	786	38	46	4	39	1771
Grand Total	198	2187	91	125	8	9	40	2350	126	130	19	141	5424
Apprch %	8	88.3	3.7	88	5.6	6.3	1.6	93.4	5	44.8	6.6	48.6	
Total %	3.7	40.3	1.7	2.3	0.1	0.2	0.7	43.3	2.3	2.4	0.4	2.6	

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

File Name : h1503034
Site Code : 00000000
Start Date : 3/7/2015
Page No : 2

	FAIRVIEW ROAD Southbound				MERRIMAC WAY Westbound				FAIRVIEW ROAD Northbound				MERRIMAC WAY Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 11:00 to 13:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 11:15																	
11:15	18	193	**17**	228	11	**1**	1	13	**7**	209	11	227	7	0	3	10	478
11:30	14	176	8	198	14	1	0	15	5	197	9	211	8	**5**	14	27	451
11:45	16	184	3	203	**18**	1	**3**	**22**	4	**214**	**19**	**237**	**12**	2	**18**	**32**	**494**
12:00	**27**	**201**	8	**236**	4	0	1	5	0	186	8	194	12	0	16	28	463
Total Volume	75	754	36	865	47	3	5	55	16	806	47	869	39	7	51	97	1886
% App. Total	8.7	87.2	4.2		85.5	5.5	9.1		1.8	92.8	5.4		40.2	7.2	52.6		
PHF	.694	.938	.529	.916	.653	.750	.417	.625	.571	.942	.618	.917	.813	.350	.708	.758	.954



APPENDIX D-II

SATURDAY LOS CALCULATION WORKSHEETS

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--------------------------------------------------------------------------------
                                 Sat Existing
                     2.13.3396.1 Orange Coast College
--------------------------------------------------------------------------------

                   Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #6 Pinecreek Drive at Adams Avenue
********************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):         0.428
Loss Time (sec):        0               Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         40               Level Of Service:                  A
********************************************************************************
Street Name:            Pinecreek Drive                   Adams Avenue
Approach:        North Bound      South Bound      East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Split Phase      Split Phase       Protected        Protected
Rights:            Include          Include          Ignore           Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Y+R:         4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:       1  1  0   0  1   0  1  0   0  1   1  0  3   0  1   2  0  1   1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:    176    11   228   51    17    59   39   755   172  216   654    45
Growth Adj: 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Initial Bse: 176    11   228   51    17    59   39   755   172  216   654    45
Added Vol:     0     0     0    0     0     0    0     0     0    0     0     0
PasserByVol:   0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut: 176    11   228   51    17    59   39   755   172  216   654    45
User Adj:   1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  0.00 1.00  1.00  1.00
PHF Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  0.00 1.00  1.00  1.00
PHF Volume:  176    11   228   51    17    59   39   755     0  216   654    45
Reduct Vol:    0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol: 176    11   228   51    17    59   39   755     0  216   654    45
PCE Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  0.00 1.00  1.00  1.00
MLF Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  0.00 1.00  1.00  1.00
FinalVolume: 176    11   228   51    17    59   39   755     0  216   654    45
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:   1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600  1600
Adjustment: 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Lanes:      1.88  0.12  1.00 0.75  0.25  1.00 1.00  3.00  1.00 2.00  1.87  0.13
Final Sat.: 3012   188  1600 1200   400  1600 1600  4800  1600 3200  2994   206
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.06  0.06  0.14 0.04  0.04  0.04 0.02  0.16  0.00 0.07  0.22  0.22
Crit Moves:             ****       ****       ****                    ****
********************************************************************************
```

Sat Existing
2.13.3396.1 Orange Coast College

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #10 Fairview Road at Adams Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.551
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	51	Level Of Service:	A

Street Name:	Fairview Road						Adams Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:		Protected			Protected			Split Phase			Split Phase	
Rights:		Include			Ignore			Include			Include	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0 2 1 0			1 0 3 0 1			2 0 1 0 1			0 1 1 0 1		
Volume Module:												
Base Vol:	208	913	43	79	942	631	754	82	192	39	69	86
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	208	913	43	79	942	631	754	82	192	39	69	86
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	208	913	43	79	942	631	754	82	192	39	69	86
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	208	913	43	79	942	0	754	82	192	39	69	86
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	208	913	43	79	942	0	754	82	192	39	69	86
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	208	913	43	79	942	0	754	82	192	39	69	86
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	2.87	0.13	1.00	3.00	1.00	2.00	1.00	1.00	0.72	1.28	1.00
Final Sat.:	3200	4584	216	1600	4800	1600	3200	1600	1600	1156	2044	1600
Capacity Analysis Module:												
Vol/Sat:	0.07	0.20	0.20	0.05	0.20	0.00	0.24	0.05	0.12	0.03	0.03	0.05
Crit Moves:	****				****		****					****

```
------------------------------------------------------------------------------
                               Sat Existing
                    2.13.3396.1 Orange Coast College
------------------------------------------------------------------------------
                   Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
******************************************************************************
Intersection #11 Fairview Road at Monitor Way
******************************************************************************
Cycle (sec):          100              Critical Vol./Cap.(X):          0.382
Loss Time (sec):        0              Average Delay (sec/veh):       xxxxxx
Optimal Cycle:         30              Level Of Service:                   A
******************************************************************************
Street Name:              Fairview Road                  Monitor Way
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:      Prot+Permit      Prot+Permit        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:     0    0     0    0    0     0    0    0     0    0    0     0
Y+R:          4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:        1  0  2  1  0   1  0  3  0  1   0  1  0  0  1   0  1  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      45  892     7   60  858   255  195    2    25   41    3    57
Growth Adj:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Initial Bse:   45  892     7   60  858   255  195    2    25   41    3    57
Added Vol:      0    0     0    0    0     0    0    0     0    0    0     0
PasserByVol:    0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:   45  892     7   60  858   255  195    2    25   41    3    57
User Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Volume:    45  892     7   60  858   255  195    2    25   41    3    57
Reduct Vol:     0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:   45  892     7   60  858   255  195    2    25   41    3    57
PCE Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume:   45  892     7   60  858   255  195    2    25   41    3    57
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600 1600 1600  1600 1600 1600  1600 1600 1600  1600
Adjustment:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Lanes:       1.00 2.98  0.02 1.00 3.00  1.00 0.99 0.01  1.00 0.93 0.07  1.00
Final Sat.:  1600 4763    37 1600 4800  1600 1584   16  1600 1491  109  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.03 0.19  0.19 0.04 0.18  0.16 0.12 0.12  0.02 0.03 0.03  0.04
Crit Moves:       ****       ****            ****                         ****
******************************************************************************
```

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--------------------------------------------------------------------------------
                              Sat Existing
                  2.13.3396.1 Orange Coast College
--------------------------------------------------------------------------------
                 Level Of Service Computation Report
     ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #12 Fairview Road at Pirate Way/Mustang Way
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):         0.251
Loss Time (sec):       0              Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        25              Level Of Service:                  A
********************************************************************************
Street Name:              Fairview Road                Pirate Way/Mustang Way
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected         Permitted        Permitted
Rights:          Include          Include           Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Y+R:         4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:       1  0  2  1  0    1  0  3  0  1    0  1  0  0  1    0  0  1!  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     26   884     4    1   934    42   52     0    25    4     0     9
Growth Adj: 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Initial Bse:  26   884     4    1   934    42   52     0    25    4     0     9
Added Vol:     0     0     0    0     0     0    0     0     0    0     0     0
PasserByVol:   0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut:  26   884     4    1   934    42   52     0    25    4     0     9
User Adj:   1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Volume:   26   884     4    1   934    42   52     0    25    4     0     9
Reduct Vol:    0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol:  26   884     4    1   934    42   52     0    25    4     0     9
PCE Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
MLF Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
FinalVolume:  26   884     4    1   934    42   52     0    25    4     0     9
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:   1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600  1600
Adjustment: 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Lanes:      1.00  2.99  0.01 1.00  3.00  1.00 1.00  0.00  1.00 0.31  0.00  0.69
Final Sat.: 1600  4778    22 1600  4800  1600 1600     0  1600  492     0  1108
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.02  0.18  0.19 0.00  0.19  0.03 0.03  0.00  0.02 0.00  0.00  0.01
Crit Moves: ****                   ****       ****                         ****
********************************************************************************
```

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--------------------------------------------------------------------------------
                                  Sat Existing
                        2.13.3396.1 Orange Coast College
--------------------------------------------------------------------------------

                       Level Of Service Computation Report
         ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #13 Fairview Road at Arlington Drive
********************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):          0.281
Loss Time (sec):        0               Average Delay (sec/veh):       xxxxxx
Optimal Cycle:         26               Level Of Service:                   A
********************************************************************************
Street Name:                Fairview Road                 Arlington Drive
Approach:        North Bound      South Bound      East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
-------------|----------------||----------------||----------------||----------------|
Control:          Protected        Protected        Permitted        Permitted
Rights:             Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Y+R:          4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0
Lanes:         2  0  3  0  1   2  0  3  0  1   1  0  1  0  1   1  1  0  0  1
-------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:       5  779   127   153  769    20    12    0     6    89    0   101
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    5  779   127   153  769    20    12    0     6    89    0   101
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    5  779   127   153  769    20    12    0     6    89    0   101
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     5  779   127   153  769    20    12    0     6    89    0   101
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    5  779   127   153  769    20    12    0     6    89    0   101
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:    5  779   127   153  769    20    12    0     6    89    0   101
-------------|----------------||----------------||----------------||----------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 3.00  1.00  2.00 3.00  1.00  1.00 1.00  1.00  2.00 0.00  1.00
Final Sat.:  3200 4800  1600  3200 4800  1600  1600 1600  1600  3200    0  1600
-------------|----------------||----------------||----------------||----------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.16  0.08  0.05 0.16  0.01  0.01 0.00  0.00  0.03 0.00  0.06
Crit Moves:       ****        ****             ****                         ****
********************************************************************************
```

Sat Existing
2.13.3396.1 Orange Coast College

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #14 Fairview Road at Merrimac Way

Cycle (sec):	100	Critical Vol./Cap.(X):	0.229
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	24	Level Of Service:	A

Street Name:	Fairview Road						Merrimac Way					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0 3 0 1			2 0 3 0 1			1 1 0 0 1			1 0 0 1 0		
Volume Module:												
Base Vol:	47	806	16	36	754	75	51	7	39	5	3	47
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	47	806	16	36	754	75	51	7	39	5	3	47
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	47	806	16	36	754	75	51	7	39	5	3	47
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	47	806	16	36	754	75	51	7	39	5	3	47
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	47	806	16	36	754	75	51	7	39	5	3	47
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	47	806	16	36	754	75	51	7	39	5	3	47
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	1.76	0.24	1.00	1.00	0.06	0.94
Final Sat.:	3200	4800	1600	3200	4800	1600	2814	386	1600	1600	96	1504
Capacity Analysis Module:												
Vol/Sat:	0.01	0.17	0.01	0.01	0.16	0.05	0.02	0.02	0.02	0.00	0.03	0.03
Crit Moves:		****		****			****				****	

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                        Sat Existing Plus Project
                    2.13.3396.1 Orange Coast College
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                     Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #6 Pinecreek Drive at Adams Avenue
********************************************************************************
Cycle (sec):         100                Critical Vol./Cap.(X):         0.504
Loss Time (sec):       0                Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        46                Level Of Service:                  A
********************************************************************************
Street Name:          Pinecreek Drive                    Adams Avenue
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
-------------|---------------||---------------||---------------||---------------|
Control:       Split Phase      Split Phase       Protected        Protected
Rights:           Include          Include          Ignore           Include
Min. Green:    0    0    0     0    0    0     0    0    0     0    0    0
Y+R:          4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0
Lanes:        1  1  0  0  1   0  1  0  0  1   1  0  3  0  1   2  0  1  1  0
-------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     246   11  277    53   17   59    39  845  236   356  720   47
Growth Adj:  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Initial Bse:  246   11  277    53   17   59    39  845  236   356  720   47
Added Vol:      0    0    0     0    0    0     0    0    0     0    0    0
PasserByVol:    0    0    0     0    0    0     0    0    0     0    0    0
Initial Fut:  246   11  277    53   17   59    39  845  236   356  720   47
User Adj:    1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 0.00  1.00 1.00 1.00
PHF Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 0.00  1.00 1.00 1.00
PHF Volume:   246   11  277    53   17   59    39  845    0   356  720   47
Reduct Vol:     0    0    0     0    0    0     0    0    0     0    0    0
Reduced Vol:  246   11  277    53   17   59    39  845    0   356  720   47
PCE Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 0.00  1.00 1.00 1.00
MLF Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 0.00  1.00 1.00 1.00
FinalVolume:  246   11  277    53   17   59    39  845    0   356  720   47
-------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600 1600  1600 1600 1600  1600 1600 1600  1600 1600 1600
Adjustment:  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Lanes:       1.91 0.09 1.00  0.76 0.24 1.00  1.00 3.00 1.00  2.00 1.88 0.12
Final Sat.:  3063  137 1600  1211  389 1600  1600 4800 1600  3200 3004  196
-------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.08 0.08 0.17  0.04 0.04 0.04  0.02 0.18 0.00  0.11 0.24 0.24
Crit Moves:             ****  ****                  ****        ****
********************************************************************************
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-------------------------------------------------------------------------------
                          Sat Existing Plus Project
                      2.13.3396.1 Orange Coast College
-------------------------------------------------------------------------------
                     Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*******************************************************************************
Intersection #10 Fairview Road at Adams Avenue
*******************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):         0.616
Loss Time (sec):       0              Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        59              Level Of Service:                  B
*******************************************************************************
Street Name:              Fairview Road                     Adams Avenue
Approach:        North Bound      South Bound       East Bound       West Bound
Movement:       L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Protected        Protected        Split Phase      Split Phase
Rights:           Include           Ignore           Include          Include
Min. Green:     0    0     0    0    0     0    0    0     0    0    0     0
Y+R:          4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:          2  0  2  1  0   1  0  3  0  1   2  0  1  0  1   0  1  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     250 1004    46    79 1055   739   845   84   235    42   71    86
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  250 1004    46    79 1055   739   845   84   235    42   71    86
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  250 1004    46    79 1055   739   845   84   235    42   71    86
User Adj:    1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   250 1004    46    79 1055     0   845   84   235    42   71    86
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  250 1004    46    79 1055     0   845   84   235    42   71    86
PCE Adj:     1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  250 1004    46    79 1055     0   845   84   235    42   71    86
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 2.87  0.13  1.00 3.00  1.00  2.00 1.00  1.00  0.74 1.26  1.00
Final Sat.:  3200 4590   210  1600 4800  1600  3200 1600  1600  1189 2011  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.08 0.22  0.22  0.05 0.22  0.00  0.26 0.05  0.15  0.04 0.04  0.05
Crit Moves:  ****                    ****      ****                          ****
*******************************************************************************
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                          Sat Existing Plus Project
                      2.13.3396.1 Orange Coast College
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
     ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #11 Fairview Road at Monitor Way
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):         0.420
Loss Time (sec):       0              Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        32              Level Of Service:                  A
********************************************************************************
Street Name:              Fairview Road                    Monitor Way
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:      L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Prot+Permit      Prot+Permit        Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:     0     0     0     0     0     0     0     0     0     0     0     0
Y+R:          4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0
Lanes:         1  0  2  1  0    1  0  3  0  1    0  1  0  0  1    0  1  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       64  1005     7    60   984   288   217     2    37    41     3    57
Growth Adj:   1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:    64  1005     7    60   984   288   217     2    37    41     3    57
Added Vol:       0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:     0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:    64  1005     7    60   984   288   217     2    37    41     3    57
User Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:      1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:     64  1005     7    60   984   288   217     2    37    41     3    57
Reduct Vol:      0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:    64  1005     7    60   984   288   217     2    37    41     3    57
PCE Adj:      1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:      1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:    64  1005     7    60   984   288   217     2    37    41     3    57
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:     1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:   1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:        1.00  2.98  0.02  1.00  3.00  1.00  0.99  0.01  1.00  0.93  0.07  1.00
Final Sat.:   1600  4767    33  1600  4800  1600  1585    15  1600  1491   109  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:      0.04  0.21  0.21  0.04  0.21  0.18  0.14  0.14  0.02  0.03  0.03  0.04
Crit Moves:         ****        ****              ****                          ****
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--------------------------------------------------------------------------------
                          Sat Existing Plus Project
                      2.13.3396.1 Orange Coast College
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #12 Fairview Road at Pirate Way/Mustang Way
********************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):         0.295
Loss Time (sec):        0               Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         26               Level Of Service:                  A
********************************************************************************
Street Name:                Fairview Road              Pirate Way/Mustang Way
Approach:        North Bound      South Bound      East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected         Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0     0     0   0     0     0   0     0     0   0     0     0
Y+R:         4.0   4.0   4.0 4.0   4.0   4.0 4.0   4.0   4.0 4.0   4.0   4.0
Lanes:        1  0  2  1  0   1  0  3  0  1   0  1  0  0  1   0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      47 1010     4     1 1064    50    58     0    39     4     0     9
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   47 1010     4     1 1064    50    58     0    39     4     0     9
Added Vol:      0    0     0     0    0     0     0     0     0     0     0     0
PasserByVol:    0    0     0     0    0     0     0     0     0     0     0     0
Initial Fut:   47 1010     4     1 1064    50    58     0    39     4     0     9
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    47 1010     4     1 1064    50    58     0    39     4     0     9
Reduct Vol:     0    0     0     0    0     0     0     0     0     0     0     0
Reduced Vol:   47 1010     4     1 1064    50    58     0    39     4     0     9
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   47 1010     4     1 1064    50    58     0    39     4     0     9
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.99  0.01  1.00 3.00  1.00  1.00 0.00  1.00  0.31 0.00  0.69
Final Sat.:  1600 4781    19  1600 4800  1600  1600    0  1600   492    0  1108
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.03 0.21  0.21  0.00 0.22  0.03  0.04 0.00  0.02  0.00 0.00  0.01
Crit Moves:  ****                    ****      ****                         ****
********************************************************************************
```

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--------------------------------------------------------------------------------
                          Sat Existing Plus Project
                      2.13.3396.1 Orange Coast College
--------------------------------------------------------------------------------
                     Level Of Service Computation Report
        ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #13 Fairview Road at Arlington Drive
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):         0.338
Loss Time (sec):       0              Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        28              Level Of Service:                  A
********************************************************************************
Street Name:             Fairview Road                   Arlington Drive
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected         Permitted        Permitted
Rights:          Include          Include           Include          Include
Min. Green:    0    0    0     0    0    0     0    0    0     0    0    0
Y+R:         4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0
Lanes:       2  0  3  0  1   2  0  3  0  1   1  0  1  0  1   1  1  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     19  863  127   153  842   90    75    0   18    89    0  101
Growth Adj: 1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Initial Bse:  19  863  127   153  842   90    75    0   18    89    0  101
Added Vol:     0    0    0     0    0    0     0    0    0     0    0    0
PasserByVol:   0    0    0     0    0    0     0    0    0     0    0    0
Initial Fut:  19  863  127   153  842   90    75    0   18    89    0  101
User Adj:   1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
PHF Adj:    1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
PHF Volume:   19  863  127   153  842   90    75    0   18    89    0  101
Reduct Vol:    0    0    0     0    0    0     0    0    0     0    0    0
Reduced Vol:  19  863  127   153  842   90    75    0   18    89    0  101
PCE Adj:    1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
MLF Adj:    1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
FinalVolume:  19  863  127   153  842   90    75    0   18    89    0  101
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:   1600 1600 1600  1600 1600 1600  1600 1600 1600  1600 1600 1600
Adjustment: 1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Lanes:      2.00 3.00 1.00  2.00 3.00 1.00  1.00 1.00 1.00  2.00 0.00 1.00
Final Sat.: 3200 4800 1600  3200 4800 1600  1600 1600 1600  3200    0 1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.01 0.18 0.08  0.05 0.18 0.06  0.05 0.00 0.01  0.03 0.00 0.06
Crit Moves:      ****       ****            ****                         ****
********************************************************************************
```

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-------------------------------------------------------------------------------
                      Sat Existing Plus Project
                  2.13.3396.1 Orange Coast College
-------------------------------------------------------------------------------
                 Level Of Service Computation Report
     ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*******************************************************************************
Intersection #14 Fairview Road at Merrimac Way
*******************************************************************************
Cycle (sec):        100              Critical Vol./Cap.(X):         0.248
Loss Time (sec):      0              Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       25              Level Of Service:                  A
*******************************************************************************
Street Name:             Fairview Road                     Merrimac Way
Approach:       North Bound      South Bound      East Bound      West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:     0    0     0    0    0     0    0    0     0    0    0     0
Y+R:          4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:         2  0  3  0  1   2  0  3  0  1   1  1  0  0  1   1  0  0  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      65  874    16   36  812   103   81    7    55    5    3    47
Growth Adj:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Initial Bse:   65  874    16   36  812   103   81    7    55    5    3    47
Added Vol:      0    0     0    0    0     0    0    0     0    0    0     0
PasserByVol:    0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:   65  874    16   36  812   103   81    7    55    5    3    47
User Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Volume:    65  874    16   36  812   103   81    7    55    5    3    47
Reduct Vol:     0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:   65  874    16   36  812   103   81    7    55    5    3    47
PCE Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume:   65  874    16   36  812   103   81    7    55    5    3    47
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600 1600 1600  1600 1600 1600  1600 1600 1600  1600
Adjustment:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Lanes:       2.00 3.00  1.00 2.00 3.00  1.00 1.84 0.16  1.00 1.00 0.06  0.94
Final Sat.:  3200 4800  1600 3200 4800  1600 2945  255  1600 1600   96  1504
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.02 0.18  0.01 0.01 0.17  0.06 0.03 0.03  0.03 0.00 0.03  0.03
Crit Moves:  ****                 ****      ****                      ****
*******************************************************************************
```

Sat Cum
2.13.3396.1 Orange Coast College

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #6 Pinecreek Drive at Adams Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.453
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	42	Level Of Service:	A

Street Name:	Pinecreek Drive						Adams Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Ignore			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 1 0 0 1			0 1 0 0 1			1 0 3 0 1			2 0 1 1 0		
Volume Module:												
Base Vol:	176	11	228	56	17	64	43	823	172	216	713	49
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	176	11	228	56	17	64	43	823	172	216	713	49
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	176	11	228	56	17	64	43	823	172	216	713	49
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	176	11	228	56	17	64	43	823	0	216	713	49
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	176	11	228	56	17	64	43	823	0	216	713	49
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	176	11	228	56	17	64	43	823	0	216	713	49
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.88	0.12	1.00	0.77	0.23	1.00	1.00	3.00	1.00	2.00	1.87	0.13
Final Sat.:	3012	188	1600	1227	373	1600	1600	4800	1600	3200	2994	206
Capacity Analysis Module:												
Vol/Sat:	0.06	0.06	0.14	0.05	0.05	0.04	0.03	0.17	0.00	0.07	0.24	0.24
Crit Moves:			****	****			****				****	

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--------------------------------------------------------------------------------
                                    Sat Cum
                       2.13.3396.1 Orange Coast College
--------------------------------------------------------------------------------
                       Level Of Service Computation Report
          ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #10 Fairview Road at Adams Avenue
********************************************************************************
Cycle (sec):          100                Critical Vol./Cap.(X):          0.602
Loss Time (sec):        0                Average Delay (sec/veh):       xxxxxx
Optimal Cycle:         57                Level Of Service:                   B
********************************************************************************
Street Name:                Fairview Road                      Adams Avenue
Approach:        North Bound      South Bound       East Bound       West Bound
Movement:       L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Protected        Protected       Split Phase      Split Phase
Rights:            Include          Ignore          Include          Include
Min. Green:     0     0     0    0     0     0    0     0     0    0     0     0
Y+R:          4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:        2  0  2  1  0    1  0  3  0  1    2  0  1  0  1    0  1  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     227   999    47    86  1032   688   822    89   209    43    75    94
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:  227   999    47    86  1032   688   822    89   209    43    75    94
Added Vol:      0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:  227   999    47    86  1032   688   822    89   209    43    75    94
User Adj:    1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:   227   999    47    86  1032     0   822    89   209    43    75    94
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:  227   999    47    86  1032     0   822    89   209    43    75    94
PCE Adj:     1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:  227   999    47    86  1032     0   822    89   209    43    75    94
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       2.00  2.87  0.13  1.00  3.00  1.00  2.00  1.00  1.00  0.73  1.27  1.00
Final Sat.:  3200  4584   216  1600  4800  1600  3200  1600  1600  1166  2034  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.07  0.22  0.22  0.05  0.22  0.00  0.26  0.06  0.13  0.04  0.04  0.06
Crit Moves:  ****                    ****        ****                          ****
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                                   Sat Cum
                     2.13.3396.1 Orange Coast College
--------------------------------------------------------------------------------
                     Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #11 Fairview Road at Monitor Way
********************************************************************************
Cycle (sec):         100             Critical Vol./Cap.(X):         0.406
Loss Time (sec):       0             Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        31             Level Of Service:                  A
********************************************************************************
Street Name:              Fairview Road                     Monitor Way
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Prot+Permit      Prot+Permit       Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0     0     0     0     0     0     0     0     0     0     0     0
Y+R:         4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0
Lanes:        1  0  2  1  0   1  0  3  0  1   0  1  0  0  1   0  1  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      45   976     8    65   940   255   195     2    25    45     3    62
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:   45   976     8    65   940   255   195     2    25    45     3    62
Added Vol:      0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:   45   976     8    65   940   255   195     2    25    45     3    62
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:    45   976     8    65   940   255   195     2    25    45     3    62
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:   45   976     8    65   940   255   195     2    25    45     3    62
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:   45   976     8    65   940   255   195     2    25    45     3    62
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       1.00  2.98  0.02  1.00  3.00  1.00  0.99  0.01  1.00  0.94  0.06  1.00
Final Sat.:  1600  4761    39  1600  4800  1600  1584    16  1600  1500   100  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.03  0.20  0.21  0.04  0.20  0.16  0.12  0.12  0.02  0.03  0.03  0.04
Crit Moves:              ****  ****              ****                          ****
********************************************************************************
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--------------------------------------------------------------------------------
                                    Sat Cum
                       2.13.3396.1 Orange Coast College
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #12 Fairview Road at Pirate Way/Mustang Way
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):         0.271
Loss Time (sec):       0              Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        26              Level Of Service:                  A
********************************************************************************
Street Name:            Fairview Road                Pirate Way/Mustang Way
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected        Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Y+R:         4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:        1  0  2  1  0    1  0  3  0  1    0  1  0  0  1    0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      26   968     4     1  1023    42    52     0    25     4     0    10
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:   26   968     4     1  1023    42    52     0    25     4     0    10
Added Vol:      0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:   26   968     4     1  1023    42    52     0    25     4     0    10
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:    26   968     4     1  1023    42    52     0    25     4     0    10
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:   26   968     4     1  1023    42    52     0    25     4     0    10
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:   26   968     4     1  1023    42    52     0    25     4     0    10
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       1.00  2.99  0.01  1.00  3.00  1.00  1.00  0.00  1.00  0.29  0.00  0.71
Final Sat.:  1600  4780    20  1600  4800  1600  1600     0  1600   457     0  1143
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.02  0.20  0.20  0.00  0.21  0.03  0.03  0.00  0.02  0.00  0.00  0.01
Crit Moves:  ****                    ****        ****                          ****
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--------------------------------------------------------------------------------
                                   Sat Cum
                       2.13.3396.1 Orange Coast College
--------------------------------------------------------------------------------
                       Level Of Service Computation Report
        ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #13 Fairview Road at Arlington Drive
********************************************************************************
Cycle (sec):         100               Critical Vol./Cap.(X):         0.306
Loss Time (sec):       0               Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        27               Level Of Service:                  A
********************************************************************************
Street Name:               Fairview Road                   Arlington Drive
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected         Permitted        Permitted
Rights:          Include          Include           Include          Include
Min. Green:     0    0     0    0    0     0    0    0     0    0    0     0
Y+R:          4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:         2  0  3  0  1   2  0  3  0  1   1  0  1  0  1   1  1  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       5  853   138  167  843    20   12    0     6   97    0   110
Growth Adj:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Initial Bse:    5  853   138  167  843    20   12    0     6   97    0   110
Added Vol:      0    0     0    0    0     0    0    0     0    0    0     0
PasserByVol:    0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:    5  853   138  167  843    20   12    0     6   97    0   110
User Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Volume:     5  853   138  167  843    20   12    0     6   97    0   110
Reduct Vol:     0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:    5  853   138  167  843    20   12    0     6   97    0   110
PCE Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume:    5  853   138  167  843    20   12    0     6   97    0   110
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600 1600 1600  1600 1600 1600  1600 1600 1600  1600
Adjustment:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Lanes:       2.00 3.00  1.00 2.00 3.00  1.00 1.00 1.00  1.00 2.00 0.00  1.00
Final Sat.:  3200 4800  1600 3200 4800  1600 1600 1600  1600 3200    0  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.18  0.09 0.05 0.18  0.01 0.01 0.00  0.00 0.03 0.00  0.07
Crit Moves:       ****       ****            ****                         ****
********************************************************************************
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                                    Sat Cum
                         2.13.3396.1 Orange Coast College
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                        Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #14 Fairview Road at Merrimac Way
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):         0.242
Loss Time (sec):       0              Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        25              Level Of Service:                  A
********************************************************************************
Street Name:              Fairview Road                       Merrimac Way
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected         Permitted        Permitted
Rights:          Include          Include           Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Y+R:         4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:        2  0  3  0  1    2  0  3  0  1    1  1  0  0  1    1  0  0  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     51   883    17   39   827    82   56     8    43    5     3    51
Growth Adj: 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Initial Bse:  51   883    17   39   827    82   56     8    43    5     3    51
Added Vol:     0     0     0    0     0     0    0     0     0    0     0     0
PasserByVol:   0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut:  51   883    17   39   827    82   56     8    43    5     3    51
User Adj:   1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Volume:   51   883    17   39   827    82   56     8    43    5     3    51
Reduct Vol:    0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol:  51   883    17   39   827    82   56     8    43    5     3    51
PCE Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
MLF Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
FinalVolume:  51   883    17   39   827    82   56     8    43    5     3    51
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:   1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600  1600
Adjustment: 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Lanes:      2.00  3.00  1.00 2.00  3.00  1.00 1.75  0.25  1.00 1.00  0.06  0.94
Final Sat.: 3200  4800  1600 3200  4800  1600 2800   400  1600 1600    89  1511
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.02  0.18  0.01 0.01  0.17  0.05 0.02  0.02  0.03 0.00  0.03  0.03
Crit Moves: ****                   ****       ****                    ****
********************************************************************************
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                          Sat Cum Plus Project
                    2.13.3396.1 Orange Coast College
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                   Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
******************************************************************************
Intersection #6 Pinecreek Drive at Adams Avenue
******************************************************************************
Cycle (sec):          100              Critical Vol./Cap.(X):         0.521
Loss Time (sec):        0              Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         48              Level Of Service:                  A
******************************************************************************
Street Name:          Pinecreek Drive                      Adams Avenue
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Split Phase      Split Phase       Protected        Protected
Rights:           Include          Include          Ignore           Include
Min. Green:     0     0     0    0     0     0    0     0     0    0     0     0
Y+R:          4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:        1  1  0  0  1    0  1  0  0  1    1  0  3  0  1    2  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     246    11   277   58    17    64   43   913   236  356   779    51
Growth Adj:  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Initial Bse:  246    11   277   58    17    64   43   913   236  356   779    51
Added Vol:      0     0     0    0     0     0    0     0     0    0     0     0
PasserByVol:    0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut:  246    11   277   58    17    64   43   913   236  356   779    51
User Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  0.00 1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  0.00 1.00  1.00  1.00
PHF Volume:   246    11   277   58    17    64   43   913     0  356   779    51
Reduct Vol:     0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol:  246    11   277   58    17    64   43   913     0  356   779    51
PCE Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  0.00 1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  0.00 1.00  1.00  1.00
FinalVolume:  246    11   277   58    17    64   43   913     0  356   779    51
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600  1600
Adjustment:  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Lanes:       1.91  0.09  1.00 0.77  0.23  1.00 1.00  3.00  1.00 2.00  1.88  0.12
Final Sat.:  3063   137  1600 1237   363  1600 1600  4800  1600 3200  3003   197
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.08  0.08  0.17 0.05  0.05  0.04 0.03  0.19  0.00 0.11  0.26  0.26
Crit Moves:              **** ****                     ****       ****
******************************************************************************
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                   Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #10 Fairview Road at Adams Avenue
********************************************************************************
Cycle (sec):          100                Critical Vol./Cap.(X):         0.667
Loss Time (sec):        0                Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         68                Level Of Service:                  B
********************************************************************************
Street Name:              Fairview Road                      Adams Avenue
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected       Split Phase      Split Phase
Rights:          Include          Ignore           Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Y+R:         4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:        2  0  2  1  0    1  0  3  0  1    2  0  1  0  1    0  1  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     269 1090    50    86 1145   796   913    91   252    46    77    94
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  269 1090    50    86 1145   796   913    91   252    46    77    94
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  269 1090    50    86 1145   796   913    91   252    46    77    94
User Adj:    1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   269 1090    50    86 1145     0   913    91   252    46    77    94
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  269 1090    50    86 1145     0   913    91   252    46    77    94
PCE Adj:     1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  269 1090    50    86 1145     0   913    91   252    46    77    94
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 2.87  0.13  1.00 3.00  1.00  2.00 1.00  1.00  0.75 1.25  1.00
Final Sat.:  3200 4589   211  1600 4800  1600  3200 1600  1600  1197 2003  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.08 0.24  0.24  0.05 0.24  0.00  0.29 0.06  0.16  0.04 0.04  0.06
Crit Moves:  ****                    ****      ****                          ****
********************************************************************************
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                          Sat Cum Plus Project
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                    Level Of Service Computation Report
     ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #11 Fairview Road at Monitor Way
********************************************************************************
Cycle (sec):         100               Critical Vol./Cap.(X):        0.444
Loss Time (sec):       0               Average Delay (sec/veh):     xxxxxx
Optimal Cycle:        33               Level Of Service:                 A
********************************************************************************
Street Name:            Fairview Road                     Monitor Way
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Prot+Permit      Prot+Permit       Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:    0    0    0    0    0    0    0    0    0    0    0    0
Y+R:         4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0
Lanes:        1  0  2  1  0   1  0  3  0  1   0  1  0  0  1   0  1  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      64 1089    8   65 1066  288  217    2   37   45    3   62
Growth Adj:  1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse:   64 1089    8   65 1066  288  217    2   37   45    3   62
Added Vol:      0    0    0    0    0    0    0    0    0    0    0    0
PasserByVol:    0    0    0    0    0    0    0    0    0    0    0    0
Initial Fut:   64 1089    8   65 1066  288  217    2   37   45    3   62
User Adj:    1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:     1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume:    64 1089    8   65 1066  288  217    2   37   45    3   62
Reduct Vol:     0    0    0    0    0    0    0    0    0    0    0    0
Reduced Vol:   64 1089    8   65 1066  288  217    2   37   45    3   62
PCE Adj:     1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj:     1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume:   64 1089    8   65 1066  288  217    2   37   45    3   62
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600
Adjustment:  1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes:       1.00 2.98 0.02 1.00 3.00 1.00 0.99 0.01 1.00 0.94 0.06 1.00
Final Sat.:  1600 4765   35 1600 4800 1600 1585   15 1600 1500  100 1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.04 0.23 0.23 0.04 0.22 0.18 0.14 0.14 0.02 0.03 0.03 0.04
Crit Moves:       ****      ****           ****                          ****
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                              Sat Cum Plus Project
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                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #12 Fairview Road at Pirate Way/Mustang Way
********************************************************************************
Cycle (sec):          100                Critical Vol./Cap.(X):          0.315
Loss Time (sec):        0                Average Delay (sec/veh):       xxxxxx
Optimal Cycle:         27                Level Of Service:                   A
********************************************************************************
Street Name:              Fairview Road                Pirate Way/Mustang Way
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------||----------------||----------------||----------------|
Control:        Protected        Protected         Permitted         Permitted
Rights:          Include           Include          Include           Include
Min. Green:     0     0     0    0     0     0    0     0     0    0     0     0
Y+R:          4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:        1  0  2  1  0    1  0  3  0  1    0  1  0  0  1    0  0  1!  0  0
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:      47  1094     4     1  1153    50    58     0    39     4     0    10
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:   47  1094     4     1  1153    50    58     0    39     4     0    10
Added Vol:      0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:   47  1094     4     1  1153    50    58     0    39     4     0    10
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:    47  1094     4     1  1153    50    58     0    39     4     0    10
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:   47  1094     4     1  1153    50    58     0    39     4     0    10
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:   47  1094     4     1  1153    50    58     0    39     4     0    10
------------|----------------||----------------||----------------||----------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       1.00  2.99  0.01  1.00  3.00  1.00  1.00  0.00  1.00  0.29  0.00  0.71
Final Sat.:  1600  4783    17  1600  4800  1600  1600     0  1600   457     0  1143
------------|----------------||----------------||----------------||----------------|
Capacity Analysis Module:
Vol/Sat:     0.03  0.23  0.23  0.00  0.24  0.03  0.04  0.00  0.02  0.00  0.00  0.01
Crit Moves:  ****                    ****        ****                          ****
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                              Sat Cum Plus Project
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                       Level Of Service Computation Report
        ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #13 Fairview Road at Arlington Drive
********************************************************************************
Cycle (sec):          100                Critical Vol./Cap.(X):          0.363
Loss Time (sec):        0                Average Delay (sec/veh):       xxxxxx
Optimal Cycle:         29                Level Of Service:                   A
********************************************************************************
Street Name:              Fairview Road                    Arlington Drive
Approach:        North Bound      South Bound       East Bound       West Bound
Movement:       L  -  T  -  R   L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------||----------------||----------------||----------------|
Control:         Protected        Protected         Permitted        Permitted
Rights:            Include          Include           Include          Include
Min. Green:     0     0     0    0     0     0    0     0     0    0     0     0
Y+R:          4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:          2  0  3  0  1    2  0  3  0  1    1  0  1  0  1    1  1  0  0  1
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:      19   937   138  167   916    90   75     0    18   97     0   110
Growth Adj:  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Initial Bse:   19   937   138  167   916    90   75     0    18   97     0   110
Added Vol:      0     0     0    0     0     0    0     0     0    0     0     0
PasserByVol:    0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut:   19   937   138  167   916    90   75     0    18   97     0   110
User Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Volume:    19   937   138  167   916    90   75     0    18   97     0   110
Reduct Vol:     0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol:   19   937   138  167   916    90   75     0    18   97     0   110
PCE Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
FinalVolume:   19   937   138  167   916    90   75     0    18   97     0   110
------------|----------------||----------------||----------------||----------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600  1600
Adjustment:  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Lanes:       2.00  3.00  1.00 2.00  3.00  1.00 1.00  1.00  1.00 2.00  0.00  1.00
Final Sat.:  3200  4800  1600 3200  4800  1600 1600  1600  1600 3200     0  1600
------------|----------------||----------------||----------------||----------------|
Capacity Analysis Module:
Vol/Sat:     0.01  0.20  0.09 0.05  0.19  0.06 0.05  0.00  0.01 0.03  0.00  0.07
Crit Moves:        ****       ****             ****                           ****
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                             Sat Cum Plus Project
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-------------------------------------------------------------------------------
                       Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*******************************************************************************
Intersection #14 Fairview Road at Merrimac Way
*******************************************************************************
Cycle (sec):         100                Critical Vol./Cap.(X):         0.273
Loss Time (sec):       0                Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        26                Level Of Service:                  A
*******************************************************************************
Street Name:              Fairview Road                     Merrimac Way
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected         Permitted        Permitted
Rights:           Include          Include           Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Y+R:         4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:        2  0  3  0  1    2  0  3  0  1    1  1  0  0  1    1  0  0  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     69   951    17   39   885   110   86     8    59    5     3    51
Growth Adj:  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Initial Bse:  69   951    17   39   885   110   86     8    59    5     3    51
Added Vol:     0     0     0    0     0     0    0     0     0    0     0     0
PasserByVol:   0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut:  69   951    17   39   885   110   86     8    59    5     3    51
User Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Volume:   69   951    17   39   885   110   86     8    59    5     3    51
Reduct Vol:    0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol:  69   951    17   39   885   110   86     8    59    5     3    51
PCE Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
FinalVolume:  69   951    17   39   885   110   86     8    59    5     3    51
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600  1600
Adjustment:  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Lanes:       2.00  3.00  1.00 2.00  3.00  1.00 1.83  0.17  1.00 1.00  0.06  0.94
Final Sat.:  3200  4800  1600 3200  4800  1600 2928   272  1600 1600    89  1511
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.02  0.20  0.01 0.01  0.18  0.07 0.03  0.03  0.04 0.00  0.03  0.03
Crit Moves:        ****       ****             ****                   ****
*******************************************************************************
```

APPENDIX E

LEFT-TURN QUEUING CALCULATION WORKSHEETS

AM Cumulative
2.13.3396.1 Orange Coast College
Caltrans

Future Queue Report (cars)

Node	Intersection	Northbound L	Northbound T	Northbound R	Southbound L	Southbound T	Southbound R	Eastbound L	Eastbound T	Eastbound R	Westbound L	Westbound T	Westbound R
#4	[HCM2kAvgQ]:	2	13	13	5	14	14	2	1	1	1	1	1
#6	[HCM2kAvgQ]:	0	0	1	4	4	2	1	16	0	2	9	9
#11	[HCM2kAvgQ]:	1	5	5	1	6	3	1	1	0	1	1	2
#12	[HCM2kAvgQ]:	3	8	8	3	7	6	2	2	1	5	5	5
#13	[HCM2kAvgQ]:	1	7	5	2	7	2	0	0	0	1	1	4
#14	[HCM2kAvgQ]:	2	4	0	0	4	3	1	0	2	0	0	0

#4 = Harbor / Merrimac
#6 = Pinecreek / Adams
#11 = Fairview / Monitor
#12 = Fairview / Pirate-Mustang
#13 = Fairview / Arlington
#14 = Fairview / Merrimac

AM Cumulative
2.13.3396.1 Orange Coast College
Caltrans

Future Queue Report (cars)

Node	Intersection	Northbound L	Northbound T	Northbound R	Southbound L	Southbound T	Southbound R	Eastbound L	Eastbound T	Eastbound R	Westbound L	Westbound T	Westbound R
#4	[HCM2k70thQ]:	2	15	15	6	16	16	3	2	2	1	1	1
#6	[HCM2k70thQ]:	0	0	1	5	5	3	1	19	0	3	11	11
#11	[HCM2k70thQ]:	1	6	6	1	8	3	1	1	0	1	1	3
#12	[HCM2k70thQ]:	3	9	9	4	8	8	2	2	1	6	6	6
#13	[HCM2k70thQ]:	1	8	6	3	8	2	0	0	0	1	1	4
#14	[HCM2k70thQ]:	3	5	0	0	5	4	2	0	2	0	0	0

AM Cumulative
2.13.3396.1 Orange Coast College
Caltrans

Future Queue Report (cars)

Node	Intersection	Northbound L	Northbound T	Northbound R	Southbound L	Southbound T	Southbound R	Eastbound L	Eastbound T	Eastbound R	Westbound L	Westbound T	Westbound R
#4	[HCM2k85thQ]:	3	19	19	8	20	20	4	2	2	1	2	2
#6	[HCM2k85thQ]:	0	0	1	6	6	4	2	24	0	4	14	14
#11	[HCM2k85thQ]:	1	8	8	1	10	4	1	1	0	2	2	3
#12	[HCM2k85thQ]:	4	12	12	5	10	10	3	3	1	8	8	8
#13	[HCM2k85thQ]:	1	11	8	4	11	3	0	0	0	1	1	6
#14	[HCM2k85thQ]:	4	7	0	0	7	5	2	0	3	0	0	0

AM Cumulative
2.13.3396.1 Orange Coast College
Caltrans

Future Queue Report (cars)

Node	Intersection	Northbound L	Northbound T	Northbound R	Southbound L	Southbound T	Southbound R	Eastbound L	Eastbound T	Eastbound R	Westbound L	Westbound T	Westbound R
#4	[HCM2k95thQ]:	4	23	23	11	24	24	5	3	3	2	2	2
#6	[HCM2k95thQ]:	1	1	2	8	8	5	2	29	0	5	17	17
#11	[HCM2k95thQ]:	2	10	10	1	12	5	2	2	0	2	2	4
#12	[HCM2k95thQ]:	5	15	15	7	13	12	3	3	1	11	11	11
#13	[HCM2k95thQ]:	2	13	10	5	13	3	1	0	0	2	2	7
#14	[HCM2k95thQ]:	5	9	0	0	8	6	3	0	4	0	0	0

PM Cumulative
2.13.3396.1 Orange Coast College
Caltrans

Future Queue Report (cars)

Node	Intersection	Northbound L	Northbound T	Northbound R	Southbound L	Southbound T	Southbound R	Eastbound L	Eastbound T	Eastbound R	Westbound L	Westbound T	Westbound R
#4	[HCM2kAvgQ]:	2	31	31	8	21	21	2	1	1	3	5	5
#6	[HCM2kAvgQ]:	4	4	5	5	5	7	6	8	0	3	36	36
#11	[HCM2kAvgQ]:	1	15	15	2	12	3	5	0	1	0	0	1
#12	[HCM2kAvgQ]:	3	12	0	1	10	5	6	0	2	1	0	1
#13	[HCM2kAvgQ]:	1	9	3	2	9	2	1	0	1	2	2	7
#14	[HCM2kAvgQ]:	4	5	0	0	6	5	2	2	3	0	0	0

PM Cumulative
2.13.3396.1 Orange Coast College
Caltrans

Future Queue Report (cars)

Node	Intersection	Northbound L	Northbound T	Northbound R	Southbound L	Southbound T	Southbound R	Eastbound L	Eastbound T	Eastbound R	Westbound L	Westbound T	Westbound R
#4	[HCM2k70thQ]:	2	35	35	9	25	25	3	2	2	3	6	6
#6	[HCM2k70thQ]:	5	5	5	6	6	8	7	10	0	4	41	41
#11	[HCM2k70thQ]:	1	17	17	2	14	4	7	0	2	0	0	2
#12	[HCM2k70thQ]:	4	14	0	1	12	6	7	0	2	1	0	1
#13	[HCM2k70thQ]:	1	11	3	2	10	2	2	0	1	2	2	8
#14	[HCM2k70thQ]:	4	6	0	0	7	6	3	3	4	0	0	0

PM Cumulative
2.13.3396.1 Orange Coast College
Caltrans

Future Queue Report (cars)

Node	Intersection	Northbound L	Northbound T	Northbound R	Southbound L	Southbound T	Southbound R	Eastbound L	Eastbound T	Eastbound R	Westbound L	Westbound T	Westbound R
#4	[HCM2k85thQ]:	3	43	43	12	31	31	4	2	2	4	8	8
#6	[HCM2k85thQ]:	7	7	7	8	8	11	9	13	0	5	50	50
#11	[HCM2k85thQ]:	2	22	22	3	18	5	9	0	2	1	0	2
#12	[HCM2k85thQ]:	5	18	0	1	15	8	10	0	3	2	0	2
#13	[HCM2k85thQ]:	2	14	4	3	13	3	2	0	1	2	2	11
#14	[HCM2k85thQ]:	6	8	0	0	9	8	3	3	5	0	0	0

PM Cumulative
2.13.3396.1 Orange Coast College
Caltrans

Future Queue Report (cars)

Node	Intersection	Northbound L	Northbound T	Northbound R	Southbound L	Southbound T	Southbound R	Eastbound L	Eastbound T	Eastbound R	Westbound L	Westbound T	Westbound R
#4	[HCM2k95thQ]:	4	49	49	15	36	36	5	3	3	6	10	10
#6	[HCM2k95thQ]:	8	8	9	11	11	13	11	16	0	6	56	56
#11	[HCM2k95thQ]:	2	26	26	4	22	7	11	0	3	1	0	3
#12	[HCM2k95thQ]:	6	21	0	1	18	10	12	0	4	2	0	2
#13	[HCM2k95thQ]:	2	18	5	4	16	4	3	0	2	3	3	13
#14	[HCM2k95thQ]:	7	10	0	0	11	11	5	5	7	0	0	0

AM Cumulative Plus Project
2.13.3396.1 Orange Coast College
Caltrans

Future Queue Report (cars)

Node	Intersection	Northbound L	Northbound T	Northbound R	Southbound L	Southbound T	Southbound R	Eastbound L	Eastbound T	Eastbound R	Westbound L	Westbound T	Westbound R
#4	[HCM2kAvgQ]:	2	15	15	8	15	15	2	1	1	1	1	1
#6	[HCM2kAvgQ]:	1	1	2	5	5	3	1	19	0	7	9	9
#11	[HCM2kAvgQ]:	2	5	5	1	9	5	2	2	1	1	1	2
#12	[HCM2kAvgQ]:	5	8	8	3	8	8	2	2	1	6	6	6
#13	[HCM2kAvgQ]:	2	8	5	2	8	4	1	0	0	1	1	4
#14	[HCM2kAvgQ]:	3	6	0	0	5	4	2	0	2	0	0	0

AM Cumulative Plus Project
2.13.3396.1 Orange Coast College
Caltrans

Future Queue Report (cars)

		Northbound			Southbound			Eastbound			Westbound		
Node	Intersection	L	T	R	L	T	R	L	T	R	L	T	R
#4	[HCM2k70thQ]:	2	17	17	9	17	17	3	2	2	1	2	2
#6	[HCM2k70thQ]:	1	1	2	5	5	3	1	22	0	9	11	11
#11	[HCM2k70thQ]:	2	6	6	1	10	6	2	2	1	1	1	3
#12	[HCM2k70thQ]:	6	10	10	4	10	9	2	2	1	7	7	7
#13	[HCM2k70thQ]:	2	10	6	3	9	4	1	0	0	1	1	4
#14	[HCM2k70thQ]:	4	7	0	0	6	5	3	0	2	0	0	0

AM Cumulative Plus Project
2.13.3396.1 Orange Coast College
Caltrans

Future Queue Report (cars)

Node	Intersection	Northbound L	Northbound T	Northbound R	Southbound L	Southbound T	Southbound R	Eastbound L	Eastbound T	Eastbound R	Westbound L	Westbound T	Westbound R
#4	[HCM2k85thQ]:	2	22	22	12	22	22	4	2	2	1	2	2
#6	[HCM2k85thQ]:	1	1	3	7	7	4	2	28	0	11	14	14
#11	[HCM2k85thQ]:	3	8	8	1	13	8	3	3	1	2	2	4
#12	[HCM2k85thQ]:	7	13	13	5	13	12	3	3	2	9	9	9
#13	[HCM2k85thQ]:	2	13	8	4	12	6	1	0	0	1	1	6
#14	[HCM2k85thQ]:	5	10	0	0	8	7	3	0	3	0	0	0

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Caltrans

Future Queue Report (cars)

Node	Intersection	Northbound L	Northbound T	Northbound R	Southbound L	Southbound T	Southbound R	Eastbound L	Eastbound T	Eastbound R	Westbound L	Westbound T	Westbound R
#4	[HCM2k95thQ]:	3	26	26	14	26	26	5	3	3	2	3	3
#6	[HCM2k95thQ]:	2	2	4	9	9	5	2	33	0	14	17	17
#11	[HCM2k95thQ]:	3	10	10	1	16	10	4	4	1	2	2	5
#12	[HCM2k95thQ]:	9	15	15	7	16	15	4	4	2	12	12	12
#13	[HCM2k95thQ]:	3	16	10	5	14	7	1	0	1	2	2	7
#14	[HCM2k95thQ]:	6	12	0	0	10	9	4	0	4	0	0	0

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Caltrans

Future Queue Report (cars)

Node	Intersection	Northbound L	Northbound T	Northbound R	Southbound L	Southbound T	Southbound R	Eastbound L	Eastbound T	Eastbound R	Westbound L	Westbound T	Westbound R
#4	[HCM2kAvgQ]:	2	34	34	10	22	22	2	1	1	3	7	7
#6	[HCM2kAvgQ]:	7	7	10	6	6	7	6	11	0	7	39	39
#11	[HCM2kAvgQ]:	2	17	17	2	14	6	9	0	3	0	0	1
#12	[HCM2kAvgQ]:	5	14	0	1	12	6	7	0	3	1	0	1
#13	[HCM2kAvgQ]:	2	11	3	2	10	3	4	0	1	2	2	7
#14	[HCM2kAvgQ]:	4	6	0	0	7	7	3	3	4	0	0	0

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Caltrans

Future Queue Report (cars)

Node	Intersection	Northbound L	Northbound T	Northbound R	Southbound L	Southbound T	Southbound R	Eastbound L	Eastbound T	Eastbound R	Westbound L	Westbound T	Westbound R
#4	[HCM2k70thQ]:	2	39	39	12	25	25	3	2	2	4	8	8
#6	[HCM2k70thQ]:	8	8	11	7	7	8	7	13	0	8	44	44
#11	[HCM2k70thQ]:	3	20	20	3	16	7	10	0	3	0	0	2
#12	[HCM2k70thQ]:	6	17	0	1	14	7	8	0	4	1	0	1
#13	[HCM2k70thQ]:	2	13	3	2	12	4	5	0	2	2	2	8
#14	[HCM2k70thQ]:	5	7	0	0	8	8	4	4	5	0	0	0

PM Cumulative Plus Project
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Caltrans

Future Queue Report (cars)

Node	Intersection	Northbound L	Northbound T	Northbound R	Southbound L	Southbound T	Southbound R	Eastbound L	Eastbound T	Eastbound R	Westbound L	Westbound T	Westbound R
#4	[HCM2k85thQ]:	3	48	48	15	32	32	4	2	2	5	11	11
#6	[HCM2k85thQ]:	11	11	15	9	9	11	9	16	0	10	53	53
#11	[HCM2k85thQ]:	4	25	25	4	21	9	13	0	4	1	0	2
#12	[HCM2k85thQ]:	8	21	0	1	18	9	11	0	5	2	0	2
#13	[HCM2k85thQ]:	3	17	4	3	16	5	6	0	2	2	2	11
#14	[HCM2k85thQ]:	6	9	0	0	10	10	5	5	6	0	0	0

PM Cumulative Plus Project
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Caltrans

Future Queue Report (cars)

		Northbound			Southbound			Eastbound			Westbound		
Node	Intersection	L	T	R	L	T	R	L	T	R	L	T	R
#4	[HCM2k95thQ]:	4	55	55	19	37	37	5	3	3	7	13	13
#6	[HCM2k95thQ]:	13	13	18	11	11	13	11	20	0	13	61	61
#11	[HCM2k95thQ]:	5	29	29	5	25	11	16	0	5	1	0	3
#12	[HCM2k95thQ]:	10	25	0	1	22	11	14	0	6	2	0	2
#13	[HCM2k95thQ]:	3	21	5	4	19	6	8	0	3	3	3	13
#14	[HCM2k95thQ]:	8	11	0	0	13	13	6	6	8	0	0	0