City of Long Beach

Pacific Pointe East Development Project

Draft Environmental Impact Report

SCH # 2014011059

April 2014

rincon

Environmental Scientists Planners Engineers

Draft
Environmental Impact Report

Pacific Pointe East Development Project

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Pacific Pointe East Development Project EIR

Table of Contents

Page

Executive Summary ES-1

1.0 Introduction
- 1.1 Environmental Impact Report Background 1-1
- 1.2 Purpose and Legal Authority 1-1
- 1.3 Scope and Content/Environmental Factors Potentially Affected 1-2
- 1.4 Lead, Responsible and Trustee Agencies 1-3
- 1.5 Environmental Review Process 1-3

2.0 Project Description
- 2.1 Project Applicant 2-1
- 2.2 Project Location 2-1
- 2.3 Current Land Use and Regulatory Setting 2-7
- 2.4 Project Characteristics 2-8
- 2.5 Project Objectives 2-11
- 2.6 Required Approvals 2-11

3.0 Environmental Setting
- 3.1 Regional Setting 3-1
- 3.2 Project Site Setting 3-1
- 3.3 Cumulative Projects Setting 3-1

4.0 Environmental Impact Analysis 4-1
- 4.1 Aesthetics 4.1-1
- 4.2 Air Quality 4.2-1
- 4.3 Greenhouse Gas Emissions/Climate Change 4.3-1
- 4.4 Noise 4.4-1
- 4.5 Transportation and Traffic 4.5-1

5.0 Other CEQA-Required Discussions 5-1
- 5.1 Growth Inducement 5-1
- 5.2 Irreversible Environmental Effects 5-2

6.0 Alternatives 6-1
- 6.1 No Project 6-2
- 6.2 Reduced Intensity Alternative 6-3
- 6.3 Alternative Site Alternative 6-5
- 6.4 Environmentally Superior Alternative 6-7

7.0 References and Report Preparers
- 7.1 References 7-1
- 7.2 Report Preparers 7-4

List of Figures

Figure 1-1 CEQA Environmental Review Process 1-4
Figure 2-1 Regional Location 2-2
Figure 2-2 Aerial View of Project Site and Surrounding Uses 2-3
Figure 2-3 Site Photographs 2-4
Figure 2-4a Site Vicinity Photographs 2-5
Figure 2-4b Site Vicinity Photographs 2-6
Figure 2-5 Site Plan 2-10
Figure 4.1-1 Existing Industrial Development in the Project Vicinity 4.1-3
Figure 4.1-2 Building 9 Elevation 4.1-7
Figure 4.1-3 Building 10 Elevation 4.1-9
Figure 4.1-4 Building 11 Elevation 4.1-11
Figure 4.4-1 Long Beach Municipal Airport Noise Level Contours 4.4-6
Figure 4.5-1 Existing Weekday Volumes AM 4.5-6
Figure 4.5-2 Existing Weekday Volumes PM 4.5-7
Figure 4.5-3 Passenger Car Trip Distribution 4.5-11
Figure 4.5-4 Truck Trip Distribution 4.5-12
Figure 4.5-5 Project AM Peak Hour Trips 4.5-14
Figure 4.5-6 Project PM Peak Hour Trips 4.5-15
Figure 4.5-7 Existing Plus Project AM Peak Hour Traffic Volumes 4.5-16
Figure 4.5-8 Existing Plus Project PM Peak Hour Traffic Volumes 4.5-17
Figure 4.5-9 Project Access and Circulation Plan 4.5-21
Figure 4.5-10 Cumulative Projects AM Peak Hour Traffic Volumes 4.5-24
Figure 4.5-11 Cumulative Projects PM Peak Hour Traffic Volumes 4.5-25
Figure 4.5-12 Cumulative Plus Project AM Peak Hour Traffic Volumes 4.5-26
Figure 4.5-13 Cumulative Plus Project PM Peak Hour Traffic Volumes 4.5-27

List of Tables

Table ES-1 Project Summary ES-2
Table ES-2 Summary of Environmental Impacts, Mitigation Measures and Residual Impacts ES-3
Table 1-1 NOP Response Issues 1-1
Table 2-1 Existing Site Characteristics 2-7
Table 3-1 Planned and Pending Projects 3-2
Table 4.2-1 Current Federal and State Ambient Air Quality Standards 4.2-2
Table 4.2-2 Ambient Air Quality Data 4.2-7
Table 4.2-3 SCAQMD LSTs for Emissions in SRA-4 ..... 4.2-9
Table 4.2-4 Estimated Construction Maximum Daily Air Pollutant Emissions 4.2-11
Table 4.2-5 Long-Term Operational Emissions 4.2-12
Table 4.3-1 Estimated Construction Emissions of Greenhouse Gases 4.3-13
Table 4.3-2 Estimated Annual Area Source Greenhouse Gas Emissions 4.3-13
Table 4.3-3 Estimated Annual Energy-Related Greenhouse Gas Emissions 4.3-13
Table 4.3-4 Estimated Annual Solid Waste Greenhouse Gas Emissions 4.3-14
Table 4.3-5 Estimated Greenhouse Gas Emissions from Water Use 4.3-14
Table 4.3-6 Estimated Annual Mobile Emissions of Greenhouse Gases 4.3-15
Table 4.3-7 Combined Annual Emissions of Greenhouse Gases 4.3-15

Table 4.3-8 Project Consistency with Applicable Climate Action Team Greenhouse Gas Emission Reduction Strategies 4.3-17
Table 4.3-9 Project Consistency with Applicable SCAG SCS Greenhouse Gas Emission Reduction Strategies 4.3-20
Table 4.3-10 Project Consistency with Applicable Long Beach Sustainable City Action Plan Goals 4.3-22
Table 4.4-1 City of Long Beach Interior Noise Level Standards 4.4-3
Table 4.4-2 City of Long Beach General Plan Noise Level Standards 4.4-4
Table 4.4-3 Existing Traffic-Generated Noise 4.4-5
Table 4.4-4 Noise Impact Criteria 4.4-7
Table 4.4-5 Construction Noise Levels at the Nearest Noise-Sensitive Receptor 4.4-8
Table 4.4-6 Pre-Project and Post-Project Traffic Noise Impacts 4.4-10
Table 4.5-1 Level of Service Definitions 4.5-3
Table 4.5-2 Existing (Weekday) Intersection Peak Hour Levels of Service Summary 4.5-5
Table 4.5-3 Project Trip Generation Forecast 4.5-9
Table 4.5-4 Existing Plus Project Peak Hour Intersection Capacity Analysis 4.5-13
Table 4.5-5 Project Driveway Capacity Analysis 4.5-20
Table 4.5-6 Cumulative Peak Hour Intersection Capacity Analysis 4.5-22
Table 6-1 Comparison of Project Alternatives Buildout Characteristics 6-1
Table 6-2 Comparison of Environmental Impacts of Alternatives 6-7

Appendices

Appendix A Initial Study, Notice of Preparation (NOP) and NOP Comment Letters
Appendix B CalEEMod Emissions Modeling
Appendix C Traffic Study

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EXECUTIVE SUMMARY

This section summarizes the characteristics of the proposed project, and the environmental impacts, mitigation measures, and residual impacts associated with the proposed project.

PROJECT SYNOPSIS

Project Applicant

DP3 Hangars, LLC
18802 Bardeen Avenue
Irvine, California 92612-1521
Phone: (949) 809-2414

Project Description

This Environmental Impact Report (EIR) has been prepared to examine the potential environmental effects of the proposed Pacific Point East Development Project. The following is a summary of the full project description, which may be found in Section 2.0 *Project Description.*

The proposed Pacific Pointe East development is located on an unaddressed, approximately 25-acre parcel at the southeast corner of Lakewood Boulevard and Conant Street near the Long Beach Airport, with a Los Angeles County Assessor's ID Number of 7149-005-006. As shown in Figure 3, the proposed project involves three new industrial buildings on a site that is currently developed with a paved surface parking lot. These buildings have an open floor plan and would be intended for light industrial, light manufacturing, warehouse, office, and/or research & development land uses. The three buildings would have a maximum height of about 41 feet and total floor area of 494,000 square feet, broken down as follows:

- Building 9 – 144,000 sq. ft. of building area on a 306,399 square foot (sq. ft.) site
- Building 10 – 118,000 sq. ft. of building area on a 233,538 sq. ft. site
- Building 11 – 232,000 sq. ft. of building area on a 541,098 sq. ft. site

A total of 722 parking spaces are proposed, including 221 spaces for Building 9, 156 spaces for Building 10, and 345 spaces for Building 11.

The project site is located in the Douglas Aircraft Planned Development District (PD-19), which allows a range of uses but limits total peak period (4-6 PM) vehicle trips to and from the district to 5,503. In addition, development within PD-19 must not have significant effects on neighboring residences, significant effects on visual resources, or significant safety and security effects.

Table ES-1
Project Summary

Land Use	Size (square feet)	Quantity
Industrial Buildings	494,000	3 buildings
Parking Spaces	n/a	722 spaces

Implementation of the project would require the following discretionary approvals from the City of Long Beach:

- **Site Plan Review and Approval –** Consistent with City Ordinance ORD-11-0029, the applicant is required to submit a Site Plan for Planning Commission approval.

ALTERNATIVES

Three alternatives to the proposed project were selected for consideration as follows:

- Alternative 1: No Project (no three new light industrial buildings with associated improvements)
- Alternative 2: Reduced Intensity
- Alternative 3: Alternate Site

The Reduced Intensity Alternative would reduce all of the project's less than significant environmental effects, and is therefore considered environmentally superior overall.

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Table ES-2 includes a brief description of the environmental issues relative to the proposed project, the identified environmental impacts, proposed mitigation measures, and residual impacts (the impact after application of mitigation, if any). Impacts are categorized by classes. Class I impacts are defined as significant, unavoidable adverse impacts which require a statement of overriding considerations to be issued per Section 15093 of the *State CEQA Guidelines* if the project is approved. Class II impacts are significant adverse impacts that can be feasibly mitigated to less than significant levels and which require findings to be made under Section 15091 of the *State CEQA Guidelines.* Class III impacts are considered less than significant impacts.

Table ES-2 Summary of Environmental Impacts, Mitigation Measures, and Residual Impacts

Impact	Mitigation Measures	Residual Impact
AESTHETICS		
Impact AES-1 The proposed project would involve replacing the existing surface parking lot with three industrial structures a maximum height of 41 feet. Because the project would not adversely affect any scenic views and would be visually compatible with the industrial character of the area, its impact would be Class III, less than significant.	None required	Less than significant
Impact AES-2. The proposed project would not conflict with adopted policies of the City of Long Beach related to aesthetics, and would therefore produce a Class III, less than significant, impact.	None required	Less than significant
AIR QUALITY		
Impact AQ-1. Onsite construction activity would generate air pollutant emissions, but construction-related emissions would not exceed SCAQMD thresholds for any criteria pollutant. Therefore, impacts would be Class III, less than significant.	None required	Less than significant
Impact AQ-2. Operation of the proposed facilities project would generate air pollutant emissions in the long-term. However, emissions would not exceed SCAQMD operational significance thresholds for any criteria pollutants. Therefore, operational air quality impacts would be Class III, less than significant.	None required	Less than significant
GREENHOUSE GAS EMISSIONS		
Impact GHG-1. Development that could potentially occur under the proposed project would generate additional GHG emissions beyond existing conditions. However, GHG emissions generated would not exceed proposed SCAQMD significance thresholds. Impacts would therefore be Class III, less than significant.	None required	Less than significant
Impact GHG-2. The proposed project would be consistent with the Climate Action Team GHG reduction strategies and the SCAG Sustainable Communities Strategy. Impacts related to consistency with	None required	Less than significant

Table ES-2 Summary of Environmental Impacts, Mitigation Measures, and Residual Impacts

Impact	Mitigation Measures	Residual Impact
GHG plans and policies would therefore be Class III, less than significant.		
NOISE		
Impact N-1. Construction-related activities associated with the proposed project would intermittently generate high noise levels and groundborne vibration on and adjacent to the site. However, construction noise would be temporary and subject to restrictions established in the Municipal Code. Therefore, impacts would be Class III, less than significant.	None required	Less than significant
Impact N-2. Onsite operations would generate noise levels that may periodically be audible to existing land uses near and within the project area. However, operational noise is not expected to exceed City noise standards or thresholds. This is a Class III, less than significant impact.	None required	Less than significant
Impact N-3. Aircraft associated with nearby airports would periodically generate noise that would be audible at the project site. However, aircraft noise would not exceed City interior noise standards. This is a Class III, less than significant impact.	None required	Less than significant
TRAFFIC AND TRANSPORTATION		
Impact T-1. Implementation of the proposed project would increase traffic on the surrounding network, but would not cause any intersection to exceed the City's LOS standard or conflict with the County CMP. Impacts associated with the proposed project would be Class III, less than significant.	None required	Less than significant
Impact T-2. The proposed project does not include any hazardous design feature and would not result in inadequate emergency access. Impacts associated with the proposed project would be Class III, less than significant.	None required	Less than significant

1.0 INTRODUCTION

This document is a Draft Environmental Impact Report (EIR) for the proposed Pacific Pointe East Development Project, located in the City of Long Beach, County of Los Angeles. For the purposes of this analysis, the Pacific Pointe East Development Project refers to the development scenario proposed by DP3 Hangars, LLC, for the entire 25-acre site, as detailed in Section 2.0, *Project Description*.

This section describes: (1) the purpose and legal authority of the EIR; (2) the general background of the project; (3) the scope and content of the EIR; (4) lead, responsible, and trustee agencies; (5) the environmental review process required under the California Environmental Quality Act (CEQA); and (6) areas of known public controversy.

1.1 ENVIRONMENTAL IMPACT REPORT BACKGROUND

A Notice of Preparation (NOP) of an environmental impact report was prepared for the proposed project and distributed for agency and public review for the required 30-day review period on January 22, 2014. Five written responses to the NOP were received (including the State Clearinghouse letter confirming receipt of the NOP). The NOP is presented in Appendix A, along with the Initial Study that was prepared for the project and the NOP responses received. The intent of the NOP was to provide interested individuals, groups, public agencies and others a forum to provide input to the City regarding scope and focus of the EIR. Table 1-1 lists the issues relevant to the EIR that were brought up in the NOP written comments and the EIR sections where the issues are addressed.

Table 1-1 NOP Response Issues

Issue	How Addressed
Caltrans traffic study requirements	Section 4.5, Transportation and Traffic
South Coast Air Quality Management District air quality analysis requirements	Section 4.2, Air Quality
Los Angeles County Sanitation District wastewater permit and requirements	Initial Study
Los Angeles County Fire Department statutory responsibilities	Initial Study

1.2 PURPOSE AND LEGAL AUTHORITY

The proposed project requires the discretionary approval of the City of Long Beach. Therefore, it is subject to the requirements of CEQA. In accordance with Section 15121 of the *CEQA Guidelines,* the purpose of this EIR is to serve as an informational document that:

> *...will inform public agency decision-makers and the public generally of the significant environmental effects of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project.*

This EIR has been prepared as a Project EIR pursuant to Section 15161 of the *CEQA Guidelines.* A Project EIR is appropriate for a specific development project. As stated in the *CEQA Guidelines:*

> *This type of EIR should focus primarily on the changes in the environment that would result from the development project. The EIR shall examine all phases of the project, including planning, construction, and operation.*

This EIR is to serve as an informational document for the public and City of Long Beach decision-makers. The process will culminate with a Planning Commission hearing to consider certification of the Final EIR and approval of the project, unless the Planning Commission's decision is appealed to the City Council, in which case the process would culminate with a City Council hearing to consider certification of the Final EIR and approval of the project.

1.3 SCOPE AND CONTENT/ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

This EIR addresses the issues determined to be potentially significant by the City of Long Beach. The issues addressed in this EIR include:

- *Aesthetics*
- *Air Quality*
- *Greenhouse Gas Emissions*
- *Noise*
- *Transportation and Traffic*

This EIR addresses the issues referenced above and identifies the potentially significant environmental impacts, including site-specific and cumulative effects of the project, in accordance with the provisions set forth in the *CEQA Guidelines.* In addition, the EIR recommends feasible mitigation measures, where possible, that would reduce or eliminate adverse environmental effects.

In preparing the EIR, use was made of pertinent City policies and guidelines, certified EIRs and adopted CEQA documents, and background documents prepared by the City. A full reference list is contained in Section 7.0, *References and Report Preparers*.

The Alternatives Section of the EIR (Section 6.0) was prepared in accordance with Section 15126.6 of the *CEQA Guidelines.* The alternatives discussion evaluates the CEQA-required "no project" alternative and two alternative development scenarios for the site. It also identifies the environmentally superior alternative among the alternatives assessed.

The level of detail contained throughout this EIR is consistent with the requirements of CEQA and applicable court decisions. The *CEQA Guidelines* provide the standard of adequacy on which this document is based. *CEQA Guidelines* Section 15151 states:

> *An EIR should be prepared with a sufficient degree of analysis to provide decision-makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of the*

> *proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection, but for adequacy, completeness, and a good faith effort at full disclosure.*

1.4 LEAD, RESPONSIBLE, AND TRUSTEE AGENCIES

The *CEQA Guidelines* define lead, responsible and trustee agencies. The City of Long Beach is the lead agency for the project because it holds principal responsibility for approving this EIR.

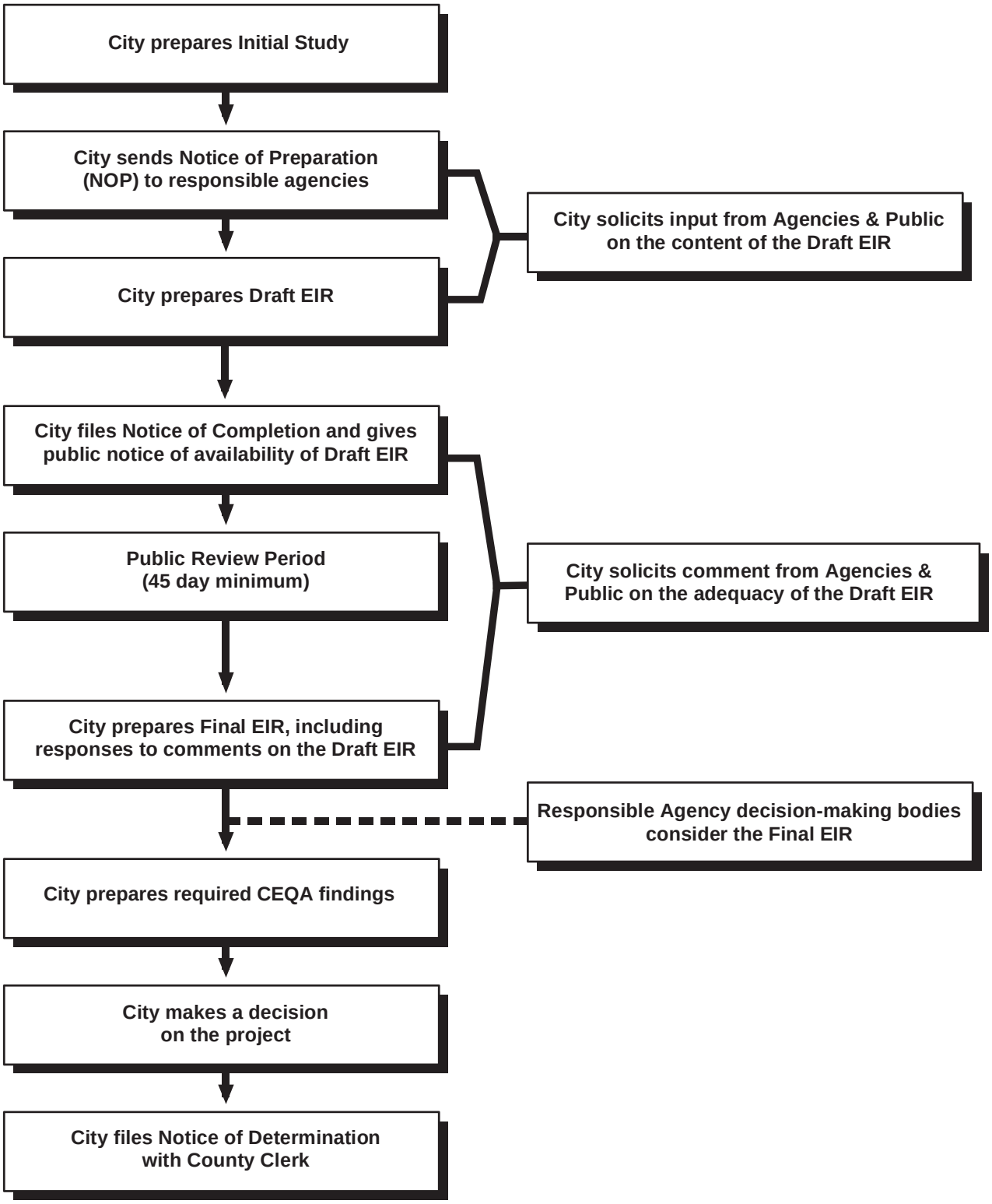
A responsible agency refers to a public agency other than the lead agency that has discretionary approval over the project. There are no responsible agencies for the project.

A trustee agency refers to a state agency having jurisdiction by law over natural resources affected by a project. There are no trustee agencies for the proposed project.

1.5 ENVIRONMENTAL REVIEW PROCESS

The major steps in the environmental review process, as required under CEQA, are outlined below and illustrated on Figure 1-1. The steps are presented in sequential order.

1. **Notice of Preparation (NOP).** After deciding that an EIR is required, the lead agency must file an NOP soliciting input on the EIR scope to the State Clearinghouse, other concerned agencies, and parties previously requesting notice in writing *(CEQA Guidelines* Section 15082; Public Resources Code Section 21092.2). The NOP must be posted in the County Clerk's office for 30 days. The NOP may be accompanied by an Initial Study that identifies the issue areas for which the proposed project could create significant environmental impacts.
2. **Draft Environmental Impact Report (DEIR) Prepared.** The DEIR must contain: a) table of contents or index; b) summary; c) project description; d) environmental setting; e) discussion of significant impacts (direct, indirect, cumulative, growth-inducing and unavoidable impacts); f) a discussion of alternatives; g) mitigation measures; and, h) discussion of irreversible changes.
3. **Notice of Completion and Notice of Availability.** A lead agency must file a Notice of Completion with the State Clearinghouse when it completes a Draft EIR (CEQA Guidelines Section 15085) and prepare a Public Notice of Availability of a Draft EIR. The lead agency must file the Notice of Availability with the County Clerk's office for a 30 day posting period and send a copy of the Notice of Availability to anyone requesting it *(CEQA Guidelines* Section 15087). Additionally, public notice of DEIR availability must be given through at least one of the following procedures: a) publication in a newspaper of general circulation; b) posting on and off the project site; and c) direct mailing to owners and occupants of contiguous properties. The lead agency must solicit input from other agencies and the public, and respond in writing to all comments received (PRC Sections 21104 and 21153). The minimum public review period for a DEIR is 30 days. When a Draft EIR is sent to the State Clearinghouse for review, the public review period must be 45 days unless the Clearinghouse (Public Resources Code Section 21091) approves a shorter period.



Environmental Review Process

Figure 1-1

4. **Final EIR.** A Final EIR (FEIR) must include: a) the Draft EIR; b) copies of comments received during public review; c) list of persons and entities commenting; and, d) responses to comments.
5. **Certification of FEIR.** Prior to making a decision on a proposed project, the lead agency must certify that: a) the FEIR has been completed in compliance with CEQA; b) the FEIR was presented to the decision-making body of the lead agency; and, c) the decision-making body reviewed and considered the information in the FElR prior to approving a project *(CEQA Guidelines* Section 15090).
6. **Lead Agency Project Decision.** A lead agency may: a) disapprove a project because of its significant environmental effects; b) require changes to a project to reduce or avoid significant environmental effects; or, c) approve a project despite its significant environmental effects, if the proper findings and statement of overriding considerations are adopted *(CEQA Guidelines* Sections 15042 and 15043).
7. **Findings/Statement of Overriding Considerations.** For each significant impact of the project identified in the EIR, the lead or responsible agency must find, based on substantial evidence, that either: a) the project has been changed to avoid or substantially reduce the magnitude of the impact; b) changes to the project are within another agency's jurisdiction and such changes have or should be adopted; or c) specific economic, social, or other considerations make the mitigation measures or project alternatives infeasible *(CEQA Guidelines* Section 15091). If an agency approves a project with unavoidable significant environmental effects, it must prepare a written Statement of Overriding Considerations that sets forth the specific social, economic, or other reasons supporting the agency's decision.
8. **Mitigation Monitoring Reporting Program.** When an agency makes findings on significant effects identified in the EIR, it must adopt a reporting or monitoring program for mitigation measures that were adopted or made conditions of project approval to mitigate significant effects.
9. **Notice of Determination.** An agency must file a Notice of Determination within five working days after deciding to approve a project for which an EIR is prepared *(CEQA Guidelines* Section 15094). A local agency must file the Notice with the County Clerk. The Notice must be posted for 30 days and sent to anyone previously requesting notice. Posting of the Notice starts a 30-day statute of limitations on CEQA legal challenges [Public Resources Code Section 21167(c)].

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2.0 PROJECT DESCRIPTION

The proposed project would involve construction of three new industrial buildings on a site that is currently developed with a paved surface parking lot. The new buildings would have an open floor plan and would be intended for light industrial, light manufacturing, warehouse, office, and/or research & development land uses. They would have a maximum height of about 41 feet and total floor area of 494,000 square feet, broken down as follows:

- Building 9: 144,000 sq. ft. of building area on a 306,399 square foot (sq. ft.) site
- Building 10: 118,000 sq. ft. of building area on a 233,538 sq. ft. site
- Building 11: 232,000 sq. ft. of building area on a 541,098 sq. ft. site

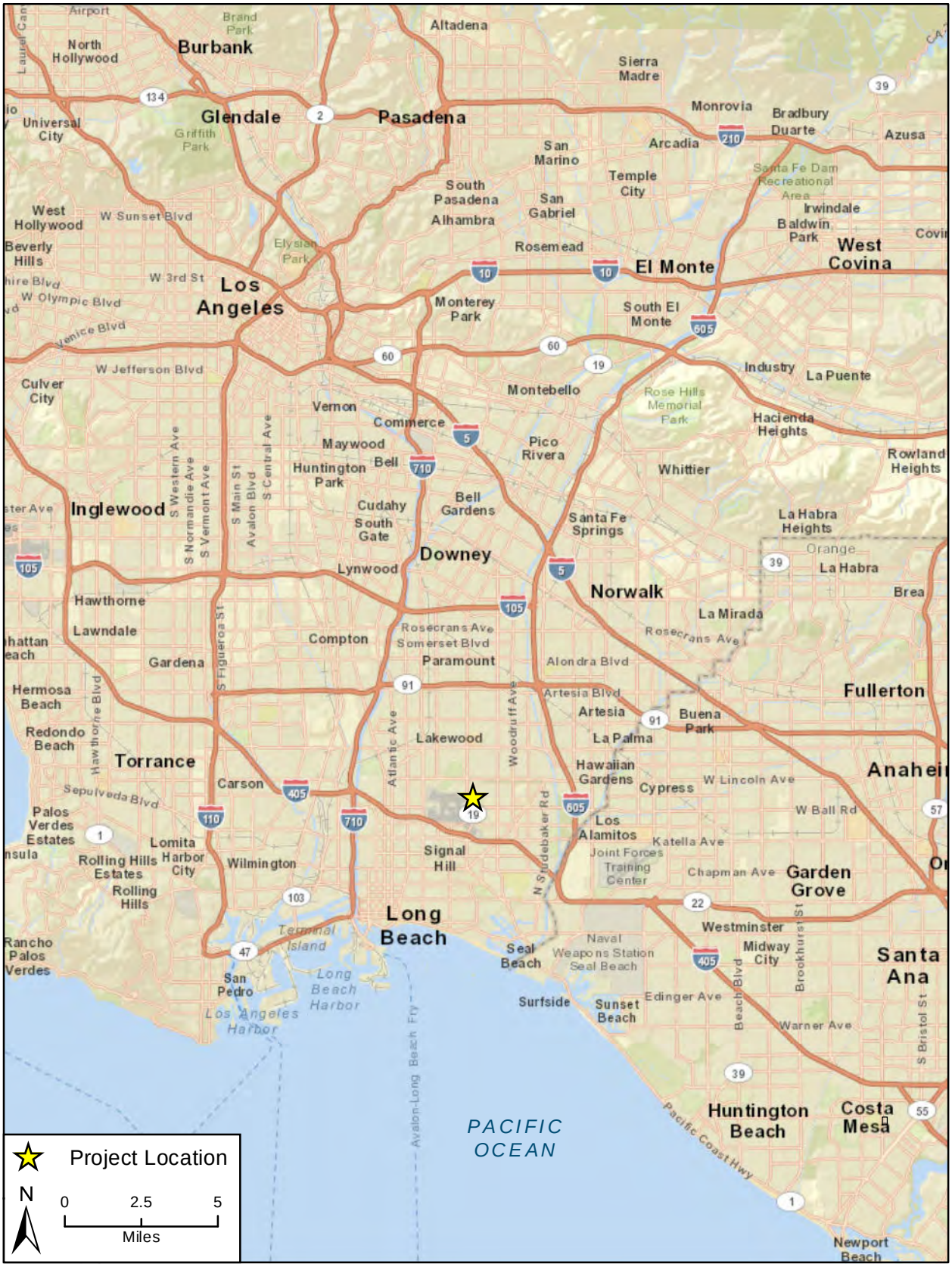
A total of 722 parking spaces are proposed, including 221 spaces for Building 9, 156 spaces for Building 10, and 345 spaces for Building 11.This section describes the project location, major characteristics of the site and the proposed development, project objectives, and approvals needed to implement the project.

2.1 PROJECT APPLICANT

DP3 Hangars, LLC
18802 Bardeen Avenue
Irvine, California 92612-1521
Phone: (949) 809-2414

2.2 PROJECT LOCATION

The proposed Pacific Pointe East development is located on an unaddressed, approximately 25-acre parcel at the southeast corner of Lakewood Boulevard and Conant Street near the Long Beach Airport in the City of Long Beach, County of Los Angeles. The property is located in the Douglas Aircraft Planned Development District (PD-19). Conant Street runs along the northern boundary of the site, Lakewood Boulevard runs along the western boundary of the site, the Skylinks at Long Beach Golf Course borders the site to its south, and two office buildings border the site to its east. As shown on Figure 2-1 (Regional Location), the project site is located in northern central Long Beach, just northeast of the Long Beach Airport. The site is regionally accessible from Interstate 405 (the San Diego Freeway), and State Route 19 (Lakewood Boulevard). Figure 2-2 presents an aerial view of the project site and surrounding uses. Figure 2-3 provides street-level photographs of the site, and Figures 2-4(a) and 2-4(b) provide street-level photographs of nearby land uses.



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Regional Location

Figure 2-1

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Aerial View of Project Site and Surrounding Uses

Figure 2-2

Photo 1: Project site from eastern end looking west.

Photo 2: Looking east down Conant Street from western end of project site.

Site Photographs

Figure 2-3

Photo 1: Looking west towards airport-adjacent commercial development through the intersection of Conant Street and Lakewood Boulevard.

Photo 2: DC Jets building.

Site Vicinity Photographs

Figure 2-4a

Photo 3: Long Beach City College office.

Photo 4: Long Beach City College Veteran's Memorial Stadium from eastern end of project site.

Site Vicinity Photographs

Figure 2-4b

2.3 CURRENT LAND USE AND REGULATORY SETTING

Table 2-1 summarizes the existing characteristics of the project site, which are also described below.

Table 2-1
Existing Site Characteristics

Assessor's Parcel Number	7149-005-006
Site Size	25 gross acres
General Plan Land Use Designations	Mixed Use (LUD No. 7)
Zoning Designations	PD-19, Douglas Aircraft Planned Development District
Current Use and Development	Surface parking lot
Surrounding Land Use Designations	North: Mixed Use (LUD 7), Institutional and School (LUD 10) East: Mixed Use (LUD 7) South: Open Space and Park (LUD 11) West: Harbor/Airport (LUD 12), Mixed Use (LUD 7)
Surrounding Zoning Designations	North: Douglas Aircraft Planned Development (PD-19), Institutional (I) East, Douglas Aircraft Planned Development (PD-19) South: Park (P) West: General Industrial (IG), Douglas Park South Planned Development (PD-32), Sub-Area 7
Regional Access Local Access	Interstate 405 (San Diego Freeway), and State Route 19 (Lakewood Boulevard) Conant Street, Lakewood Boulevard,
Public Services	Water: Long Beach Water Department Sewer: Long Beach Water Department Fire: Long Beach Fire Department Police: City of Long Beach Police Department

2.3.1 Current Land Use

The project site is roughly rectangular, generally flat, and is approximately 25 acres in size. The site is currently developed with a surface parking lot which previously served the Long Beach Airport. Current zoning no longer allows the lot to be used for paid parking. The project site is within the City's Douglas Aircraft Planned Development District (PD-19).

2.3.2 Surrounding Land Uses

The project site is surrounded by a variety of land uses, including the following. The Skylinks at Long Beach Golf Course is located to the south of the site. Long Beach Airport is located to the southwest of the site, with airport buildings approximately 650 feet south of the site and airport runways approximately 450 feet southwest of the site. West of the project site, the land on either side of Conant Street west of Lakewood Boulevard is within the City's Douglas Park South Planned Development District (PD-32), and is partially developed with commercial, office, and light industrial buildings in an office park setting, with the remainder of this area being vacant lots that have not yet been developed. Directly north of the project site across Conant Street, the land west of Faculty Avenue is occupied by a former DC Jets factory currently owned by the applicant. East of Faculty Avenue, the land north of Conant Street across from the project site is occupied by surface parking lots on the campus of Long Beach City College. Office buildings associated with the College are located to the northeast and east of the project site on both sides of Conant Street. Rosie the Riveter Park and Interpretive Center is located immediately to the east of these buildings on the southeast corner of Conant Street and Clark Avenue.

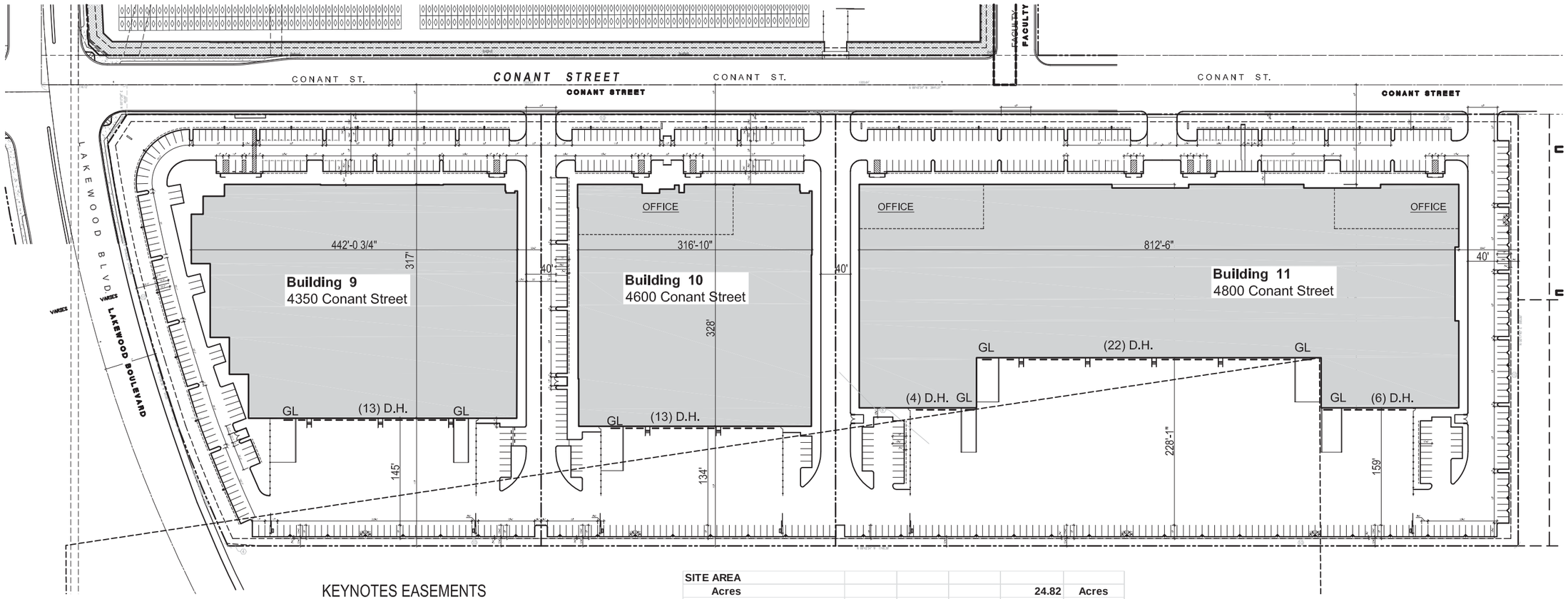
2.3.3 Land Use Regulatory Overview

The project site is located in the Douglas Aircraft Planned Development District (PD-19) and has a General Plan land use designation of Mixed Use (LUD No. 7). Properties within the PD-19 District are subject to City regulations governing development within the District, contained in City Ordinance No. 11-0029. The proposed project would require design review to ensure that it complies with the requirements of the PD-19 district and other applicable land use regulations. The Initial Study (Appendix A) found that, upon completion of City review for compliance with the requirements of the PD-19 district, land use plan consistency impacts would be less than significant, and further analysis of this issue in an EIR is not warranted. However, relevant land use policies, regulations, guidelines, and standards, including those of the PD-19 District, are discussed in sections of the Initial Study and this EIR relevant to their respective issue areas, as applicable.

2.4 PROJECT CHARACTERISTICS

2.4.1 Proposed Land Uses and Development

The proposed project would involve construction of three new industrial buildings on the project site. The new buildings would have an open floor plan and would be intended for light industrial, light manufacturing, warehouse, office, and/or research & development land uses. Figure 2-5 shows the proposed site plan, including a summary of key statistics related to the proposed buildings and other proposed site characteristics, and. The three buildings would have a maximum height of about 41 feet and total floor area of 494,000 square feet. A total of 722 parking spaces are proposed, including 221 spaces for Building 9, 156 spaces for Building 10, and 345 spaces for Building 11.



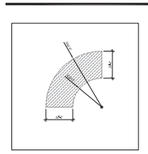
KEYNOTES EASEMENTS

(A) AN EASEMENT FOR PRIVATE ENVIRONMENTAL PURPOSES RECORDED OCTOBER 4, 2012 AS INSTRUMENT NO. 20121495709 OF OFFICIAL RECORDS.

(B) VARIED WIDTH EASEMENT FOR WATER MAIN PURPOSES IN FAVOR OF METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA, RECORDED DECEMBER 19, 1967 AS INSTRUMENT NO. 2640, O.R.

(C) FAA RPZ LINE

CITY OF LONG BEACH FIRE ACCESS TURNING RADIUS



SITE AREA		
Acres	**24.82**	**Acres**
SF	**1,081,035**	**SF**
TOTAL BUILDING AREA	**494,000**	**SF**
FLOOR AREA RATIO (FAR)	**45.7%**	
TOTAL PARKING REQUIRED @ 1/1000	**494**	**STALLS**
TOTAL PARKING PROVIDED	**722**	**STALLS**
PARKING RATIO / 1000	**1.46**	**/1000**

BUILDING DESCRIPTION	**BUILDING 9**	**BUILDING 10**	**BUILDING 11**	**TOTALS**
SITE AREA				
Acres	7.03	5.36	12.42	**24.82**
SF	306,399	233,538	541,098	**1,081,035**
FAR	47.0%	50.5%	42.9%	**45.7%**
BUILDING AREA				
1ST FLOOR - Industrial	129,000	103,000	212,000	**444,000**
2ND FLOOR - Office	15,000	15,000	20,000	**50,000**
TOTALS	**144,000**	**118,000**	**232,000**	**494,000**
PARKING REQUIRED @ 1/1000	**144**	**118**	**232**	**494**
PARKING REQUIRED @ 1.5/1000	**216**	**177**	**348**	**741**
PARKING PROVIDED	**221**	**156**	**345**	**722**
PARKING RATIO	**1.53**	**1.32**	**1.49**	**1.46**

12.18.13

0 75 150
Scale in Feet

N

Site Plan

Figure 2-5

Source: Pacific Pointe East, November 22, 2013.

Vehicular access to the project site would be from Conant Street into four proposed on-site driveways. Sidewalks already exist along Conant Street in front of the project site, as well as along Lakewood Boulevard bordering the project site. Primary pedestrian access to the site would from these sidewalks into the project site at the proposed driveway locations on Conant Street. As shown on Figure 2-5, each proposed building would also be surrounded, except at the rear loading docks, by sidewalks for pedestrian access into the buildings.

2.4.2 Site Preparation and Construction

The proposed project would involve demolition of the existing surface parking lot and construction of the proposed industrial buildings. No excavation or cut and fill would be required to prepare the site for construction, but minor grading may be required. Other site preparation activities would include utility and infrastructure improvements, paving, and landscaping. Construction is anticipated to begin in August 2014 and last approximately 12 months.

2.5 PROJECT OBJECTIVES

The objectives of the proposed project are the following:

- Develop the project site with new industrial buildings in order to attract tenants in the light industrial, light manufacturing, warehouse, office, and/or research & development industries.
- Facilitate the construction of light industrial uses on the site in order to help develop the site in accordance with land uses called for under the PD-19, Douglas Aircraft Planned Development District.
- Utilize design elements that will project a high-quality professional image while focusing on sustainability and energy conservation.
- Provide employment opportunities.
- Promote business by attracting quality companies.
- Implement a project that will provide the latest design, materials, and operational methods to promote sustainability, energy, and water conservation and healthy workplaces.
- Enhance the City's tax base.

2.6 REQUIRED APPROVALS

Implementation of the proposed Pacific Pointe East Development Project would require the following discretionary approval from the City of Long Beach, which is the lead agency and the only public agency with discretionary approval over the project.:

- **Site Plan Review and Approval –** Consistent with City Ordinance ORD-11-0029, the applicant is required to submit a Site Plan for Planning Commission approval.

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3.0 ENVIRONMENTAL SETTING

3.1 REGIONAL SETTING

The project site is located in the City of Long Beach, in southern Los Angeles County, within the greater Los Angeles metropolitan area (refer to Figure 2-1, Regional Location, and Figure 2-2, Project Vicinity, both of which can be found in Section 2.0, *Project Description*). Long Beach is approximately 20 miles south of downtown Los Angeles and is located adjacent to the Pacific Ocean. The total area of the City is approximately 33,908 acres (53 square miles). Developed land comprises approximately 98.6% of Long Beach and about 473 acres, or 1.4%, of the City is undeveloped. Water-covered areas and miscellaneous land uses account for the remaining land. The Mediterranean climate of the region and coastal influence produce moderate temperatures year round, with rainfall concentrated in the winter months. The region is subject to various natural hazards, including earthquakes, tsunami and flooding.

3.2 PROJECT SITE SETTING

The project site is located on a single, unaddressed, roughly rectangular, approximately 25-acre parcel at the southeast corner of Lakewood Boulevard and Conant Street immediately west of the Long Beach Airport. The property is located in the Douglas Aircraft Planned Development District (PD-19). The project site is currently developed with a surface parking lot, and has flat topography. Conant Street runs along the northern boundary of the site, Lakewood Boulevard runs along the western boundary of the site, the Skylinks at Long Beach Golf Course borders the site to its south, and two office buildings border the site to its east. Currently, vehicular and pedestrian access to the project site is available from Conant Street.

Beyond the uses immediately bordering the project site mentioned above, prevailing uses in the vicinity of the project site are the following. The Long Beach Airport and commercial development west of Lakewood Boulevard and south of Carson Street are located to the west of the project site. To the north is the former DC Jets factory and Long Beach City College. To the east are the Rosie the Riveter Park and Interpretive Center and residential neighborhoods east of Clark Avenue. The Skylinks at Long Beach Gold Course stretches for about a mile to the south of the project site. Photos of the project site and surrounding uses are shown in Figure 2-3, Figure 2-4a, and Figure 2-4b.

3.3 CUMULATIVE PROJECTS SETTING

CEQA defines "cumulative impacts" as two or more individual events that, when considered together, are considerable or will compound other environmental impacts. Cumulative impacts are the changes in the environment that result from the incremental impact of development of the proposed project and other nearby projects. For example, traffic impacts of two nearby projects may be insignificant when analyzed separately, but could have a significant impact when analyzed together. Cumulative impact analysis allows the EIR to provide a reasonable forecast of future environmental conditions and can more accurately gauge the effects of a series of projects.

Cumulative impacts are discussed within each of the specific impact analysis discussions in Section 4.0, *Environmental Impact Analysis*. Section 15130 of the *CEQA Guidelines* states that an adequate discussion of cumulative impacts should include either a list of past, present, and probable future projects producing related or cumulative impacts; or a summary of projections contained in an adopted local, regional or statewide plan, or related planning document, that describes or evaluates conditions contributing to the cumulative effect. The cumulative analysis in this EIR uses the following list of planned and pending projects in the general area, including parts of neighboring jurisdictions, obtained from the Planning Departments of the City of Long Beach and the City of Lakewood in February 2014. The projects on this list consist of various forms of commercial development, either in the form of new construction or renovation of existing space, totaling 1,236,619 square feet (sf) of development. 1,064,615 sf, or 86%, of this development is accounted for by the proposed renovation of existing buildings included in the Mercedes Benz West Coast Campus project, which is located across Conant Street from the project site.

Table 3-1 Planned and Pending Projects

Related Project	Address	Jurisdiction	Description/Size
City of Long Beach			
Building 8 at Pacific Pointe South	3865 Lakewood Boulevard	Long Beach	58,645 SF of industrial/warehouse space
Urbana Medical Office Development	3824 Schaufele Avenue	Long Beach	91,560 SF of medical office space within two (2) buildings
Mercedes Benz West Coast Campus	3860 Lakewood Boulevard	Long Beach	Renovation of 1,064,615 SF of existing warehouse space to accommodate: ✓ Vehicle Preparation Center (VPC) – 45,745 SF /100 staff ✓ Learning and Performance Center (LPC) – 48,140 SF/ 40 staff ✓ Regional Office (Western Region) – 50 staff within 8,358 SF ✓ Classic Car Center – 30 staff
City of Lakewood			
Chuck E. Cheese	5151 Lakewood Boulevard	Lakewood	2,000 SF expansion
Applebee's	4935 Graywood Avenue	Lakewood	5,757 SF restaurant
Gymnasium	4007 Paramount Boulevard, #109	Lakewood	4,488 SF gymnasium
YMCA	5835 Carson Street	Lakewood	9,554 SF gymnasium
		Total	**1,236,619 SF**

Source: City of Long Beach Planning Department, February 2014
City of Lakewood Planning Department, February 2014
SF = Square-Feet

4.0 ENVIRONMENTAL IMPACT ANALYSIS

This section discusses the possible environmental effects of the proposed project for the specific issue areas that were identified through the Initial Study and NOP process as having the potential to experience significant impacts. "Significant effect" is defined by the *State CEQA Guidelines §15382* as "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance." An economic or social change by itself shall not be considered a significant effect on the environment, but may be considered in determining whether the physical change is significant.

The assessment of each issue area begins with a discussion of the setting relevant to that issue area. Following the setting is a discussion of the project's impacts relative to the issue area. Within the impact analysis, the first subsection identifies the methodologies used and the "significance thresholds," which are those criteria adopted by the City, other agencies, universally recognized, or developed specifically for this analysis to determine whether potential impacts are significant. The next subsection describes each impact of the proposed project, mitigation measures for significant impacts, and the level of significance after mitigation. Each impact under consideration for an issue area is separately listed in bold text, with the discussion of the impact and its significance following. Each bolded impact listing also contains a statement of the significance determination for the environmental impact as follows:

> ***Class I, Significant and Unavoidable:*** *An impact that cannot be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires a Statement of Overriding Considerations to be issued if the project is approved.*
>
> ***Class II, Significant but Mitigable:*** *An impact that can be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires findings to be made.*
>
> ***Class III, Not Significant:*** *An impact that may be adverse, but does not exceed the threshold levels and does not require mitigation measures. However, mitigation measures that could further lessen the environmental effect may be suggested if readily available and easily achievable.*
>
> ***Class IV, Beneficial:*** *An impact that would reduce existing environmental problems or hazards.*

Following each environmental impact discussion is a listing of recommended mitigation measures (if required) and the residual effects or level of significance remaining after the implementation of the measures. In those cases where the mitigation measure for an impact could have a significant environmental impact in another issue area, this impact is discussed as a residual effect.

The impact analysis concludes with a discussion of cumulative effects, which evaluates the impacts associated with the proposed project in conjunction with other future development in the area.

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4.1 AESTHETICS

This section addresses potential impacts related to aesthetics, including changes in public views and visual character, and consistency with adopted urban design policies.

4.1.1 Setting

a. Visual Character of the Project Site Vicinity. The project site is located in northern central Long Beach, approximately 4.5 miles north of the Pacific Ocean. The project site is not located along a designated scenic corridor. The property is located in the Douglas Aircraft Planned Development District (PD-19). Conant Street runs along the northern boundary of the site, Lakewood Boulevard runs along the western boundary of the site, the Skylinks at Long Beach Golf Course borders the site to its south, and two office buildings border the site to the east. Figure 2-2 in Section 2.0, *Project Description*, presents an aerial view of the project site and surrounding uses. Figure 2-3 in Section 2.0 provides street-level photographs of the site, and figures 2-4(a) and 2-4(b) provide street-level photographs of nearby land uses. Figure 4.1-1 documents surrounding industrial development.

The project site is surrounded by a variety of land uses, including the following. The Skylinks at Long Beach Golf Course is located to the south of the site. The golf course is bordered by trees and other vegetation that up to approximately 20 feet high, which screens views into the golf course from the project site, and from Lakewood Boulevard and Clark Avenue.

Long Beach Airport is located to the southwest of the site, with airport buildings approximately 650 feet south of the site and airport runways approximately 450 feet southwest of the site. Views of this area are available from the project site and from Lakewood Boulevard. These views consist primarily of runways, with airport facilities visible in the distance (approximately 3/4 mile west of Lakewood Boulevard). Due to their distance from the project site, these buildings are barely visible from the project site. However, from this distance, they appear as low-rise, utilitarian structures. Airport related, 20 to 30 foot high hangar-like buildings are located on the east side of the airport, along the west side of Lakewood Boulevard, but are not visible from the project site because of landscaping on the north side of the Skylinks at Long Beach Golf Course.

West of the project site, the land on either side of Conant Street west of Lakewood Boulevard is within the City's Douglas Park South Planned Development District (PD-32), and is partially developed with commercial, office, and light industrial buildings in an office park setting, with the remainder of this area being vacant lots that have not yet been developed. Structures in this area are approximately 30 feet high and feature landscaped exterior areas including parking lots, and a contemporary commercial architectural style featuring neutral colors such as grays and whites, large prominent windows, and decorative architectural elements such as awnings.

Directly north of the project site across Conant Street, the land west of Faculty Avenue is occupied by a former DC Jets factory currently owned by the Boeing Corporation. This building is approximately 40 feet in height and is a large, white, rectangular, hangar-type structure. East of Faculty Avenue, the land north of Conant Street across from the project site is occupied by surface parking lots on the campus of Long Beach City College. Office buildings associated with

the college are located to the northeast and east of the project site on both sides of Conant Street. Buildings in this area are approximately 30 feet high and feature a contemporary commercial style, with simple forms, neutral colors such as white and gray, and a limited number of windows featuring dark tinting. Rosie the Riveter Park and Interpretive Center is located immediately to the east of these buildings on the southeast corner of Conant Street and Clark Avenue.

b. Visual Character of the Project Site. The project site is currently occupied by a paved surface parking lot with security lighting surrounded by a low chain link fence. No existing structures are present within the project site. The site is topographically flat, and does not contain any notable trees or other landscape features. As can be seen in the photos of the project site in Figure 2-3 in Section 2.0, the site's visual quality is low, due to the fact that the entire site consists of a paved surface parking lot.

c. Regulatory Setting. Citywide policies on scenic vistas focus on protecting views of the City's natural resources as well as views along significant streets and boulevards. The Scenic Routes Element, adopted in 1975, proposed five scenic route systems within the City. The Scenic Routes Element was adopted by the Long Beach City Council in 1975. The purpose of the Scenic Routes Element is to protect and enhance the scenic resources of the City of Long Beach, by establishing a system of scenic routes along existing roadways that traverse areas of scenic beauty and interest. There are no scenic routes in the immediate project site vicinity. The closest Scenic Route is Ocean Boulevard, which is located approximately 4.3 miles to the south of the project site. The project site is not within the viewshed of Ocean Boulevard, which therefore would not be impacted by this project.

Neighborhood aesthetics and character are addressed in several City policies, especially those contained in the Urban Design Analysis, Conclusions and Policy Directions Section of the Land Use Element and several in the Conservation and Scenic Routes Elements. These issues are further addressed in the City's Zoning Ordinance through a range of development standards that are applied by zoning district.

The project site is located within the Douglas Aircraft Planned Development District (PD-19). This district is subject to specific standards adopted by the City that apply to all development within the district. The ordinance establishing PD-19 provides standards for building heights, setbacks, accessory structures, signs, landscaping, screening, architecture, and parking. All development projects in the PD-19 district are also subject to design review prior to approval.

Policies and design standards from the City's General Plan related to aesthetics that apply to the proposed project are discussed below. This section primarily focuses on those requirements most applicable to the design of the proposed project for the purpose of assessing whether any inconsistency with these standards creates a significant impact on the City's visual resources. The project's consistency with the City's Zoning Ordinance is discussed in the Initial Study (Appendix A). The ultimate determination of whether the proposed project is consistent with the General Plan, Zoning Ordinance, and PD-19 district standards resides exclusively with the decision-making bodies (Site Plan Review Committee, Planning Commission, and City Council).

Existing Industrial Development in the Project Vicinity

Figure 4.1-1

The General Plan policies most applicable to the proposed project are listed below.

Land Use Element

- *Neighborhood Emphasis: Long Beach recognizes a strong neighborhood to be the essential building block of a City-wide quality living environment and will assist and support the efforts of residents to maintain and strengthen their neighborhoods (p.18).*

- *Facilities Maintenance: Long Beach will maintain its physical facilities and public rights-of-way at a high level of functional and aesthetic quality, manifesting the pride of the citizens in their City and ensuring that future generations need not bear the burden of deferred maintenance (p. 18).*

Conservation Element

- *To create and maintain a productive harmony between man and his environment through conservation of natural resources and protection of significant areas having environmental and aesthetic value (p.8).*

4.1.2 Impact Analysis

a. Methodology and Significance Thresholds. The assessment of aesthetic impacts involves qualitative analysis that is inherently subjective in nature. Different viewers react to viewsheds and aesthetic conditions differently. This evaluation measures the proposed project against existing visual conditions, analyzing the nature of the anticipated change. The project site was observed and photographically documented (see Figure 2-3), as was the surrounding area (see Figure 4.1-1), to assist in the analysis.

An impact is considered significant if development facilitated by the proposed project would result in one or more of the following conditions:

- *Have a substantial adverse effect on a scenic vista*
- *Substantially degrade the existing visual character or quality of the site and its surroundings*

The Initial Study prepared for the proposed project determined that project implementation would result in less than significant impacts related to the following thresholds:

- *Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.*
- *Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.*

Consequently, these issues are not analyzed further in this section. The Initial Study analysis is provided in Appendix A.

b. Project Impacts and Mitigation Measures.

Impact AES-1 **The proposed project would involve replacing the existing surface parking lot with three industrial structures a maximum height of 41 feet. Because the project would would not adversely affect any scenic views and would be visually compatible with the industrial character of the area, its impact would be Class III, *less than significant*.**

The project site is located in an urban area in north central Long Beach. Surrounding development consists primarily of two- to three-story structures associated with surrounding industrial development, the Long Beach Airport, and the nearby Long Beach City College. The Skylinks at Long Beach Golf Course borders the site to its south.

As discussed in the *Setting*, the project site is located in a topographically flat coastal plain; thus, few scenic vistas are available in the project site vicinity. Views of Signal Hill, located approximately two miles to the southwest, and of the Palos Verdes peninsula, located approximately ten miles to the west, are available from the site, from Conant Street north of the site, and from Lakewood Boulevard to the west of the site, although the Palos Verdes peninsula barely protrudes above the horizon. These are the only scenic views available in the project area. The following discussion evaluates project effects on available views from the surrounding streets (Clark Avenue, Lakewood Boulevard, and Conant Street) and from the Skylinks at the Long Beach Golf Course.

Clark Avenue is located approximately 580 feet east of the project site. Existing commercial buildings approximately 30 feet high are located on Clark Avenue. These structures obscure views to the west from Clark Avenue, and project development therefore would not affect scenic views for this location.

Lakewood Boulevard is located on the project site's western boundary. West-facing views of Signal Hill and the Palos Verdes peninsula from Lakewood Boulevard would not be obstructed by the proposed structures and project development therefore would not affect scenic views from this location

The Skylinks at Long Beach Golf Course is located south of the project site. The golf course is surrounded by trees and other landscaping up to 20 feet in height, which affects the availability of views. However, some views of Signal Hill and the Palos Verdes peninsula would be available from this location. Project development to the north of the golf course would not affect these west-facing views, and project development therefore would not affect scenic views for this location.

Conant Street is located on the project site's northern boundary. Looking south from Conant Street, the crest of Signal Hill is visible over the top of the golf course landscaping, which reaches up to 20 feet in height. The Palos Verdes peninsula is visible looking west from Conant Street, but barely protrudes above the horizon. As viewers travel west along Conant Street, these views are partially obstructed by terminals and other airport structures, although the flat runway areas allow for some consistent views of the Palos Verdes peninsula. The construction of industrial buildings a maximum of 41 feet high would eliminate south-facing views from

Conant Street. However, since these views are distant, partial, and intermittent, and since the project site is not located in or near a designated scenic corridor, project impacts would be less than significant.

Development of the proposed project would change the visual condition of the site through construction of the proposed industrial buildings. The project site plan is shown in Figure 2-5 in Section 2.0, *Project Description.* Figures 4.1-2 through 4.1-4 show exterior elevations for the three proposed industrial buildings. Project structures would be a maximum of 41 feet in height. The project site is located in a highly industrialized area and the proposed structures are similar in height and scale to existing industrial structures in the project vicinity, which range from 30 to 40 feet high. As shown in Figure 4.1-1, surrounding industrial development is of varied age and architectural style, and development of the proposed project structures would consistent with the aesthetic values of the area. The proposed project includes a landscaping plan that provides for the planning of 368 new trees on the project site. These trees would provide new visual interest to the project site, which is currently an asphalt parking lot that lacks landscaping. Project development would not substantially degrade the existing visual character in the area.

In summary, although the project would alter the visual character of the project site, this change in visual character would not be significantly adverse and the project would not substantially damage a scenic resource.

Mitigation Measures. None required.

Significance After Mitigation. With required approval through the Site Plan Review approval process, impacts would be less than significant without mitigation.

Impact AES-2 The proposed project would not conflict with adopted policies of the City of Long Beach related to aesthetics, and would therefore produce a Class III, *less than significant*, impact.

The various regulations and policies relating to aesthetics that would apply to the proposed project are listed in Section 4.1.1c, *Regulatory Setting*. These include policies from the Land Use Element and Conservation Element of the City's Beach General Plan. The project's consistency with applicable provisions of the City's Zoning Ordinance was already analyzed in the Initial Study (Appendix A), which found that the project would have a less than significant impact in this regard. The project would also be subject to the design requirement of the PD-19 District in which the site is located.

Review of the policies from the Land Use and Conservation Elements reveals that these policies are meant to maintain and strengthen neighborhoods; maintain and enhance the City's public facilities (including public rights-of-way) and protect areas of high aesthetic value. Impact AES-1 found that the project would have a less than significant impact on the visual character of the site and its surroundings, and the project would therefore not conflict with any of the policies relating to visual character and overall aesthetic quality. The project also would not have a negative impact on any City facilities, including public rights-of-way. The project would comply with all applicable design standards, in the establishing ordinance for PD-19. The proposed building setbacks (approximately 35 feet) exceed PD-19 requirements (10 feet), and

Building 9 -Corner of Lakewood and Conant - Looking South -East

Building 9 -Lakewood - Looking North -East

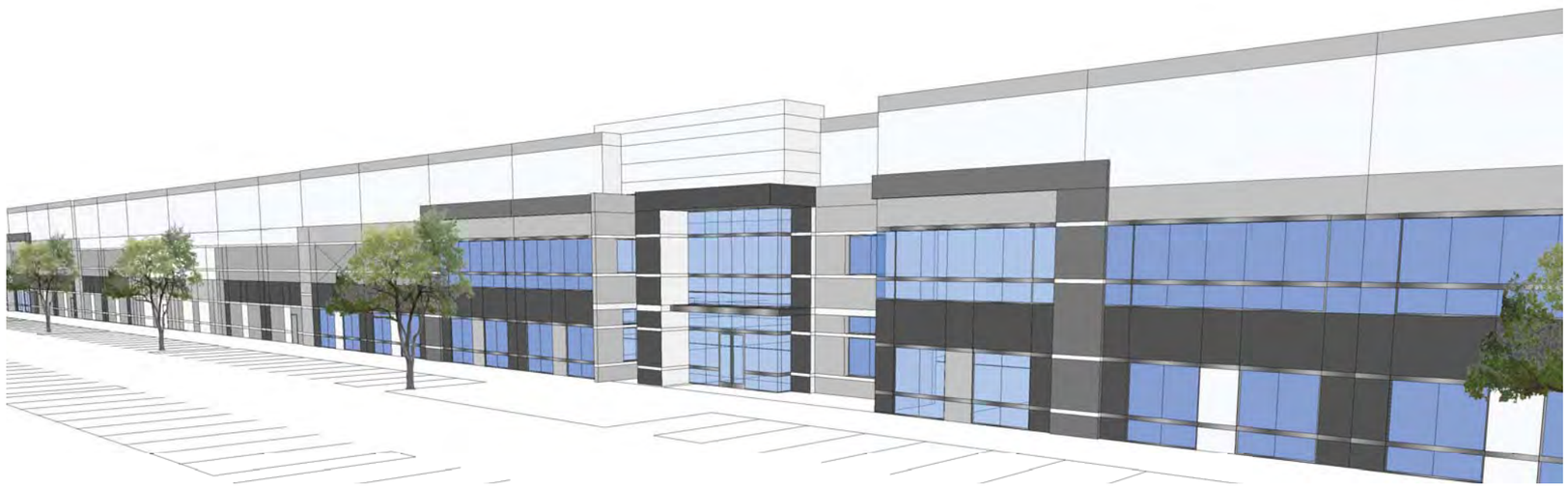
Building 9 - Conant - Looking Easterly

Building 9 Elevation

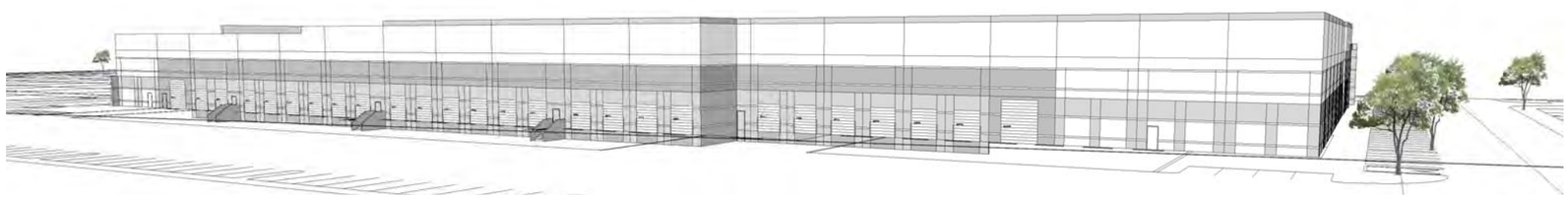
Figure 4.1-2

Source: DeRevere & Associates, August 2013

Building 10 -Conant - Looking South -East



Building 10 -Conant Close-Up



Building 10 - Rear Elevation - Looking North

Building 10 Elevation

Figure 4.1-3

Source: DeRevere & Associates, August 2013

Building 11 -Conant - Looking South -East

Building 11 -Conant Close-Up

Building 11 - Rear Elevation - Looking North-West

Building 11 Elevation

Figure 4.1-4

Source: DeRevere & Associates, August 2013

the project site plan includes architectural features intended to improve the appearance of the industrial structures to offsite viewers (see Figures 4.1-2 through 4.1-3) and a landscaping plan that would provide for 368 new trees within the project site.

In summary, for the reasons discussed above, the changes to the project site and its surroundings that would be produced by the proposed project would not be inconsistent with applicable policies of the City's General Plan relating to aesthetics.

Mitigation Measures. None required.

Significance After Mitigation. Impacts would be less than significant without mitigation.

c. Cumulative Impacts. Future projects in Long Beach will be required to adhere to specific development standards in the City's Zoning Ordinance and General Plan designed to protect and enhance the area's aesthetic and visual resources. Additionally, there are no planned or pending projects within any viewshed from which the project site can be seen. Though cumulative development may, over time, alter the visual character of north central Long Beach to a somewhat denser urban environment, the project's contribution to the overall visual effect of cumulative development in the area would be less than significant.

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4.2 AIR QUALITY

This section analyzes the proposed project's temporary and long-term impacts to local and regional air quality. Greenhouse gas emissions are discussed in Section 4.3, *Greenhouse Gas Emissions*. This section uses data generated using the California Air Emissions Estimator Model (CalEEMod), which can be found in Appendix B.

4.2.1 Setting

The project site is located in the City of Long Beach, which is part of the South Coast Air Basin (Basin) and is under the jurisdiction of SCAQMD.

a. Climate and Meteorology. Air quality in the Basin is affected by various emission sources (mobile and industry, etc.) as well as atmospheric conditions such as wind speed, wind direction, temperature, and rainfall, etc. The combination of topography, low mixing height, abundant sunshine, and emissions from the second largest urban area in the United States give the Basin the worst air pollution problem in the nation.

The majority of annual rainfall in the Basin occurs between November and April. Summer rainfall is minimal and is generally limited to scattered thunder showers in coastal regions and slightly heavier showers in the eastern portion of the Basin and along the coastal side of the mountains. The Long Beach WSCMO Station climatological station monitored precipitation from April 1958 to March 2013. Average monthly rainfall measured in Long Beach during that period varied from 2.90 inches in February to 0.42 inch or less between May and October, with an annual total of 12.01 inches. Patterns in monthly and yearly rainfall totals are unpredictable due to fluctuations in the weather.

The Basin experiences a persistent temperature inversion (increasing temperature with increasing altitude) as a result of the Pacific high. This inversion limits the vertical dispersion of air contaminants, holding them relatively near the ground. As the sun warms the ground and the lower air layer, the temperature of the lower air layer approaches the temperature of the base of the inversion (upper) layer until the inversion layer finally breaks, allowing vertical mixing with the lower layer. This phenomenon is observed in midafternoon to late afternoon on hot summer days, when the smog appears to clear up suddenly. Winter inversions frequently break by midmorning.

The combination of stagnant wind conditions and low inversions produces the greatest pollutant concentrations. On days of no inversion or high wind speeds, ambient air pollutant concentrations are lowest. During periods of low inversions and low wind speeds, air pollutants generated in urbanized areas are transported predominantly onshore into Riverside and San Bernardino counties. In the winter, the greatest pollution problem is accumulation of CO and nitrogen oxides (NOX) due to extremely low inversions and air stagnation during the night and early morning hours. In the summer, the longer daylight hours and the brighter sunshine combine to cause a reaction between hydrocarbons and NOX to form photochemical smog.

b. Air Pollution Regulation. The California Air Resources Board (CARB) coordinates and oversees both State and federal air pollution control programs in California. The CARB oversees activities of local air quality management agencies and maintains air quality monitoring stations throughout the State in conjunction with the Environmental Protection Agency (EPA) and local air districts. The CARB has divided the State into 15 air basins based on meteorological and topographical factors of air pollution. Data collected at these stations are used by the CARB and EPA to classify air basins as attainment, nonattainment, nonattainment-transitional, or unclassified, based on air quality data for the most recent three calendar years compared with the Ambient Air Quality Standards (AAQS). Nonattainment areas are imposed with additional restrictions as required by the EPA. The air quality data are also used to monitor progress in attaining air quality standards. Table 4.2-1 lists the AAQS for criteria pollutants in the Basin.

Table 4.2-1
Current Federal and State Ambient Air Quality Standards

Pollutant	Federal Standard	California Standard
Ozone	0.075 ppm (8-hr avg)	0.09 ppm (1-hr avg) 0.07 ppm (8-hr avg)
Carbon Monoxide	9.0 ppm (8-hr avg) 35.0 ppm (1-hr avg)	9.0 ppm (8-hr avg) 20.0 ppm (1-hr avg)
Nitrogen Dioxide	0.053 ppm (annual avg)	0.18 ppm (1-hr avg) 0.030 ppm (annual avg)
Sulfur Dioxide	0.14 ppm (24-hr avg) 0.075 ppm (1-hr avg)	0.04 ppm (24-hr avg) 0.25 ppm (1-hr avg)
Lead	1.5 $\mu g/m^3$ (3-month avg)	1.5 $\mu g/m^3$ (30-day avg)
Particulate Matter (PM_{10})	150 $\mu g/m^3$ (24-hr avg)	20 $\mu g/m^3$ (annual avg) 50 $\mu g/m^3$ (24-hr avg)
Particulate Matter ($PM_{2.5}$)	15 $\mu g/m^3$ (annual avg) 35 $\mu g/m^3$ (24-hr avg)	12 $\mu g/m^3$ (annual avg)

ppm= parts per million
$\mu g/m^3$ = micrograms per cubic meter
Source: California Air Resources Board, http://www.arb.ca.gov/research/aaqs/aaqs2.pdf, 2014.

Ozone. O_3 (smog) is formed by photochemical reactions between oxides of nitrogen and reactive organic gases rather than being directly emitted. Ozone is a pungent, colorless gas typical of Southern California smog. Elevated ozone concentrations result in reduced lung function, particularly during vigorous physical activity. This health problem is particularly acute in sensitive receptors such as the sick, the elderly, and young children. Ozone levels peak during summer and early fall. The entire Basin is designated as a nonattainment area for the State 1-hour and 8-hour ozone standards. The EPA has officially designated the status for the Basin regarding the 8-hour ozone standard as "Extreme," which means the Basin has until 2024 to attain the federal 8-hour O_3 standard.

Carbon Monoxide. CO is formed by the incomplete combustion of fossil fuels, almost entirely from automobiles. It is a colorless odorless gas that can cause dizziness, fatigue, and impairment to central nervous system functions. The entire Basin is in attainment for the State

standards for CO. The Basin is designated as an "Attainment/Maintenance" area under the federal CO standards.

Nitrogen Oxides. Nitrogen dioxide (NO_2), a reddish-brown gas, and nitric oxide (NO), a colorless odorless gas, are formed from fuel combustion under high temperature or pressure. These compounds are referred to as nitrogen oxides, or NOX. NOX is a primary component of the photochemical smog reaction. It also contributes to other pollution problems, including a high concentration of fine particulate matter, poor visibility, and acid deposition (i.e., acid rain). NO_2 decreases lung function and may reduce resistance to infection. The entire Basin is designated as nonattainment for the State NO_2 standard and as an "Attainment/Maintenance" area under the federal NO_2 standard.

Sulfur Dioxide. Sulfur dioxide (SO_2) is a colorless irritating gas formed primarily from incomplete combustion of fuels containing sulfur. Industrial facilities also contribute to gaseous SO_2 levels. SO_2 irritates the respiratory tract, can injure lung tissue when combined with fine particulate matter, and reduces visibility and the level of sunlight. The entire Basin is in attainment for both federal and State SO_2 standards.

Lead. Lead is found in old paints and coatings, plumbing, and a variety of other materials. Once in the blood stream, lead can cause damage to the brain, nervous system, and other body systems. Children are highly susceptible to the effects of lead. The Los Angeles County portion of the Basin was redesignated as nonattainment for the State and federal standards for lead in 2010.

Particulate Matter. Particulate matter is the term used for a mixture of solid particles and liquid droplets found in the air. Coarse particles (particulate matter less than 10 microns in diameter [PM_{10}]), derive from a variety of sources, including windblown dust and grinding operations. Fuel combustion and resultant exhaust from power plants and diesel buses and trucks are primarily responsible for fine particle ($PM_{2.5}$) levels. Fine particles can also be formed in the atmosphere through chemical reactions. PM_{10} can accumulate in the respiratory system and aggravate health problems such as asthma. The EPA's scientific review concluded that PM2.5, which penetrates deeply into the lungs, is more likely than PM10 to contribute to the health effects listed in a number of recently published community epidemiological studies at concentrations that extend well below those allowed by the current PM10 standards. These health effects include premature death; increased hospital admissions and emergency room visits (primarily the elderly and individuals with cardiopulmonary disease); increased respiratory symptoms and disease (children and individuals with cardiopulmonary disease such as asthma); decreased lung functions (particularly in children and individuals with asthma); and alterations in lung tissue and structure and in respiratory tract defense mechanisms. The Basin is a nonattainment area for the State PM_{10} and $PM_{2.5}$ standards and a nonattainment area for the federal $PM_{2.5}$ standards. The Basin was redesignated as attainment/maintenance for the federal PM_{10} standard in 2013.

Reactive Organic Compounds. Reactive organic compounds (ROCs; also known as ROGs and volatile organic compounds [VOCs]) are formed from combustion of fuels and evaporation of organic solvents. ROCs are not defined criteria pollutants but are a prime component of the photochemical smog reaction. Consequently, ROCs accumulate in the

atmosphere more quickly during the winter when sunlight is limited and photochemical reactions are slower.

Sulfates. Sulfates occur in combination with metal and/or hydrogen ions. In California, emissions of sulfur compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. This sulfur is oxidized to SO_2 during the combustion process and subsequently converted to sulfate compounds in the atmosphere. The conversion of SO_2 to sulfates takes place comparatively rapidly and completely in urban areas of California due to regional meteorological features. The entire Basin is in attainment for the State standard for sulfates.

Hydrogen Sulfide. Hydrogen sulfide (H_2S) is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. Also, it can be present in sewer gas and some natural gas and can be emitted as the result of geothermal energy exploitation. In 1984, a CARB committee concluded that the ambient standard for H2S is adequate to protect public health and to significantly reduce odor annoyance. The entire Basin is unclassified for the State standard for H2S.

Visibility-Reducing Particles. Visibility-reducing particles consist of suspended particulate matter, which is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size, and chemical composition, and can be made up of many different materials such as metals, soot, soil, dust, and salt. The statewide standard is intended to limit the frequency and severity of visibility impairment due to regional haze. The entire Basin is unclassified for the State standard for visibility-reducing particles.

Federal Regulations/Standards. Pursuant to the federal Clean Air Act (CAA) of 1970, the EPA established national ambient air quality standards (NAAQS). The NAAQS were established for six major pollutants termed "criteria" pollutants. Criteria pollutants are defined as those pollutants for which the federal and State governments have established AAQS, or criteria, for outdoor concentrations in order to protect public health. The NAAQS are shown in Table 4.2-1.

Data collected at permanent monitoring stations are used by the EPA to classify regions as "attainment" or "nonattainment," depending on whether the regions met the requirements stated in the primary NAAQS. Nonattainment areas are imposed with additional restrictions as required by the EPA.

The EPA has designated the Southern California Association of Governments (SCAG) as the Metropolitan Planning Organization (MPO) responsible for ensuring compliance with the requirements of the CAA for the Basin.

The EPA established new national air quality standards for ground-level ozone and fine particulate matter in 1997. On May 14, 1999, the Court of Appeals for the District of Columbia Circuit issued a decision ruling that the CAA, as applied in setting the new public health standards for ozone and particulate matter, was unconstitutional as an improper delegation of legislative authority to the EPA. On February 27, 2001, the U.S. Supreme Court upheld the way

the government sets air quality standards under the CAA. The Court unanimously rejected industry arguments that the EPA must consider financial costs as well as health benefits in writing standards. The justices also rejected arguments that the EPA took too much lawmaking power from Congress when it set tougher standards for ozone and soot in 1997. Nevertheless, the court dismissed the EPA's policy for implementing new ozone rules, saying that the agency ignored a section of the law that restricts its authority to enforce such rules.

In April 2003, the EPA was cleared by the White House Office of Management and Budget (OMB) to implement the 8-hour ground-level ozone standard. The EPA issued the proposed rule implementing the 8-hour ozone standard in April 2003. The EPA completed final 8-hour nonattainment status on April 15, 2004. The EPA revoked the 1-hour ozone standard on June 15, 2005, and lowered the 8-hour O3 standard from 0.08 parts per million (ppm) to 0.075 ppm on April 1, 2008. The EPA issued the final PM2.5 implementation rule in fall 2004. The EPA lowered the 24-hour PM2.5 standard from 65 to 35 micrograms per cubic meter (µg/m3) and revoked the annual PM10 standard on December 17, 2006. The EPA issued final designations for the 2006 24-hour PM2.5 standard on December 12, 2008.

State Regulations/Standards. In 1967, the California Legislature passed the Mulford-Carrell Act, which combined two Department of Health bureaus: the Bureau of Air Sanitation and the Motor Vehicle Pollution Control Board, in order to establish CARB. Since its formation, CARB has worked with the public, the business sector, and local governments to find solutions to California's air pollution problems.

The CARB identified particulate emissions from diesel-fueled engines (diesel particulate matter [DPM]) as toxic air contaminants (TACs) in August 1998. Following the identification process, CARB was required by law to determine whether there is a need for further control. In September 2000, the CARB adopted the Diesel Risk Reduction Plan (Diesel RRP), which recommends many control measures to reduce the risks associated with DPM and to achieve the goal of 85 percent DPM reduction by 2020.

California Green Building Code. California Green Buildings Standards Code (Cal Green Code) (California Code of Regulations [CCR], Title 24, Part 11) was adopted by the California Building Standards Commission in 2010 and became effective in January 2011. The Code applies to all new constructed residential, nonresidential, commercial, mixed-use, and State-owned facilities, as well as schools and hospitals. Cal Green Code is comprised of Mandatory Residential and Nonresidential Measures and more stringent Voluntary Measures (TIERs I and II).

Mandatory Measures are required to be implemented on all new construction projects and consist of a wide array of green measures concerning project site design, water use reduction, improvement of indoor air quality, and conservation of materials and resources. The Cal Green Building Code refers to Title 24, Part 6 compliance with respect to energy efficiency; however, it encourages 15 percent energy use reduction over that required in Part 6. Voluntary Measures are optional, more stringent measures may be used by jurisdictions that strive to enhance their commitment towards green and sustainable design and achievement of Assembly Bill (AB) 32 goals. Under TIERs I and II, all new construction projects are required to reduce energy consumption by 15 percent and 30 percent, respectively, below the baseline required under the

California Energy Commission (CEC), as well as implement more stringent green measures than those required by mandatory code.

Local Regulations and Policies. There are a number of local regulations and policies related to air quality, as described below.

Regional Air Quality Planning Framework. The 1976 Lewis Air Quality Management Act established the SCAQMD and other air districts throughout the State. The federal CAA Amendments of 1977 required that each state adopt an implementation plan outlining pollution control measures to attain the federal standards in nonattainment areas of the state. The CARB is responsible for incorporating air quality management plans for local air basins into a State Implementation Plan (SIP) for EPA approval. Significant authority for air quality control within the local air basins has been given to local air districts that regulate stationary source emissions and develop local nonattainment plans.

Regional Air Quality Management Plan. The SCAQMD and the SCAG are responsible for formulating and implementing the Air Quality Management Plan (AQMP) for the Basin. Every 3 years, the SCAQMD prepares a new AQMP, updating the previous plan and having a 20-year horizon. The Final 2012 AQMP was adopted by the SCAQMD on December 7, 2012, and forwarded it to the CARB for review in February 2013. The 2012 AQMP includes the new and changing federal requirements, implementation of new technology measures, and the continued development of economically sound, flexible compliance approaches.

City of Long Beach General Plan. The Air Quality Element (1996) of the Long Beach General Plan includes goals and polices related to air quality. The following goals and policies are applicable to the proposed Project:

> ***Goal 6:*** *Minimize particulate emissions from the construction and operation of roads and buildings, from mobile sources, and from the transportation, handling and storage materials.*
>
> ***Policy 6.1:*** *Control Dust. Further reduce particulate emissions from roads, parking lots, construction sites, unpaved alleys, and port operations and related uses.*
>
> ***Goal 7:*** *Reduce emissions through reduced energy consumption.*
>
> ***Policy 7.1:*** *Energy Conservation. Reduce energy consumption through conservation improvements and requirements.*

c. Current Air Quality. Both the State of California and the federal government have established health-based AAQS for the criteria air pollutants described previously. As previously discussed, areas that meet AAQSs are classified as attainment areas, while areas that do not meet these standards are classified as nonattainment areas.

Local Air Quality. The SCAQMD, together with the CARB, maintains ambient air quality monitoring stations in the Basin. The air quality monitoring station closest to the site is the North Long Beach station, and its air quality trends are representative of the ambient air quality in the project area. The pollutants monitored are CO, O_3, NO_2, and SO_2. The closest station to the project site that monitors PM_{10} and $PM_{2.5}$ is the Long Beach Pacific Coast Highway

station. Table 4.2-2 summarizes the ambient air quality levels measured at these stations between 2010 and 2012.

Table 4.2-2
Ambient Air Quality Data

Pollutant	2010	2011	2012
Ozone, ppm - Worst Hour	0.099	0.074	0.080
Number of days of State exceedances (>0.09 ppm)	1	0	0
Carbon Monoxide, ppm - Worst 8 Hours	2.60	3.31	2.57
Number of days of State/Federal exceedances (>9.0 ppm)	0	0	0
Nitrogen Dioxide, ppm - Worst Hour	0.118	0.090	0.098
Number of days of State exceedances (>0.18 ppm)	0	0	0
Sulfur Dioxide, ppm – Worst Hour	0.004	0.012	0.004
Number of days of State exceedances (>0.04 ppm)	0	0	0
Particulate Matter <10 microns, $\mu g/m^3$ Worst 24 Hours [1]	76	50	54
Number of samples of State exceedances (>50 $\mu g/m^3$)	2	0	1
Number of samples of Federal exceedances (>150 $\mu g/m^3$)	0	0	0
Particulate Matter <2.5 microns, $\mu g/m^3$ Worst 24 Hours[1]	33.7	42.0	46.7
Number of samples of Federal exceedances (>35 $\mu g/m^3$)	0	3	5

Source: CARB, Annual Air Quality Data Summaries available at http://www.arb.ca.gov

SO_2, NO_2, and CO levels did not exceed state or federal standards from 2010 to 2012. O_3 exceeded State standards one time over this period. $PM_{2.5}$ levels exceeded federal standards eight times over this period,and PM_{10} levels exceeded state standards three times over this period but remained within federal standards.

4.2.2 Impact Analysis

a. Methodology and Significance Thresholds.

Methodology. The air quality analysis conforms to the methodologies recommended in the SCAQMD's CEQA Air Quality Handbook (1993). The handbook includes thresholds for emissions associated with both construction and operation of proposed projects.

The SCAQMD's current guidelines, included in its CEQA Air Quality Handbook, were adhered to in the assessment of potential short- and long-term air quality impacts of the proposed Project. However, the air quality models identified in the CEQA Air Quality Handbook are outdated; therefore, CalEEMod Version 2013.2.2 was used to quantify the project-related mobile

and stationary source emissions.

Both temporary construction emissions and long-term operation emissions were calculated using CalEEMod. Operational emissions were estimated using information provided in the traffic study contained in Appendix C. Both construction and long-term emissions were analyzed based on the regional thresholds established by the SCAQMD and published in the *CEQA Air Quality Handbook*.

Regional Thresholds. To determine whether a proposed project would have a significant impact to air quality, Appendix G of the *CEQA Guidelines* questions whether a project would:

a) Conflict with or obstruct implementation of the applicable air quality plan;
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors);
d) Expose sensitive receptors to substantial pollutant concentrations; or
e) Create objectionable odors affecting a substantial number of people.

As discussed in the Initial Study prepared for the proposed project (see Appendix A), project development would not cause population growth exceeding forecasts used to prepare the Basin Air Quality Management Plan, and therefore the project would not conflict with or obstruct the implementation of that plan. The Initial Study also concluded that onsite development would not generate objectionable odors that would affect a substantial number of people. No heavy industrial, agricultural or other uses typically associated with objectionable odors are proposed. Therefore, it is unlikely that the proposed project would generate objectionable odors affecting a substantial number of people. Consequently, the thresholds related to conflict with air quality plans and objectionable odors are not discussed below.

The SCAQMD has developed specific numeric thresholds that apply to projects within the Basin. The SCAQMD currently recommends that impacts associated with projects with construction-related mass daily emissions that exceed any of the following emissions thresholds should be considered significant:

- *75 pounds per day of ROG*
- *100 pounds per day of NO_x*
- *550 pounds per day of CO*
- *150 pounds per day of SO_x*
- *150 pounds per day of PM_{10}*
- *55 pounds per day of $PM_{2.5}$*

The SCAQMD has also established the following significance thresholds for project operations within the Basin:

- *55 pounds per day of ROG*
- *55 pounds per day of NO_X*
- *550 pounds per day of CO*
- *150 pounds per day of SO_X*
- *150 pounds per day of PM_{10}*
- *55 pounds per day of $PM_{2.5}$*

Localized Significance Thresholds. In addition to the above thresholds, the SCAQMD has developed Localized Significance Thresholds (LSTs) in response to the Governing Board's Environmental Justice Enhancement Initiative (1-4), which was prepared to update the *CEQA Air Quality Handbook*. LSTs were devised in response to concern regarding exposure of individuals to criteria pollutants in local communities. LSTs represent the maximum emissions from a project that will not cause or contribute to an air quality exceedance of the most stringent applicable federal or state ambient air quality standard at the nearest sensitive receptor, taking into consideration ambient concentrations in each source receptor area (SRA), project size, distance to the sensitive receptor, etc. However, LSTs only apply to emissions within a fixed stationary location, including idling emissions during both project construction and operation. LSTs have been developed for NO_x, CO, PM_{10} and $PM_{2.5}$. LSTs are not applicable to mobile sources such as cars on a roadway (Final Localized Significance Threshold Methodology, SCAQMD, June 2003). As such, LSTs for operational emissions do not apply to onsite development as the majority of emissions would be generated by cars on the roadways.

LSTs have been developed for emissions within areas up to five acres in size, with air pollutant modeling recommended for activity within larger areas. The SCAQMD provides lookup tables for project sites that measure one, two, or five acres. The project area measures approximately 25 acres and is located in Source Receptor Area 4 (SRA-4). For the purposes of this EIR, it is assumed that construction activity at the project site would generally occur within a five-acre area at any one time. The applicable LSTs for construction on a five acre site in SRA-4 are shown in Table 4.2-3. According to the SCAQMD's publication, *Final Localized Significant (LST) Thresholds Methodology*, the use of LSTs is voluntary, to be implemented at the discretion of local agencies.

Table 4.2-3
SCAQMD LSTs for Emissions in SRA-4

Pollutant	Allowable emissions as a function of receptor distance in meters from a five-acre site (lbs/day)				
	25	**50**	**100**	**200**	**500**
Gradual conversion of NO_x to NO_2	123	118	126	141	179
CO	1,530	1,982	2,613	4,184	10,198
PM_{10} (construction)	14	42	58	92	191
PM_{10} (operation)	4	10	14	22	46
$PM_{2.5}$ (construction)	8	10	18	39	120
$PM_{2.5}$ (operation)	2	3	5	10	29

Source: SCAQMD. http://www.aqmd.gov/CEQA/handbook/LST/appC.pdf.

CO Hotspots Thresholds. The significance of localized project impacts under CEQA depends on whether ambient CO levels in the vicinity of the project are above or below state and federal CO standards. If ambient levels are below the standards, a project is considered to have a significant impact if project emissions result in an exceedance of one or more of these standards. If ambient levels already exceed a state or federal standard, project emissions are considered significant if they increase 1-hour CO concentrations by 1.0 ppm or more or 8-hour CO concentrations by 0.45 ppm or more. The following are applicable local emission concentration standards for CO:

- *California State 1-hour CO standard of 20.0 ppm*
- *California State 8-hour CO standard of 9.0 ppm*

As shown in Table 4.2-2 above, CO concentrations in the Basin do not exceed federal or state standards for CO. Therefore, a CO hotspots analysis would not be required for the proposed project.

b. Project Impacts and Mitigation Measures.

Impact AQ-1 Onsite construction activity would generate air pollutant emissions, but construction-related emissions would not exceed SCAQMD thresholds for any criteria pollutant. Therefore, impacts would be *Class III, less than significant*.

Construction emissions estimates were generated for onsite development using the CalEEMod model (Version 2013.2.2). The model considers six construction phases: 1) demolition; 2) site preparation; 3) grading; 4) building construction; 5) architectural coating; and, 6) paving. Construction equipment would include tractors, loaders, backhoes, cranes, forklifts, dozers, pavers, air compressors, and saws (See Appendix A for the construction equipment mixes). Table 4.2-4 shows estimated daily emissions during demolition, site preparation, grading, building, architectural coating, and paving. As shown in Table 4.2-4, construction emissions would not exceed any SCAQMD regional thresholds.

The LST thresholds only apply to those emissions generated by onsite construction activities, such as emissions from onsite grading, and do not apply to offsite mobile emissions. The LST thresholds for sensitive receptors 200 meters from the project site were used to illustrate the closest receptors, which are located approximately 730 feet (222 meters) to the east of the project site. As indicated in Table 4.2-4, emissions generated by temporary construction activities would be below LST thresholds for NOx, CO, PM_{10} and $PM_{2.5}$. Therefore, impacts related to construction emissions would be less than significant.

Mitigation Measures. Mitigation would not be required since impacts would be less than significant.

Significance After Mitigation. Impacts would be less than significant without mitigation.

Table 4.2-4
Estimated Construction Maximum
Daily Air Pollutant Emissions (lbs/day)

	Emissions (lbs/day)					
	ROG	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Demolition	4.58	48.45	37.15	0.04	2.62	2.33
Site Preparation	5.34	56.99	43.92	0.04	21.36	12.82
Grading	6.87	79.16	52.27	0.06	12.70	7.15
Building Construction	5.38	39.18	42.35	0.07	5.09	2.89
Architectural Coating	35.23	2.59	4.54	0.01	0.66	0.32
Paving	2.15	22.46	15.79	0.02	1.43	1.20
Maximum lbs/day [e]	**35.06**	**79.05**	**50.84**	**0.06**	**21.15**	**12.77**
SCAQMD Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**
Local Significance Thresholds [f] (LSTs)	*n/a*	*141*	*4,184*	*n/a*	*92*	*39*
Threshold Exceeded?	**n/a**	**No**	**No**	**n/a**	**No**	**No**

Source: SCAQMD LST Spreadsheet for a 5-acre site and CalEEMod; see Appendix B for calculations.
[e] Maximum daily emissions based on highest in any construction period.
[f] LSTs are for a five-acre project in SRA-4 within a distance of 200 meters from the site boundary

Impact AQ-2 Operation of the proposed project would generate air pollutant emissions in the long-term. However, emissions would not exceed SCAQMD operational significance thresholds for any criteria pollutants. Therefore, operational air quality impacts would be Class III, *less than significant*.

Long-term air pollutant emission impacts are those associated with stationary sources and mobile sources involving any project-related changes. The proposed project would result in an increase in both stationary and mobile source emissions. Stationary source emissions would come from additional natural gas consumption for onsite buildings and electricity for the lighting in the buildings and at the parking area. Mobile source emissions would come from project-related vehicle trips. Project-related vehicle trips are largely dependent on the number of employees working at the project site.

The net increase in long-term operational emissions associated with the proposed project, calculated using CalEEMod, are shown in Table 4.2-5. The net increase of all criteria pollutants would be less than the corresponding SCAQMD daily emission thresholds. Therefore, project-related long-term impacts to regional air quality would not be significant.

Table 4.2-5

Long-Term Operational Emissions (lbs/day)

Emission Source	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Area	12.92	0.00	0.05	0.00	0.00	0.00
Energy	0.27	2.50	2.10	0.02	0.19	0.19
Mobile	14.55	47.59	193.23	0.48	33.03	9.28
Total Project Emissions	**27.74**	**50.09**	**195.38**	**0.50**	**33.22**	**9.47**
SCAQMD Thresholds	*55*	*55*	*550*	*150*	*150*	*55*
Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***

Source: see Appendix B for CalEEMod calculations;

Mitigation Measures. Mitigation would not be required since impacts would be less than significant.

Significance After Mitigation. Impacts would be less than significant without mitigation.

c. Cumulative Impacts. SCAQMD's approach to determining cumulative air quality impacts for criteria air pollutants is to first determine whether or not the proposed project would result in a significant project-level impact to regional air quality based on SCAQMD significance thresholds. If the project does not exceed SCAQMD thresholds, then the lead agency needs to consider the additive effects of related projects only if the proposed project is part of an ongoing regulatory program or is contemplated in a Program EIR, and the related projects are located within an approximately one mile of the proposed project site. If there are related projects within the vicinity (one-mile radius) of the project site, that are part of an ongoing regulatory program or are contemplated in a Program EIR, then the additive effect of the related projects should be considered.

As discussed in Section 3.3, Cumulative Projects Setting, seven related projects are located within a two-mile radius of the project site. Each related project would generate emissions during construction and operation. Neither the proposed project nor the related projects are part of an ongoing regulatory program or are contemplated in a Program EIR. The SCAQMD therefore recommends that project-specific air quality impacts be used to determine the potential cumulative impacts to regional air quality. As discussed under Impact AQ-2, the proposed project would result in an increase in daily operational emissions; however, emissions would not exceed the SCAQMD thresholds.

Implementation of the proposed project would not result in the addition of criteria pollutants during operation of the project that would contribute to cumulative impacts in conjunction with related projects in the region. Because the proposed project would not generate emissions that exceed the SCAQMD's operational thresholds and the project is consistent with the AQMP (as discussed in the Initial Study prepared for the project and included in Appendix A of this EIR), operation of the project would not make a cumulatively considerable contribution with regard to criteria pollutants. Therefore, the project's contribution to cumulative regional long term air quality impacts would not be cumulatively considerable.

As discussed under Impact AQ-1, construction-generated emissions would not exceed SCAQMD significance thresholds for ROG, NOx, CO, SO_2, PM_{10} and $PM_{2.5}$. Therefore, the project's contribution to temporary cumulative regional air quality impacts would not be cumulatively considerable.

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4.3 GREENHOUSE GAS EMISSIONS/CLIMATE CHANGE

4.3.1 Setting

a. Climate Change and Greenhouse Gases. Climate change is the observed increase in the average temperature of the Earth's atmosphere and oceans along with other substantial changes in climate (such as wind patterns, precipitation, and storms) over an extended period of time. The term "climate change" is often used interchangeably with the term "global warming," but "climate change" is preferred to "global warming" because it helps convey that there are other changes in addition to rising temperatures. The baseline against which these changes are measured originates in historical records identifying temperature changes that have occurred in the past, such as during previous ice ages. The global climate is continuously changing, as evidenced by repeated episodes of substantial warming and cooling documented in the geologic record. The rate of change has typically been incremental, with warming or cooling trends occurring over the course of thousands of years. The past 10,000 years have been marked by a period of incremental warming, as glaciers have steadily retreated across the globe. However, scientists have observed acceleration in the rate of warming during the past 150 years. Per the United Nations Intergovernmental Panel on Climate Change (IPCC, 2013), the understanding of anthropogenic warming and cooling influences on climate has led to a high confidence (95% or greater chance) that the global average net effect of human activities has been the dominant cause of warming since the mid-20th century(IPCC, 2013).

Gases that absorb and re-emit infrared radiation in the atmosphere are called greenhouse gases (GHGs). GHGs are present in the atmosphere naturally, are released by natural sources, or are formed from secondary reactions taking place in the atmosphere. The gases that are widely seen as the principal contributors to human-induced climate change include carbon dioxide (CO_2), methane (CH_4), nitrous oxides (N_2O), fluorinated gases such as hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). Water vapor is excluded from the list of GHGs because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation.

GHGs are emitted by both natural processes and human activities. Of these gases, CO_2 and CH_4 are emitted in the greatest quantities from human activities. Emissions of CO_2 are largely by-products of fossil fuel combustion, whereas CH_4 results from off-gassing associated with agricultural practices and landfills. Observations of CO_2 concentrations, globally-averaged temperature, and sea level rise are generally well within the range of the extent of the earlier IPCC projections. The recently observed increases in CH_4 and N_2O concentrations are smaller than those assumed in the scenarios in the previous assessments. Each IPCC assessment has used new projections of future climate change that have become more detailed as the models have become more advanced.

Man-made GHGs, many of which have greater heat-absorption potential than CO_2, include fluorinated gases and sulfur hexafluoride (SF_6) (California Environmental Protection Agency [CalEPA], 2006). Different types of GHGs have varying global warming potentials (GWPs). The GWP of a GHG is the potential of a gas or aerosol to trap heat in the atmosphere over a specified timescale (generally, 100 years). Because GHGs absorb different amounts of heat, a common reference gas (CO_2) is used to relate the amount of heat absorbed to the amount of the gas

emissions, referred to as "carbon dioxide equivalent" (CO_2E), and is the amount of a GHG emitted multiplied by its GWP. Carbon dioxide has a 100-year GWP of one. By contrast, methane CH_4 has a GWP of 25, meaning its global warming effect is 25 times greater than carbon dioxide on a molecule per molecule basis (IPCC, 2006).

The accumulation of GHGs in the atmosphere regulates the earth's temperature. Without the natural heat trapping effect of GHG, Earth's surface would be about 34° C cooler (CalEPA, 2006). However, it is believed that emissions from human activities, particularly the consumption of fossil fuels for electricity production and transportation, have elevated the concentration of these gases in the atmosphere beyond the level of naturally occurring concentrations. The following discusses the primary GHGs of concern.

Carbon Dioxide. The global carbon cycle is made up of large carbon flows and reservoirs. Billions of tons of carbon in the form of CO_2 are absorbed by oceans and living biomass (i.e., sinks) and are emitted to the atmosphere annually through natural processes (i.e., sources). When in equilibrium, carbon fluxes among these various reservoirs are roughly balanced (United States Environmental Protection Agency [U.S. EPA], April 2012). CO_2 was the first GHG demonstrated to be increasing in atmospheric concentration, with the first conclusive measurements being made in the last half of the 20th century. Concentrations of CO_2 in the atmosphere have risen approximately 40% since the industrial revolution. The global atmospheric concentration of CO_2 has increased from a pre-industrial value of about 280 parts per million (ppm) to 391 ppm in 2011 (IPCC, 2007; Oceanic and Atmospheric Association [NOAA], 2010). The average annual CO_2 concentration growth rate was larger between 1995 and 2005 (average: 1.9 ppm per year) than it has been since the beginning of continuous direct atmospheric measurements (1960–2005 average: 1.4 ppm per year), although there is year-to-year variability in growth rates (NOAA, 2010). Currently, CO_2 represents an estimated 82.8% of total GHG emissions (Department of Energy [DOE] Energy Information Administration [EIA], August 2010). The largest source of CO_2, and of overall GHG emissions, is fossil fuel combustion.

Methane. Methane (CH_4) is an effective absorber of radiation, though its atmospheric concentration is less than that of CO_2 and its lifetime in the atmosphere is limited to 10 to 12 years. It has a global warming potential approximately 25 times that of CO_2. Over the last 250 years, the concentration of CH_4 in the atmosphere has increased by 148 percent (IPCC, 2007), although emissions have declined from 1990 levels. Anthropogenic sources of CH_4 include enteric fermentation associated with domestic livestock, landfills, natural gas and petroleum systems, agricultural activities, coal mining, wastewater treatment, stationary and mobile combustion, and certain industrial processes (U.S. EPA, April 2012).

Nitrous Oxide. Concentrations of nitrous oxide (N_2O) began to rise at the beginning of the industrial revolution and continue to increase at a relatively uniform growth rate (NOAA, 2010). N_2O is produced by microbial processes in soil and water, including those reactions that occur in fertilizers that contain nitrogen, fossil fuel combustion, and other chemical processes. Use of these fertilizers has increased over the last century. Agricultural soil management and mobile source fossil fuel combustion are the major sources of N_2O emissions. The GWP of nitrous oxide is approximately 298 times that of CO_2 (IPCC, 2007).

Fluorinated Gases (HFCS, PFCS and SF_6). Fluorinated gases, such as hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfurhexafluoride (SF_6), are powerful GHGs that are emitted from a variety of industrial processes. Fluorinated gases are used as substitutes for ozone-depleting substances such as chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs), and halons, which have been regulated since the mid-1980s because of their ozone-destroying potential and are phased out under the Montreal Protocol (1987) and Clean Air Act Amendments of 1990. Electrical transmission and distribution systems account for most SF_6 emissions, while PFC emissions result from semiconductor manufacturing and as a by-product of primary aluminum production. Fluorinated gases are typically emitted in smaller quantities than CO_2, CH_4, and N_2O, but these compounds have much higher GWPs. SF_6 is the most potent GHG the IPCC has evaluated.

Greenhouse Gas Emissions Inventory. Worldwide anthropogenic emissions of GHGs were approximately 40,000 million metric tons (MMT) CO_2E in 2004, including ongoing emissions from industrial and agricultural sources, but excluding emissions from land use changes (i.e., deforestation, biomass decay) (IPCC, 2007). CO_2 emissions from fossil fuel use accounts for 56.6 percent of the total emissions of 49,000 MMT CO_2E (includes land use changes) and CO_2 emissions from all sources account for 76.7 percent of the total CO_2E emitted. Methane emissions account for 14.3 percent of GHGs and N_2O emissions account for 7.9 percent (IPCC, 2007).

Total U.S. GHG emissions were 6,821.8 MMT CO_2E in 2009 (U.S. EPA, April 2012). Total U.S. emissions have increased by 10.5 percent since 1990; emissions rose by 3.2 percent from 2009 to 2010 (U.S. EPA, April 2012). This increase was primarily due to (1) an increase in economic output resulting in an increase in energy consumption across all sectors; and (2) much warmer summer conditions resulting in an increase in electricity demand for air conditioning. Since 1990, U.S. emissions have increased at an average annual rate of 0.5 percent. In 2010, the transportation and industrial end-use sectors accounted for 32 percent and 26 percent of CO_2 emissions from fossil fuel combustion, respectively. Meanwhile, the residential and commercial end-use sectors accounted for 22 percent and 19 percent of CO_2 emissions from fossil fuel combustion, respectively (U.S. EPA, April 2012).

Based upon the California Air Resources Board (ARB) California Greenhouse Gas Inventory for 2000-2011 (CARB, October 2011), California produced 448 MMT CO_2E in 2011. The major source of GHG in California is transportation, contributing 38 percent of the state's total GHG emissions. Industrial activity is the second largest source, contributing 21 percent of the state's GHG emissions (CARB, October 2013). California emissions are due in part to its large size and large population compared to other states. However, a factor that reduces California's per capita fuel use and GHG emissions, as compared to other states, is its relatively mild climate. The CARB has projected statewide unregulated GHG emissions for the year 2020 will be 507 MMT CO_2E (ARB, August 2013). These projections represent the emissions that would be expected to occur in the absence of any GHG reduction actions.

Potential Effects of Climate Change. Globally, climate change has the potential to affect numerous environmental resources through potential impacts related to future air temperatures and precipitation patterns. Scientific modeling predicts that continued GHG emissions at or above current rates would induce more extreme climate changes during the 21st century than were observed during the 20th century. Long-term trends have found that each of the past three

decades has been warmer than all the previous decades in the instrumental record, and the decade from 2000 through 2010 has been the warmest. The global combined land and ocean temperature data show an increase of about 0.89°C (0.69°C–1.08°C) over the period 1901–2012 and about 0.72°C (0.49°C–0.89°C) over the period 1951–2012 when described by a linear trend. Several independently analyzed data records of global and regional Land-Surface Air Temperature (LSAT) obtained from station observations are in agreement that LSAT as well as sea surface tempteratures have increased. In addition to these findings, there are identifiable signs that global warming is currently taking place, including substantial ice loss in the Arctic over the past two decades (IPCC, 2013).

According to the CalEPA's *2010 Climate Action Team Biennial Report*, potential impacts of climate change in California may include loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years (CalEPA, April 2010). While there is growing scientific consensus about the possible effects of climate change at a global and potentially statewide level, current scientific modeling tools are unable to predict what local impacts may occur with a similar degree of accuracy. In general, regional and local predictions are made based on downscaling statewide models (CalEPA, April 2010). Below is a summary of some of the potential effects that could be experienced in California as a result of climate change.

Sea Level Rise. According to *The Impacts of Sea-Level Rise on the California Coast*, prepared by the California Climate Change Center (CCCC) (May 2009), climate change has the potential to induce substantial sea level rise in the coming century. The rising sea level increases the likelihood and risk of flooding. Sea levels are rising faster now than in the previous two millennia, and the rise is expected to accelerate, even with robust GHG emission control measures. The most recent IPCC report (2013) predicts a mean sea–level rise of 11-38 inches by 2100. This prediction is more than 50% higher than earlier projections of 7-23 inches, when comparing the same emissions scenarios and time periods. The previous IPCC report (2007) identified a sea level rise on the California coast over the past century of approximately eight inches. Based on the results of various global climate change models, sea level rise is expected to continue. The California Climate Adaptation Strategy (December 2009) estimates a sea level rise of up to 55 inches by the end of this century.

Air Quality. Higher temperatures, which are conducive to air pollution formation, could worsen air quality in California. Climate change may increase the concentration of ground-level ozone, but the magnitude of the effect, and therefore its indirect effects, are uncertain. If higher temperatures are accompanied by drier conditions, the potential for large wildfires could increase, which, in turn, would further worsen air quality. However, if higher temperatures are accompanied by wetter, rather than drier conditions, the rains would tend to temporarily clear the air of particulate pollution and reduce the incidence of large wildfires, thereby ameliorating the pollution associated with wildfires. Additionally, severe heat accompanied by drier conditions and poor air quality could increase the number of heat-related deaths, illnesses, and asthma attacks throughout the state (California Energy Commission [CEC], March, 2009).

Water Supply. Analysis of paleoclimatic data (such as tree-ring reconstructions of stream flow and precipitation) indicates a history of naturally and widely varying hydrologic conditions in California and the west, including a pattern of recurring and extended droughts.

Uncertainty remains with respect to the overall impact of climate change on future water supplies in California. However, the average early spring snowpack in the Sierra Nevada decreased by about 10 percent during the last century, a loss of 1.5 million acre-feet of snowpack storage. During the same period, sea level rose eight inches along California's coast. California's temperature has risen 1°F, mostly at night and during the winter, with higher elevations experiencing the highest increase. Many Southern California cities have experienced their lowest recorded annual precipitation twice within the past decade. In a span of only two years, Los Angeles experienced both its driest and wettest years on record (California Department of Water Resources [DWR], 2008; CCCC, May 2009).

This uncertainty complicates the analysis of future water demand, especially where the relationship between climate change and its potential effect on water demand is not well understood. The Sierra snowpack provides the majority of California's water supply by accumulating snow during the state's wet winters and releasing it slowly during the state's dry springs and summers. Based upon historical data and modeling DWR projects that the Sierra snowpack will experience a 25 to 40 percent reduction from its historic average by 2050. Climate change is also anticipated to bring warmer storms that result in less snowfall at lower elevations, reducing the total snowpack (DWR, 2008).

Hydrology. As discussed above, climate change could potentially affect: the amount of snowfall, rainfall, and snow pack; the intensity and frequency of storms; flood hydrographs (flash floods, rain or snow events, coincidental high tide and high runoff events); sea level rise and coastal flooding; coastal erosion; and the potential for salt water intrusion. The rate of increase of global mean sea levels over the 2001-2010 decade, as observed by satellites, ocean buoys and land gauges, was approximately 3.2 mm per year, which is double the observed 20th century trend of 1.6 mm per year (World Meteorological Organization [WMO],2013). As a result, sea levels averaged over the last decade were about 8 inches higher than those of 1880 (WMO, 2013). Sea level rise may be a product of climate change through two main processes: expansion of sea water as the oceans warm and melting of ice over land. A rise in sea levels could result in coastal flooding and erosion and could jeopardize California's water supply due to salt water intrusion. Increased CO_2 emissions can cause oceans to acidify due to the carbonic acid it forms. Increased storm intensity and frequency could affect the ability of flood-control facilities, including levees, to handle storm events.

Agriculture. California has a $30 billion annual agricultural industry that produces half of the country's fruits and vegetables. Higher CO_2 levels can stimulate plant production and increase plant water-use efficiency. However, if temperatures rise and drier conditions prevail, water demand could increase; crop-yield could be threatened by a less reliable water supply; and greater air pollution could render plants more susceptible to pest and disease outbreaks. In addition, temperature increases could change the time of year certain crops, such as wine grapes, bloom or ripen, and thereby affect their quality (CCCC, 2006).

Ecosystems and Wildlife. Climate change and the potential resulting changes in weather patterns could have ecological effects on a global and local scale. Increasing concentrations of GHGs are likely to accelerate the rate of climate change. Scientists project that the average global surface temperature could rise by 1.0-4.5°F (0.6-2.5°C) in the next 50 years, and 2.2-10°F (1.4-5.8°C) in the next century, with substantial regional variation. Soil moisture is likely to

decline in many regions, and intense rainstorms are likely to become more frequent. Rising temperatures could have four major impacts on plants and animals: (1) timing of ecological events; (2) geographic range; (3) species' composition within communities; and (4) ecosystem processes, such as carbon cycling and storage (Parmesan, 2004; Parmesan, C. and H. Galbraith, 2004).

b. Regulatory Setting. The following regulations address both climate change and GHG emissions.

International Regulations. The United States is, and has been, a participant in the United Nations Framework Convention on Climate Change (UNFCCC) since it was produced in 1992. The UNFCCC is an international environmental treaty with the objective of, "stabilization of GHG concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system." This is generally understood to be achieved by stabilizing global GHG concentrations between 350 and 400 ppm, in order to limit the global average temperature increases between 2 and 2.4°C above pre-industrial levels (IPCC, 2007). The UNFCC itself does not set limits on GHG emissions for individual countries or enforcement mechanisms. Instead, the treaty provides for updates, called "protocols," that would identify mandatory emissions limits.

Five years later, the UNFCC brought nations together again to draft the *Kyoto Protocol* (1997). The Kyoto Protocol established commitments for industrialized nations to reduce their collective emissions of six GHGs (CO_2, CH_4, N_2O, SF_6, HFCs, and PFCs) to 5.2 percent below 1990 levels by 2012. The United States is a signatory of the Kyoto Protocol, but Congress has not ratified it and the United States has not bound itself to the Protocol's commitments (UNFCCC, 2007). The first commitment period of the Kyoto Protocol ended in 2012. Governments, including 38 industrialized countries, agreed to a second commitment period of the Kyoto Protocol beginning January 1, 2013 and ending either on December 31, 2017 or December 31, 2020, to be decided by the Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol at its seventeenth session (UNFCCC, November 2011).

In Durban (17th session of the Conference of the Parties in Durban, South Africa, December 2011), governments decided to adopt a universal legal agreement on climate change as soon as possible, but not later than 2015. Work will begin on this immediately under a new group called the Ad Hoc Working Group on the Durban Platform for Enhanced Action. Progress was also made regarding the creation of a Green Climate Fund (GCF) for which a management framework was adopted (UNFCCC, December 2011; United Nations, September 2012).

Federal Regulations. The United States is currently using a voluntary and incentive-based approach toward emissions reductions in lieu of the Kyoto Protocol's mandatory framework. The Climate Change Technology Program (CCTP) is a multi-agency research and development coordination effort (led by the Secretaries of Energy and Commerce) that is charged with carrying out the President's National Climate Change Technology Initiative (U.S. EPA, December 2007). However, the voluntary approach to address climate change and GHG emissions may be changing. The United States Supreme Court in *Massachusetts et al. v. Environmental Protection Agency et al*. ([2007] 549 U.S. 05-1120) held that the U.S. EPA has the authority to regulate motor-vehicle GHG emissions under the federal Clean Air Act.

The U.S. EPA issued a Final Rule for mandatory reporting of GHG emissions in October 2009. This Final Rule applies to fossil fuel suppliers, industrial gas suppliers, direct GHG emitters, and manufacturers of heavy-duty and off-road vehicles and vehicle engines, and requires annual reporting of emissions. The first annual reports for these sources were due in March 2011.

On May 13, 2010, the U.S. EPA issued a Final Rule that took effect on January 2, 2011, setting a threshold of 75,000 metric tons (MT) CO_2E per year for GHG emissions. New and existing industrial facilities that meet or exceed that threshold will require a permit after that date. On November 10, 2010, the U.S. EPA published the "PSD and Title V Permitting Guidance for Greenhouse Gases." The U.S. EPA's guidance document is directed at state agencies responsible for air pollution permits under the Federal Clean Air Act to help them understand how to implement GHG reduction requirements while mitigating costs for industry. It is expected that most states will use the U.S. EPA's new guidelines when processing new air pollution permits for power plants, oil refineries, cement manufacturing, and other large pollution point sources.

On January 2, 2011, the U.S. EPA implemented the first phase of the Tailoring Rule for GHG emissions Title V Permitting. Under the first phase of the Tailoring Rule, all new sources of emissions are subject to GHG Title V permitting if they are otherwise subject to Title V for another air pollutant and they emit at least 75,000 MT CO_2E per year. Under Phase 1, no sources were required to obtain a Title V permit solely due to GHG emissions. Phase 2 of the Tailoring Rule went into effect July 1, 2011. At that time new sources were subject to GHG Title V permitting if the source emits 100,000 MT CO_2E per year, or they are otherwise subject to Title V permitting for another pollutant and emit at least 75,000 MT CO_2E per year.

On July 3, 2012 the U.S. EPA issued the final rule that retains the GHG permitting thresholds that were established in Phases 1 and 2 of the GHG Tailoring Rule. These emission thresholds determine when Clean Air Act permits under the New Source Review Prevention of Significant Deterioration (PSD) and Title V Operating Permit programs are required for new and existing industrial facilities.

California Regulations. California Air Resources Board (CARB) is responsible for the coordination and oversight of State and local air pollution control programs in California. Various statewide and local initiatives to reduce California's contribution to GHG emissions have raised awareness about climate change and its potential for severe long-term adverse environmental, social, and economic effects.

Assembly Bill (AB) 1493 (2002), referred to as "Pavley," requires CARB to develop and adopt regulations to achieve "the maximum feasible and cost-effective reduction of GHG emissions from motor vehicles." On June 30, 2009, U.S. EPA granted the waiver of Clean Air Act preemption to California for its greenhouse gas emission standards for motor vehicles beginning with the 2009 model year. Pavley I took effect for model years starting in 2009 to 2016 and Pavley II, which is now referred to as "LEV (Low Emission Vehicle) III GHG" will cover 2017 to 2025. Fleet average emission standards would reach 22 percent reduction by 2012 and 30 percent by 2016. The Advanced Clean Cars program coordinates the goals of the Low Emissions Vehicles (LEV), Zero Emissions Vehicles (ZEV), and Clean Fuels Outlet programs and would provide major reductions in GHG emissions. By 2025, when the rules would be fully

implemented, new automobiles would emit 34% fewer GHGs. Statewide CO_2E emissions would be reduced by 3% by 2020 and by 12% by 2025. The reduction increases to 27% in 2035 and even further to a 33% reduction in 2050 (CARB, 2013).

In 2005, former Governor Schwarzenegger issued Executive Order (EO) S-3-05, establishing statewide GHG emissions reduction targets. EO S-3-05 provides that by 2010, emissions shall be reduced to 2000 levels; by 2020, emissions shall be reduced to 1990 levels; and by 2050, emissions shall be reduced to 80 percent of 1990 levels (CalEPA, 2006). In response to EO S-3-05, CalEPA created the Climate Action Team (CAT), which in March 2006 published the Climate Action Team Report (the "2006 CAT Report") (CalEPA, 2006). The 2006 CAT Report identified a recommended list of strategies that the state could pursue to reduce GHG emissions. These are strategies that could be implemented by various state agencies to ensure that the emission reduction targets in EO S-3-05 are met and can be met with existing authority of the state agencies. The strategies include the reduction of passenger and light duty truck emissions, the reduction of idling times for diesel trucks, an overhaul of shipping technology/infrastructure, increased use of alternative fuels, increased recycling, and landfill methane capture, etc.

California's major initiative for reducing GHG emissions is outlined in Assembly Bill 32 (AB 32), the "California Global Warming Solutions Act of 2006," signed into law in 2006. AB 32 codifies the statewide goal of reducing GHG emissions to 1990 levels by 2020 (essentially a 15% reduction below 2005 emission levels; the same requirement as under S-3-05), and requires CARB to prepare a Scoping Plan that outlines the main State strategies for reducing GHGs to meet the 2020 deadline. In addition, AB 32 requires CARB to adopt regulations to require reporting and verification of statewide GHG emissions.

After completing a comprehensive review and update process, CARB approved a 1990 statewide GHG level and 2020 limit of 427 MMT CO_2E. The Scoping Plan was approved by CARB on December 11, 2008, and includes measures to address GHG emission reduction strategies related to energy efficiency, water use, and recycling and solid waste, among other measures. The Scoping Plan includes a range of GHG reduction actions that may include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, and market-based mechanisms.

In early 2013, CARB initiated activities to update the AB 32 Scoping Plan. The 2013 Scoping Plan update will define CARB's climate change priorities and lay the groundwork to reach post-2020 goals set forth in EO S-3-05. The update will highlight California's progress toward meeting the "near-term" 2020 GHG emission reduction goals defined in the original Scoping Plan (2008). It will also evaluate how to align the State's longer-term GHG reduction strategies with other State policy priorities, such as for water, waste, natural resources, clean energy and transportation, and land use (CARB, 2013).

EO S-01-07 was enacted on January 18, 2007. The order mandates that a Low Carbon Fuel Standard ("LCFS") for transportation fuels be established for California to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020.

Senate Bill (SB) 97, signed in August 2007, acknowledges that climate change is an environmental issue that requires analysis in California Environmental Quality Act (CEQA) documents. In March 2010, the California Resources Agency (Resources Agency) adopted amendments to the State CEQA Guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted guidelines give lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts.

CARB Resolution 07-54 establishes 25,000 MT of GHG emissions as the threshold for identifying the largest stationary emission sources in California for purposes of requiring the annual reporting of emissions. This threshold is just over 0.005 percent of California's total inventory of GHG emissions for 2004.

Senate Bill (SB) 375, signed in August 2008, enhances the state's ability to reach AB 32 goals by directing CARB to develop regional GHG emission reduction targets to be achieved from vehicles for 2020 and 2035. In addition, SB 375 directs each of the state's 18 major Metropolitan Planning Organizations (MPO) to prepare a "sustainable communities strategy" (SCS) that contains a growth strategy to meet these emission targets for inclusion in the Regional Transportation Plan (RTP). On September 23, 2010, CARB adopted final regional targets for reducing GHG emissions from 2005 levels by 2020 and 2035.

The Southern California Association of Governments (SCAG) was assigned targets of an 8 percent reduction in GHGs from transportation sources by 2020 and a 13 percent reduction in GHGs from transportation sources by 2035. In the SCAG region, SB 375 also provides the option for the coordinated development of subregional plans by the subregional councils of governments and the county transportation commissions to meet SB 375 requirements.

In April 2011, Governor Brown signed SB 2X requiring California to generate 33 percent of its electricity from renewable energy by 2020.

For more information on the Senate and Assembly Bills, Executive Orders, and reports discussed above, and to view reports and research referenced above, please refer to the following websites: www.climatechange.ca.gov and www.arb.ca.gov/cc/cc.htm.

California Environmental Quality Act. Pursuant to the requirements of SB 97, the Resources Agency has adopted amendments to the *State CEQA Guidelines* for the feasible mitigation of GHG emissions or the effects of GHG emissions. As noted previously, the adopted *CEQA Guidelines* provide general regulatory guidance on the analysis and mitigation of GHG emissions in CEQA documents, while giving lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts. To date, the Bay Area Air Quality Management District (BAAQMD), the South Coast Air Quality Management District (SCAQMD), the San Luis Obispo Air Pollution Control District (SLOAPCD), and the San Joaquin Air Pollution Control District (SJVAPCD) have adopted quantitative significance thresholds for GHGs. On March 5, 2012 the Alameda County Superior Court issued a judgment finding that the BAAQMD had failed to comply with CEQA when it adopted the thresholds contained in the BAAQMD's 2010 CEQA Guidelines. The BAAQMD was ordered to set aside the thresholds and is no longer recommending that these thresholds be used as a general measure of a project's significant air quality impacts. In August 2013, the First

District Court of Appeal overturned the trial court and held that the thresholds of significance adopted by the BAAQMD were not subject to CEQA review. The California Supreme Court has agreed to hear an appeal of this case. The case is currently being briefed and the matter is still pending. Thus, BAAQMD will not issue a further recommendation until this litigation is complete.

4.3.2 Impact Analysis

a. Methodology and Significance Thresholds. Pursuant to the requirements of SB 97, the Resources Agency adopted amendments to the *State CEQA Guidelines* for the feasible mitigation of GHG emissions or the effects of GHG emissions in March 2010. These guidelines are used in evaluating the cumulative significance of GHG emissions from the proposed project.

According to the adopted CEQA Guidelines, impacts related to GHG emissions from the proposed project would be significant if the project would:

- *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; and/or*
- *Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.*

The vast majority of individual projects do not generate sufficient GHG emissions to create a project-specific impact through a direct influence to climate change; therefore, the issue of climate change typically involves an analysis of whether a project's contribution towards an impact is cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects (CEQA Guidelines, Section 15355).

For industrial projects the South Coast Air Quality Management District has established a threshold of 10,000 metric tons CO_2E/year (SCAQMD. 2011). Therefore, the proposed project's contribution to cumulative impacts related to GHG emissions and climate change would be cumulatively considerable if the project would produce in excess of 10,000 metric tons CO_2E/year.

Study Methodology. Calculations of CO_2, CH_4, and N_2O emissions are provided to identify the magnitude of potential project effects. The analysis focuses on CO_2, CH_4, and N_2O because these make up 98.9 percent of all GHG emissions by volume (IPCC, 2007) and are the GHG emissions that the project would emit in the largest quantities. Fluorinated gases, such as HFCs, PFCs, and SF_6, were also considered for the analysis. However, the potential for future occupants of the proposed industrial structures is unknown at this time, and to forecast emissions of fluorinated gases would be necessarily speculative. Emissions of all GHGs are converted into their equivalent weight in CO_2 (CO_2E). Minimal amounts of other main GHGs (such as chlorofluorocarbons [CFCs]) would be emitted; however, these other GHG emissions would not substantially add to the calculated CO_2E amounts. Calculations are based on the methodologies discussed in the California Air Pollution Control Officers Association (CAPCOA) *CEQA and Climate Change* white paper (January 2008) and included the use of the California Climate Action Registry (CCAR) General Reporting Protocol (January 2009).

On-Site Operational Emissions. Operational emissions from energy use (electricity and natural gas use) for the project were estimated using the California Emissions Estimator Model (CalEEMod) 2011 Version 2011.1.1 software program (see Appendix 4.2 for calculations). The default values on which the CalEEMod software program are based include the CEC-sponsored California Commercial End Use Survey (CEUS) and Residential Appliance Saturation Survey (RASS) studies. CalEEMod provides operational emissions of CO_2, N_2O and CH_4. This methodology is considered reasonable and reliable for use, as it has been subjected to peer review by numerous public and private stakeholders, and in particular by the CEC. It is also recommended by CAPCOA (January 2008).

Emissions associated with area sources, including consumer products, landscape maintenance, and architectural coating were calculated in CalEEMod and utilize standard emission rates from CARB, U.S. EPA, and district supplied emission factor values (CalEEMod User Guide, 2013).

Emissions from waste generation were also calculated in CalEEMod and are based on the IPCC's methods for quantifying GHG emissions from solid waste using the degradable organic content of waste (CalEEMod User Guide, 2013). Waste disposal rates by land use and overall composition of municipal solid waste in California was primarily based on data provided by the California Department of Resources Recycling and Recovery (CalRecycle).

Emissions from water and wastewater usage calculated in CalEEMod were based on the default electricity intensity from the CEC's 2006 Refining Estimates of Water-Related Energy Use in California using the average values for Northern and Southern California.

Direct Emissions from Mobile Combustion. Emissions of CO_2 and CH_4 from transportation sources for the proposed project were quantified using the CalEEMod software model. Because the CalEEMod software program does not calculate N_2O emissions from mobile sources, N_2O emissions were quantified using the California Climate Action Registry General Reporting Protocol (January 2009) direct emissions factors for mobile combustion (see Appendix X for calculations). The estimate of total daily trips associated with the proposed project was based on the standard Institute of Transportation Engineers (ITE) vehicle trip rates and was calculated and extrapolated to derive total annual mileage in CalEEMod. Emission rates for N_2O emissions were based on the vehicle mix output generated by CalEEMod and the emission factors found in the California Climate Action Registry General Reporting Protocol.

A limitation of the quantitative analysis of emissions from mobile combustion is that emission models, such as CalEEMod, evaluate aggregate emissions, meaning that all vehicle trips and related emissions assigned to a project are assumed to be new trips and emissions generated by the project itself. Such models do not demonstrate, with respect to a regional air quality impact, what proportion of these emissions are actually "new" emissions, specifically attributable to the project in question. For most projects, the main contributor to regional air quality emissions is from motor vehicles; however, the quantity of vehicle trips appropriately characterized as "new" is usually uncertain as traffic associated with a project may be relocated trips from other locales. In other words, vehicle trips associated with the project may include trips relocated from other existing locations. Therefore, because the proportion of "new" versus relocated trips is unknown, the VMT estimate generated by CalEEMod is used as a conservative, "worst-case" estimate.

Construction Emissions. Although construction activity is addressed in this analysis, CAPCOA does not discuss whether any of the suggested threshold approaches (as discussed below in *GHG Cumulative Significance*) adequately address impacts from temporary construction activity. As stated in the *CEQA and Climate Change* white paper, "more study is needed to make this assessment or to develop separate thresholds for construction activity" (CAPCOA, 2008). Nevertheless, air districts such as the SCAQMD (2011) have recommended amortizing construction-related emissions over a 30-year period in conjunction with the proposed project's operational emissions.

Construction of the proposed project would generate temporary GHG emissions primarily due to the operation of construction equipment and truck trips. Site preparation and grading typically generate the greatest amount of emissions due to the use of grading equipment and soil hauling. The CalEEMod software program was used to estimate emissions associated with the construction period, based on parameters such as the duration of construction activity, area of disturbance, and anticipated equipment use during construction. Complete results from CalEEMod and assumptions can be viewed in Appendix B.

b. Project Impacts and Mitigation Measures.

Impact GHG-1 Development that could potentially occur under the proposed project would generate additional GHG emissions beyond existing conditions. However, GHG emissions generated would not exceed proposed SCAQMD significance thresholds. Impacts would therefore be Class III, *less than significant.*

As stated above, GHG emissions for potential buildout of the proposed project site were calculated using CalEEMod based on the project's construction schedule and the type of development proposed. The following summarizes the project's overall GHG emissions (see Appendix 4.2 for full CalEEMod worksheets).

Construction Emissions. The project applicant's construction plan indicates that construction would occur in phases over approximately one year. Based on the CalEEMod results, construction activity facilitated by the proposed project would generate an estimated 1,348 metric tons of CO_2E (as shown in Table 4.3-1). Amortized over a 30-year period (the assumed life of the project), construction facilitated by the project would generate an estimated 44.95 metric tons of CO_2E per year.

Operational Indirect and Stationary Direct Emissions.

Area Source Emissions. CalEEMod was used to calculate direct sources of air emissions located at the project site. This includes consumer product use, architectural coatings, and landscape maintenance equipment. CalEEMod results determined that area source emissions associated with the proposed project would result from landscaping maintenance activities.

As shown in Table 4.3-2, landscaping associated with the project would generate approximately 0.013 metric tons CO_2E per year.

Table 4.3-1
Estimated Construction Emissions of Greenhouse Gases

Emission Source	Annual Emissions	
	Emissions (metric tons)	CO_2E
Carbon Dioxide (CO_2)[1]	1,343.55	1,343.55 metric tons
Methane (CH_4)[1]	0.19	4.8 metric tons
Nitrous Oxide (N_2O)[1]	0.0	0.0 metric tons
Total		**1,348 metric tons**
Amortized over 30 years		**44.95 metric tons per year**

See Appendix B for calculations and for GHG emission factor assumptions.

Table 4.3-2
Estimated Annual Area Source Greenhouse Gas Emissions

Emission Source	Annual Emissions CO_2E
Landscaping	0.013 metric tons
Total	**0.013 metric tons**

See Appendix B for calculations and for GHG emission factor assumptions.

Energy Use. Operation of the proposed new buildings would consume both electricity and natural gas. The generation of electricity through combustion of fossil fuels typically yields CO_2, and to a smaller extent, N_2O and CH_4. As discussed above, annual electricity and natural gas emissions can be calculated using default values from the CEC sponsored CEUS and RASS studies which are built into the CalEEMod model.

As shown in Table 4.3-3, electricity consumption associated with the project would generate approximately 1,710 metric tons CO_2E per year. Natural gas use would generate approximately 499 metric tons CO_2E per year. Thus, overall energy use at the project site would generate approximately 2,209 metric tons CO_2E per year.

Table 4.3-3
Estimated Annual Energy-Related Greenhouse Gas Emissions

Emission Source	Annual Emissions CO_2E
Electricity	1,710 metric tons
Natural Gas	499 metric tons
Total	**2,209 metric tons**

See Appendix B for calculations and for GHG emission factor assumptions.

Solid Waste Emissions. It is anticipated that the development facilitated by the proposed project would generate approximately 613 tons of solid waste per year according to the CalEEMod output. As shown in Table 4.3-4, based on this estimate, this aspect of the project would generate approximately 279 metric tons of CO_2E per year.

Table 4.3-4
Estimated Annual Solid Waste Greenhouse Gas Emissions

Emission Source	Annual Emissions CO_2E
Solid Waste	279 metric tons

See Appendix B for calculations and for GHG emission factor assumptions.

Water Use Emissions. It is anticipated that the project would use approximately 114 million gallons of water per year, based on CalEEMod water demand assumptions. Based on the amount of electricity generated in order to supply this amount of water, as shown in Table 4.3-5, this aspect of the project would generate approximately 569 metric tons of CO_2E per year.

Table 4.3-5
Estimated Greenhouse Gas Emissions from Water Use

Emission Source	Annual Emissions CO_2E
Water Use	569 metric tons

See Appendix B for calculations and for GHG emission factor assumptions.

Transportation Emissions. Mobile source GHG emissions were estimated using the project's traffic study prepared by LLG (March 2014) and by the total vehicle miles traveled (VMT) estimated in CalEEMod. Based on the CalEEMod estimate, the proposed project would generate approximately 11,515,989 annual VMT.

Table 4.3-6 shows the estimated mobile emissions of GHGs for the project based on the estimated annual VMT. As noted above, the CalEEMod model does not calculate N_2O emissions related to mobile sources. As such, N_2O emissions were calculated based on the project's VMT using calculation methods provided by the California Climate Action Registry General Reporting Protocol (January 2009). As shown in Table 4.3-6, the project would result in approximately 5,075 metric tons of CO_2E associated with mobile emissions.

Table 4.3-6
Estimated Annual Mobile Emissions of Greenhouse Gases

Emission Source	Annual Emissions CO_2E
Mobile Emissions (CO_2 & CH_4) [1]	5,047 metric tons
Mobile Emissions (N_2O) [2]	0 metric tons
Total	**5,047 metric tons**

[1] See Appendix B for calculations in CalEEMod Model output from Air Quality Analysis

Combined Construction, Stationary and Mobile Source Emissions. Table 4.3-7 combines the construction, operational and mobile GHG emissions associated with onsite development for the proposed project. Construction emissions associated with construction activity (approximately 432 metric tons CO_2E) are amortized over 30 years (the anticipated life of the project). For the proposed project, the combined annual emissions would total approximately 8,148 metric tons CO_2E/year. This total represents less than 0.001 percent of California's total 2004 emissions of 492 million metric tons. These emission projections indicate that the majority of the project's GHG emissions are associated with vehicular travel (85 percent). However, as noted above, mobile emissions are in part a redirection of existing travel to other locations, and so are to some extent already a part of the total California GHG emissions.

Neither the SCAQMD or the City of Long Beach have adopted formal GHG emissions thresholds that apply to land use projects and no GHG emissions reduction plan have been adopted in Long Beach. Therefore, the proposed project is evaluated based on the SCAQMD's recommended/preferred option threshold for mixed land use types of 10,000 metric tons CO_2E per year (SCAQMD, "Proposed Tier 3 Quantitative Thresholds – Option 1", September 2010).

Table 4.3-7
Combined Annual Emissions of Greenhouse Gases

Emission Source	Annual Emissions CO_2E
Construction	44.95 metric tons
Operational	
Area	0.013 metric tons
Energy	2,209 metric tons
Solid Waste	279 metric tons
Water	569 metric tons
Mobile	5,047 metric tons
Total	**8,148 metric tons**

Sources: See Appendix B for calculations and for GHG emission factor assumptions.

Implementation of the proposed project would generate GHG emissions beyond existing conditions. However, because the total amount of GHG emissions would be lower than the threshold of 10,000 metric tons per year, impacts from GHG emissions would be less than significant.

Mitigation Measures. The proposed project would result in less than 10,000 metric tons CO_2E per year; therefore, no mitigation is necessary.

Significance after Mitigation. Impacts would be less than significant without mitigation.

Impact GHG-2 The proposed project would be consistent with the Climate Action Team GHG reduction strategies and the SCAG Sustainable Communities Strategy. Impacts related to consistency with GHG plans and policies would therefore be Class III, *less than significant.*

The proposed project would be generally consistent with applicable regulations or plans addressing greenhouse gas reductions. As indicated above, the CAT published the Climate Action Team Report to Governor Schwarzenegger and the Legislature (the "2006 CAT Report") in March 2006. The CAT Report identifies a recommended list of strategies that the State could pursue to reduce climate change greenhouse gas emissions. The CAT strategies are recommended to reduce GHG emissions at a statewide level to meet the goals of the Executive Order S-3-05. These are strategies that could be implemented by various State agencies to ensure that the Governor's targets are met and can be met with existing authority of the State agencies.

The City of Long Beach adopted a Sustainable City Action Plan in 2010. This plan contains goals intended to support sustainable development within the City. Implementation of this plan would contribute to a reduction in the City's overall GHG emissions.

Tables 4.3-8 through 4.3-10 illustrate that the proposed project would be consistent with the GHG reduction strategies set forth by the 2006 CAT Report and the SCAG SCS. Therefore, additional mitigation measures would not be required. The SCAG SCS contains a number of strategies that relate to the operations of SCAG and regional land use planning. Since such strategies lie beyond the scope of individual development projects, only those strategies applicable to the proposed project are addressed.

Table 4.3-8
Project Consistency with Applicable Climate Action Team Greenhouse Gas Emission Reduction Strategies

Strategy	*Project Consistency*
California Air Resources Board	
Vehicle Climate Change Standards AB 1493 (Pavley) required the state to develop and adopt regulations that achieve the maximum feasible and cost-effective reduction of climate change emissions emitted by passenger vehicles and light duty trucks. Regulations were adopted by the CARB in September 2004.	**Consistent** The vehicles that travel to and from the project site on public roadways would be in compliance with CARB vehicle standards that are in effect at the time of vehicle purchase.
Diesel Anti-Idling The CARB adopted a measure to limit diesel-fueled commercial motor vehicle idling in July 2004.	**Consistent** Current State law restricts diesel truck idling to five minutes or less. Diesel trucks operating from and making deliveries to the project site are subject to this state-wide law. Construction vehicles are also subject to this regulation.
Hydrofluorocarbon Reduction 1) Ban retail sale of HFC in small cans. 2) Require that only low GWP refrigerants be used in new vehicular systems. 3) Adopt specifications for new commercial refrigeration. 4) Add refrigerant leak-tightness to the pass criteria for vehicular inspection and maintenance programs. 5) Enforce federal ban on releasing HFCs.	**Consistent** This strategy applies to consumer products. All applicable products would be required to comply with the regulations that are in effect at the time of manufacture.
Alternative Fuels: Biodiesel Blends ARB would develop regulations to require the use of 1 to 4% biodiesel displacement of California diesel fuel.	**Consistent** The diesel vehicles such as construction vehicles that travel to and from the project site on public roadways could utilize this fuel once it is commercially available.
Alternative Fuels: Ethanol Increased use of E-85 fuel.	**Consistent** Employees working at the project site could choose to purchase flex-fuel vehicles and utilize this fuel , which is currently available at locations in Norwalk, approximately 8 miles northeast of the project site.
Heavy-Duty Vehicle Emission Reduction Measures Increased efficiency in the design of heavy duty vehicles and an education program for the heavy duty vehicle sector.	**Consistent** The heavy-duty vehicles for construction activities that travel to and from the project site on public roadways would be subject to all applicable CARB efficiency standards that are in effect at the time of vehicle manufacture.
Achieve 50% Statewide Recycling Goal Achieving the State's 50% waste diversion mandate as established by the Integrated Waste Management Act of 1989, (AB 939, Sher, Chapter 1095, Statutes of 1989), will reduce climate change emissions associated with energy intensive material extraction and production as well as methane emission from landfills. A diversion rate of 48% has been achieved on a statewide basis. Therefore, a 2% additional reduction is needed.	**Consistent** According to data provided by CalRecycle, the City of Long Beach met its target disposal rates for both per resident and per employee metrics. Based on data for 2011 (the most recent year for which approved data is available), the City's per resident disposal rate was 3.8 pounds per day (ppd), half of the City's 7.6 ppd target and the City's per employee disposal rate was 11.8 ppd, less than half of the 25.1 ppd target. The City has implemented more than 40 programs designed to sustain these disposal rates.

Table 4.3-8
Project Consistency with Applicable Climate Action Team Greenhouse Gas Emission Reduction Strategies

Strategy	*Project Consistency*
Zero Waste – High Recycling Efforts to exceed the 50% goal would allow for additional reductions in climate change emissions.	**Consistent** As described above it is anticipated that the proposed project would participate in waste diversion programs. The project would also be subject to all applicable State and City requirements for solid waste reduction as they change in the future.
Department of Forestry	
Urban Forestry A new statewide goal of planting 5 million trees in urban areas by 2020 would be achieved through the expansion of local urban forestry programs.	**Consistent** Landscaping for new structures would result in additional planted trees throughout the project site.
Department of Water Resources	
Water Use Efficiency Approximately 19% of all electricity, 30% of all natural gas, and 88 million gallons of diesel are used to convey, treat, distribute and use water and wastewater. Increasing the efficiency of water transport and reducing water use would reduce greenhouse gas emissions.	**Consistent** The new proposed structures would be required to be consistent with CalGreen standards. As such, the proposed project would be equipped with low-flow plumbing fixtures, reducing water use.
Energy Commission (CEC)	
Building Energy Efficiency Standards in Place and in Progress Public Resources Code 25402 authorizes the CEC to adopt and periodically update its building energy efficiency standards (that apply to newly constructed buildings and additions to and alterations to existing buildings).	**Consistent** The proposed project would need to comply with the standards of Title 24 that are in effect at the time of development. The project would be equipped with equipment (e.g. HVAC systems), lighting fixtures, and lighting that meets Title 24 requirements.
Appliance Energy Efficiency Standards in Place and in Progress Public Resources Code 25402 authorizes the Energy Commission to adopt and periodically update its appliance energy efficiency standards (that apply to devices and equipment using energy that are sold or offered for sale in California).	**Consistent** Under State law, appliances that are purchased for the project - both pre- and post-development – would be consistent with energy efficiency standards that are in effect at the time of manufacture.
Fuel-Efficient Replacement Tires & Inflation Programs State legislation established a statewide program to encourage the production and use of more efficient tires.	**Consistent** Employees working at the project site could purchase tires for their vehicles that comply with state programs for increased fuel efficiency.
Municipal Utility Energy Efficiency Programs/Demand Response Includes energy efficiency programs, renewable portfolio standard, combined heat and power, and transitioning away from carbon-intensive generation.	*Not applicable*, but project development would not preclude the implementation of this strategy by municipal utility providers.

Table 4.3-8
Project Consistency with Applicable Climate Action Team Greenhouse Gas Emission Reduction Strategies

Strategy	*Project Consistency*
Municipal Utility Renewable Portfolio Standard California's Renewable Portfolio Standard (RPS), established in 2002, requires that all load serving entities achieve a goal of 20% of retail electricity sales from renewable energy sources by 2017, within certain cost constraints.	*Not applicable*, but the project would not preclude the implementation of this strategy by Southern California Edison.
Municipal Utility Combined Heat and Power Cost effective reduction from fossil fuel consumption in the commercial and industrial sector through the application of on-site power production to meet both heat and electricity loads.	*Not applicable* since this strategy addresses incentives that could be provided by utility providers such as Southern California Edison and The Gas Company.
Alternative Fuels: Non-Petroleum Fuels Increasing the use of non-petroleum fuels in California's transportation sector, as recommended as recommended in the CEC's 2003 and 2005 Integrated Energy Policy Reports.	**Consistent** Employees working at the project site could choose to purchase flex-fuel vehicles and utilize this fuel , which is currently available at locations in Norwalk, approximately 8 miles northeast of the project site.
Green Buildings Initiative Green Building Executive Order, S-20-04 (CA 2004), sets a goal of reducing energy use in public and private buildings by 20% by the year 2015, as compared with 2003 levels. The Executive Order and related action plan spell out specific actions state agencies are to take with state-owned and -leased buildings. The order and plan also discuss various strategies and incentives to encourage private building owners and operators to achieve the 20% target.	**Consistent** As discussed previously, the project would be required to be constructed in compliance with the standards of Title 24 that are in effect at the time of development. The 2013 Title 24 standards, which will take effect on July 1, 2014, improve nonresidential energy efficiency by 30 percent compared to the current 2008 standards.
Business, Transportation and Housing	
Smart Land Use and Intelligent Transportation Systems (ITS) Smart land use strategies encourage jobs/housing proximity, promote transit-oriented development, and encourage high-density residential/commercial development along transit corridors. ITS is the application of advanced technology systems and management strategies to improve operational efficiency of transportation systems and movement of people, goods and services. The Governor is finalizing a comprehensive 10-year strategic growth plan with the intent of developing ways to promote, through state investments, incentives and technical assistance, land use, and technology strategies that provide for a prosperous economy, social equity and a quality environment. Smart land use, demand management, ITS, and value pricing are critical elements in this plan for improving mobility and transportation efficiency. Specific strategies include: promoting jobs/housing proximity	**Consistent** The proposed project would provide employment opportunities near existing residential and educational uses. The project site is accessible via existing bus transit facilities. For example, Long Beach Transit bus route 111 has a stop at Conant Street and Lakewood Boulevard.

Table 4.3-8
Project Consistency with Applicable Climate Action Team Greenhouse Gas Emission Reduction Strategies

Strategy	*Project Consistency*
and transit-oriented development; encouraging high density residential/commercial development along transit/rail corridor; valuing and congestion pricing; implementing intelligent transportation systems, traveler information/traffic control, incident management; accelerating the development of broadband infrastructure; and comprehensive, integrated, multimodal/intermodal transportation planning.	
Public Utilities Commission (PUC)	
Accelerated Renewable Portfolio Standard The Governor has set a goal of achieving 33% renewable in the State's resource mix by 2020. The joint PUC/Energy Commission September 2005 Energy Action Plan II (EAP II) adopts the 33% goal.	*Not applicable*, but project development would not preclude the implementation of this strategy by energy providers.
California Solar Initiative The solar initiative includes installation of 1 million solar roofs or an equivalent 3,000 MW by 2017 on homes and businesses, increased use of solar thermal systems to offset the increasing demand for natural gas, use of advanced metering in solar applications, and creation of a funding source that can provide rebates over 10 years through a declining incentive schedule.	**Consistent** The proposed project does not include solar power generation. However, the project does not preclude the installation of photovoltaic systems in the future.

Table 4.3-9
Project Consistency with Applicable SCAG SCS Greenhouse Gas Emission Reduction Strategies

Strategy	*Project Consistency*
Land Use Actions and Strategies	
Encourage the use of range-limited battery electric and other alternative fueled vehicles through policies and programs, such as, but not limited to, neighborhood oriented development, complete streets, and Electric (and other alternative fuel) Vehicle Supply Equipment in public parking lots.	**Consistent** Employees working at the project site could choose to purchase flex-fuel vehicles and utilize this fuel , which is currently available at locations in Norwalk, approximately 8 miles northeast of the project site.
Support projects, programs, policies and regulations that encourage the development of complete communities, which includes a diversity of housing choices and educational opportunities, jobs for a variety of skills and education, recreation and culture, and a full-range of shopping, entertainment and services all within a relatively short distance.	**Consistent** The proposed project is located in a highly urbanized area and in close proximity to existing residential and educational development. Existing public transit facilities are located near the project site. The proposed project would be consistent with efforts to provide employment opportunities near residential areas, and with programs intended to support the use of alternative transit modes, including non-auto (e.g., walking, bicycles) and public transportation.

Table 4.3-9
Project Consistency with Applicable SCAG SCS Greenhouse Gas Emission Reduction Strategies

Strategy	*Project Consistency*
Transportation Network Actions and Strategies	
Expand the use of transit modes in our subregions such as BRT, rail, limited-stop service, and point-to-point express services utilizing the HOV and HOT lane networks.	**Consistent** The proposed project is located in a highly urbanized area and in close proximity to existing public transit facilities. The proposed project would be consistent with efforts to support the use of alternative transit modes, including non-auto (e.g., walking, bicycles) and public transportation.
Encourage transit providers to increase frequency and span of service in TOD/HQTA and along targeted corridors where cost-effective and where there is latent demand for transit usage.	**Consistent** The proposed project is located in a highly urbanized area and in close proximity to existing public transit facilities. The proposed project would be consistent with efforts to support the use of public transportation.
Prioritize transportation investments to support compact infill development that includes a mix of land uses, housing options, and open/park space, where appropriate, to maximize the benefits for existing communities, especially vulnerable populations, and to minimize any negative impacts.	**Consistent** The proposed project is located in an area surrounded by existing development, and would add employment-generating uses. As such, the project would be infill development and would provide jobs in an area with an existing residential population.
Explore and implement innovative strategies and projects that enhance mobility and air quality, including those that increase the walkability of communities and accessibility to transit via non-auto modes, including walking, bicycling, and neighborhood electric vehicles (NEVs) or other alternative fueled vehicles.	**Consistent** The proposed project is located in a highly urbanized area and in close proximity to existing residential and educational development. Existing public transit facilities are located near the project site. The proposed project would be consistent with efforts to provide employment opportunities near residential areas, and with programs intended to support the use of alternative transit modes, including non-auto (e.g., walking, bicycles) and public transportation.
Collaborate with local jurisdictions to plan and develop residential and employment development around current and planned transit stations and neighborhood commercial centers.	**Consistent** The proposed project is located in a highly urbanized area and in close proximity to existing public transit facilities. The proposed project would be consistent with efforts to support the use of public transportation.
Develop first-mile/last-mile strategies on a local level to provide an incentive for making trips by transit, bicycling, walking, or neighborhood electric vehicle or other ZEV options.	**Consistent** The proposed project is located in a highly urbanized area and in close proximity to existing residential and educational development. Existing public transit facilities are located near the project site. The proposed project would be consistent with efforts to provide employment opportunities near residential areas, and with programs intended to support the use of alternative transit modes, including non-auto (e.g., walking, bicycles) and public transportation.
Transportation Demand Management Actions and Strategies	
Support work-based programs that encourage emission reduction strategies and incentivize active transportation commuting or ride-share modes.	**Consistent** Occupants of the project site could implement ridesharing or other commuting programs intended to reduce emissions from motor vehicles.

Table 4.3-9
Project Consistency with Applicable SCAG SCS Greenhouse Gas Emission Reduction Strategies

Strategy	*Project Consistency*
Encourage the development of telecommuting programs by employers through review and revision of policies that may discourage alternative work options.	**Consistent** Occupants of the project site could implement telecommuting programs as appropriate.
Clean Vehicle Technology Actions and Strategies	
Develop a Regional PEV Readiness Plan with a focus on charge port infrastructure plans to support and promote the introduction of electric and other alternative fuel vehicles in Southern California.	*Not applicable*, but project development would not preclude the implementation of this strategy.

Table 4.3-10
Project Consistency with Applicable Long Beach Sustainable City Action Plan Goals

Goal	*Project Consistency*
Buildings and Neighborhoods	
At least 5 million square feet of privately developed LEED certified (or equivalent) green buildings by 2020	**Consistent** The proposed project is not currently designed to qualify for LEED certification. However, the project includes sustainability features that would be compatible with the general aims of LEED certification, such as being infill development, being located near public transit stops, and providing bicycle racks. The proposed project would not conflict with the implementation of this goal.
Plant at least 10,000 trees in Long Beach by 2020	**Consistent** Landscaping for new structures would result in additional planted trees throughout the project site.
50% of Long Beach residents work in Long Beach by 2020	**Consistent** The proposed project would provide employment opportunities for City residents.
Energy	
Reduce community electricity use by 15% by 2020 Reduce community natural gas use by 10 % by 2020	**Consistent** The proposed project would comply with the most recent Title 24 energy efficiency requirements, which would

Table 4.3-10
Project Consistency with Applicable
Long Beach Sustainable City Action Plan Goals

Goal	*Project Consistency*
	increase energy efficiency. The 2013 Title 24 standards, which will take effect on July 1, 2014, improve nonresidential energy efficiency by 30 percent compared to the current 2008 standards
Facilitate the development of at least 8 Megawatts of solar energy within the community (private rooftops) by 2020.	**Consistent** Current project designs do not include, but do not preclude, the installation of photovoltaic electricity generation systems on project roofs. However, the proposed project would not impair the implementation of this goal.
Transportation	
Increase public transit ridership by 25% by 2016 Increase bike ridership from 1% to 10% by 2016	**Consistent** The proposed project is infill development in an area served by existing public transit lines and within 0.25 mile of existing transit stops. The project site is located within 0.25 mile of existing residential development, and would provide bicycle racks to support bicycle commuting.
Annual reduction in average pounds of solid waste generated per person per day	**Consistent** According to data provided by CalRecycle, the City of Long Beach met its target disposal rates for both per resident and per employee metrics. Based on data for 2011 (the most recent year for which approved data is available), the City's per resident disposal rate was 3.8 pounds per day (ppd), half of the City's 7.6 ppd target and the City's per employee disposal rate was 11.8 ppd, less than half of the 25.1 ppd target. The City has implemented more than 40 programs designed to sustain these disposal rates. The proposed project would comply with City programs intended to continue solid waste diversion.

As indicated in tables 4.3-7 through 4.3-9, the proposed project would be consistent with CAT strategies, SCAG'S SCS GHG emission reduction strategies, and the Long Beach Sustainable City Action Plan Goals. Therefore, the proposed project would be consistent with the objectives

of AB 32, SB 97, and SB 375, and its contribution to cumulative GHG emissions and climate change would not be significant.

Mitigation Measures. As specified above, the proposed project would be consistent with the 2006 CAT Report and the SCAG SCS; therefore, no mitigation is necessary.

Significance after Mitigation. Impacts would be less than significant without mitigation.

c. Cumulative Impacts. As discussed in Section 3.0, *Environmental Setting*, cumulative development in Long Beach, including development facilitated by the proposed project, would add dwelling units and non-residential development that would generate GHGs from vehicle trips and other sources. Analyses of GHGs are cumulative in nature, as they affect the accumulation of greenhouse gases in the atmosphere. Projects falling below the impact thresholds discussed above are therefore considered to have a less than significant impact, both individually and cumulatively. As indicated in Impact GHG-1, GHG emissions associated with the proposed project would be less than significant, and the project's contribution to cumulative impacts are therefore also cumulatively less than significant.

4.4 NOISE

This section addresses the impact of the noise generated by the proposed project on nearby noise-sensitive land uses, as well as the effect of current and future noise levels on the proposed project land uses.

4.4.1 Setting

a. Overview of Sound Measurement. Noise level (or volume) is generally measured in decibels (dB) using the A-weighted sound pressure level (dBA). The A-weighting scale is an adjustment to the actual sound power levels to be consistent with that of human hearing response, which is most sensitive to frequencies around 4,000 Hertz (about the highest note on a piano) and less sensitive to low frequencies (below 100 Hertz).

The sound pressure level is measured on a logarithmic scale with the 0 dB level based on the lowest detectable sound pressure level that people can perceive (an audible sound that is not zero sound pressure level). Based on the logarithmic scale, a doubling of sound energy is equivalent to an increase of 3 dB, and a sound that is 10 dB less than the ambient sound level has no effect on ambient noise. Because of the nature of the human ear, a sound must be about 10 dB greater than the reference sound to be judged as twice as loud. In general, a 3 dB change in community noise levels is noticeable, while 1-2 dB changes generally are not perceived. Quiet suburban areas typically have noise levels in the range of 40-50 dBA, while those along arterial streets are in the 50-60+ dBA range. Normal conversational levels are in the 60-65 dBA range, and ambient noise levels greater than 65 dBA can interrupt conversations.

Noise levels typically attenuate (or drop off) at a rate of 6 dBA per doubling of distance from point sources such as industrial machinery. Noise from lightly traveled roads typically attenuates at a rate of about 4.5 dBA per doubling of distance. Noise from heavily traveled roads typically attenuates at about 3 dBA per doubling of distance.

In addition to the actual instantaneous measurement of sound levels, the duration of sound is important since sounds that occur over a long period of time are more likely to be an annoyance or cause direct physical damage or environmental stress. One of the most frequently used noise metrics that considers both duration and sound power level is the equivalent noise level (Leq). The Leq is defined as the single steady A-weighted level that is equivalent to the same amount of energy as that contained in the actual fluctuating levels over a period of time (essentially, the average noise level). Typically, Leq is summed over a one-hour period.

The actual time period in which noise occurs is also important since noise that occurs at night tends to be more disturbing than that which occurs during the daytime. Two commonly used noise metrics – the Day-Night average level (Ldn) and the Community Noise Equivalent Level (CNEL) - recognize this fact by weighting hourly Leqs over a 24-hour period. The Ldn is a 24-hour average noise level that adds 10 dB to actual nighttime (10 PM to 7 AM) noise levels to account for the greater sensitivity to noise during that time period. The CNEL is identical to the Ldn, except it also adds a 5 dB penalty for noise occurring during the evening (7 PM to 10 PM).

b. Sensitive Receptors. Noise exposure goals for various types of land uses reflect the varying noise sensitivities associated with those uses. Residences, hospitals, schools, guest lodging, and libraries are most sensitive to noise intrusion and therefore have more stringent noise exposure targets than manufacturing or agricultural uses that are not subject to effects such as sleep disturbance. Noise sensitive land uses near the project area include residential neighborhoods approximately 730 feet east of the project site's eastern boundary across Clark Avenue, and the Long Beach City College campus located north of the project site. While college facilities are located immediately east of the project site, they are administrative facilities where classes are not conducted. The nearest classroom buildings are located approximately 1,800 feet north of the project site. Therefore, the residential neighborhood located east of the project site is the nearest sensitive receptor for purposes of noise analysis.

c. Regulatory Setting. Chapter 8.80 of the Long Beach Municipal Code provides regulations regarding noise levels in the City. Section 8.80.160 sets exterior noise level limits for districts identified in the municipal code. The project site is located in District 1, and the following exterior noise level standards would therefore apply to the project site:

- *Daytime (7:00 AM – 10:00 PM): 50 dBA*
- *Nighttime (10:00 PM – 7:00 AM) 45 dBA*

Section 8.80.150 states that the noise standards provided in Section 8.80.160 shall be applied as follows:

> *No person shall operate or cause to be operated any source of sound at any location within the incorporated limits of the City or allow the creation of any noise on property owned, leased, occupied, or otherwise controlled by such person, which causes the noise level when measured from any other property, either incorporated or unincorporated, to exceed:*
>
> 1) *The noise standard for that land use district as specified in Table A in Section 8.80.160 for a cumulative period of more than thirty (30) minutes in any hour; or*
> 2) *The noise standard plus five (5) decibels for a cumulative period of more than fifteen (15) minutes in any hour; or*
> 3) *The noise standard plus ten (10) decibels for a cumulative period of more than five (5) minutes in any hour; or*
> 4) *The noise standard plus fifteen (15) decibels for a cumulative period of more than one (1) minute in any hour; or*
> 5) *The noise standard plus twenty (20) decibels or the maximum measured ambient, for any period of time.*

Section 8.80.170 of the Long Beach Municipal Code sets interior noise levels for specific types of development, as shown in Table 4.4-1.

Table 4.4-1
City of Long Beach Interior Noise Level Standards

Land Use	Time Interval	Allowable Noise Level (dBA)
Residential	10:00 PM – 7:00 AM	35
	7:00 AM – 10:00 PM	45
School	10:00 PM – 7:00 AM	45
	7:00 AM – 10:00 PM	45
Hospital, designated quiet zones, and noise sensitive zones	10:00 PM – 7:00 AM	40
	7:00 AM – 10:00 PM	40

Source: Long Beach Municipal Code Sec. 8.80.170

Section 8.80.202 of the Long Beach Municipal Code sets restrictions on construction activities as follows:

- *No person shall operate or permit the operation of any tools or equipment used for construction, alteration, repair, remodeling, drilling, demolition or any other related building activity which produce loud or unusual noise which annoys or disturbs a reasonable person of normal sensitivity between the hours of 7:00 PM and 7:00 AM the following day on weekdays, except for emergency work authorized by the Building Official.*
- *No person shall operate or permit the operation of any tools or equipment used for construction, alteration, repair, remodeling, drilling, demolition or any other related building activity which produce loud or unusual noise which annoys or disturbs a reasonable person of normal sensitivity between the hours of 7:00 PM on Friday and 9:00 AM on Saturday and after 6:00 PM on Saturday, except for emergency work authorized by the Building Official.*
- *No person shall operate or permit the operation of any tools or equipment used for construction, alteration, repair, remodeling, drilling, demolition or any other related building activity at any time on Sunday, except for emergency work authorized by the Building Official or except for work authorized by permit issued by the Noise Control Officer.*

The Long Beach Municipal Code 8.80.200(n) requires that air conditioning equipment generate noise levels of no more than 55 dBA at any point on a neighboring property line. This standard would apply to all air conditioning and refrigerating equipment.

The Long Beach General Plan Noise Element provides outdoor and indoor noise standards for different types of land uses, as summarized in Table 4.4-2.

Table 4.4-2
City of Long Beach General Plan Noise Level Standards

Land Use	Outdoor			Indoor (Ldn)
	Peak	L10	L50	
Residential (7:00 AM–10:00 PM)	70	55	45	45
Residential (10:00 PM–7:00 AM)	60	45	35	35
Commercial (any time)	75	65	55	-
Industrial (any time)	85	70	60	-

Source: Long Beach General Plan Noise Element.

Section 8.80.200(g) of the Long Beach Municipal Code regulates vibration as follows:

> *Operating or permitting the operation of any device that creates vibration which is above the vibration perception threshold of an individual at or beyond the property boundary of the source if on private property or at one hundred fifty feet (150') (forty-six (46) meters) from the source if on a public space or public right-of-way. For the purposes of this subsection, "vibration perception threshold" means the minimum ground or structure-borne vibrational motion necessary to cause a normal person to be aware of the vibration by such directed means as, but not limited to, sensation by touch or visual observation of moving objects. The perception threshold shall be presumed to be .001 g's in the frequency range 0 – 30 hertz and .003 g's in the frequency range between thirty and one hundred hertz.*

d. Existing Noise Sources. The most common sources of noise in the project site vicinity are transportation sources, including aircraft noise and traffic on surrounding roads. Motor vehicle noise is of concern because it is characterized by a high number of individual events, which often create sustained noise levels. Ambient noise levels would be expected to be highest during the daytime and rush hour unless congestion slows speeds substantially. Existing noise sources within the project site consist of motor vehicles using the project site for airport parking.

Long Beach Municipal Airport is located approximately 500 feet southwest of the project site. The most recent evaluation of airport noise was prepared as part of the Long Beach Airport Terminal Area Improvement Project EIR, which was circulated in 2005 and adopted in 2006 (City of Long Beach, 2005). As shown in Figure 4.4-1, the project site is located outside of the airport's 60 dBA noise contour.

The traffic study for the project analyzed five road segments (see Appendix C) and provided the average daily trip (ADT) rate of each roadway segment. Using the ADT data, existing traffic-generated noise levels along these segments was estimated using the Federal Highway Administration (FHWA)Traffic Noise Model (TNM). Table 4.4-3 shows existing traffic-generated noise levels along each of the five segments. Noise levels range from 63.1 dBA to

73.8 dBA. The highest modeled noise level were identified for Lakewood Boulevard, which is a heavily traveled north-south arterial that provides access to I-405 to the south and SR-91 to the north. All of the modeled noise levels shown in Table 4.4-3 currently exceed the City's District 1 daytime and nighttime exterior noise levels of 50 dBA and 45 dBA, respectively.

Table 4.4-3
Existing Traffic-Generated Noise

Roadway Segment	Existing Noise Level (dBA) CNEL
Lakewood Boulevard north of Conant Street	73.4
Faculty Avenue north of Conant Street	64.8
Conant Street west of Faculty Avenue	66.3
Conant Street east of Faculty Avenue	63.1
Lakewood Boulevard south of Conant Street	73.8

Estimates of noise generated by traffic at 50 feet from the roadway centerline. Refer to Appendix 4.4 for these estimates. Calculated using the Federal Highway Administration Traffic Noise Model.

4.4.2 Impact Analysis

a. Methodology and Thresholds of Significance. Noise levels associated with existing and future traffic along area roadways were calculated using the FHWA TNM model based on data provided in the traffic report prepared for the prosed project (LLG, 2014). Construction noise was estimated based on noise level estimates from the US Environmental Protection Agency document *"Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances*."

An impact is considered significant if it can be reasonably argued that the project would result in:

- *Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;*
- *Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels;*
- *A substantial permanent increase in ambient noise levels above levels existing without the project;*
- *A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;*
- *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels*
- *For a project within the vicinity of a private airstrip, expose people residing or working in the project area to excessive noise*

Long Beach Municipal Airport
Noise Level Contours

Figure 4.4-1

Source: Mestre Greve Associates, 2005

As discussed in the Initial Study (Appendix A), the project site is not located in the vicinity of a private airstrip. This impact would be less than significant and is not further discussed in this section. The EIR analyzes potential impacts from temporary (i.e., construction-related) noise increases, including potential vibration impacts, under Impact N-1, and permanent operational noise increases under impact N-2. Potential impacts related to noise at the Long Beach Municipal Airport are discussed under impact N-3.

Impacts related to operational on-site activities and traffic noise would be considered significant if project-related activities create noise exceeding the noise standards as shown in Table 4.4-1. Construction noise is considered significant if it would occur during hours when construction activity is prohibited under the Long Beach Municipal Code (see Regulatory Setting above).

Existing off-site development would primarily be affected by potential increased noise associated with increased traffic volumes attributable to the project at various study roadway segments. Impacts to existing development are considered significant if project-generated traffic results in exposure of sensitive receptors to unacceptable noise levels. Federal recommendations were used to determine whether increases in roadway noise would be considered significant where existing noise levels already exceed City thresholds. The level of significance changes with increasing noise exposure, such that smaller changes in ambient noise levels result in significant impacts at higher existing noise levels. Table 4.4-4 shows the significance thresholds for increases in traffic related noise levels caused either by the project alone or by cumulative development.

Table 4.4-4
Noise Impact Criteria

Ldn or Leq in dBA	
Existing Noise Level	**Allowable Noise Increase**
45	7
50	5
55	3
60	2
65	1
70	1
75	0

Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment, 2006.

b. Project Impacts and Mitigation Measures.

Impact N-1 Construction-related activities associated with the proposed project would intermittently generate high noise levels and groundborne vibration on and adjacent to the site. However, construction noise would be temporary and subject to restrictions established in the Municipal Code. Therefore, impacts would be Class III, *less than significant*.

Nearby noise-sensitive land uses, including the existing residential neighborhoods to the east of the project site and offices to the north of the site could be exposed to temporary construction noise and groundborne vibrations during development of the proposed project. Construction noise levels for each phase of project construction were modeled using typical construction equipment noise levels provided by the US EPA. These noise levels were then adjusted based on the distance between the project site and the nearest sensitive receptor, which is located approximately 730 feet east of the project site. Table 4.4-5 presents the modeled noise levels for each construction phase at the nearest noise-sensitive receptor.

Table 4.4-5
Construction Noise Levels at the Nearest Noise-Sensitive Receptor

Construction Phase	Noise Level (dBA Leq) at 730 feet	
	Without Barrier	With Barrier
Demolition	62	39
Site Preparation	62	39
Grading	64	41
Building Construction	59	36
Paving	61	38
Architectural Coating	51	28

Source: EPA, Noise From Construction Equipment and Operations, 1971.

The modeled noise levels shown in Table 4.4-5 for noise occurring 730 feet from the nearest sensitive receptor would occur during construction activity at the project site's eastern boundary. As discussed above in the *Setting*, administrative buildings associated with Long Beach City College are located to the east of the project site. These buildings are approximately 30 feet high, and, along with mature trees in Rosie the Riveter park, would serve as a barrier between construction noise occurring at the project site and the nearest sensitive receptor. Table 4.4-5 shows that with these barriers noise levels at the nearest sensitive receptor would be below the City's 50 dBA exterior noise level standard. Construction noise impacts would therefore be less than significant.

Vibration from construction activities could also have an impact on nearby noise-sensitive land uses. The primary sources of man-made vibration are blasting, grading, pavement breaking and demolition. The source of the highest vibration would be vibratory rollers used during paving

of the project site. Rollers typically cause vibration of 0.21 in/sec (0.007 g) measured at 25 feet (US Department of Transportation, 1995). As discussed above, the sensitive receptor nearest to the project site is located approximately 730 feet to the east. Like noise, vibration attenuates over distance (US Department of Transportation, 1995). Based on the distance between the project site and the nearest sensitive receptor, vibration at this location would be 0.001 in/sec (0.00003 g), which would be well below the City's 0.001 g standard for vibration. Impacts related to vibration would therefore be less than significant.

Mitigation Measures. As impacts would be less than significant, no mitigation is required.

Significance After Mitigation. Impacts would be less than significant without mitigation.

Impact N-2 Onsite operations would generate noise levels that may periodically be audible to existing land uses near and within the project area. However, operational noise is not expected to exceed City noise standards or thresholds. This is a Class III, *less than significant* impact.

Noise levels would increase as a result of ongoing activities associated with the proposed industrial structures. Noise generated by loading docks, mechanical equipment (such as heating, ventilation and air conditioning (HVAC) units), deliveries, trash hauling activities, and general parking lots would be expected. Increased traffic on roads surrounding the project site would also increase noise.

Much of the noise generated by industrial activities would also be intermittent in nature and therefore would likely not exceed City standards. For example, noise associated with parking lots generally includes engine starts, car door closing, horns, and alarms. Although these noise sources may create temporary annoyances, they are not expected to exceed City standards. In addition, the majority of noise would be generated during the daytime when residential and commercial uses are most active and least sensitive to noise.

As discussed in the *Setting*, the nearest sensitive receptors (residences to the east across Clark Avenue) are located approximately 730 feet east of the project site. Noise sources from the proposed industrial uses would consist of vehicular noise in the proposed parking lots, and rooftop HVAC equipment. Compliance with municipal code requirements (discussed above in the *Setting)* would ensure that HVAC and refrigeration equipment associated with the proposed industrial uses does not exceed City exterior noise level standards at the nearest sensitive receptor. Vehicular noise is addressed below. The majority of operational noise resulting from the project would occur in indoor areas and is therefore not expected to affect offsite sensitive receptors. Therefore, project operation would not result in noise levels that exceed City standards at these sensitive receptors, and impacts related to operational noise would thus be less than significant.

Development of the proposed project would increase the number of vehicle trips to and from the site, which would increase traffic noise on area roadways within the vicinity of the project site . Estimated average daily traffic (ADT) values from the traffic study were used to model the

change in noise levels resulting from increased traffic on five roadway segments within the vicinity of the proposed project site. Table 4.4-6 shows exterior noise level increases that would result from project-related traffic increases. Existing plus project traffic volumes would increase exterior noise levels on three of the five analyzed roadway segments: Lakewood Boulevard north of Conant Street, and on Conant Street both east and west of Faculty Avenue. Project-related noise increases would be as high as 0.5 dBA, which is less than the significance thresholds that apply along each studied road segment. Therefore, impacts from project-related traffic noise increases would therefore be considered less than significant.

Table 4.4-6
Pre-Project and Post-Project
Traffic Noise Impacts

Roadway	Projected Noise Level (dBA CNEL)			Change In Noise Level (dBA CNEL)		Threshold	Significant
	Existing	Existing Plus Project	Cumulative Growth Plus Project	Project Only	Cumulative Growth Plus Project		
Lakewood Boulevard north of Conant Street	73.4	73.5	73.7	0.1	0.3	1	No
Faculty Avenue north of Conant Street	64.8	64.8	65.0	0.0	0.2	2	No
Conant Street west of Faculty Avenue	66.3	66.8	67.0	0.5	0.7	1	No
Conant Street east of Faculty Avenue	63.1	63.6	64.0	0.5	0.9	2	No
Lakewood Boulevard south of Conant Street	73.8	73.8	74.0	0.0	0.2	1	No

Estimates of noise generated by traffic from roadway centerline at 50 feet. Refer to Appendix B for these estimates.

Note: As shown in Table 4.4-4, an increase of 2 dB would be considered significant when existing ambient noise is between 60-65 dB, and an increase of 1 dB would be significant when existing ambient noise is 65 dB or greater. This threshold is used to determine audible noise increases when existing conditions already exceed City noise thresholds.

Mitigation Measures. As impacts would be less than significant, no mitigation is required.

Significance After Mitigation. Impacts would be less than significant without mitigation.

Impact N-3 Aircraft associated with nearby airports would periodically generate noise that would be audible at the project site. However, aircraft noise would not exceed City interior noise standards. This is a Class III, *less than significant* impact.

The project site is located approximately 500 northeast of the Long Beach Municipal Airport. As shown in Figure 4.4-1, the project site is located outside of the airport's 60 dBA noise contour. This would be consistent with the proposed industrial use of the project site (see table 4.4-2).

Employees at the project site would likely spend most of the working day indoors, and thus an workers would not be exposed to excessive noise. While the Long Beach Municipal Code does not provide interior noise level standards for industrial development, interior noise levels of up to 45 dBA are allowable for sensitive uses such as schools and residences. Standard construction

techniques typically reduce indoor noise levels by 20 dBA below the exterior noise level. Since the project site is located outside of the airport's 60 dBA noise contour, interior noise levels from airport noise would be below 40 dBA. Employees working at the project site would therefore not be exposed to noise levels that exceed City standards for indoor noise. Impacts would be less than significant.

Mitigation Measures. No mitigation is required.

Significance After Mitigation. Impacts would be less than significant without mitigation.

c. Cumulative Impacts. Cumulative development in the project area would result in the development of several nearby parcels. The operational noise generation of cumulative projects is not known, but is expected to be similar to existing development in the project area. Each cumulative project would be required to analyze the potential for operational noise impacts under CEQA. As shown in Table 4.4-6, cumulative impacts along the analyzed roadways would contribute to further exceedance of the exterior noise standard over time. Cumulative traffic noise increases along the analyzed road segments would range from 0.2 dBA to 0.9 dBA CNEL, which would not exceed applicable thresholds for significant impacts. All future development would be required to comply with the City's noise and vibration standards, which restrict the level of noise and vibration that can be generated near a property according to its designated use. Cumulative impacts would be less than significant.

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4.5 TRANSPORTATION AND TRAFFIC

This section analyzes the potential for the proposed project to cause significant impacts to the existing traffic and transportation facilities in the City of Long Beach. The analysis in this section is based on the Traffic Impact Analysis (TIA) prepared for the proposed project by Linscott, Law, and Greenspan, Engineers, in March 2014. The full TIA is provided in Appendix C.

4.5.1 Setting

a. Existing Street Network. Regional access to the project site is provided by the I-405 Freeway located south of the project. Other key roadways in the local area network include Lakewood Boulevard, Faculty Avenue, Clark Avenue, Carson Street, Conant Street, and Wardlow Road. The following discussion provides a brief synopsis of these key area streets. The descriptions are based on an inventory of existing roadway conditions.

Lakewood Boulevard is primarily an eight-lane, divided roadway that borders the project site on the west. Lakewood Boulevard is oriented in the north-south direction. North of Conant Street, Lakewood Boulevard is a six-lane, divided roadway. The posted speed limit along Lakewood Boulevard is 45 miles per hour (mph). Parking is not permitted on either side of the roadway within the vicinity of the project. The key study intersections of Lakewood Boulevard at Carson Street, Conant Street and Donald Douglas Drive/Wardlow Road are controlled by traffic signals.

Faculty Avenue is a two-lane, undivided roadway oriented in the north-south direction. The posted speed limit along Faculty Avenue is 30 mph. Parking is not permitted on either side of the roadway within the vicinity of the project, but angled parking is available along a cul-de-sac located at the northern end of Faculty Avenue. The key study intersection of Faculty Avenue at Conant Street is controlled by an all-way stop.

Clark Avenue is primarily a four-lane, divided roadway located east of the project site. Clark Avenue is oriented in the north-south direction. South of Conant Street, Clark Avenue is a five-lane, divided roadway, with three lanes in the southbound direction and two lanes in the northbound direction. The posted speed limit along Clark Avenue is 40 mph. North of Conant Street, parking is permitted on the east side and restricted on the west side. South of Conant Street, parking is not permitted on either side of the roadway. The key study intersections of Clark Avenue at Carson Street and Conant Street are controlled by traffic signals.

Carson Street is primarily a five-lane, divided roadway located north of the project site. Carson Street is oriented in the east-west direction, with three lanes in the westbound direction and two lanes in the eastbound direction. West of Lakewood Boulevard and east of Clark Avenue, Carson Street is a six-lane, divided roadway. The posted speed limit along Carson Street is 40 mph. Parking is permitted on both sides of the roadway within the vicinity of the project.

Conant Street is a four-lane, divided roadway that borders the project site on the north. Conant Street is oriented in the east-west direction. West of Faculty Avenue, parking is not permitted

on either side of the roadway. East of Faculty Avenue, parking is permitted on the south side and restricted on the north side.

Wardlow Road is a four-lane, divided roadway located south of the project site. Wardlow Road is oriented in the east-west direction. The posted speed limit along Wardlow Road is 35 mph. Parking is permitted on both sides of the roadway within the vicinity of the project.

b. Existing Public Transit. The Long Beach Transit (LBT) provides public transit services in the vicinity of the project site. A brief description of the transit services is as follows:

LBT Route 93: Route 93 extends from Alondra Boulevard and Woodruff Avenue to Fifth Street Station. Route 93 traverses the study area on Carson Street and Clark Avenue, and operates throughout the day, Monday through Friday. During the weekday AM peak hour, Route 93 provides headways of 3 buses in the eastbound direction and 2 buses in the westbound direction. During the weekday PM peak hour, Route 93 provides headways of 2 buses in the eastbound direction and 3 buses in the westbound direction.

LBT Routes 101 and 103: The routes extend from Santa Fe Avenue and Willow Street to Norwalk Boulevard and Carson Street. The route traverses the study area on Carson Street, Lakewood Boulevard, and Clark Avenue, and operates throughout the day, Monday through Friday. During the weekday AM and PM peak hours, in the eastbound/westbound directions, Routes 101 and 103 provide headways of 2 buses in each direction.

LBT Routes 111 and 112: The route extends from the Downtown Long Beach Station to Lakewood Regional Medical Center. These routes traverse the study area on Carson Street, Lakewood Boulevard, and Clark Avenue, and operate throughout the day, Monday through Sunday. During the weekday AM peak hour, Route 111 provides headways of 2 buses in both the northbound and southbound directions. During the weekday PM peak hour, Route 111 provides headways of 2 buses in the northbound direction and 1 bus in the southbound direction. During the weekday AM peak hour, Route 112 provides a headway of 2 buses in the southbound direction. During the weekday PM peak hour, Route 112 provides a headway of 1 bus in the southbound direction. Route 112 does not provide any buses in the northbound direction during the AM or PM peak hours.

LBT Route 176: The route extends from the Lakewood Mall to San Gabriel and Pacific Coast Highway. The route traverses the study area on Carson Street and Lakewood Boulevard, and operates throughout the day, Monday through Friday. During the weekday AM and PM peak hours, in the northbound/southbound directions, Route 176 provides headways of 2 buses in each direction.

c. Existing Traffic Conditions. In conformance with City of Long Beach and LA County CMP requirements, existing AM and PM peak hour operating conditions for the key signalized study intersections were evaluated using the Intersection Capacity Utilization (ICU) method. The ICU technique is intended for signalized intersection analysis and estimates the volume to capacity (V/C) relationship for an intersection based on the individual V/C ratios for key conflicting traffic movements. The ICU numerical value represents the percent signal (green) time, and thus capacity, required by existing and/or future traffic. It should be noted that the

ICU methodology assumes uniform traffic distribution per intersection approach lane and optimal signal timing.

Per LA County CMP requirements, the ICU calculations use a lane capacity of 1,600 vehicles per hour (vph) for left-turn, through, and right-turn lanes, and dual left turn capacity of 2,880 vph. A clearance interval is also added to each Level of Service calculation. Per City of Long Beach requirements, clearance intervals are based on the number of phases in the intersection and whether the left turning movements are all fully protected or whether some of them are permitted with other left-turn movements being protected.

The ICU value translates to a Level of Service (LOS) estimate, which is a relative measure of the intersection performance. The six qualitative categories of Level of Service have been defined along with the corresponding ICU value range and are shown in Table 4.5-1. The ICU value is the sum of the critical volume to capacity ratios at an intersection; it is not intended to be indicative of the LOS of each of the individual turning movements.

Table 4.5-1
Level of Service Definitions

Level of Service	ICU Value	HCM Delay Value (sec/veh)	Description
A	<0.600	<10	EXCELLENT. No vehicle waits longer than one red light, and no approach phase is fully used.
B	0.601–0.700	10–15	VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.
C	0.701–0.800	15–25	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.
D	0.801–0.900	25–35	FAIR. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.
E	0.901–1.000	35–50	POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.
F	>1.000	>50	FAILURE. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Potentially very long delays with continuously increasing queue lengths.

Highway Capacity Manual (HCM) Method of Analysis (Unsignalized Intersections). The 2000 HCM unsignalized methodology for stop-controlled intersections was utilized for the analysis of the unsignalized intersections. This methodology estimates the average control delay for each of the subject movements and determines the level of service for each movement. For all-way stop controlled intersections, the overall average control delay measured in seconds per vehicle, and level of service is then calculated for the entire intersection. For one-way and two-way stop controlled (minor street stop-controlled) intersections, this methodology estimates the worst side street delay, measured in seconds per vehicle and determines the level of service for that approach.

The HCM control delay value translates to a Level of Service (LOS) estimate, which is a relative measure of the intersection performance. The six qualitative categories of Level of Service have been defined along with the corresponding HCM control delay value range, as shown in Table 4.5-1.

Level of Service Criteria. According to the City of Long Beach, LOS D is the minimum acceptable condition that should be maintained during the peak commute hours, or the current LOS if the existing LOS is worse than LOS D (i.e. LOS E of F).

Existing Daily Roadway Segment Volumes. Manual vehicular turning movement counts were conducted at the six key study locations during the weekday morning and evening peak commuter periods to determine the existing AM peak hour and PM peak hour traffic volumes. Traffic counts at the six key study intersections were conducted in February 2014 by Transportation Studies, Inc. Figures 4.5-1 and 4.5-2 depict the existing weekday AM and PM peak hour traffic volumes at the six key study intersections, respectively. Figure 4.5-2 also presents the existing average daily traffic volumes for the roadway segments in the vicinity of the proposed project.

Existing Level of Service Results. Table 4.5-2 summarizes the existing weekday peak hour service level calculations for the six key study intersections based on existing traffic volumes and current street geometrics. Review of Table 4.5-2 indicates that one of the six study intersections currently operates at an unacceptable level of service during the PM peak hour. The intersection of Clark Avenue at Carson Street currently operates at unacceptable LOS E during the PM peak hour. The remaining five key study intersections currently operate at acceptable levels of service during the AM and PM peak hours.

d. Regulatory Setting.

Congestion Management Program (CMP). In Los Angeles County (County), the CMP uses ICU intersection analysis methodology to analyze its operations. In June 1990, the passage of the Proposition 111 gas tax increase required urbanized areas in the State with a population of 50,000 or more to adopt a CMP. The Los Angeles County Metropolitan Transportation Authority (Metro) is the Congestion Management Agency (CMA) for the County. Metro has been charged with the development, monitoring, and biennial updating of Los Angeles County's CMP. The Los Angeles County CMP is intended to address the impact of local growth on the regional transportation system. The CMP Highway System includes specific roadways, including State highways, and CMP arterial monitoring locations/intersections. The CMP is also the vehicle for proposing transportation projects that are eligible to compete for the State gas tax funds.

City of Long Beach General Plan. It is the stated goal of the City to maintain or improve the current ability to move people and goods to and from activity centers while reinforcing the quality of life in their neighborhoods. This goal is supported by the objectives to: (1) maintain traffic and transportation LOS at LOS D, (2) accommodate reasonable, balanced growth, and (3) maintain or enhance our quality of life.

Table 4.5-2
Existing (Weekday) Intersection Peak Hour Levels of Service Summary

Key Intersection	Control Type	Time Period	Delay (s/v)	LOS
1. Lakewood Boulevard at Carson Street	8-phase signal	AM PM	0.678 0.795	B C
2. Lakewood Boulevard at Conant Street	6-phase signal	AM PM	0.552 0.665	A B
3. Lakewood Boulevard at Donald Douglas Drive/Warlow Road	8-phase signal	AM PM	0.649 0.673	B B
4. Faculty Avenue at Conant Street	All-way stop	AM PM	11.3 s/v 8.7 s/v	B A
5. Clark Avenue at Carson Street	8-phase signal	AM PM	0.743 **0.914**	C **E**
6. Clark Avenue at Carson Street	2-phase signal	AM PM	0.521 0.470	A A

Source: LLG Engineers, 2014; see Appendix 4.5 for full TIA report.
Notes:
s/v = seconds per vehicle
LOS = Level of Service
Ø = Phase
***Bold Delay/LOS** values indicate unacceptable service levels based on LOS criteria identified in this report.*

PD-19 District. The proposed project is located in the Douglas Aircraft Planned Development District (PD-19), which allows new development intensity within this District to equal no more than 5,503 vehicle trips to and from the District in the peak period between 4 and 6PM.

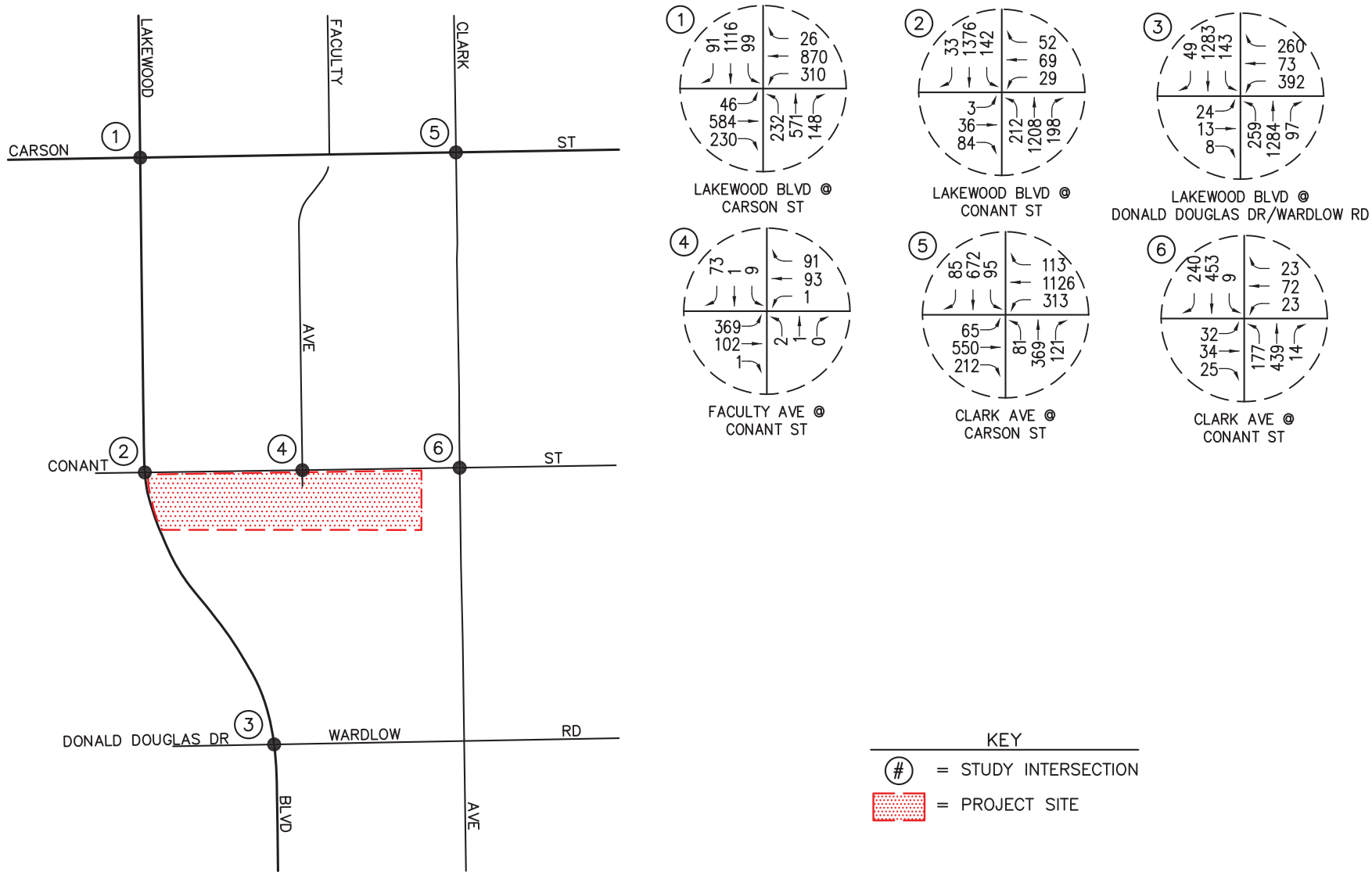
Long Beach Municipal Code. Chapter 21.41, Off-Street Parking and Loading requirements, of the Long Beach Municipal Code (LBMC) provides parking requirements for development projects within the City. Since the proposed project involves development of new commercial uses within the City, which will require adequate parking, the proposed project is subject to the requirements of Chapter 21.41 of the LBMC.

4.5.2 Impact Analysis

a. Methodology and Significance Thresholds. Each of the six key study intersections within the study area was analyzed to determine the delay and corresponding Levels of Service.

Project Traffic Generation. Traffic generation is expressed in vehicle trip ends, defined as one-way vehicular movements, either entering or exiting the generating land use. Generation equations and/or rates used in the traffic forecasting procedure are found in the Ninth Edition of *Trip Generation*, published by the Institute of Transportation Engineers (ITE).

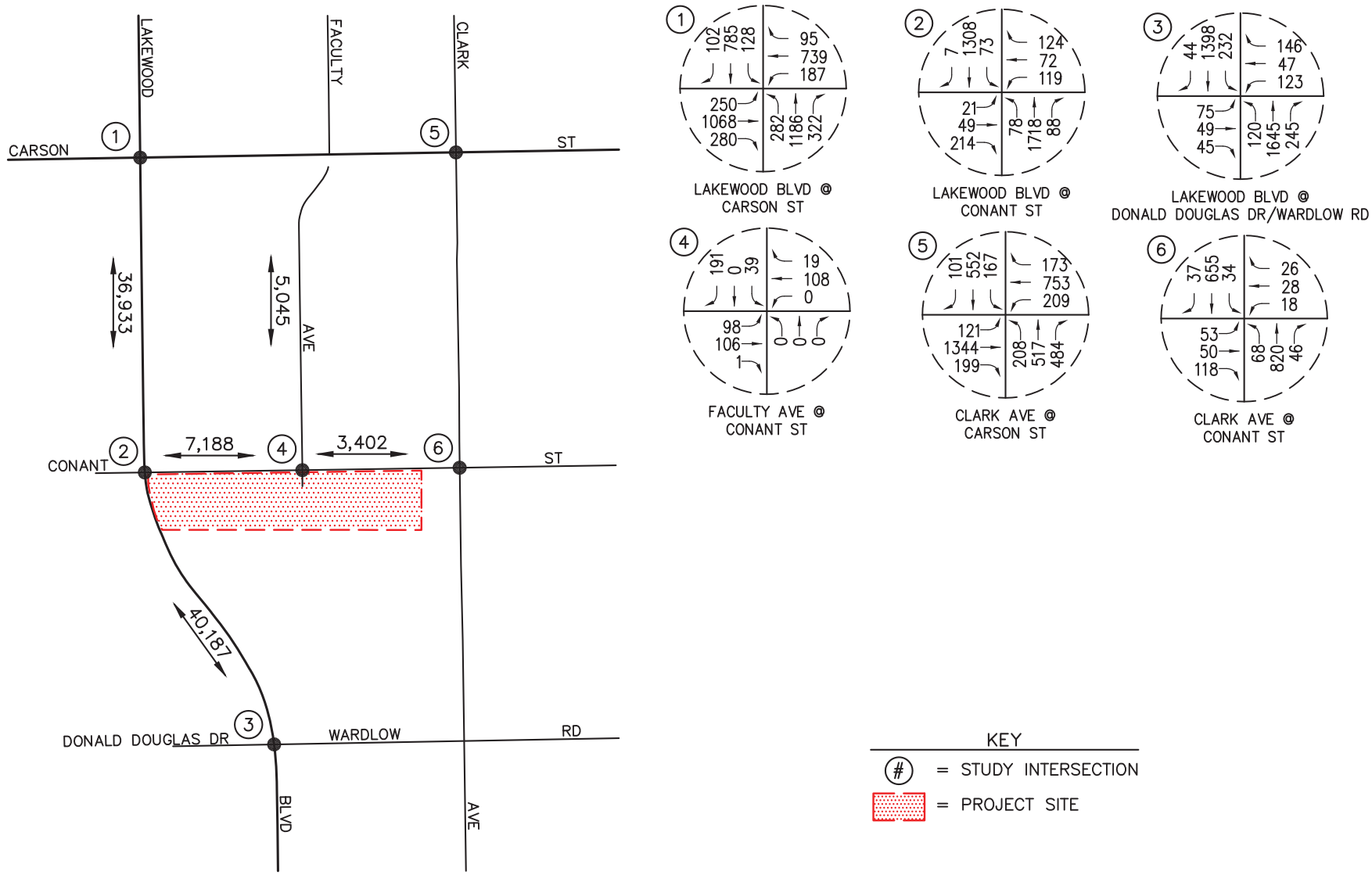
Table 4.5-3 summarizes the trip generation rates used in forecasting the vehicular trips generated by the proposed project and presents the forecast daily and peak hour project traffic volumes for a "typical" weekday. As shown in the upper portion of this table, the trip generation potential for the proposed project was forecast using ITE Land Use Code 140:



Source: LLG, 2014

Existing Weekday Volumes AM Peak Hour

Figure 4.5-1



Source: LLG, 2014

Existing Weekday Volumes PM Peak Hour

Figure 4.5-2

Manufacturing average trip rates and ITE Land Use 150: Warehousing average trip rates. Specifically, ITE Land Use Code 140: Manufacturing average trip rates were utilized to estimate the trip generation potential for Buildings 9 and 10 and ITE Land Use Code 150: Warehousing average trip rates were utilized to estimate the trip generation potential for Building 11. To provide a conservative assessment, no adjustment to the project's trip generation forecast has been applied in this analysis to account for the Transportation Demand Management (TDM) Program required of project by the City.

As shown in the upper portion of Table 4.5-3 (i.e. below the trip generation rates), the proposed project is forecast to generate 1,827 daily trips, with 261 trips (205 inbound, 56 outbound) produced in the AM peak hour and 266 trips (87 inbound, 179 outbound) produced in the PM peak hour on a typical weekday.

To account for the truck trip potential of the proposed project, truck traffic was forecast using the following daily, AM peak hour and PM peak hour truck percentages for manufacturing uses and warehouse uses based on information contained within the *San Bernardino/Riverside County Warehouse/Distribution Center Vehicle Trip Generation Study (January 2005).* A passenger car equivalent (PCE) of 2.5 was applied to each truck trip generation estimate.

- *Manufacturing Truck Percentages = Daily: 12%, AM: 14% and PM: 9%*
- *Warehousing Truck Percentages = Daily: 16%, AM: 19% and PM: 12%*

Table 4.5-3 shows that Building 9 is forecast to generate 649 daily PCE trips with 128 PCE trips forecast during the AM peak hour and 119 PCE trips forecast during the PM peak hour. Building 10 is forecast to generate 532 daily PCE trips with 105 PCE trips forecast during the AM peak hour and 99 PCE trips forecast during the PM peak hour. Building 11 is forecast to generate 1,024 daily PCE trips with 90 PCE trips forecast during the AM peak hour and 89 PCE trips forecast during the PM peak hour.

Table 4.5-3
Project Trip Generation Forecast

	Daily	AM Peak Hour			PM Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
Trip Generation Rates							
140: Manufacturing (TE/1,000 sf)	3.82	0.57	0.16	0.73	0.26	0.47	0.73
150: Warehousing (TE/1,000 sf)	3.56	0.24	0.06	0.30	0.08	0.24	0.32
Trip Generation Forecast							
Building 9 – Manufacturing (144,000 sf)	550	82	23	105	37	68	105
Building 10 – Manufacturing (118,000 sf)	451	67	19	86	31	55	86
Building 11 – Warehousing (232,000 sf)	826	56	14	70	19	56	75
Total Trip Generation	**1,827**	**205**	**56**	**261**	**87**	**179**	**266**
Building 9							
Passenger Car Trips	484	71	19	90	34	62	96
Truck PCE Trips	165	28	10	38	8	15	23
Building 9 Total PCE Trips	**649**	**99**	**29**	**128**	**42**	**77**	**119**
Building 10							
Passenger Car Trips	397	58	16	74	28	50	78
Truck PCE Trips	135	23	8	31	8	13	21
Building 10 Total PCE Trips	**532**	**81**	**24**	**105**	**36**	**63**	**99**
Building 11							
Passenger Car Trips	694	45	12	57	17	49	66
Truck PCE Trips	330	28	5	33	5	18	23
Building 11 Total PCE Trips	**1,024**	**73**	**17**	**90**	**22**	**67**	**89**
Total Project Trip Generation							
Passenger Car Trips	1,575	174	47	221	79	161	240
Truck PCE Trips	630	79	23	102	21	46	67
Total Project PCE Trips	**2,205**	**253**	**70**	**323**	**100**	**207**	**307**

Source: LLG, 2014.

Overall, the trip generation potential for the proposed project totals 2,205 daily PCE trips, with 323 PCE trips (253 inbound, 70 outbound) forecast during the AM peak hour and 307 PCE trips (100 inbound, 207 outbound) forecast during the PM peak hour.

Project Traffic Distribution and Assignment. Traffic distribution determines the directional orientation of traffic. It is based upon the location, intensity of use, accessibility of existing and planned residential areas, employment centers, and other commercial activities. Traffic assignment is the determination of specific trip routes, given the previously developed traffic distribution. Primary factors in route selection are the generalized travel direction, minimum time and minimum distance paths.

The general, directional traffic distribution pattern for the passenger cars and truck components of the project are graphically presented in Figure 4.5-3 and Figure 4.5-4, respectively. Project traffic volumes entering and exiting the project site have been distributed and assigned to the adjacent street system based upon the following considerations:

- *The site's proximity to major traffic carriers (i.e. I-405 Freeway and Lakewood Boulevard),*
- *Expected localized traffic flow patterns based on adjacent street channelization and presence of traffic signals and turn restrictions at the study intersections,*
- *Existing intersection traffic volumes,*
- *Ingress/egress availability at the project site, and*
- *Existing truck routes in the area.*

The anticipated AM and PM peak hour project traffic volumes generated by the proposed project at study intersections are presented in Figures 4.5-5 and 4.5-6, respectively. Figure 4.5-6 also presents the daily project traffic volumes.

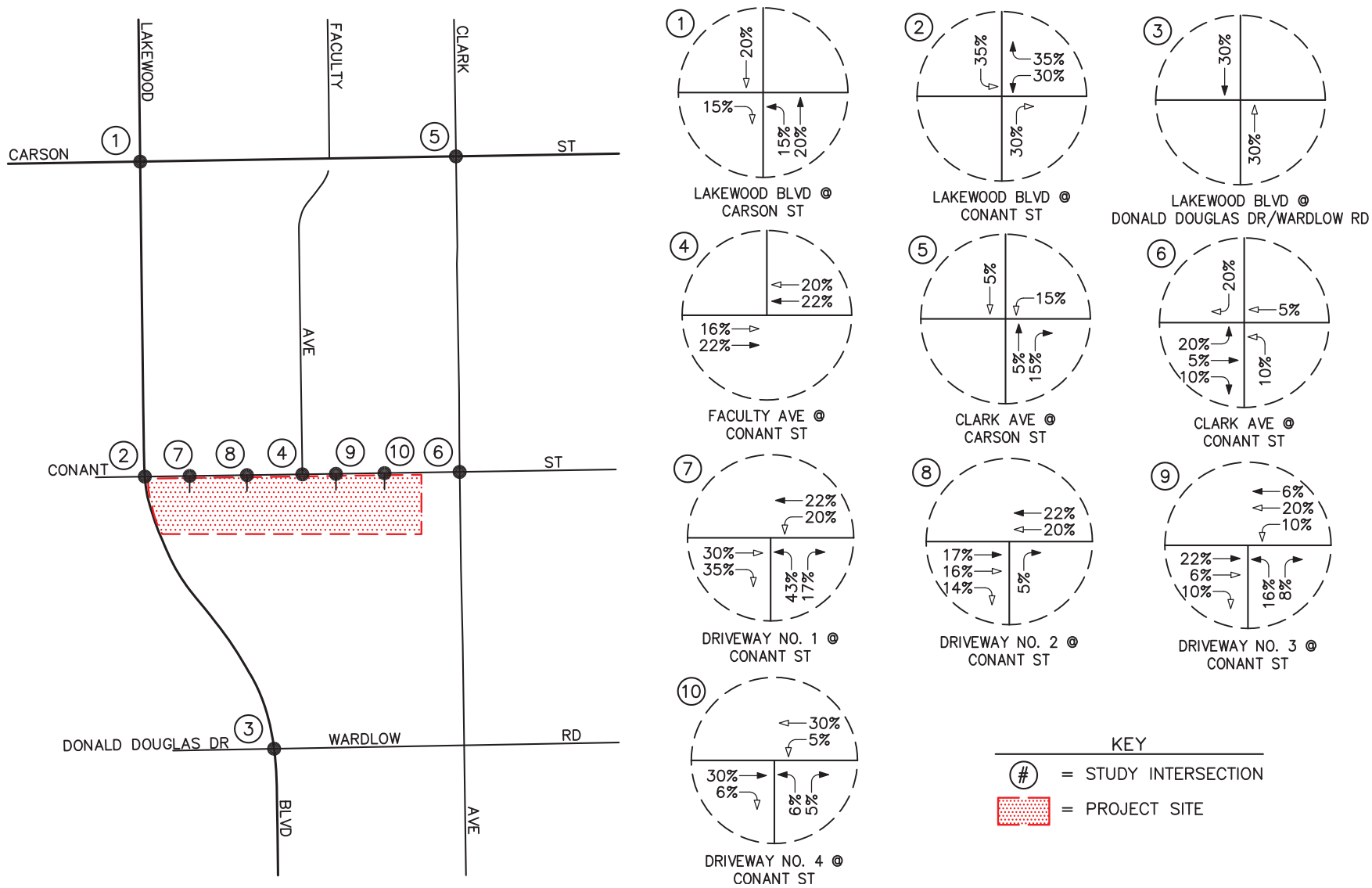
Significance Thresholds. Impacts related to transportation and circulation would be considered potentially significant if development facilitated by the proposed project would:

- *Conflict with an applicable plan, ordinance, or policy establishing a measure of effectiveness for the performance of a circulation system, taking into account all modes of transportation, including mass transit and nonmotorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways, and freeways, pedestrian and bicycle paths, and mass transit*
- *Conflict with an applicable congestion management program, including, but not limited to, level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways*
- *Substantially increase traffic-related hazards due to a design feature or incompatible uses*
- *Result in inadequate emergency access*

The Initial Study prepared for the proposed project determined that project implementation would result in less than significant impacts related to the following thresholds:

- *Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks*
- *Conflict with adopted policies, plans, or programs regarding public transit, bikeways, or pedestrian facilities, or otherwise substantially decrease the performance or safety of such facilities*

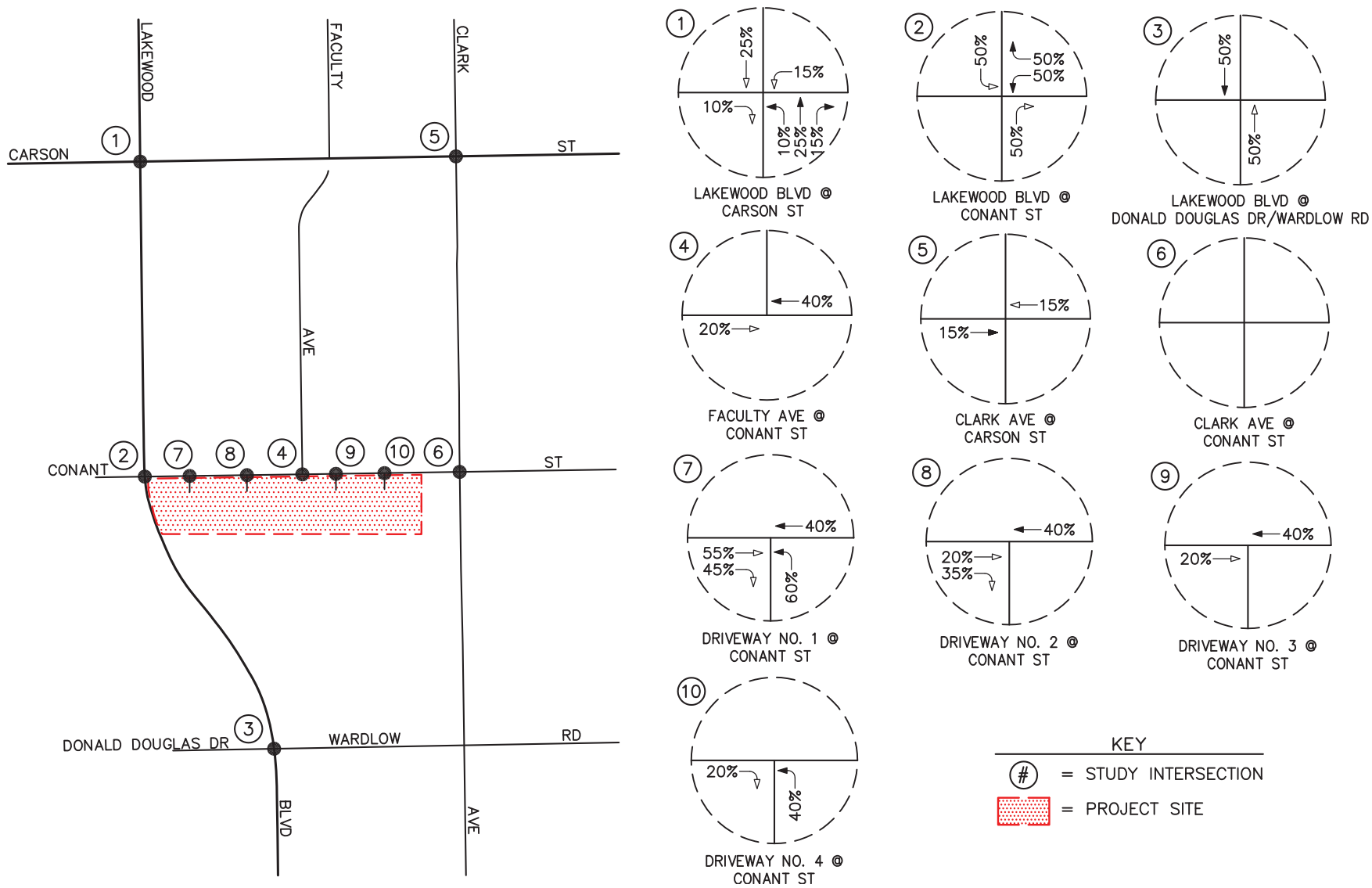
Therefore, these thresholds are not discussed further herein.



Source: LLG, 2014

Passenger Car Trip Distribution

Figure 4.5-3



Source: LLG, 2014

Truck Trip Distribution

Figure 4.5-4

b. Project Impacts and Mitigation Measures.

Impact T-1 Implementation of the proposed project would increase traffic on the surrounding network, but would not cause any intersection to exceed the City's LOS standard or conflict with the County CMP. Impacts associated with the proposed project would be Class III, *less than significant*.

Project-generated traffic would increase traffic volumes at each of the six study intersections. Figures 4.5-5 and 4.5-6 present AM and PM peak hour traffic volumes at the study intersections with the addition of the trips generated by the proposed project to existing traffic volumes. Figure 4.5-6 also presents the existing plus project daily traffic volumes.

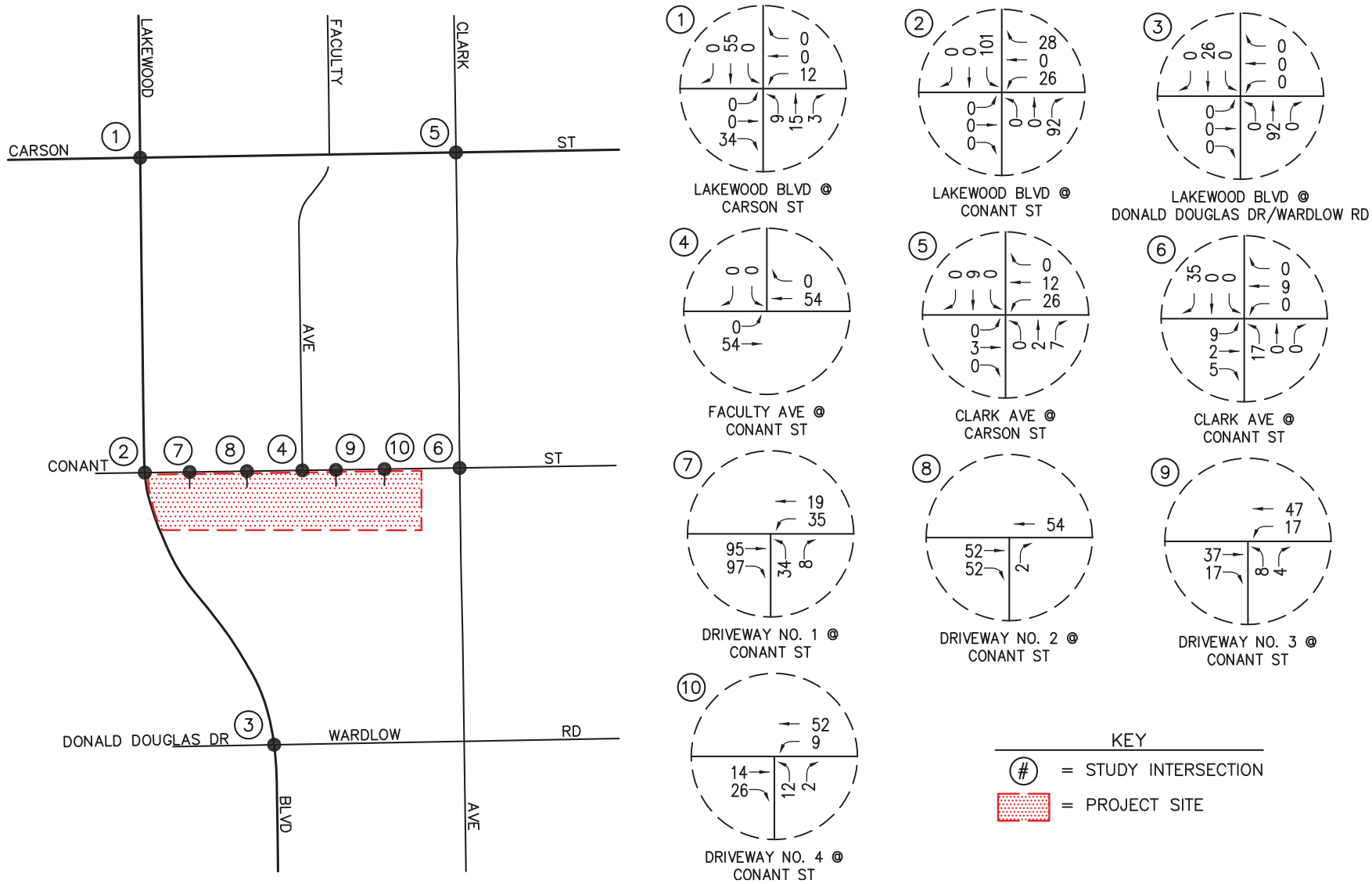
Existing Plus Project Traffic Conditions. Table 4.5-4 summarizes the peak hour Level of Service results at the key study intersections for Existing Plus Project traffic conditions. Figures 4.5-7 and 4.5-8 present AM and PM peak hour Existing Plus Project traffic volumes at the study intersections.

Table 4.5-4
Existing Plus Project Peak Hour Intersection Capacity Analysis

Key Intersections	Time Period	Existing Conditions		Existing Plus Project		Increase	Significant Impact?
		ICU/HCM	LOS	ICU/HCM	LOS		
Lakewood Boulevard at Carson Street	AM	0.678	B	0.694	B	0.016	No
	PM	0.795	C	0.805	D	0.010	No
Lakewood Boulevard at Conant Street	AM	0.552	A	0.568	A	0.016	No
	PM	0.665	B	0.722	C	0.057	No
Lakewood Boulevard at Donald Douglas Drive/Wardlow Road	AM	0.649	B	0.653	B	0.004	No
	PM	0.673	B	0.679	B	0.006	No
Faculty Avenue at Conant Street	AM	11.3 s/v	B	11.1 s/v	B	0.0 s/v	No
	PM	8.7 s/v	A	9.0 s/v	A	0.03 s/v	No
Clark Avenue at Carson Street	AM	0.743	C	0.749	C	0.006	No
	PM	0.914	E	0.924	E	0.010	No
Clark Avenue at Conant Street	AM	0.521	A	0.554	A	0.033	No
	PM	0.470	A	0.493	A	0.023	No

Source: LLG, 2014.

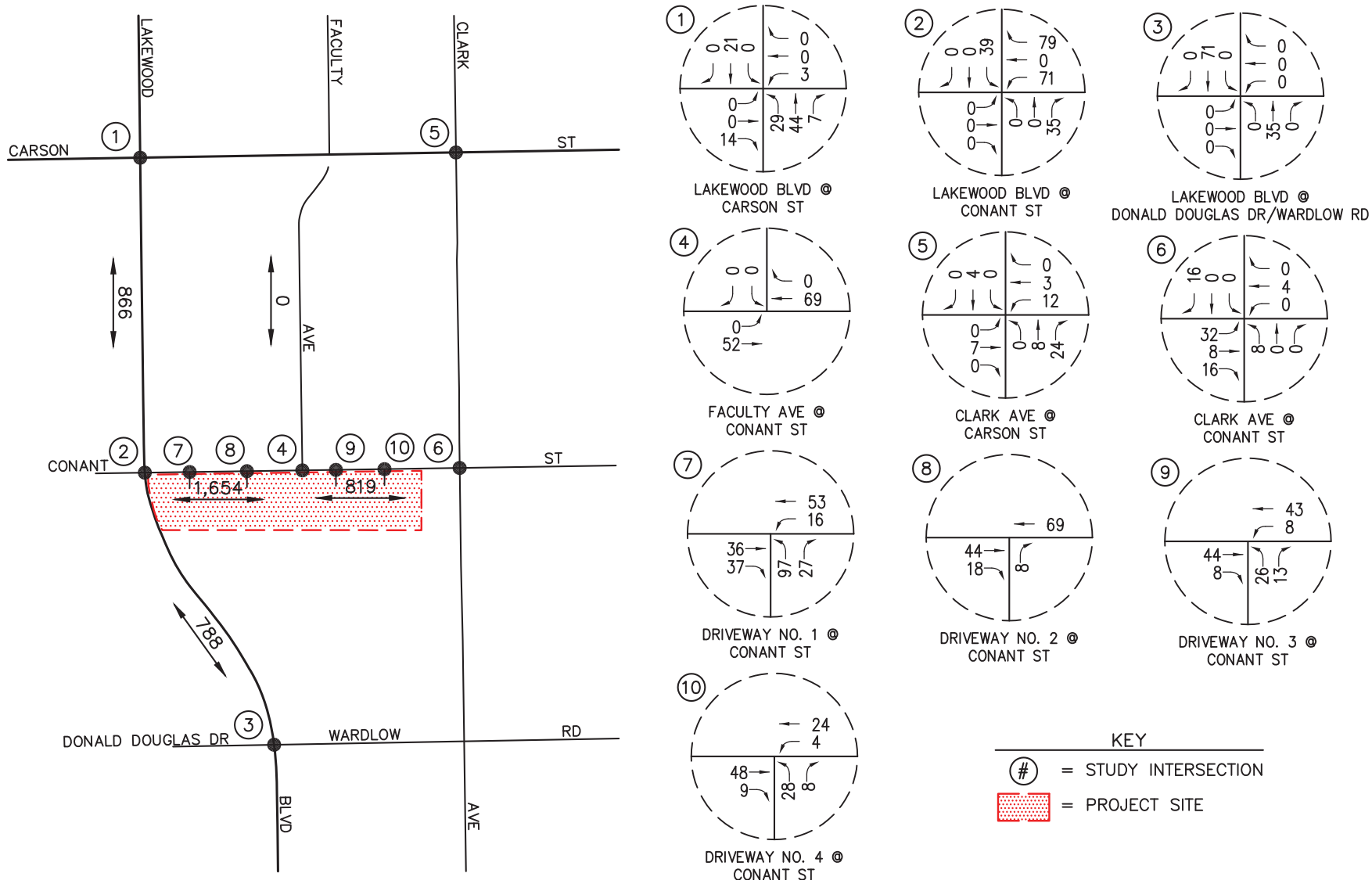
Based on the increases forecast to occur, traffic associated with the proposed project would not significantly impact any of the six key study intersections when compared to the LOS standards and significant impact criteria specified in this report. Although the intersection of Clark Avenue at Carson Street is forecast to operate at unacceptable LOS E during the PM peak hour with the addition of project traffic, the proposed project is expected to add less than 0.020 to the ICU value; therefore, the project's impact would not be significant based on City criteria. The



Source: LLG, 2014

Project AM Peak Hour Trips

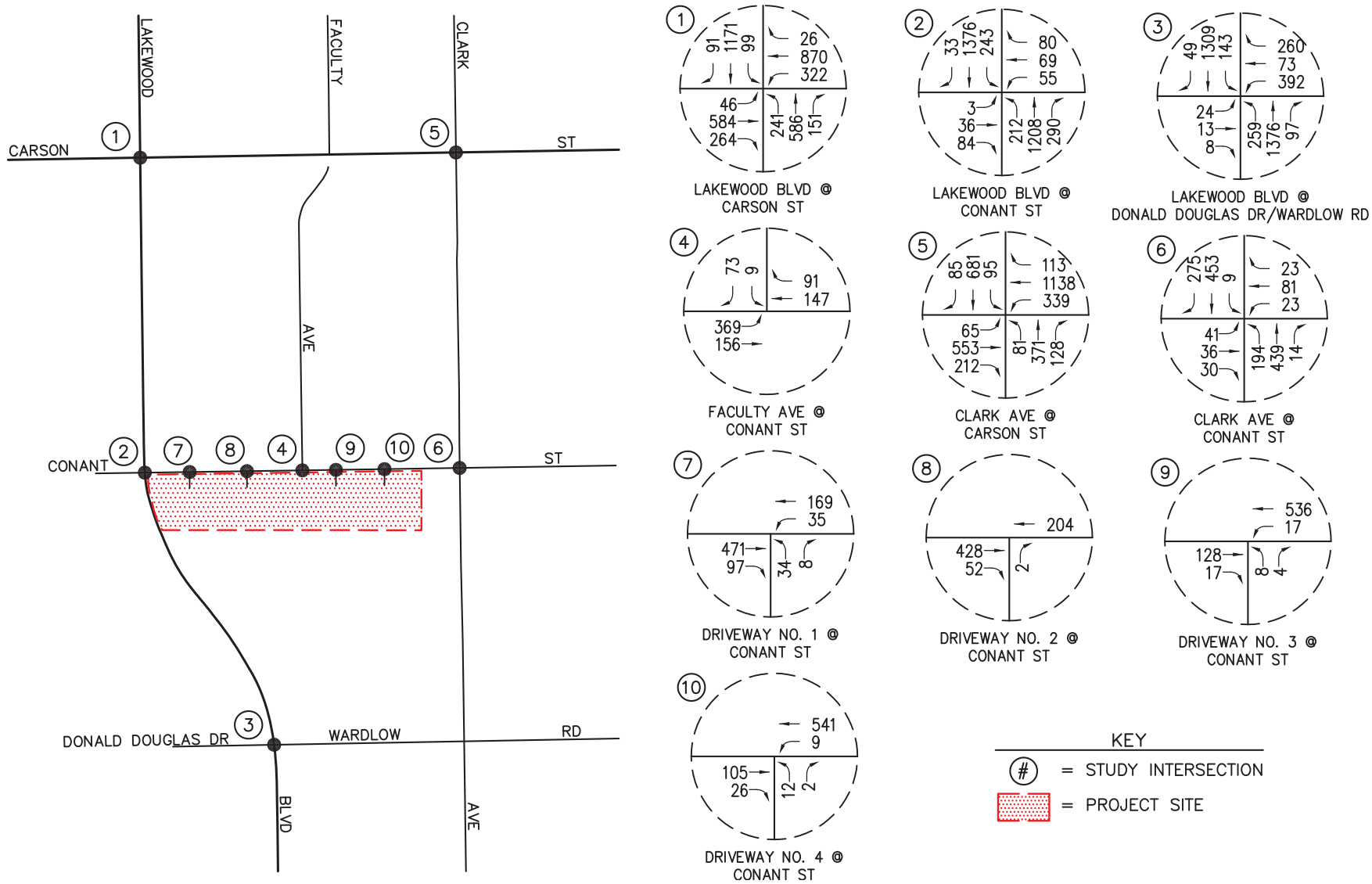
Figure 4.5-5



Source: LLG, 2014

Project PM Peak Hour Trips

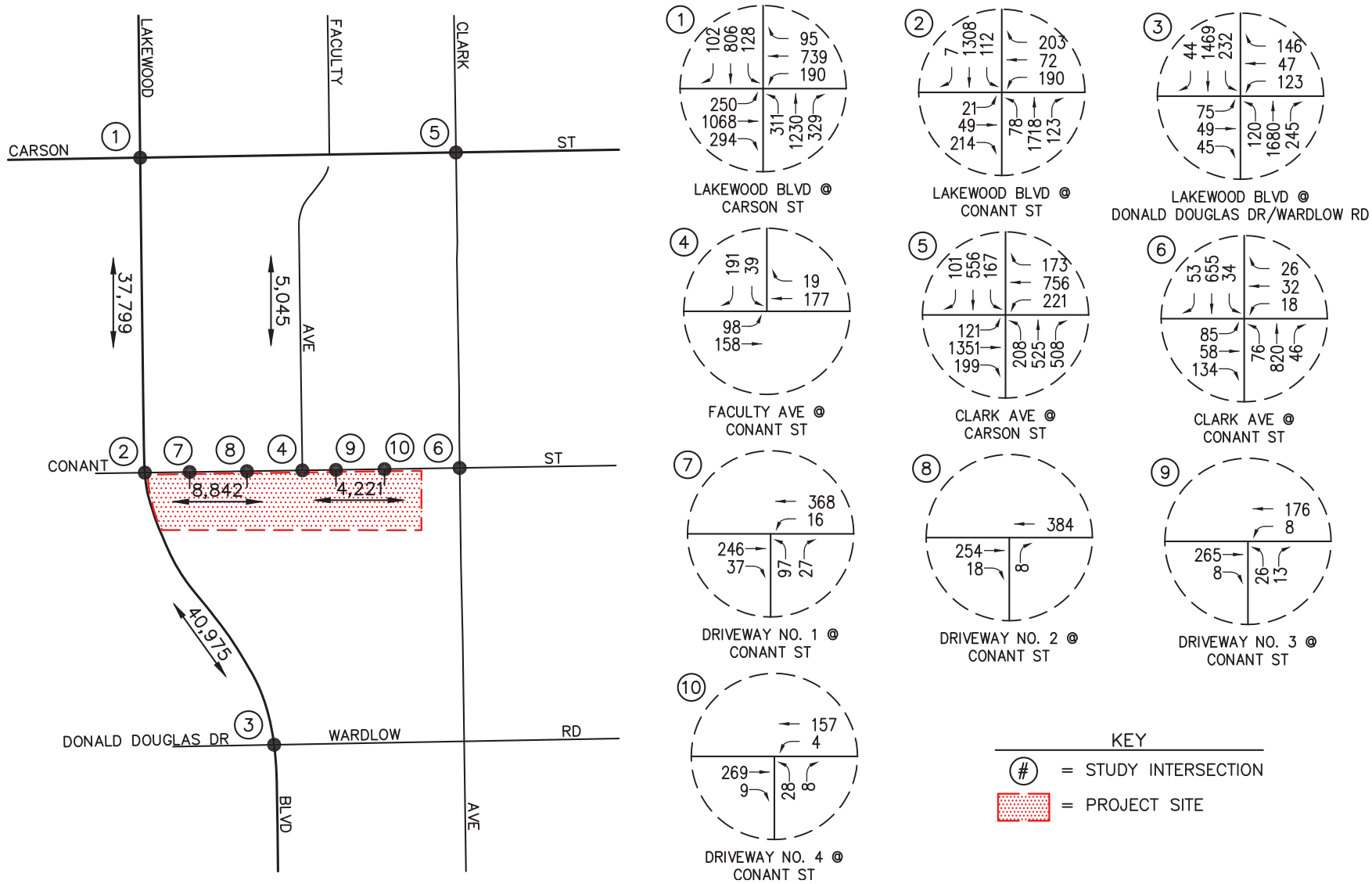
Figure 4.5-6



Source: LLG, 2014

Existing Plus Project AM Peak Hour Traffic Volumes

Figure 4.5-7



Source: LLG, 2014

Existing Plus Project PM Peak Hour Traffic Volumes

Figure 4.5-8

remaining five key study intersections are forecast to continue to operate at an acceptable LOS with the addition of project generated traffic to existing traffic.

Congestion Management Program. The Congestion Management Program (CMP) was created statewide as a result of Proposition 111 and has been implemented locally by the Los Angeles County Metropolitan Transportation Authority (LACMTA). The CMP for Los Angeles County requires that the traffic impact of individual development projects of potential regional significance be analyzed. A specific system of arterial roadways plus all freeways comprise the CMP system.

As required by the current CMP, a review has been made of designated monitoring locations on the CMP highway system for potential impact analysis. Per CMP TIA criteria, the geographic area examined in the TIA must include the following:

- *All CMP arterial monitoring intersections, including freeway on and off-ramp intersections, where the project will add 50 or more trips during either the AM or PM weekday peak hours.*
- *Mainline freeway-monitoring stations where the project will add 150 or more trips, in either direction, during the AM or PM weekday peak hours.*

The following CMP intersection monitoring location within the project study area has been identified:

- *CMP Station Int. No. Intersection/Jurisdiction No. 34 1 Lakewood Boulevard at Carson Street*

As stated earlier, the CMP guidelines require that arterial monitoring intersection locations must be examined if the proposed project will add 50 or more trips during either the AM or PM weekday peak hours (of adjacent street traffic) at CMP monitoring intersections. Based on the results of a detailed analysis of project added trips, the proposed project would add approximately 128 trips to this intersection during the AM peak hour and 118 trips during the PM peak hour. However, as shown in Table 4.5-4, the intersection of Lakewood Boulevard/Carson Street is forecast to operate at acceptable LOS D or better during the AM and PM peak hours. Therefore, the proposed project would not significantly impact this CMP location and no improvements are required.

The following CMP freeway monitoring location in the project vicinity has been identified:

- *CMP Station Intersection/Jurisdiction No. 1065, I-405, north of Route 22*

As stated earlier, the CMP TIA guidelines require that freeway monitoring locations must be examined if the proposed project will add 150 or more trips (in either direction) during either the AM or PM weekday peak periods. Based on the project's trip generation potential and distribution pattern, the proposed project would not add more than 150 trips during the AM or PM peak hour at this CMP mainline freeway monitoring location. Therefore, a CMP freeway traffic impact analysis is not required.

A review of potential impacts on transit service was also conducted. As discussed in the *Setting*, Long Beach Transit (LBT) Routes Nos. 93, 101, 103, 111, 112, and 176 currently serve the surrounding vicinity. Pursuant to the CMP guidelines, the proposed project is forecast to generate 16 transit trips (12 inbound and 4 outbound) during the AM peak hour and 15 transit trips (5 inbound and 10 outbound) during the PM peak hour. Over a 24-hour period the proposed project is forecasted to generate 108 daily weekday transit trips. It is anticipated that the existing transit service in the project area would be able to accommodate the project generated transit trips. Therefore, the existing public transit system would not be significantly impacted by the proposed project.

Based on the foregoing analysis, the proposed project would not result in an exceedance of the City's LOS standards, and would not conflict with implementation of the County CMP. Impacts would be less than significant.

Mitigation Measures. Mitigation would not be required since impacts would be less than significant.

Significance After Mitigation. Impacts would be less than significant without mitigation.

Impact T-2 The proposed project does not include any hazardous design feature and would not result in inadequate emergency access. Impacts associated with the proposed project would be Class III, *less than significant.*

Potential traffic hazards related to temporary construction traffic, internal circulation, and access are discussed below.

Construction Traffic. The project TIA estimates that the busiest phase of project construction would result in 175 daily trips to and from the project site, including 60 trips during both the AM and PM peak hours. Construction-related trips associated with trucks and employees traveling to and from the site in the morning and afternoon may result in some minor traffic delays; however, potential traffic interference caused by construction vehicles would be temporary/short-term and would be limited to Lakewood Boulevard and Conant Street in the morning and afternoon hours.

Traffic impacts to the adjacent roadway network would be minimal and not long-term. Further, since the construction-related trip generation potential of the proposed project is substantially less than that of the proposed project as a whole, and the proposed project would not significantly impact any of the six key study intersections, significant impacts resulting from construction traffic are not anticipated.

Internal Circulation. According to the TIA, the on-site circulation layout of the proposed project as illustrated in Figure 4.5-9 is generally adequate. Curb return radii have been confirmed and are generally adequate for small service/delivery trucks and trash trucks. Curb return radii for full-sized trucks and/or fire trucks are also generally adequate. However, these larger vehicles would require the use of both the inbound lane and outbound lanes to access the site from the

curb lane along Conant Street. For this reason, the TIA recommends that the preparation of a detailed truck access and circulation evaluation prior to finalization of the site plan.

Project Access. As shown in Figure 4.5-9, access to the project site would be provided via four driveways to be located on Conant Street. Driveways 1, 3, and 4 will provide full access to the site, while Driveway 2 will provide right-turn in/right-turn out only access to the site. Table 4.5-5 summarizes the intersection operations at the proposed project driveways located along Conant Street for near-term (Year 2016) traffic conditions at completion and full occupancy of the proposed project. The operations analysis for the project driveways is based on the *Highway Capacity Manual 2000* (HCM 2000) unsignalized methodology.

Table 4.5-5
Project Driveway Capacity Analysis

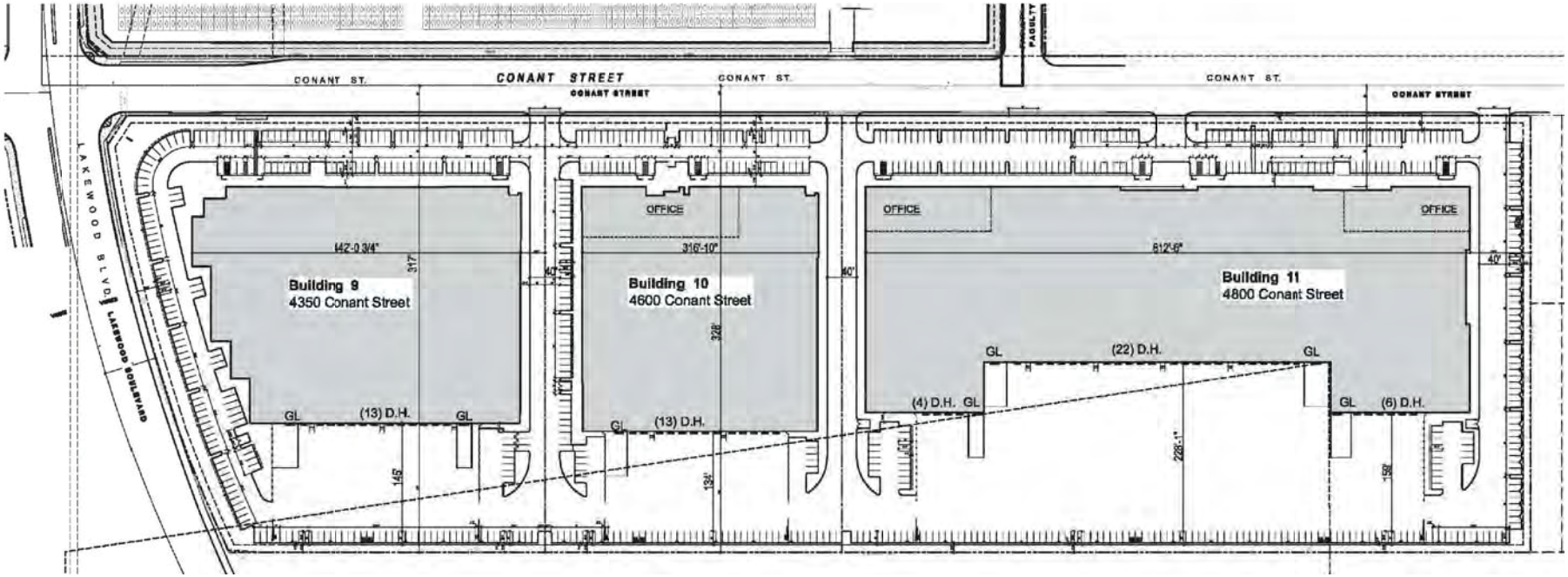
Driveway	Time Period	Year 2016 Cumulative Plus Project Operation	
		HCM	LOS
1	AM	15.4	C
	PM	13.9	B
2	AM	9.8	A
	PM	9.2	A
3	AM	11.0	B
	PM	11.0	B
4	AM	11.4	B
	PM	11.2	B

Source: LLG, 2104.

Table 4.5-5 shows that the proposed project driveways are forecast to operate at acceptable LOS C or better during the AM and PM peak hours. As such, project access would be adequate. Motorists entering and exiting the project site will be able to do so comfortably, safely, and without undue congestion.

Traffic Signal Warrant Analysis. The intersection of Faculty Avenue and Conant Street is currently controlled via an all-way stop. City staff determined that the level of service analysis at Faculty Avenue and Conant Street should be supplemented with an assessment of the need for signalization of the intersection. This assessment is made to determine whether peak-hour traffic conditions or peak-hour traffic volume levels are, or would be, sufficient to justify installation of a traffic signal.

The traffic signal warrant analysis is made on the basis of signal warrant criteria published in the California Manual on Uniform Traffic Control Devices (CA MUTCD). For the intersection of Conant Street at Faculty Avenue, the need for signalization was assessed using existing daily traffic volumes collected at this intersection. Based on the existing traffic volumes and current intersection geometrics, the study intersection did not satisfy any of the applicable signal warrants. The intersection of Conant Street at Faculty Avenue currently operates at LOS B



Source: LLG, 2014

Project Access and Circulation Plan

Figure 4.5-9

during the weekday AM peak hour and LOS A during the weekday PM peak hour and is forecast to operate at an acceptable LOS B or better during the AM and PM peak hours under Existing plus Project traffic conditions and Year 2016 Cumulative plus Project traffic conditions. The intersection of Faculty Avenue and Conant Street is forecast to operate at acceptable LOS B or better during the AM and PM peak hours under Existing Plus Project traffic conditions. Based on the traffic signal warrant analysis performed as part of the project TIA, the intersection of Faculty Avenue and Conant Street does not satisfy the traffic signal warrant under Existing plus project traffic conditions.

Mitigation Measures. Mitigation would not be required since impacts would be less than significant.

Significance After Mitigation. Impacts would be less than significant without mitigation.

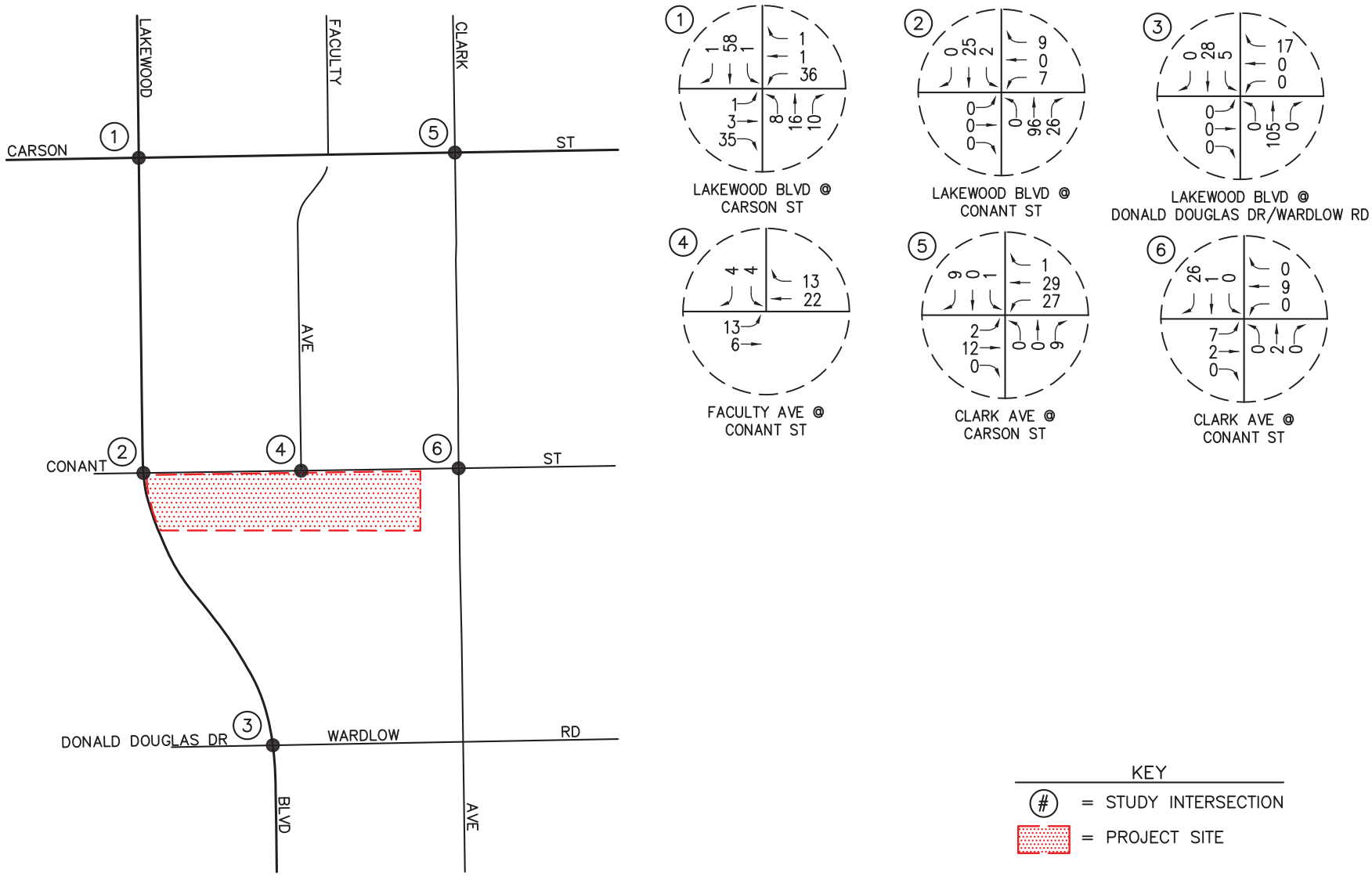
c. Cumulative Impacts. Cumulative development within the project area would cause increases in traffic on area roadways. The project TIA identifies seven related projects (also shown in Table 3-1 of this EIR) that could, in combination with the proposed project, result in cumulative traffic impacts. Figures 4.5-10 and 4.5-11 show the forecast traffic volumes for cumulative projects in the AM and PM peak hours. Figures 4.5-12 and 4.5-13 show the cumulative plus project traffic volumes in the AM and PM peak hours for both the study intersections and the project driveways. Table 4.5-6 summarizes existing, cumulative, and cumulative plus project intersection capacities.

Table 4.5-6
Cumulative Peak Hour Intersection Capacity Analysis

Intersection		Existing Conditions		Year 2016 Cumulative Conditions		Year 2016 Cumulative Plus Project		Project Increase	Significant Impact?
	Time Period	ICU/ HCM	LOS	ICU/ HCM	LOS	ICU/ HCM	LOS		
Lakewood Boulevard at Carson Street	AM	0.678	B	0.723	C	0.739	C	0.016	No
	PM	0.795	C	0.840	D	0.850	D	0.010	No
Lakewood Boulevard at Conant Street	AM	0.552	A	0.577	A	0.593	A	0.016	No
	PM	0.665	B	0.711	C	0.769	C	0.058	No
Lakewood Boulevard at Donald Douglas Drive/Wardlow Road	AM	0.649	B	0.682	B	0.686	B	0.004	No
	PM	0.673	B	0.714	C	0.720	C	0.006	No
Faculty Avenue at Conant Street	AM	11.3 s/v	B	12.0 s/v	B	11.9 s/v	B	0.0 s/v	No
	PM	8.7 s/v	A	9.0 s/v	A	9.4 s/v	A	0.4 s/v	No
Clark Avenue at Carson Street	AM	0.743	C	0.776	C	0.782	C	0.006	No
	PM	**0.914**	**E**	**0.957**	**E**	**0.968**	**E**	0.011	No
Clark Avenue at Conant Street	AM	0.521	A	0.556	A	0.589	A	0.033	No
	PM	0.470	A	0.501	A	0.523	A	0.022	No

Source: LLG, 2014.

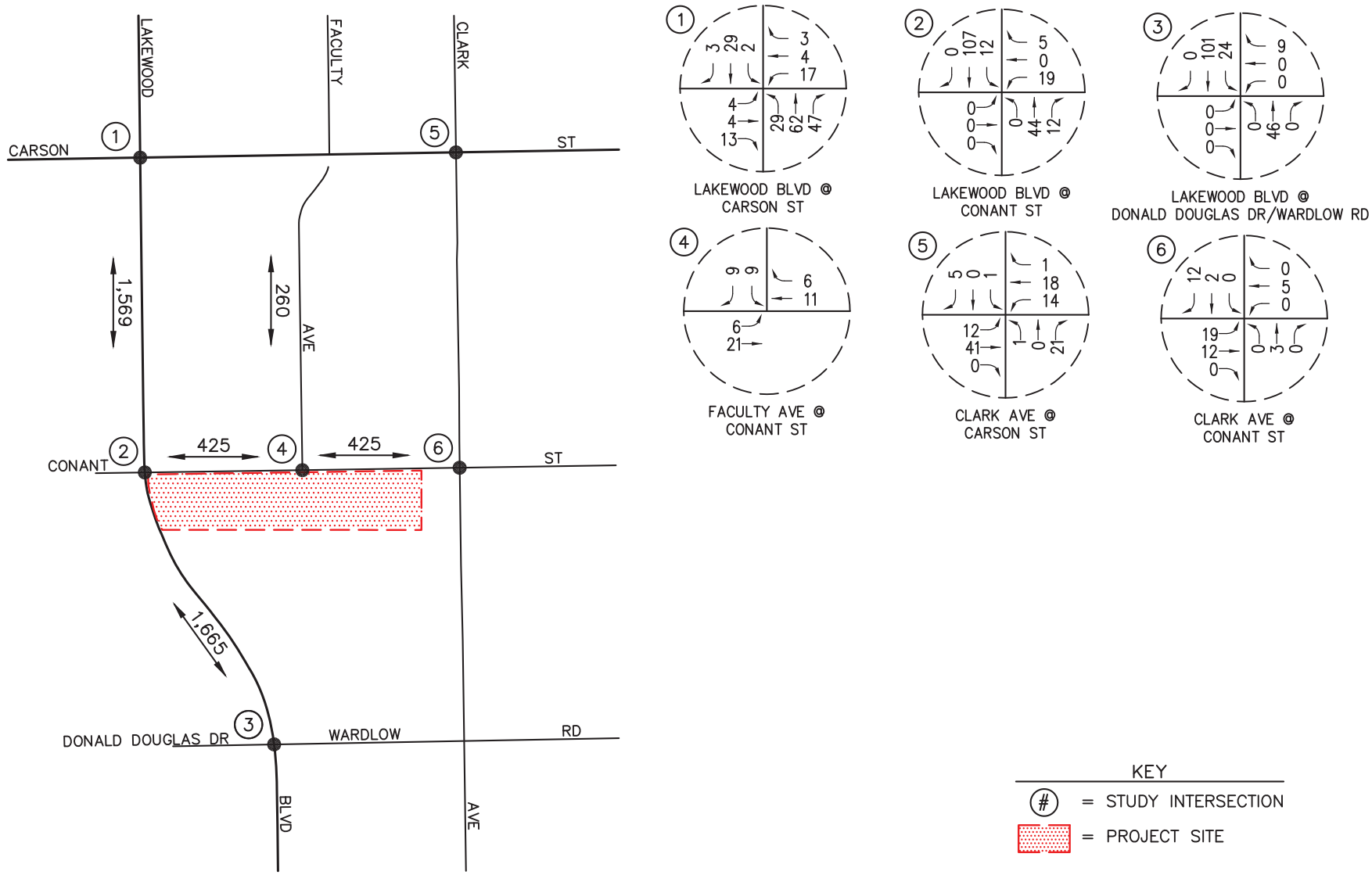
The intersection of Clark Avenue and Carson Street is currently operating at LOS E and would continue to do so under future conditions both with and without the project. As shown in Table 4.5-6, all of the other study intersections would operate at acceptable levels of service under the year 2016 cumulative and cumulative plus project scenarios. Cumulative impacts would therefore be less than significant and project impacts would not be cumulatively considerable.



Source: LLG, 2014

Cumulative Projects AM Peak Hour Traffic Volumes

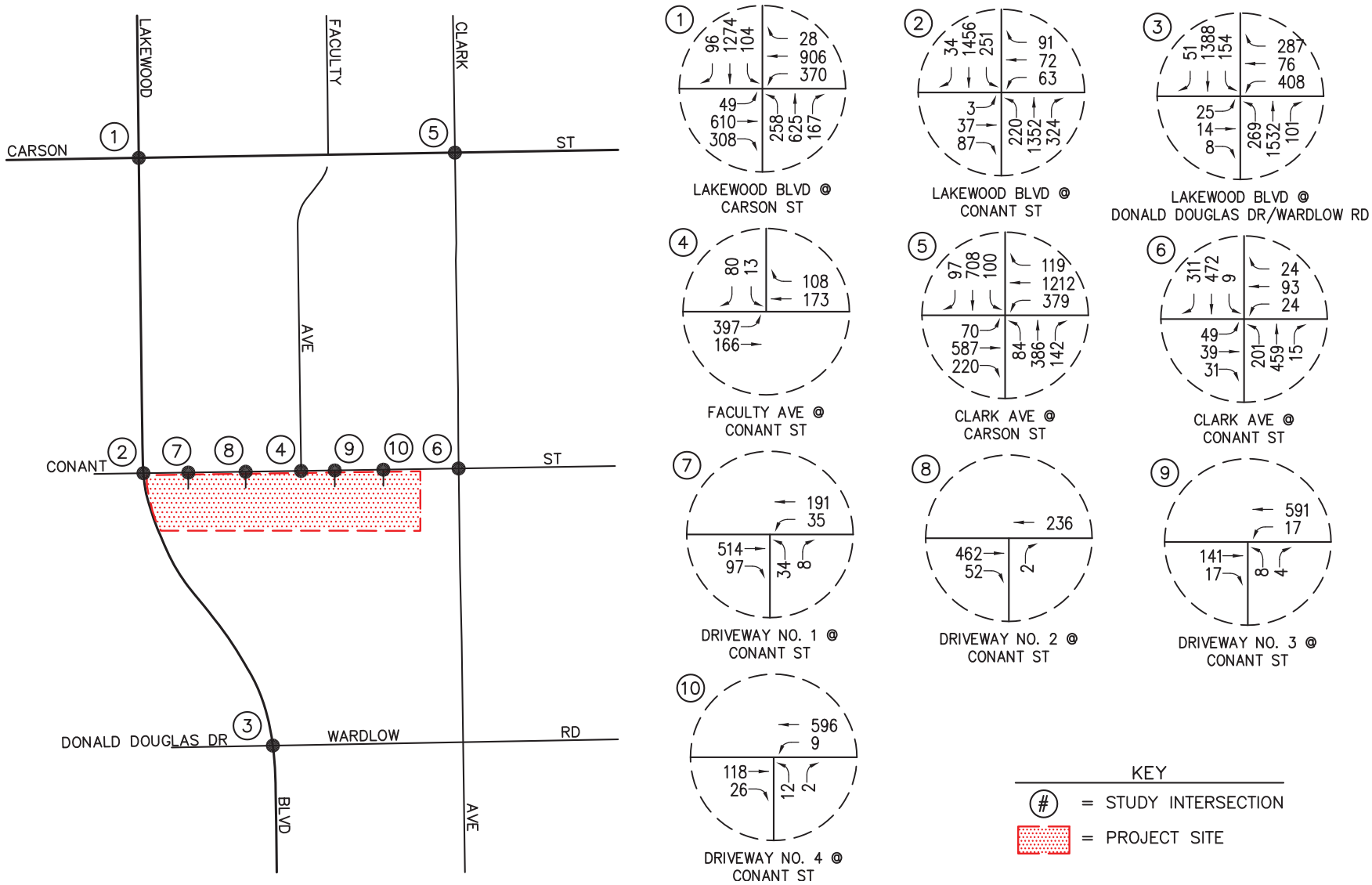
Figure 4.5-10



Source: LLG, 2014

Cumulative Projects PM Peak Hour Traffic Volumes

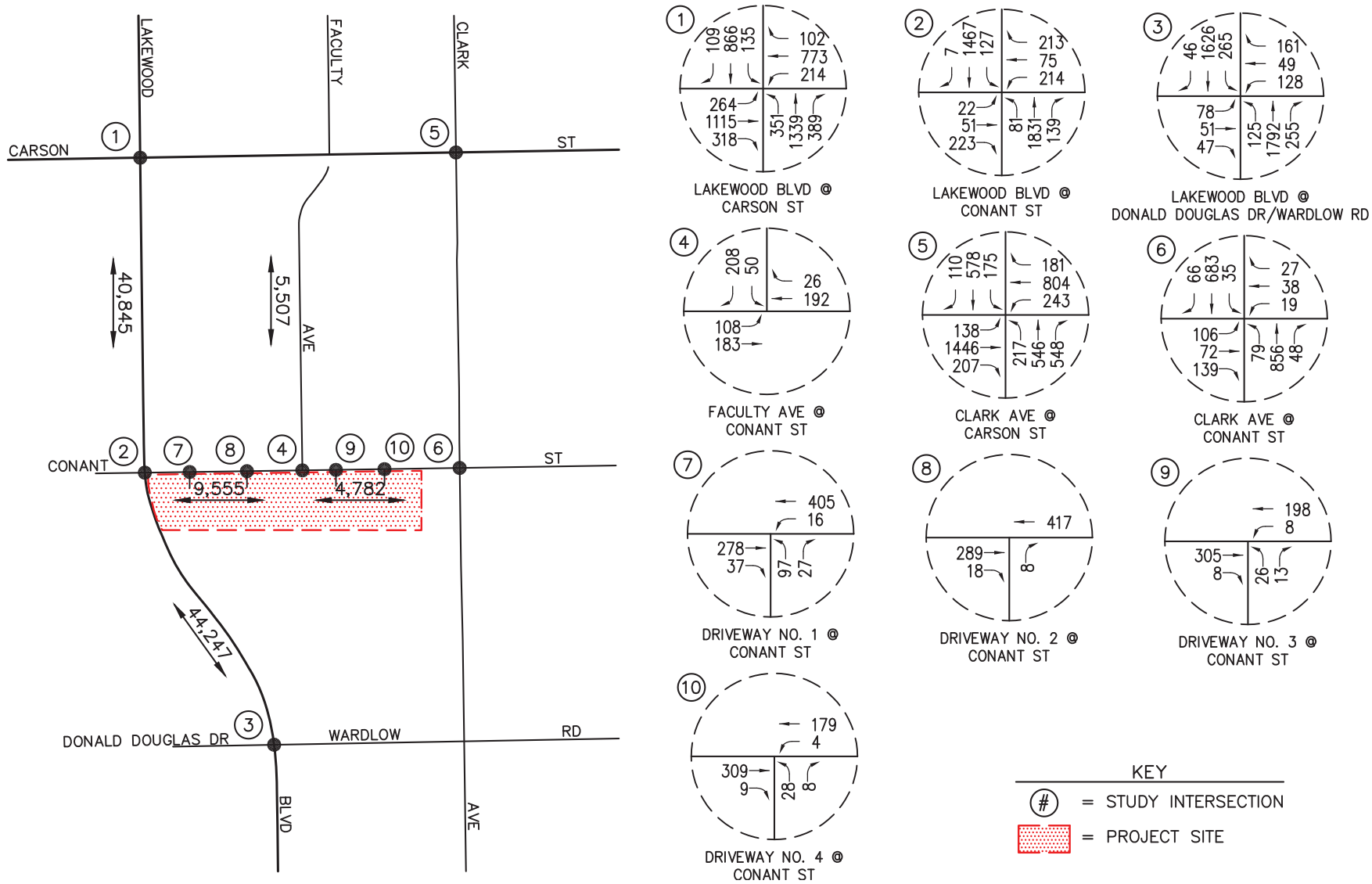
Figure 4.5-11



Source: LLG, 2014

Cumulative Plus Project AM Peak Hour Traffic Volumes

Figure 4.5-12



Source: LLG, 2014

Cumulative Plus Project PM Peak Hour Traffic Volumes

Figure 4.5-13

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5.0 OTHER CEQA-REQUIRED DISCUSSIONS

5.1 GROWTH INDUCEMENT

Section 15126(d) of the *CEQA Guidelines* requires a discussion of a proposed project's potential to foster economic or population growth, including ways in which a project could remove an obstacle to growth. Growth does not necessarily create significant physical changes to the environment. However, depending upon the type, magnitude, and location of growth, it can result in significant adverse environmental effects. The proposed project's growth inducing potential is therefore considered significant if it could result in significant physical effects in one or more environmental issue areas. The most commonly cited example of how an economic effect might create a physical change is where economic growth in one area could create blight conditions elsewhere by causing existing competitors to go out of business and buildings to be left vacant for extended periods.

5.1.1 Pacific Pointe East Development Project Site

The proposed project involves development of an existing paved surface parking lot with three industrial buildings with a total floor area of 494,000 square feet. The project would generate temporary employment opportunities during construction, which would be expected to draw workers from the existing regional work force. Therefore, construction of the project would not be considered growth inducing from a temporary employment standpoint.

Any increase in permanent jobs in the City associated with the project would result from jobs associated with the proposed industrial development. Based on median square feet per employee for Los Angeles County (SCAG, 2001), the proposed projet would generate an estimated 407 new jobs in the City of Long Beach. In 2012 the City of Long Beach had 165,186 jobs, and by 2035 it is projected to have 184,800 jobs, for an increase of 19,614 jobs (SCAG, 2013). The 407 jobs generated by the project would represent approximately 2% of this increase. Therefore, project-generated employment growth would be well within projected employment growth for the City of Long Beach.

The proposed project does not include any residential development, and would not remove any existing residences from the City's housing supply. Thus, the project would have no direct effect on population within the City of Long Beach. Indirect growth in population may occur as a result of employees who work at the project site seeking housing within the City in order to live close to their place of employment. The City's 2013 population was 467,646 residents, which is forecast to increase to 534,100 residents by 2035, an increase of 66,454 residents (California Department of Finance, 2013; SCAG 2013). Were all 407 employees to seek housing in the City, this would represent approximately 0.6 percent of the total population growth forecast to occur. Therefore, project-generated population growth would be well within projected growth for the City of Long Beach.

According to SCAG data, in 2008 (the most recent year for which SCAG data is available) Long Beach had a jobs-housing ratio of 1.03:1 (SCAG, October 2012). This indicates that there are 1.03 jobs for every housing unit. A jobs-housing ratio over 1.5:1 is considered high and may indicate an increasing imbalance between jobs and housing (i.e., new residential construction has not

kept up with job creation), while a ratio below 1:1 is considered low. The new population growth and employment opportunities that would be added by the project are well within SCAG's projections for the City. The project-related increase of 407 jobs would only incrementally alter the existing job-housing ratio in the City of Long Beach from 1.0281:1 to 1.0306:1. Impacts related to the jobs-housing ratio would not be signifcant.

5.1.2 Removal of Obstacles to Growth

The proposed project would be located in a fully urbanized area, generally served by existing infrastructure. The Initial Study (Appendix A) found that the project would not create the need for the extension of utility service to a currently unserved area, nor would it require any upgrades to the area's existing water, sewer, circulation and drainage connection infrastructure. However, if any such improvements were necessary, they would be sized to accommodate the project's contribution to existing service needs.

The proposed project does not provide for any substantially capacity-increasing transportation and circulation improvements. No new roadways or bike/pedestrian pathways are proposed. The project constitutes infill development within an urbanized area and does not require the extension of new infrastructure through undeveloped areas.

5.2 IRREVERSIBLE ENVIRONMENTAL EFFECTS

The *CEQA Guidelines* require that EIRs evaluating projects involving amendments to public plans, ordinances, or policies contain a discussion of significant irreversible environmental changes. CEQA also requires decisionmakers to balance the benefits of a proposed project against its unavoidable environmental risks in determining whether to approve a project. This section addresses non-renewable resources, the commitment of future generations to the proposed uses, and irreversible impacts associated with the proposed project.

Conversion of the project site from a surface parking lot to an industrial development would likely result in a long-term commitment of the site to such uses. The project would involve the use of building materials and energy, some of which are non-renewable resources. Consumption of these resources would occur with any development in the region and are not unique to the project. The increased intensity of industrial development would also irreversibly increase local demand for non-renewable energy resources such as petroleum products and natural gas. However, increasingly efficient building fixtures and automobile engines are expected to offset this demand to some degree.

The project would require a commitment of law enforcement, fire protection, water supply, wastewater treatment, and solid waste disposal services. However, as discussed in the Initial Study (Appendix A), impacts to these service systems would be less than significant. The additional vehicle trips associated with buildout of the project site would increase traffic in the vicinity of the project site. As discussed in Section 4.2, Air Quality, air pollutant emissions associated with construction would be less than significant. Although impacts would be less than significant, air pollutants emissions associated with construction and operation of the project would contribute to the degradation of air quality associated with this and all other cumulative development. The project would also create greenhouse gas emissions

incrementally contributing to global climate change. This impact was found to be less than significant in Section 4.3, Greenhouse Gas Emissions, which includes an analysis of the cumulative nature of this impact.

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6.0 ALTERNATIVES

As required by Section 15126.6 of the *CEQA Guidelines*, this EIR examines a range of reasonable alternatives to the proposed project that would attain most of the basic objectives of the project (as stated in Section 2.5 of this EIR) but would avoid or substantially lessen any of its significant effects.

Included in this analysis are three alternatives, including the CEQA-required "no project" alternative, that involve changes to the project to help reduce its environmental impacts as identified in this EIR. This section also identifies the Environmentally Superior Alternative.

The following alternatives are evaluated in this EIR:

- *Alternative 1: No Project (no three new light industrial buildings with associated improvements)*
- *Alternative 2: Reduced Intensity*
- *Alternative 3: Alternate Site*

The potential environmental impacts of each alternative are analyzed in Sections 6.1 through 6.4. Because the alternatives analysis is intended to focus on alternatives that would substantially lessen any of the significant effects of the project, and because this EIR focuses only on impact areas with the potential for such effects, the potential impacts of each alternative are analyzed in the areas of Aesthetics, Air Quality, Greenhouse Gas Emissions, Noise, and Transportation/Traffic, which are the only areas that were identified in the Initial Study (Appendix A) as having potentially significant effects.

Table 6-1 provides a summary comparison of the development characteristics of the proposed project and the alternatives. A more detailed description of the alternatives is included in the impact analysis for each alternative.

Table 6-1
Comparison of Project Alternatives Buildout Characteristics

Characteristic	Alternatives			
	Proposed Project	No Project Alternative	Reduced Intensity Alternative	Alternate Site Alternative
Number of Buildings	3	0	2	3
Square Footage of Buildings	494,000	0	247,000	494,000
Parking Spaces	722	0[1]	361	722

[1] *Although the project site was formerly used as a surface parking lot, this use is no longer in operation, and therefore the number of parking spaces currently available is 0.*

6.1 NO PROJECT

As described below and throughout this EIR, the project does not have any significant impacts that would be significantly reduced by this alternative. This alternative assumes that the proposed improvements are not implemented and that the site remains in its present condition, occupied by a vacant surface parking lot. This alternative would not meet the objectives of the proposed project because it would not attract tenants in the light industrial, light manufacturing, warehouse, office, and/or research & development industries; help develop the site in accordance with land uses called for under the PD-19 District; utilize design elements that would project a high-quality professional image while focusing on sustainability and energy conservation; provide employment opportunities or attract businesses; or enhance the City's tax base. Implementation of the No Project alternative would not preclude future development on the site. Any future development projects proposed on the site would be subject to at least the same level of discretionary review as required of the proposed project.

6.1.1 Aesthetics

The No Project Alternative would not change the aesthetics of the project site or area. As discussed in the Aesthetics section of this EIR, the project site currently has relatively low visual quality, but it is consistent with the aesthetic character of its surroundings, which also contain large amounts of unlandscaped open space (i.e., the runways and surrounding open areas at Long Beach Airport). This alternative would avoid the project's less than significant impact related to blocking views of the distant ridgelines of Signal Hill and the Palos Verdes Peninsula from Conant Street. While the project would be consistent with policies from the Long Beach General Plan relating to aesthetics, such as maintaining and improving the aesthetic quality of neighborhoods and City facilities, the No Project Alternative would leave the site in its current state, which, as a vacant surface parking lot, has relatively low aesthetic quality. Overall, this alternative's impacts with respect to aesthetics would, like those of the proposed project, be less than significant.

6.1.2 Air Quality

Due to the fact that the project site is currently vacant, there are little to no emissions currently resulting from use of the site. While the project's impacts related to air quality emissions are less than significant, the project would still result in emissions from increased use of the site. Therefore, the No Project Alternative's air quality impacts would be less than those of the proposed project.

6.1.3 Greenhouse Gas Emissions/Climate Change

Because the project site is currently vacant, it creates fewer greenhouse gas (GHG) emissions than it would under the proposed project, which would increase use of and vehicle trips to the site. Although the project's impacts related to GHG emissions would be less than significant, the No Project Alternative's GHG/Climate Change impacts would be less than those of the proposed project.

6.1.4 Noise

Because the project site is currently vacant, it produces less noise and vibration than it would under the proposed project, which would result in temporary noise and vibration impacts from construction of the proposed project, as well as long-term noise and vibration impacts from the operation of the proposed commercial/light industrial uses on the site, including both on-site operational noise and vibration and on- and off-site vehicle noise and vibration. The No Project Alternative would not involve any construction on the project site or any construction traffic on surrounding streets, and would retain the site in its currently vacant, unused state. It would therefore avoid the project's less than significant impacts related to both construction and operational noise and vibration, and its impacts in this regard would be less than those of the proposed project.

6.1.5 Transportation and Traffic

Because the project site is currently vacant, it has little or no vehicle trips associated with it. The proposed project would result in both temporary construction traffic and long-term operational traffic that would be added to the area's street system. While the impacts of this project-related traffic have been determined to be less than significant in this EIR, the No Project Alternative would avoid these impacts, and its transportation and traffic impacts are therefore less than those of the proposed project.

6.2 REDUCED INTENSITY ALTERNATIVE

As described below and throughout this EIR, the project does not have any significant impacts that would be significantly reduced by this alternative. This alternative involves reducing the amount of development included in the proposed project. For the purposes of this analysis, a 50% reduction in total square footage and parking spaces has been assumed, which would result in a reduction from 494,000 square of total floor area to 247,000 square feet of floor area, and a reduction from 722 parking spaces to 361 parking spaces. Also, it is assumed that this reduction in square footage would lead to the inclusion in the project of two rather than three light industrial buildings. The intent of this alternative is to reduce any potentially significant impacts associated with the project that would result from its intensity, such as traffic, noise, and air quality impacts. This alternative would meet the objectives of the project, but to a lesser degree than the project, because it would not allow for as much job creation or economic development. It should also be noted that the Reduced Density Alternative could be applied at an alternate site. The Alternate Site Alternative is analyzed in Section 6.3.

6.2.1 Aesthetics

The Reduced Intensity Alternative would reduce the amount of development on the project site, but it would still change the visual character of the site from a vacant surface parking lot to a site occupied by light industrial commercial development. If the remaining buildings on the project site under this alternative were clustered towards the eastern end of the site, the project's less than significant impact related to blocking views of the distant ridgelines of Signal Hill and the Palos Verdes Peninsula from Conant Street could be reduced. Both the proposed project, as well as this alternative, would be consistent with policies from the Long Beach

General Plan relating to aesthetics, such as maintaining and improving the aesthetic quality of neighborhoods and City facilities. Due to its potential to preserve views of distant ridgelines to a slightly greater degree than the proposed project, this alternative's impacts with respect to aesthetics would be slightly less than those of the proposed project.

6.2.2 Air Quality

While the proposed project's impacts related to air quality emissions are less than significant, the Reduced Intensity Alternative would reduce emissions associated with development and increased use of the site because it would reduce the amount of development on the site. This reduced amount of development could lead to fewer emissions during construction, if less of the site needed to be developed and less construction activity needed to be carried out to construct the project. It would also lead to fewer emissions during operation of the project, because less activity would be carried out on the site and fewer vehicle trips would be made to and from the site. Therefore, this alternative's air quality impacts would be less than those of the proposed project.

6.2.3 Greenhouse Gas Emissions/Climate Change

While the proposed project's impacts related to GHG emissions and climate change are less than significant, the Reduced Intensity Alternative would reduce GHG emissions associated with development and increased use of the site because it would reduce the amount of development on the site, as explained in Section 6.2.2 above. Therefore, this alternative's impacts related to GHG emissions and climate change would be less than those of the proposed project.

6.2.4 Noise

While the proposed project's impacts related to noise are less than significant, the Reduced Intensity Alternative would reduce noise associated with development and increased use of the site because it would reduce the amount of development on the site. This could lead to less construction activity required to construct the project, and less construction noise. It would also reduce the amount of noise associated with project operation, since there would be less operational activity on the site, as well as fewer vehicle trips to and from the site. Therefore, this alternative's noise impacts would be less than those of the proposed project.

6.2.5 Transportation and Traffic

While the project's impacts related to transportation and traffic are less than significant, the Reduced Intensity Alternative would reduce such impacts associated with development and increased use of the site because it would reduce the amount of development on the site. This could lead to less construction activity required to construct the project, and less construction traffic. It would also reduce the amount of traffic associated with project operation, since there would be less operational activity on the site, and thus fewer vehicle trips to and from the site. Therefore, this alternative's transportation and traffic impacts would be less than those of the proposed project.

6.3 ALTERNATE SITE ALTERNATIVE

As described below and throughout this EIR, the project does not have any significant impacts that would be significantly reduced by this alternative. This alternative involves analyzing the potential impacts of development of the proposed project on a different site relative to its impacts on the currently proposed site. In order to identify the most comparable sites, the areas closest to the project site were examined first. The project site is located in the City's Douglas Aircraft Planned Development District (PD-19). The project site is the last piece of property within PD-19 large enough to accommodate the proposed project. The City has two other Planned Development Districts in the vicinity of Long Beach Airport that include some areas that would allow the proposed project: Douglas Park North (PD-32 North) and Douglas Park South (PD-32 South). Sub Area 3 of PD-32 North, which is located on the north side of Cover Street between Schauffle Avenue and the Lakewood Golf Course, allows light industrial uses, but this area is already largely developed with buildings and other currently active land uses, and therefore does not contain a site large enough to accommodate the proposed project. Sub Area 7 of PD-32 South, which is located between Lakewood Boulevard, Conant Street, Worsham Avenue, and Cover Street, directly to the northeast and across Lakewood Boulevard from the project site, also allows light industrial, and is not developed. This site is roughly square in shape and is approximately 20.5 acres in size. Due to its proximity to the project site, size, and similar access to Conant Street and Lakewood Boulevard, this site has been chosen, for the purposes of this analysis, as the Alternate Site.

It should be noted that this site is approximately five acres smaller than the project site. While it could be possible to rearrange the buildings proposed under the project at this alternate site to accommodate the same amount of development as under the proposed project, this alternative may also require somewhat reducing the total amount of proposed development. A Reduced Intensity Alternative is analyzed in Section 6.2. No other undeveloped sites this large were found in the general area.

This alternative would meet the objectives of the project, because it would allow for construction of the same project, but on a different site in relatively close proximity to the current project site. If this alternative required a reduction in the total amount of development, it would meet the project objectives to a proportionally lesser degree. However, for the purposes of analysis, it is assumed in this section that this alternative would allow construction of the proposed project to its full extent. The actual availability of alternate sites for purchase and development is not known.

6.3.1 Aesthetics

The Alternate Site Alternative would change the visual character of the alternate site from a currently undeveloped lot to a lot developed with light industrial/commercial development. It would also leave the proposed project site as a vacant surface parking lot. The impacts of this alternative on visual character and quality would be the same as under the proposed project, but at a different site. This alternative would preserve views of Signal Hill and the Palos Verdes Peninsula from Conant Street, but could block them to a similar degree from Lakewood Boulevard north of Conant Street. Its impacts in this regard would therefore be similar. Both the proposed project, as well as this alternative, would be consistent with policies from the Long

Beach General Plan relating to aesthetics, such as maintaining and improving the aesthetic quality of neighborhoods and City facilities. This alternative's aesthetic impacts would therefore be similar to those of the proposed project, and less than significant.

6.3.2 Air Quality

The Alternate Site Alternative assumes the same level of development as the proposed project. It would therefore have the same construction and on-site operational emissions as the proposed project. Additionally, because it is in close proximity to the proposed project site, it would have very similar trip generation and distribution characteristics as the project, and would therefore have very similar emissions from mobile (vehicular) sources. This alternative's air quality impacts would therefore be similar to those of the proposed project, and less than significant.

6.3.3 Greenhouse Gas Emissions/Climate Change

The Alternate Site Alternative assumes the same level of development as the proposed project. It would therefore have the same construction and on-site operational emissions as the proposed project. Additionally, because it is in close proximity to the proposed project site, it would have very similar trip generation and distribution characteristics as the project, and would therefore have very similar emissions from mobile (vehicular) sources. This alternative's impacts related to GHG emissions and climate change would therefore be similar to those of the proposed project, and less than significant.

6.3.4 Noise

While the proposed project's impacts related to noise are less than significant, the alternate site is somewhat further from noise-sensitive receptors than the proposed project site. While the proposed project site is approximately 730 feet from residential neighborhoods on the east side of Clark Avenue, the closest residential neighborhoods to the alternate site are located approximately 1,750 feet to its north on the north side of Carson Street. Although noise generated on the proposed project site would have a less than significant impact on the closest noise-sensitive receptors, the greater distance of the alternate site from such receptors could reduce the project's construction-related and operational noise impacts. Because the proposed project would have similar trip generation and distribution characteristics at either site, traffic-related noise would be similar under either alternative. Because of its greater distance from noise-sensitive receptors, this alternative's noise impacts would be less than those of the proposed project.

6.3.5 Transportation and Traffic

The project at the alternate site would most likely be accessed from the immediately surrounding streets of Conant Street, Worsham Avenue, or Cover Street. While the alternate site also borders Lakewood Boulevard, this facility is a State highway, and it is more likely that acceptable access would be taken from these other streets. The proposed project would have similar trip generation at either site. Because of the proximity of the two sites, project-generated traffic would distribute across the local roadway network in very similar ways under either

alternative, and impacts related to transportation and traffic would be similar and less than significant under either alternative.

6.4 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

The environmental analysis contained in the EIR has found that the proposed project has no significant environmental impacts. Adoption of a project alternative is therefore not necessary in order to avoid significant environmental impacts. However, each of the alternatives would incrementally reduce one or more of the proposed project's less than significant impacts, as discussed below.

Alternative 2, the Reduced Intensity Alternative, would avoid all of the project's less than significant impacts. Consequently, the Reduced Intensity Alternative is considered environmentally superior. This alternative would meet the objectives of the project (stated in Section 2.0, *Project Description,* and discussed throughout this alternatives analysis) but to a lesser degree than the project, because it would not allow for as much job creation or economic development.

Table 6-2 indicates whether each alternative's environmental impact is greater, lesser, or similar to the proposed project.

Table 6-2
Comparison of Environmental Impacts of Alternatives

Issue	Proposed Project	Alternative 1: No Project	Alternative 2: Reduced Intensity	Alternative 3: Alternate Site
Aesthetics	=	=	+	=
Air Quality	=	+	+	=
GHG Emissions/ Climate Change	=	+	+	=
Noise	=	+	+	+
Transportation and Traffic	=	+	+	=
Overall	=	+	+	+

+Superior to the proposed project
- Inferior to the proposed project
= Similar impact to the proposed project

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7.1 REFERENCES

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7.1.2 Persons Contacted

Craig Chalfant. Long Beach Development Services, Planning Bureau. January-March 2014.

Janine Padia. Sares-Regis Group/Commercial Development. January-March 2014.

7.2 REPORT PREPARERS

This EIR was prepared by the City of Long Beach, with the assistance of Rincon Consultants, Inc. Consultant staff involved in the preparation of the EIR are listed below.

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Appendix A

Initial Study, Notice of Preparation (NOP),
and NOP Comment Letters

City of Long Beach

Pacific Pointe East Development Project

Initial Study

January 2014

rincon

Environmental Scientists Planners Engineers

PACIFIC POINTE EAST DEVELOPMENT PROJECT
INITIAL STUDY

Prepared for:
City of Long Beach
Department of Development Services
333 W. Ocean Boulevard, 5th Floor
Long Beach, CA 90802

Prepared by:
Rincon Consultants
180 North Ashwood Avenue
Ventura, California 93003

January 2014

This report prepared on 50% recycled paper with 50% post-consumer content.

TABLE OF CONTENTS

Page

Initial Study
1. Project title....1
2. Lead agency name and address....1
3. Contact person and phone number....1
4. Project location....1
5. Project sponsor's name and address....1
6. General Plan designation....1
7. Zoning....1
8. Project Description....1
9. Surrounding land uses and setting....2
10. Required Entitlements....2
11. Other public agencies whose approval is required....2

Environmental Factors Affected....7

Determination....8

Environmental Checklist....9

Discussion
I. Aesthetics....9
II. Agricultural and Forest Resources....10
III. Air Quality....11
IV. Biological Resources....14
V. Cultural Resources....16
VI. Geology and Soils....17
VII. Greenhouse Gas Emissions....19
VIII. Hazards and Hazardous Materials....20
IX. Hydrology and Water Quality....23
X. Land Use and Planning....25
XI. Mineral Resources....26
XII. Noise....27
XIII. Population and Housing....29
XIV. Public Services....30
XV. Recreation....31
XVI. Transportation/Traffic....31
XVII. Utilities and Service Systems....33
XVIII. Mandatory Findings of Significance....35

References....37

List of Figures

Figure 1 Regional Location 3
Figure 2 Project Location 4
Figure 3 Site Plan 5

List of Tables

Table 1 SCAQMD LSTs for Emissions in SRA-4 13

INITIAL STUDY

1.	**Project title:**	Pacific Pointe East Development Project
2.	**Lead agency name and address:**	City of Long Beach Department of Development Services 333 W. Ocean Boulevard, 5th Floor Long Beach, CA 90802
3.	**Contact person and phone number:**	Craig Chalfant (562) 570-6368
4.	**Project location:**	Southeast corner of Lakewood Boulevard and Conant Street near the Long Beach Airport Figure 1 shows the location of the project site within the region and Figure 2 shows an aerial view of the project site.
5.	**Project applicant's/sponsor's name and address:**	DP3 Hangars, LLC 18802 Bardeen Avenue Irvine, California 92612-1521 Phone: (949) 809-2414
6.	**General Plan designation:**	Mixed Use (LUD No. 7)
7.	**Zoning:**	Douglas Aircraft Planned Development District (PD-19)

8. Project Description:

The proposed Pacific Pointe East development is located on an unaddressed, approximately 25-acre parcel at the southeast corner of Lakewood Boulevard and Conant Street near the Long Beach Airport, with a Los Angeles County Assessor's ID Number of 7149-005-006. As shown in Figure 3, the proposed project involves three new industrial buildings on a site that is currently developed with a paved surface parking lot. These buildings have an open floor plan and would be intended for light industrial, light manufacturing, warehouse, office, and/or research & development land uses. The three buildings would have a maximum height of about 41 feet and total floor area of 494,000 square feet, broken down as follows:

- Building 9 – 144,000 sq. ft. of building area on a 306,399 square foot (sq. ft.) site
- Building 10 – 118,000 sq. ft. of building area on a 233,538 sq. ft. site
- Building 11 – 232,000 sq. ft. of building area on a 541,098 sq. ft. site

A total of 722 parking spaces are proposed, including 221 spaces for Building 9, 156 spaces for Building 10, and 345 spaces for Building 11.

The project site is located in the Douglas Aircraft Planned Development District (PD-19), which allows a range of uses but limits total peak period (4-6 PM) vehicle trips to and from the district to 5,503. In addition, development within PD-19 must not have significant effects on neighboring residences, significant effects on visual resources, or significant safety and security effects.

9. Surrounding land uses and setting:

The project site is surrounded by industrial and office development to the north, east, and west. A golf course is located immediately south of the project site. Long Beach Airport facilities are located approximately 650 feet southwest of the site, and airport runways are located approximately 450 feet southwest of the site. Approximately 300 feet east of the project site is Rosie the Riveter Park. Long Beach City College is located nearby to the north and east of the project site. The nearest residential development is located approximately 700 feet east of the project site along Clark Avenue.

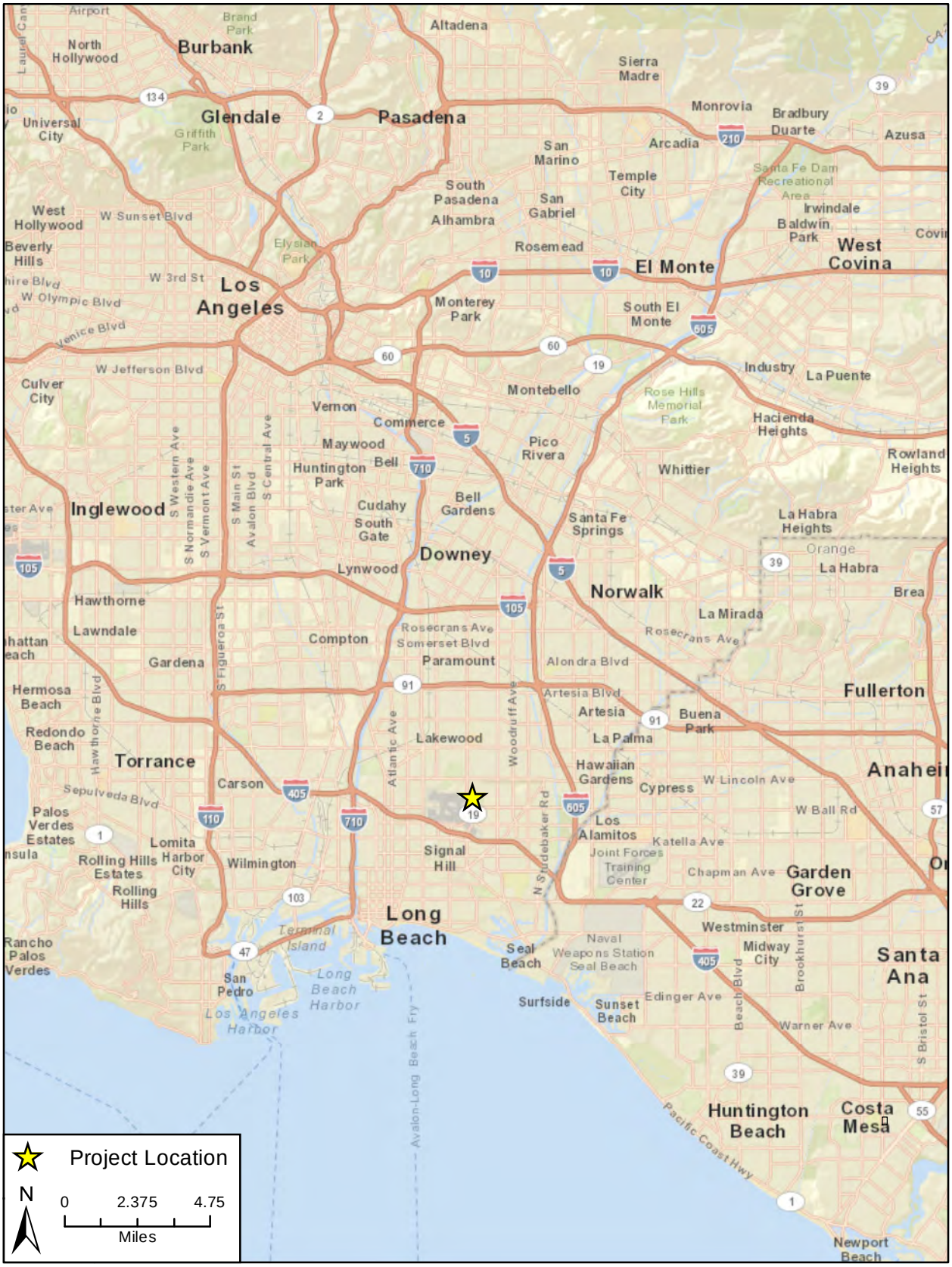
10. Required Entitlements:

The project requires the following discretionary approval (entitlement) from the City of Long Beach:

- **Site Plan Review and Approval –** Consistent with City Ordinance ORD-11-0029, a Site Plan would be submitted for Planning Commission approval.

11. Other public agencies whose approval is required:

The City of Long Beach is the lead agency and is the only public agency with discretionary approval over the project.



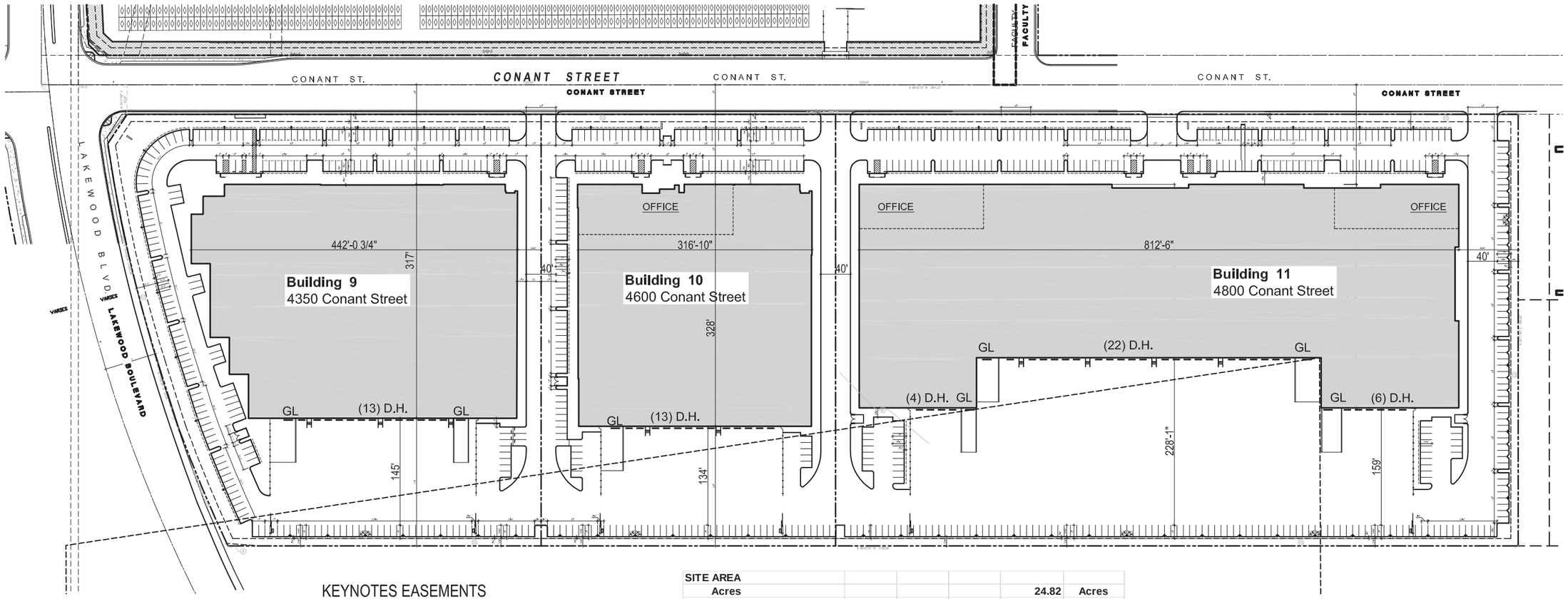
Regional Location

Figure 1

Imagery provided by ESRI and its licensors © 2013.

Aerial View of Project Site and Surrounding Uses

Figure 2



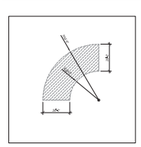
KEYNOTES EASEMENTS

(A) AN EASEMENT FOR PRIVATE ENVIRONMENTAL PURPOSES RECORDED OCTOBER 4, 2012 AS INSTRUMENT NO. 20121495709 OF OFFICIAL RECORDS.

(B) VARIED WIDTH EASEMENT FOR WATER MAIN PURPOSES IN FAVOR OF METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA, RECORDED DECEMBER 19, 1967 AS INSTRUMENT NO. 2640, O.R.

(C) FAA RPZ LINE

CITY OF LONG BEACH FIRE ACCESS TURNING RADIUS



SITE AREA					
Acres				**24.82**	**Acres**
SF				**1,081,035**	**SF**
TOTAL BUILDING AREA				**494,000**	**SF**
FLOOR AREA RATIO (FAR)				**45.7%**	
TOTAL PARKING REQUIRED @ 1/1000				**494**	**STALLS**
TOTAL PARKING PROVIDED				**722**	**STALLS**
PARKING RATIO / 1000				**1.46**	**/1000**

BUILDING DESCRIPTION	**BUILDING 9**	**BUILDING 10**	**BUILDING 11**	**TOTALS**
SITE AREA				
Acres	7.03	5.36	12.42	**24.82**
SF	306,399	233,538	541,098	**1,081,035**
FAR	47.0%	50.5%	42.9%	**45.7%**
BUILDING AREA				
1ST FLOOR - Industrial	129,000	103,000	212,000	**444,000**
2ND FLOOR - Office	15,000	15,000	20,000	**50,000**
TOTALS	**144,000**	**118,000**	**232,000**	**494,000**
PARKING REQUIRED @ 1/1000	**144**	**118**	**232**	**494**
PARKING REQUIRED @ 1.5/1000	**216**	**177**	**348**	**741**
PARKING PROVIDED	**221**	**156**	**345**	**722**
PARKING RATIO	**1.53**	**1.32**	**1.49**	**1.46**

12.18.13

0 75 150
Scale in Feet

N

Site Plan

Figure 3

Source: Pacific Pointe East, November 22, 2013.

ENVIRONMENTAL FACTORS AFFECTED

The environmental factors checked below would be potentially affected by this Project, involving at least one impact that is "Potentially Significant" or "Potentially Significant Unless Mitigation Incorporated" as indicated by the checklist on the following pages.

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

DETERMINATION:

On the basis of this initial evaluation:

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

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

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

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

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

Signature

1/22/14
Date

Craig Chalfant
Printed Name

City of Long Beach
For

Environmental Checklist

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

a) Policy 1.2 in the City's General Plan Open Space and Recreation Element identifies natural resources, amenities, and scenic values in the City, including nature centers, beaches, bluffs, wetlands, and other water bodies (City of Long Beach, October 2002). There are no such resources in the vicinity of the project site, which is located in an urbanized inland area of the City. The proposed structures would be approximately 41 feet high, which would potentially obscure views of scenic resources not located in the immediate vicinity of the project site. Impacts would be **potentially significant** and will be analyzed in the EIR.

b) There are no state scenic highways in the City of Long Beach. The City of Long Beach has one local scenic route, which follows Ocean Boulevard from the Los Angeles River to Livingston Drive in the Belmont Shore neighborhood (City of Long Beach, 2009). This scenic route is located approximately 4 miles south of the project site and would not be affected by project development. There would be **no impact** and further analysis of this issue in an EIR is not warranted.

c) The project site is currently occupied by a paved parking lot. Due to the height of the proposed structures (41 feet), project development would potentially alter views available from the golf course to the south and residences to the east of the project site. The project's impact is **potentially significant** and will be studied in the EIR.

d) The project site is currently developed with a paved parking lot that includes security lighting. The proposed project would include sources of light and glare on the project site, such as parking lot and structural lighting and reflective surfaces on parked cars and building exteriors. However, Chapter 21.41.259 of the Long Beach Municipal Code (LBMC) requires the following:

> *"All parking lots and garages shall be illuminated with lights directed and shielded to prevent light and glare from intruding onto adjacent sites. The light standards shall not exceed the height of the principal use structure or one foot (1') for each two feet (2') of the distance between the light standard and the nearest property line, whichever is greater."*

Otherwise, the project site would be lit similarly to its current state, and any new lighting would be reviewed through the City's Site Plan Review process, as described in Division V of Chapter 21.25—*Site Plan Review* of the LBMC. The project's impacts related to light and glare would therefore be **less than significant** and further analysis of this issue in an EIR is not warranted.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
II. <u>AGRICULTURE AND FOREST RESOURCES</u> -- In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. -- Would the Project:				
a) Convert Prime Farmland, Unique Farmland, Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☐	☒

a-e) There are no agricultural zones or forest lands within the City of Long Beach, which is a fully urbanized community that has been urbanized for over half a century. The proposed project would have **no impact** upon agricultural or forest resources and further analysis of this issue in an EIR is not warranted.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
III. <u>AIR QUALITY</u> -- Would the Project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☒	☐	☐	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☒	☐	☐	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☒	☐	☐	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

The project site is within the South Coast Air Basin (the Basin), which is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The local air quality management agency (SCAQMD) is required to monitor air pollutant levels to ensure that applicable air quality standards are met and, if they are not met, to develop strategies to meet the standards.

Depending on whether or not the standards are met or exceeded, the air basin is classified as being in "attainment" or "nonattainment." The part of the Basin in which the project site is located is a nonattainment area for both the federal and state standards for ozone, particulate matter (PM_{10} and $PM_{2.5}$), and lead, as well as the state standard for nitrogen dioxide (NOx) (California Air Resources Board, February 2011, April 2013). Thus, the basin currently exceeds several state and federal ambient air quality standards and is required to implement strategies that would reduce the pollutant levels to recognized acceptable standards. This non-attainment status is a result of several factors, the primary ones being the naturally adverse meteorological conditions that limit the dispersion and diffusion of pollutants, the limited capacity of the local airshed to eliminate pollutants from the air, and the number, type, and density of emission sources within the Basin. The SCAQMD has adopted an Air Quality Management Plan (AQMP) that provides a strategy for the attainment of state and federal air quality standards.

The SCAQMD has established the following significance thresholds for project operations within the Basin:

- *55 pounds per day of reactive organic compounds (ROC (also known as ROG or VOC))*
- *55 pounds per day of nitrogen oxides (NO_x)*
- *550 pounds per day of carbon monoxide (CO)*
- *150 pounds per day of sulphur oxides (SO_x)*
- *150 pounds per day of particulate matter less than 10 microns in diameter (PM_{10})*
- *55 pounds per day of particulate matter less than 2.5 microns in diameter ($PM_{2.5}$)*

The SCAQMD has also adopted the following thresholds for temporary construction-related pollutant emissions:

- *75 pounds per day ROC*
- *100 pounds per day NO_x*
- *550 pounds per day CO*
- *150 pounds per day of PM_{10}*
- *55 pounds per day of $PM_{2.5}$*
- *150 pounds per day SO_x*

The SCAQMD has also developed Localized Significance Thresholds (LSTs) in response to the Governing Board's Environmental Justice Enhancement Initiative (1-4), which was prepared to update the SCAQMD's CEQA Air Quality Handbook. LSTs were devised in response to concern regarding exposure of individuals to criteria pollutants in local communities. LSTs represent the maximum emissions from a project that would not cause or contribute to an air quality exceedance of the most stringent applicable federal or state ambient air quality standard at the nearest sensitive receptor, taking into consideration ambient concentrations in each source receptor area (SRA), project size, and distance to the sensitive receptor. LSTs only apply to emissions within a fixed stationary location, including idling emissions during both project

construction and operation. LSTs have been developed only for NOx, CO, PM_{10} and $PM_{2.5}$. LSTs are not applicable to mobile sources such as cars on a roadway (Final Localized Significance Threshold Methodology, SCAQMD, June 2003).

LSTs have been developed for emissions within areas up to five acres in size, with air pollutant modeling recommended for activity within larger areas. The SCAQMD provides a lookup table for project sites that measure one, two, three, four, or five acres, with allowable emissions for receptors within 25, 50, 100, 200, and 500 meters. The project site is approximately 25 acres and is located in Source Receptor Area 4 (SRA-4), which is designated by the SCAQMD as the South Coastal LA County and includes the City of Long Beach. LST thresholds for a five-acre site in SRA-4 are shown in Table 1 for reference (SCAQMD, June 2003). The sensitive receptors closest to the project site include: Long Beach City College, which is located immediately to the north and east of the project site, and residences approximately 700 feet east of the project site. The Long Beach City College American Culture and Language Institute is located approximately 100 feet east of the project site, and would be the nearest sensitive receptor.

Table 1
SCAQMD LSTs for Emissions in SRA-4

Pollutant	Allowable emissions as a function of receptor distance in meters from a one acre site (lbs/day)				
	25	**50**	**100**	**200**	**500**
Gradual conversion of NO_x to NO_2	57	58	68	90	142
CO	585	789	1,180	2,296	7,558
PM_{10} (construction)	4	13	29	61	158
PM_{10} (operation)	1	3	7	15	38
$PM_{2.5}$ (construction)	3	5	10	26	93
$PM_{2.5}$ (operation)	1	2	3	7	23

Source: SCAQMD. http://www.aqmd.gov/CEQA/handbook/LST/appC.pdf, accessed online November 2013.

a) Vehicle use, energy consumption, and associated air pollutant emissions are directly related to population growth. The population forecasts upon which the Air Quality Management Plan (AQMP) is based are used to estimate future emissions and devise appropriate strategies to attain state and federal air quality standards. When population growth exceeds the forecasts upon which the AQMP is based, emission inventories could be surpassed, which could affect attainment of standards. However, as discussed in Section XIII, *Population and Housing,* the proposed project would not induce population growth exceeding these population forecasts. Therefore, the project would not conflict with implementation of an air quality plan, and **no impact** would occur. Further analysis of this issue in an EIR is not warranted

b-d) The sensitive receptors closest to the project site that could potentially be affected by project emissions are Long Beach City College nearby the project site to the north and east, and residential development located approximately 700 feet east of the project site. The Long Beach

City College American Culture and Language Institute is located approximately 100 feet east of the project site, and would be considered the nearest sensitive receptor.

Construction activities for the project would generate temporary air pollutant emissions and fugitive dust emissions associated with demolition of the existing parking lot and construction of the proposed structures, including emissions from construction equipment used in activities such as demolition, minor site grading, asphalt paving, architectural coatings, and motor vehicles transporting construction workers. Exhaust emissions from construction activities would vary daily as construction activity levels change.

Operational emissions would consist primarily of exhaust from vehicles traveling to and from the project site. Other sources of operational emissions would include the occupants of the proposed structures. The types of activity that could occur in the proposed structures include light industrial, light manufacturing, warehouse, office, and research & development. The project's construction and operational emissions could result in a **potentially significant impact** with respect to air quality standards and effects on sensitive receptors, and be studied further in the EIR.

e) It is expected that the proposed project would be occupied by light industrial, light manufacturing, warehouse, office, and research & development uses. Light industrial uses typically do not generate odors that are noticeable off-site. Impacts related to odors would be **less than significant** and further analysis of this issue in an EIR is not warranted.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
IV. <u>BIOLOGICAL RESOURCES</u> -- Would the Project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
IV. BIOLOGICAL RESOURCES -- Would the Project:				
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

a- d, f) The proposed project would be located within a developed portion of the City of Long Beach. The project site is located within an existing urbanized area that has been previously disturbed. The site is fully paved and lacks significant native vegetation that provides a habitat for any unique, rare, or endangered plant or animal species. The site does not contain and is not adjacent to wetlands. There is no vegetation present on the project site. Vegetation in the project vicinity consists of ornamental street trees located on Conant Street, on the parcel adjacent to the east of the project site, and the golf course to the south of the project site which is heavily planted with ornamental trees and other vegetation. The area is highly urbanized and there is no potential for adverse effects to wildlife resources or their habitat, either directly or indirectly. There would be **no impact** and further analysis of this issue in an EIR is not warranted.

e) The proposed project would not conflict with any local policies or ordinances protecting biological resources such as trees, nor would it conflict with any conservation plans. There would be **no impact** and further analysis of this issue in an EIR is not warranted**.**

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

a) The project site contains an existing surface parking lot. No historic buildings or other resources are present within the site. The nearest designated historical resource is the Long Beach Airport terminal building, which is located approximately 1,700 feet south of the project site (City of Long Beach, 2010). This structure would be unaffected by project implementation. Therefore, **no impact** with regard to historic resources would occur, and further analysis of this issue in an EIR is not warranted.

b-d) The proposed project would require grading and excavation for foundations. Earth-disturbing activities have the potential to affect previously undiscovered subsurface resources, including archaeological and paleontological resources and human remains. Because the site is already developed and has therefore been previously disturbed, the likelihood of finding intact archaeological or paleontological resources is considered low. In the unlikely event that such resources are discovered during construction of the proposed project, the applicant would be required to comply with standard procedures for assessment and preservation of such resources compliant with the State Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98, which regulate disturbance and disposition of cultural resources and human remains. Although unlikely, if human remains are found during demolition activities, work must stop in the vicinity of the find as well as any area that is reasonably suspected until the County Coroner has been called out and the remains have been investigated and appropriate recommendations have been made for the treatment and disposition of the remains. Compliance with State regulations, which detail the appropriate actions necessary in the event human remains are encountered, would reduce impacts to a **less than significant** level. Further analysis of this issue in an EIR is not warranted

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

a.i and ii) Similar to all of Southern California, active and/or potentially active faults in the region could generate strong groundshaking on the project site. However, the project site is not located within an Alquist-Priolo Earthquake Zone (California Department of Conservation, 1986), so the probability of seismic surface rupture is considered low. Per Plate 2 of the Seismic Safety Element of the General Plan, the most significant fault system in the City is the Newport-Inglewood fault zone. This fault zone runs in a northwest to southeast angle across the southern half of the City. However, the project site is located approximately 1.75 miles northeast of the closest portion of the Newport-Inglewood Fault Zone. Thus, project

implementation would not expose people or structures to potentially substantial adverse effects involving fault rupture.

The project would be required to comply with the California Building Code (CBC). The CBC requires various measures of all construction in California to account for hazards from seismic shaking, and the proposed project would be inspected for compliance with these measures by the City of Long Beach Building Bureau prior to Certificate of Occupancy. Impacts related to seismically-induced surface rupture or ground shaking would therefore be **less than significant** and further analysis of this issue in an EIR is not warranted.

a.iii and iv) The project site is located on a relatively flat site in an area that is not susceptible to earthquake induced landslide hazards. However, the site is in an area that is subject to identified liquefaction hazard (California Department of Conservation Seismic Hazard Zones for the Long Beach Quadrangle, 1999). Based on Plate 7, Liquefaction Potential Areas, of the Long Beach General Plan Seismic Safety Element, the project site has a low potential for liquefaction. Based on the geotechnical analysis performed for the project site, soils subject to liquefaction during seismic events are present on the site (Southern California Geotechnical, 2013). The differential settlement associated with liquefaction at this site would be less than 1 inch. The estimated differential settlements could be assumed to occur across a distance of 100 feet, indicating maximum angular distortions of less than 0.002 inches per inch for both sites. Such settlements are considered to be within the structural tolerances of typical building supported on shallow foundation systems. However, minor to moderate repairs, including repair of damaged drywall and stucco, etc., could be required after the occurrence of liquefaction-induced settlements. Compliance with City and State building codes, which include provisions to mitigate potential liquefaction hazard, would be required of the proposed project. The project would therefore have a **less than significant** impact related to these hazards and further analysis of this issue in an EIR is not warranted.

b) Soil erosion is the removal of soil by water, wind, and gravity. Demolition of the existing parking lot and construction of the structures would involve soil-disturbing activities that could create soil erosion. However, Standard Urban Stormwater Mitigation Plan (SUSMP) and National Pollutant Discharge Elimination System (NPDES) requirements to utilize watering of soils and stormwater Best Management Practices (BMPs) limiting erosion would be enforced on the project, as described in Section IX, *Hydrology and Water Quality*. These impacts would be **less than significant** and further analysis of this issue in an EIR is not warranted.

c) The project site is located in a topographically flat area and does not contain slopes that are subject to landslide or other geologic hazards that could affect on- or off-site development. Therefore, impacts related to unstable soils and collapse would be **less than significant**.

d) Testing was performed on the soils present on the project site to determine their potential for expansion. The soils tested were determined to have low to medium expansion potential. Project development would require excavation and removal of existing fill soils and the provision of compacted fill to support the proposed structures. It is expected that the compacted fill, in combination with other common methods for addressing expansive soils, would substantially reduce expansion potential at the project site. Compliance with existing City and State building codes would ensure that impacts related to expansive soils are **less than significant** and further analysis of this issue in an EIR is not warranted.

e) The project is located in a fully developed part of Long Beach, with access to existing sewer connections, and would not require the use of septic tanks. Therefore, **no impact** related to the use of septic tanks would occur and further analysis of this issue in an EIR is not warranted.

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

a) Project activities would generate greenhouse gas (GHG) emissions through the burning of fossil fuels or other emissions of GHGs, thus potentially contributing to cumulative impacts related to global climate change. Sources of GHG emissions include the operation of heavy equipment and the application of architectural coating during project construction, vehicular emissions from employees traveling to and from the project site, emissions resulting from industrial activities on the project site, and indirect emissions from energy use (electricity and natural gas). The adopted CEQA Guidelines provide general regulatory guidance on the analysis and mitigation of GHG emissions in CEQA documents, but contain no suggested thresholds of significance for GHG emissions. Instead, they give lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts. The general approach to developing a threshold of significance for GHG emissions is to identify the emissions level for which a project would not be expected to substantially conflict with existing California legislation adopted to reduce statewide GHG emissions needed to move the state towards climate stabilization. This is a **potentially significant** impact that will be analyzed in the EIR.

b. In response to Executive Order (EO) S-3-05, CalEPA created the Climate Action Team (CAT), which in March 2006 published the Climate Action Team Report (the "2006 CAT Report") (CalEPA, 2006). The 2006 CAT Report identified a recommended list of strategies that the state could pursue to reduce GHG emissions. These are strategies that could be implemented by various state agencies to ensure that the emission reduction targets in EO S-3-05 are met and can be met with existing authority of the state agencies. The strategies include the reduction of passenger and light duty truck emissions, the reduction of idling times for diesel trucks, an overhaul of shipping technology/infrastructure, increased use of alternative fuels, increased recycling, and landfill methane capture, etc. In addition, in 2008 the California Attorney General published The California Environmental Quality Act Addressing Global Warming Impacts at the Local Agency Level (Office of the California Attorney General, Global Warming Measures Updated May 21, 2008). This document provides information that may be helpful to

local agencies in carrying out their duties under CEQA as they relate to global warming. Included in this document are various measures that may reduce the global warming related impacts of a project. Lastly, Senate Bill 375, signed in August 2008, requires the inclusion of Sustainable Communities' Strategies (SCS) in Regional Transportation Plans (RTPs) for the purpose of reducing GHG emissions. In April 2012 SCAG adopted the *2012-2035 Regional Transportation Plan/Sustainable Communities Strategy* (RTP/SCS). SCAG's RTP/SCS includes a commitment to reduce emissions from transportation sources by promoting compact and infill development in order to comply with SB 375. A goal of the SCS is to "promote the development of better places to live and work through measures that encourage more compact development, varied housing options, bike and pedestrian improvements, and efficient transportation infrastructure." The extent to which the proposed project would be consistent with local and regional programs to reduce GHG emissions represents a **potentially significant** impact that will be analyzed in the EIR.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
VIII. HAZARDS AND HAZARDOUS MATERIALS - Would the Project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☐	☒
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within ¼ mile of an existing or proposed school?	☐	☐	☒	☐
d) Be located on a site which is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☒	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard for people residing or working in the Project area?	☐	☐	☒	☐

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
VIII. HAZARDS AND HAZARDOUS MATERIALS - Would the Project:				
f) For a project within the vicinity of a private airstrip, would the Project result in a safety hazard for people residing or working in the Project area?	☐	☐	☒	☐
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

a) The proposed project involves demolition of an existing surface parking lot and construction of three industrial buildings totaling 502,076 square feet of floor area. Operation of the proposed project would not involve the routine transport, use or disposal of hazardous substances. There would be **no impact** and further analysis of this issue in an EIR is not warranted**.**

b, c) The school nearest to the project site is Long Beach City College, which is located to the north and east of the site. Burcham Elementary School is located approximately 0.7 miles to the southeast of the project. Operation of the proposed project would not involve the routine use or transport of hazardous materials or emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste, and nearby schools would therefore not be adversely affected. Construction of the project would require the demolition of the existing surface parking lot and construction of the proposed industrial buildings. These activities would not expose nearby schools to hazardous materials, emissions, or substances. Compliance with existing state and City regulations regarding the use and transport of hazardous materials would reduce the project's potential impacts related to hazardous emissions or materials affecting school sites within ¼ mile to a **less than significant** level. Further analysis of this issue in an EIR is not warranted

d) The following databases compiled pursuant to Government Code Section 65962.5 were checked (November 13, 2013) for known hazardous materials contamination at the project site:

- Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) database;
- Geotracker search for leaking underground storage tanks (LUSTs);

- Investigations- Cleanups (SLIC) and Landfill sites, Cortese list of Hazardous Waste and Substances Sites; and
- The Department of Toxic Substances Control's Site Mitigation and Brownfields Database.

The project site is identified in the Geotracker database as the site of four USTs associated with prior use of the site. Based on the records on the Geotracker online database, potential contaminants of concern on this site as a result of the former uses include 1,1,1-trichloroethane (TCA), benzene, chromium, other chlorinated hydrocarbons, other solvent or non-petroleum hydrocarbon, stoddard solvent/mineral spirits/distillates, tetrachloroethylene (PCE), and trichloroethylene (TCE). The case was opened in 1995 and its status is no further action as of December 2011. The record search indicates that cleanup onsite took place and the case was deemed to be closed by the Los Angeles Regional Water Quality Control Board (RWQCB) in January 2010. According to Geotracker records, a health risk assessment for the affected area was completed and reviewed by the Office of Environmental Hazard Assessment, and the site was deemed suitable for continued industrial/commercial uses.

The closest "open status" contaminated site is located approximately ¼ mile to the northwest of the project site, with potential contaminants of concern including chlorinated hydrocarbons, metal, polynuclear aromatic hydrocarbons (PAHS), and waste oil. There is no evidence to suggest that any contamination at this site would affect the project site. Thus, construction of the proposed project would not create a significant hazard to the public or the environment from being located on a contaminated site. The impact would be **less than significant** and further analysis of this issue in an EIR is not warranted.

e, f) The project site is located immediately northeast of the Long Beach Municipal Airport. A portion of the southern project site is located in a Runway Protection Zone (RPZ) within the airport's influence area. The proposed project has been designed such that all proposed structures are located beyond the RPZ boundary. Those areas in the southern portion of the project site within the RPZ are planned for development as parking areas and loading docks. The project applicant will be required to submit building plans to the Federal Aviation Administration for review and approval. Thus, air traffic associated with the Long Beach Municipal Airport would not result in a safety hazard at the project site. The project site is not located near any private airstrip. There would be a **less than significant** impact and further analysis of this issue in an EIR is not warranted**.**

g) The proposed project involves demolition of an existing surface parking lot and the construction of three industrial buildings, and would not conflict with an adopted emergency response plan or emergency evacuation plan or interfere with traffic on adjacent streets. The impact would be **less than significant** and further analysis of this issue in an EIR is not warranted.

h) The project site is located in an urbanized area of Long Beach and is not near any wildlands. Thus the proposed project would not expose persons or structures to wildfire hazard risks. There would be **no impact** and further analysis of this issue in an EIR is not warranted**.**

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

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
IX. HYDROLOGY AND WATER QUALITY – Would the Project:				
i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

a, e-f) The project site is located approximately 4.5 miles north of the Pacific Ocean, 3.4 miles north of Colorado Lagoon, 3.8 miles north of Alamitos Bay, 3.6 miles east of the the Los Angeles River, and 2.5 miles west of the San Gabriel River. Construction activity, including grading, could have the potential to degrade water quality due to sediment erosion or the presence of contaminants located within the soils (as discussed in Section VIII, *Hazards and Hazardous Materials*). However, on-site activities would be required to comply with the requirements of Long Beach Municipal Code (LBMC) Chapter 18.61, NPDES and SUSMP Regulations. Specifically, proposed construction activities would be required to comply with LBMC Section 18.61.050, which requires construction plans to include construction and erosion and sediment control best management practices (BMPs). Examples of required BMPs include sediment traps, stockpile management, and material delivery and storage. Further, the City would be required to complete and submit a Stormwater Pollution and Prevention Plan (SWPPP) to both the Regional Water Quality Control Board (RWQCB) and the City of Long Beach in addition a Notice of Intent (NOI) to comply with the state construction activity storm water permit. Compliance with these requirements would reduce potential impacts associated with water quality during implementation of the proposed project to **less than significant**. The project does not involve any actions beyond construction activities that would adversely affect water quality. Further analysis of this issue in an EIR is not warranted

b) The proposed project would introduce three new industrial buildings totaling 502,076 square feet on the project site. The project would therefore lead to a small increase in consumption of potable water. However, this increase would be so small in comparison to total water usage in this highly urbanized area that it would not significantly impact groundwater. Also, the project would produce little if any increase in impermeable surfaces in the area that would restrict groundwater recharge. The project would therefore not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering or the local groundwater table level, and this impact would be **less than significant**. Further analysis of this issue in an EIR is not warranted

c, d) The proposed project would not alter the surface drainage pattern of the surrounding area. It also would not require the relocation of existing storm drain lines or construction of any new storm drain lines. Storm water would continue to flow into the City's existing storm drain system. The project would not significantly increase the amount of impermeable surfaces on the

project site, and would therefore not significantly alter the overall amount of surface water drainage such that the project would result in flooding, substantial erosion or siltation on- or off-site. Construction activities, including excavation, may result in sedimentation or erosion on or off-site. However, as discussed above, proposed construction activities would be required to comply with LBMC Section 18.61.050, which requires construction plans to include construction and erosion and sediment control best management practices (BMPs) that would reduce the impacts related to erosion or siltation on or off site to a less than significant level. Impacts related to drainage patterns, both temporary and operational, would be **less than significant.** Further analysis of this issue in an EIR is not warranted

g-h) Per FEMA flood zone maps (#06037C1960F), the project site is located in Zone X, which is within the 500-year flood zone (the area with a 0.2% chance per year of flooding). The proposed project would not impede flood flows or expose people to significant flood-related safety impacts. Consequently, there would be **no impact** and further analysis of this issue in an EIR is not warranted.

i) The proposed project is not subject to flooding due to dam or levee failure, and would not increase exposure to risks associated with dam or levee failure. **No impact** would occur and further analysis of this issue in an EIR is not warranted.

j) A tsunami is a tidal wave produced by off-shore seismic activity; seiches are seismically-induced waves that occur in large bodies of water, such as lakes. The project site is not located within a tsunami hazard zone (California Department of Conservation, March 2009). Additionally, because the project site is not sufficiently close to a large body of water other than the ocean, seiches are not a significant concern. As described above in Section VI, *Geology and Soils*, the project site is not located within an area subject to potentially high landslide or debris and mud flows. Therefore, **no impact** related to these hazards would occur and further analysis of this issue in an EIR is not warranted.

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

c) Conflict with an applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

a) The proposed project involves infill development and does not include any components, such as a new road, that would physically divide an established community. **No impact** would occur and further analysis of this issue in an EIR is not warranted.

b) The project site is located in the Douglas Aircraft Planned Development District (PD-19) and within General Plan land use designation Mixed Use (LUD No. 7). The proposed project would require design review to ensure that it complies with the requirements of the PD-19 district and other applicable land use regulations. Upon completion of City review for compliance with the requirements of the PD-19 district, impacts would be **less than significant**, and further analysis of this issue in an EIR is not warranted.

c) The project site is not located within an area that is subject to an adopted habitat conservation plan or natural community plan. **No impact** would occur and further analysis of this issue in an EIR is not warranted.

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

a-b) The project site and surrounding properties are part of an urbanized area in northeast Long Beach. The project site is not located in a mineral extraction operations area. The proposed project does not involve a mineral resource recovery site and no mineral resource activities would be altered or displaced by the project. Therefore, **no impact** would occur and further analysis of this issue in an EIR is not warranted.

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

Noise is defined as unwanted sound that disturbs human activity. Environmental noise levels typically fluctuate over time, and different types of noise descriptors are used to account for this variability. Noise level measurements include intensity, frequency, and duration, as well as time of occurrence. Noise level (or volume) is generally measured in decibels (dB) using the A-weighted sound pressure level (dBA).

In order to determine the compatibility of proposed new uses with existing development, the City of Long Beach uses the State Noise/Land Use Compatibility Standards, which suggest a normally acceptable exterior noise exposure of up to 65 dBA CNEL for sensitive land uses such as residences and schools. Less sensitive commercial and industrial uses may be compatible with ambient noise levels up to 70 dBA, or even 75 dBA for industrial uses.

The City has not adopted any thresholds or regulations addressing vibration. Vibration impacts would be significant if they exceeded the following Federal Railroad Administration (FRA) thresholds.

- *65VdB where low ambient vibration is essential for interior operations, such as hospitals and recording studios.*
- *72 VdB for residences and buildings where people normally sleep, including hotels.*
- *75 VdB for institutional land uses with primary daytime use, such as churches and schools.*
- *95 VdB for physical damage to extremely fragile historic buildings.*
- *100 VdB for physical damage to buildings.*

a, c) The proposed project involves demolition of an existing surface parking lot and the construction of three industrial buildings. The project would generate vehicular trips and increase vehicular traffic on surrounding streets. The primary operational sources of noise associated with the proposed project that could increase existing ambient noise levels would be this project-generated traffic, stationary sources such as mechanical equipment, and non-stationary noise such as parking lot noise from vehicles and conversations.

Mechanical equipment associated with the proposed project would include equipment such as HVAC systems and equipment associated with industrial development, which would produce temporary noise. However, such HVAC equipment would be subject to Chapter 8.80.200 of the LBMC. Enforcement of this regulation would ensure that its operation would not cause a significant operational noise impact. Other operational noise sources would include activity at the planned loading docks in the southern portion of the project site. Construction and operational noise has the potential to affect nearby sensitive receptors and is a **potentially significant impact** that will be further analyzed in the EIR.

b) The proposed project would involve demolition and construction activities at the project site such as pavement removal, grading and paving activities for the proposed surface parking lot, and building construction noise. The operation of heavy construction equipment, particularly in the demolition and grading phases of project implementation, has the potential to cause perceptible vibration at off-site sensitive receptors. This is a **potentially significant impact** that will be analyzed further in the EIR**.**

d) Project construction would involve the use of heavy equipment associated with grading. Noise generated during this phase would be typical of such site preparation activity and would be temporary. The noise-sensitive land uses closest to the project site include: Long Beach City College, which is located to the north and east of the project site, and residences approximately 700 feet east of the project site. Such noise levels would exceed ambient levels in the area and could cause temporary disturbance to nearby receptors. This is a **potentially significant impact** that will be analyzed further in the EIR**.**

e) The project site is located immediately northeast of the closest airport, Long Beach Municipal Airport, and within the airport's 70 dB noise contour. Exposure to noise from the airport is a **potentially significant impact** that will be analyzed further in the EIR**.**

f) The project site is not located in the vicinity of a private airstrip, and **no impact** related to such facilities would occur. Further analysis of this issue in an EIR is not warranted

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

a) The proposed project would involve the creation of three new industrial buildings totaling 494,000 square feet. The project does not include new residential development that could directly induce population growth. Employees of businesses operating in the proposed structures could be existing residents of the City of Long Beach, commuters from locations outside of the City, or new residents of the City. Based on median employment for similar types of development in Los Angeles County, the proposed project would generate approximately 352 jobs (The Natelson Company, October 2001).

The population of the City of Long Beach is 462,257 (California Department of Finance, May 2013). The Southern California Association of Governments (SCAG) in its adopted 2012 Integrated Growth Forecast (SCAG, August 2012), forecasts that the population of Long Beach will grow to 491,000 by 2020, which would be a population increase of 28,743 persons, or 6.2%. Population growth as a result of employment created by the proposed project—which would be approximately 352 residents, as discussed above— would fall well within SCAG's population increase forecast and, therefore, would not directly or indirectly induce substantial population growth in the area. Therefore, this impact would be **less than significant** and further analysis of this issue in an EIR is not warranted.

b, c) The proposed project would not displace any existing housing unit, and therefore **no impact** would occur. Further analysis of this issue in an EIR is not warranted.

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

a.i, ii) Fire and police protection are provided by the Long Beach Fire Department (LBFD) and the Long Beach Police Department (LBPD). The proposed project does not include any new residential development. As discussed in Section XIII, *Population and Housing,* the project would not create a significant increase in population compared to projected growth. The project would therefore not significantly affect existing fire and police service ratios and response times or significantly increase the demand for fire and police protection services beyond that already planned. The proposed project would be built according to California Building Code (CBC) requirements. Additionally, the submitted plans would require review and approval from the City of Long Beach Development Services Department and all other required departments and agencies to ensure that fire and life safety regulations are met. Therefore, impacts would be **less than significant** and further analysis of this issue in an EIR is not warranted.

a.iii, iv, v) The amount of employment opportunities created by the proposed project would not directly result in significant population increases or significantly increased demand for schools, parks, or other facilities, and this impact would be **less than significant**. Further analysis of this issue in an EIR is not warranted

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

a, b) As discussed in Section XIV, *Public Services,* the proposed project would not result in significant population growth or new employment opportunities that would result in significantly increased demand for, or increased use of, park or recreational facilities. Furthermore, the project does not propose any recreational facilities that could be used by the public. Therefore the project's impacts on or from recreational facilities would be **less than significant** and further analysis of this issue in an EIR is not warranted.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XVI. TRANSPORTATION / TRAFFIC -- Would the Project:				
a) Conflict with an applicable plan, ordinance or policy establishing a measure of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways, and freeways, pedestrian and bicycle paths, and mass transit?	☒	☐	☐	☐

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XVI. TRANSPORTATION / TRAFFIC -- Would the Project:				
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☒	☐	☐	☐
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?	☒	☐	☐	☐
e) Result in inadequate emergency access?	☒	☐	☐	☐
f) Conflict with adopted policies, plans, or programs regarding public transit, bikeways, or pedestrian facilities, or otherwise substantially decrease the performance or safety of such facilities?	☐	☐	☒	☐

a, b) The proposed project is located in the Douglas Aircraft Planned Development District (PD-19), which allows new development intensity within this District to equal no more than 5,503 vehicle trips to and from the District in the peak period between 4 and 6PM. Although the project itself would generate less than this threshold (366 PM peak hour trips), the project's trip generation combined with other land uses has the potential to exceed this threshold. The project's impacts on traffic in the area and its consistency with the requirements of the PD-19 District and other plans are therefore **potentially significant** and will be evaluated in the EIR.

c) As discussed in Section VIII, *Hazards and Hazardous Materials*, the project site is located immediately northeast of the Long Beach Municipal Airport. A portion of the southern project site is located in a Runway Protection Zone (RPZ) within the airport's influence area. The proposed project has been designed such that all proposed structures are located beyond the RPZ boundary. Those areas in the southern portion of the project site within the RPZ are planned for development as parking areas and loading docks. The proposed project would not result in changes in air traffic patterns. There would be **no impact** in this regard and further study of this issue is not warranted.

d) Site plans for the proposed project would be reviewed by the City to ensure that the project would not include any design features that could present traffic hazards. Vehicular access to

the project site would be taken from three planned driveways on Conant Street, similar to the existing site access for the surface parking lot currently on the site. Construction activity for the project may result in temporary safety impacts to surrounding streets such as Lakewood Boulevard, Conant Street, and Clark Avenue for all users including drivers, bicyclists, and pedestrians. Also, because of changes in driveway location and different traffic levels and circulation patterns, operation of the project has the potential to create hazardous design features. This impact is therefore **potentially significant** and will be further evaluated in the EIR.

e) As stated under impact XVId) above, the project may have both temporary construction-related and permanent operational safety impacts on immediately surrounding streets, and while no temporary or permanent street closures are anticipated, the project's impacts related to hazardous design features and site access are potentially significant. These impacts are therefore also potentially significant for emergency vehicles, which would also need to access the site in case of emergency. Impacts related to emergency access are therefore **potentially significant** and will be evaluated in the EIR**.**

f) The proposed project would not directly result in changes to the public transportation system that would conflict with adopted policies plans or programs. Transit access to City of Long Beach bus lines is currently available adjacent to the project site at the intersection of Conant Street with both Lakewood Boulevard and the intersection of Conant Street with Clark Avenue. People employed at the project site may use existing transit services to reach the project site. Project-related increases in the use of existing transit resources would be a **less than significant impact** and further study of this issue is not warranted.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XVII. UTILITIES AND SERVICE SYSTEMS -- Would the Project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☒	☐
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XVII. UTILITIES AND SERVICE SYSTEMS -- Would the Project:				
d) Have sufficient water supplies available to serve the Project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☒	☐
e) Result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
f) Be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs?	☐	☐	☒	☐
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☒	☐

a, b, e) The proposed project would require connection to existing sewer infrastructure and would result in an increase in the amount of wastewater produced on the site. The site is already served by the City's existing sewer system. Based on standard wastewater generation rates developed by the Sanitation Districts of Los Angeles County, the proposed project would generate an estimated 10 gallons of wastewater per 1,000 square feet per day, or approximately 5,021 gallons per day (gpd) (Sanitation Districts of Los Angeles, 2013). Currently, a majority of the City's wastewater is delivered to the Joint Water Pollution Control Plant (JWPCP) of the Los Angeles County Sanitation Districts. The remaining portion of the City's wastewater is delivered to the Long Beach Water Reclamation Plant of the Los Angeles County Sanitation Districts. The JWPCP provides advanced primary and partial secondary treatment for 350 million gallons of wastewater per day (mgd). The Long Beach Water Reclamation Plant provides primary, secondary, and tertiary treatment for 25 mgd of wastewater. Project operation would result in a 0.001% increase in demand for wastewater treatment compared to the available treatment capacity of 375 mgd. Thus, the project would not exceed wastewater treatment requirements, exceed the capacity of the City's wastewater systems, or require the construction of new wastewater treatment facilities. These impacts would be **less than significant** and further analysis of this issue in an EIR is not warranted.

c) As discussed in Section IX, *Hydrology and Water Quality,* the proposed project would not substantially change the amount of impervious surfaces on the project site, and the project would therefore not significantly increase the amount of runoff from the site. It would therefore not require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects, and would have **no impact** in this regard. Further analysis of this issue in an EIR is not warranted

d) The proposed project would require connection to existing water delivery infrastructure and would result in an increase in the amount of water consumed on the site. The site is already served by the City's existing water system. Based on the project's estimated wastewater generation, project water demand can be estimated at 6,025 gpd, or 6.75 acre-feet per year. The City's 2010 Urban Water Management Plan (UWMP) reports total Citywide water demand for 2010 at 63,448 acre-feet. This is projected to increase by 4,172 acre-feet (or 6.6 percent) to 67,620 acre-feet in 2015. Project water demand would represent less than 0.2 percent of the forecast increase in water demand. Adequate water supplies are identified in the UWMP to meet future demand. Based on the project's incremental contribution to future demand, it is not expected that new sources of water supply would be required to meet project water needs. This would be a **less than significant** impact and further analysis of this issue in an EIR is not warranted.

f, g) Demolition materials, including asphalt and concrete, would be disposed of at either the Azusa Landfill or the Puente Hills Landfill. Azusa Landfill is a Class III landfill with 6,500 tons per day capacity that accepts inert waste and contaminated soil (CalRecycle, 2013). Demolition materials containing any contaminated soils (if found onsite as described in Section VIII, *Hazards and Hazardous Materials*) would be disposed of at this landfill. All other demolition waste would be disposed of at the Scholl Canyon Landfill, which is a Class III landfill with 3,400 tons per day capacity (CalRecycle, 2013). Asphalt and concrete demolition debris would likely be recycled at Hanson Aggregates, a local construction recycling facility in Long Beach (located approximately 5 miles north of the site). Demolition materials would be a one-time deposit and the project would not be a continuous solid waste generator.

Based on solid waste generation rates provided by CalRecycle for similar types of uses, the project would generate an estimated 2.5 tons per day of solid waste (CalRecycle, 2013). Based on the disposal capacity of landfills serving the project site, this would be an incremental increase in total disposal that would not affect the availability of solid waste disposal capacity. Therefore, impacts related to solid waste would be **less than significant** and further analysis of this issue in an EIR is not warranted.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XVIII. MANDATORY FINDINGS OF SIGNIFICANCE —				
a) Does the Project have the potential to substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self- sustaining levels, eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☒	☐

b) Does the Project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☒	☐	☐	☐
c) Does the Project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

a) As discussed in Section V, *Cultural Resources*, the project site does not contain potentially historic structures that would be removed or altered by the proposed project. The project would also be required to comply with standard procedures for assessment and preservation of subsurface resources compliant with the State Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98, which regulate disturbance and disposition of cultural resources and human remains. Compliance with these regulations, which detail the appropriate actions necessary in the event human remains are encountered, would reduce impacts to these cultural resources to a **less than significant** level.

As discussed in Section IV, *Biological Resources*, the project area is located within an existing urbanized area that has been previously disturbed. The site lacks significant native vegetation that would provide a habitat for any unique, rare, or endangered plant or animal species. The site does not contain and is not adjacent to wetlands. Vegetation in the area is limited to ornamental street trees and other ornamental vegetation along local streets and on private property. The area is highly urbanized and there is no potential for adverse effects to wildlife resources or their habitat either directly or indirectly. There would be **no impact** related to biological resources.

b) The proposed project has potentially significant impacts related to aesthetics, air quality, greenhouse gas emissions, land use, noise, and traffic, which could potentially contribute to cumulative impacts in the same areas. The project's **potentially significant** cumulative impacts will be studied in the EIR.

c) As analyzed in this Initial Study, the proposed project has potentially significant environmental effects in the areas of aesthetics, air quality, greenhouse gas emissions, land use, noise, and traffic, but these environmental effects would not cause substantial adverse effects on human beings, either directly or indirectly. The project's impacts in this area are therefore **less than significant**.

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CITY OF LONG BEACH

DEPARTMENT OF DEVELOPMENT SERVICES

333 W. Ocean Blvd. Long Beach, CA 90802 (562) 570-6458 - FAX (562) 570-6068

NOTICE OF PREPARATION

TO: Agencies, Organizations and Interested Parties

SUBJECT: Notice of Preparation of a Draft Environmental Impact Report in Compliance with Title 14, Section 15082(a) of the California Code of Regulations

Pursuant to Public Resources Code Section 21165 and the Guidelines for the California Environmental Quality Act (CEQA) Section 15050, the City of Long Beach is the Lead Agency responsible for preparation of an Environmental Impact Report (EIR) addressing potential impacts associated with the project identified below.

AGENCIES: The purpose of this notice is to serve as a Notice of Preparation (NOP) of an EIR pursuant to the State CEQA Guidelines Section 15082, and solicit comments and suggestions regarding the scope and content of the EIR to be prepared for the proposed project. Specifically, the City of Long Beach requests input on the environmental information that is germane to your agency's statutory responsibility in connection with the proposed project. Your agency may rely on the Draft EIR prepared by the City when considering permits or other approvals for this project.

ORGANIZATIONS AND INTERESTED PARTIES: The City of Long Beach requests your comments and concerns regarding the proposed scope and content of the environmental information to be included in the EIR.

PROJECT TITLE: Pacific Pointe East Development Project

PROJECT LOCATION: Southeast corner of Lakewood Boulevard and Conant Street near the Long Beach Airport (Los Angeles County Assessor's ID Number 7149-005-006).

PROJECT DESCRIPTION: The proposed project involves construction of three industrial buildings on a site currently improved as a paved surface parking lot. These buildings would have an open floor plan and are intended for light industrial, light manufacturing, warehouse, office, and/or research and development land uses. These three buildings would have a maximum height of 41 feet with a total floor area of 494,000 square feet and 722 on-site parking spaces, broken down as follows: Building 9 – 144,000 square feet with 221 parking spaces; Building 10 – 118,000 square feet with 156 parking spaces; and Building 11 – 232,000 square feet with 345 parking spaces.

PROBABLE ENVIRONMENTAL EFFECTS OF THE PROJECT: Based on the findings of the Initial Study, the proposed project could have potentially significant impacts on the following environmental factors: **Aesthetics, Air Quality, Greenhouse Gas Emissions, Noise, and Transportation/Traffic.**

PUBLIC REVIEW PERIOD: This NOP is available for public review and comment pursuant to California Code of Regulations, Title 14, Section 15082(b). The public review and comment period during which the City of Long Beach will receive comments on the NOP for this proposed project is:

Beginning: Wednesday, January 22, 2014 **Ending:** Thursday, February 20, 2014

THE NOP AND INITIAL STUDY ARE AVAILABLE FOR PUBLIC REVIEW AT THE FOLLOWING LOCATIONS:

City Hall, 333 W. Ocean Boulevard, 5th Floor
Long Beach Main Library, 101 Pacific Avenue
Online at: www.lbds.info/planning/environmental_planning/environmental_reports.asp

RESPONSES AND COMMENTS: Please list a contact person for your agency or organization, include U.S. mail and email addresses, and send your comments to:

Craig Chalfant
Planning Bureau, Development Services Department
City of Long Beach
333 W. Ocean Boulevard, 5th Floor
Long Beach, CA 90802

Or via email to: craig.chalfant@longbeach.gov

DEPARTMENT OF TRANSPORTATION
DISTRICT 7, OFFICE OF TRANSPORTATION PLANNING
IGR/CEQA BRANCH
100 MAIN STREET, MS # 16
LOS ANGELES, CA 90012-3606
PHONE: (213) 897-9140
FAX: (213) 897-1337

Flex your power!
Be energy efficient!

February 13, 2014

Mr. Craig Chalfant
City of Long Beach
Department of Development Services
333 W. Ocean Boulevard, 5th Floor
Long Beach, CA 90802

Re: **Pacific Pointe East Development Project**
Notice of Preparation of Draft EIR
IGR#140141/EA, SCH#2014011059
Vic: LA/405/3.623

Dear Mr. Chalfant:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the proposed Pacific Pointe East Development project. The proposed development involves construction of three industrial buildings intended for light industrial, light manufacturing, warehouse, office and/or research and development land uses. The three buildings would have a total floor area of 494,000 square feet. A total of 722 parking spaces are proposed including 221 spaces for Building 9, 156 for building 10, and 345 for building 11. The project site is located at the southeast corner of Lakewood Boulevard and Conant Street across from the Long Beach Airport.

The initial study states that the project's vehicle trip generation combined with that of other land uses would be potentially significant on the surrounding roadway network. Please evaluate potential transportation impacts to State highway facilities Interstate 405 (I-405) and Lakewood Boulevard (State Route 19) in a traffic impact analysis report. You may be aware that the segments of Lakewood Boulevard south of Del Amo Boulevard to Pacific Coast Highway is no longer part of State Route 19, they were relinquished to the City.

The following are elements of what is expected in a traffic impact analysis for consideration by Caltrans District 7.

1. Analysis should include a) traffic generated by the projects under consideration, b) cumulative traffic from all related approved developments in the area, c) cumulative traffic from likely not-yet-approved developments in the area, and d) traffic growth other than from the project and developments. That is, include: existing + specific plan project + other related projects + other growth scenarios involving different assumptions on development and growth.

2. Analysis of AM, and PM peak-hour volumes for both existing and future conditions in the affected area. This should include mainline highway sections, interchanges, and intersections. If the project site is part of a specific plan area, the future scenario should extend the projected build-out year of the specific plan.

3. Presentations of assumptions and methods used to develop trip generation, trip distribution, choice of travel mode, and assignments of trips to routes. Caltrans will check for consistency of travel demand

modeling with other regional and local modeling forecasts and with travel data. Differences or inconsistencies must be thoroughly explained.

4. Discussion of mitigation measures appropriate to alleviate anticipated traffic impacts. This discussion should include, but not be limited to, the following:
   - description of transportation infrastructure improvements
   - financial costs, funding sources and financing
   - sequence and scheduling considerations
   - implementation responsibilities, controls and monitoring

Please refer to Caltrans' Guide for the Preparation of Traffic Impact Studies for additional information regarding preferred methods of highway analysis. The Guide can be downloaded from the Internet at: www.dot.ca.gov/hq/tpp/offices/ocp/igr_ceqa_files/tisguide.pdf

Caltrans understands that the City is required to comply with Los Angeles County Congestion Management Program (CMP) standards and thresholds of significant. However, please be aware that Caltrans does not consider the Los Angeles County's CMP criteria alone to be adequate for the analysis of transportation impacts pursuant to a CEQA review. The CMP does not adequately address cumulative transportation impacts and does not analyze for safety, weaving problems, or delay. Caltrans' Guide directs preparers of traffic impact analysis to consult with the local District as early as possible to determine the appropriate requirements and criteria of significance to be used in the traffic impact analysis.

If you have any questions regarding these comments, you may contact me or project coordinator Elmer Alvarez at (213) 897 – 6696 or electronically at elmer.alvarez@dot.ca.gov. Please refer to our record number 140141/EA.

Sincerely,

DIANNA WATSON
IGR/CEQA Branch Chief

COUNTY OF LOS ANGELES

FIRE DEPARTMENT

1320 NORTH EASTERN AVENUE
LOS ANGELES, CALIFORNIA 90063-3294

DARYL L. OSBY
FIRE CHIEF
FORESTER & FIRE WARDEN

February 20, 2014

Craig Chalfant, Planner
City of Long Beach
Development Services Department
333 W. Ocean Boulevard, 5th Floor
Long Beach, CA 90802

Dear Mr. Chalfant:

PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT, "PACIFIC POINTE EAST DEVELOPMENT PROJECT," INVOLVES CONSTRUCTION OF THREE INDUSTRIAL BUILDINGS ON A SITE CURRENTLY IMPORVED AS A PAVED SURFACE PARKING LOT. SOUTHEAST CORNER OF LAKEWOOD BOULEVARD AND CONANT STREET NEAR THE LONG BEACH AIRPORT, LONG BEACH (FFER #201400018)

The Preparation of a Draft Environmental Impact Report has been reviewed by the Planning Division, Land Development Unit, Forestry Division, and Health Hazardous Materials Division of the County of Los Angeles Fire Department. The following are their comments:

PLANNING DIVISION:

1. The subject property is entirely within the City of Long Beach, which is not a part of the emergency response area of the Los Angeles County Fire Department (also known as the Consolidated Fire Protection District of Los Angeles (County). Therefore, this project does not appear to have any impact on the emergency responsibilities of this Department.

LAND DEVELOPMENT UNIT:

1. This project is located entirely in the City of Long Beach. Therefore, the City of Long Beach Fire Department has jurisdiction concerning this project and will be setting conditions. This project is located in close proximity to the jurisdictional area of the Los Angeles County Fire

Department. However, this project is unlikely to have an impact that necessitates a comment concerning general requirements from the Land Development Unit of the Los Angeles County Fire Department.

2. Should any questions arise regarding subdivision, water systems, or access, please contact the County of Los Angeles Fire Department, Land Development Unit Inspector, Nancy Rodeheffer, at (323) 890-4243 or at nrodeheffer@fire.lacounty.gov.

3. The County of Los Angeles Fire Department, Land Development Unit, appreciates the opportunity to comment on this project.

FORESTRY DIVISION – OTHER ENVIRONMENTAL CONCERNS:

1. The statutory responsibilities of the County of Los Angeles Fire Department, Forestry Division include erosion control, watershed management, rare and endangered species, vegetation, fuel modification for Very High Fire Hazard Severity Zones or Fire Zone 4, archeological and cultural resources, and the County Oak Tree Ordinance. Potential impacts in these areas should be addressed.

HEALTH HAZARDOUS MATERIALS DIVISION:

1. The Health Hazardous Materials Division has no objection to the proposed project.

If you have any additional questions, please contact this office at (323) 890-4330.

Very truly yours,

Frank Vidales

FRANK VIDALES, CHIEF, FORESTRY DIVISION
PREVENTION SERVICES BUREAU

FV:jl

COUNTY SANITATION DISTRICTS
OF LOS ANGELES COUNTY

1955 Workman Mill Road, Whittier, CA 90601-1400
Mailing Address: P.O. Box 4998, Whittier, CA 90607-4998
Telephone: (562) 699-7411, FAX: (562) 699-5422
www.lacsd.org

GRACE ROBINSON HYDE
Chief Engineer and General Manager

February 20, 2014

Ref File No.: 2860163

Mr. Craig Chalfant
Planning Bureau
Development Services Department
City of Long Beach
333 West Ocean Boulevard, 5th Floor
Long Beach, CA 90802

Dear Mr. Chalfant:

Pacific Pointe East Development Project

The County Sanitation Districts of Los Angeles County (Districts) received a Notice of Preparation of a Draft Environmental Impact Report for the subject project on January 27, 2014. The proposed development is located within the jurisdictional boundaries of District No. 3. We offer the following comments regarding sewerage service:

1. The proposed project may require a Districts' permit for Industrial Wastewater Discharge. Project developers should contact the Districts' Industrial Waste Section at extension 2900, in order to reach a determination on this matter. If this permit is necessary, project developers will be required to forward copies of final plans and supporting information for the proposed project to the Districts for review and approval before beginning project construction. For additional Industrial Wastewater Discharge Permit information, go to http://www.lacsd.org/wastewater/industrial_waste/permit.asp.

2. The wastewater flow originating from the proposed project will discharge to a local sewer line, which is not maintained by the Districts, for conveyance to the Districts' JOA-1A North Long Beach Interceptor Trunk Sewer, located in Conant Street just west of Clark Avenue. This 15-inch diameter trunk sewer has a design capacity of 9 million gallons per day (mgd) and conveyed a peak flow of 4.5 mgd when last measured in 2012.

3. The wastewater generated by the proposed project will be treated at the Joint Water Pollution Control Plant located in the City of Carson, which has a design capacity of 400 mgd and currently processes an average flow of 263.2 mgd, or the Long Beach Water Reclamation Plant, which has a design capacity of 25 mgd and currently processes an average flow of 17.5 mgd.

4. In order to estimate the volume of wastewater the project will generate, go to www.lacsd.org, Wastewater & Sewer Systems, Will Serve Program, and click on the Table 1, Loadings for Each Class of Land Use link for a copy of the Districts' average wastewater generation factors.

Recycled Paper

5. The Districts are empowered by the California Health and Safety Code to charge a fee for the privilege of connecting (directly or indirectly) to the Districts' Sewerage System for increasing the strength or quantity of wastewater attributable to a particular parcel or operation already connected. This connection fee is a capital facilities fee that is imposed in an amount sufficient to construct an incremental expansion of the Sewerage System to accommodate the proposed project. Payment of a connection fee will be required before a permit to connect to the sewer is issued. For a copy of the Connection Fee Information Sheet, go to www.lacsd.org, Wastewater & Sewer Systems, Will Serve Program, and click on the appropriate link. For more specific information regarding the connection fee application procedure and fees, please contact the Connection Fee Counter at extension 2727.

6. In order for the Districts to conform to the requirements of the Federal Clean Air Act (CAA), the design capacities of the Districts' wastewater treatment facilities are based on the regional growth forecast adopted by the Southern California Association of Governments (SCAG). Specific policies included in the development of the SCAG regional growth forecast are incorporated into clean air plans, which are prepared by the South Coast and Antelope Valley Air Quality Management Districts in order to improve air quality in the South Coast and Mojave Desert Air Basins as mandated by the CCA. All expansions of Districts' facilities must be sized and service phased in a manner that will be consistent with the SCAG regional growth forecast for the counties of Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial. The available capacity of the Districts' treatment facilities will, therefore, be limited to levels associated with the approved growth identified by SCAG. As such, this letter does not constitute a guarantee of wastewater service, but is to advise you that the Districts intend to provide this service up to the levels that are legally permitted and to inform you of the currently existing capacity and any proposed expansion of the Districts' facilities.

If you have any questions, please contact the undersigned at (562) 908-4288, extension 2717.

Very truly yours,

Grace Robinson Hyde

Adriana Raza
Customer Service Specialist
Facilities Planning Department

AR:ar

cc: L. Shadler
M. Tremblay
J. Ganz

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

February 14, 2014

Craig Chalfant
Planning Bureau, Development Services Department
City of Long Beach
333 W. Ocean Boulevard, 5th Floor
Long Beach, CA 90802

Notice of Preparation of a CEQA Document for the
Pacific Pointe East Project

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

Air Quality Analysis

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

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

The SCAQMD has also developed both regional and localized significance thresholds. The SCAQMD staff requests that the lead agency quantify criteria pollutant emissions and compare the results to the recommended regional significance thresholds found here: http://www.aqmd.gov/ceqa/handbook/signthres.pdf. In addition to analyzing regional air quality impacts, the SCAQMD staff recommends calculating localized air quality impacts and comparing the results to localized significance thresholds (LSTs). LST's can be used in addition to the recommended regional

significance thresholds as a second indication of air quality impacts when preparing a CEQA document. Therefore, when preparing the air quality analysis for the proposed project, it is recommended that the lead agency perform a localized analysis by either using the LSTs developed by the SCAQMD or performing dispersion modeling as necessary. Guidance for performing a localized air quality analysis can be found at: http://www.aqmd.gov/ceqa/handbook/LST/LST.html.

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

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

Mitigation Measures

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

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

Data Sources

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

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

Sincerely,

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

LAC140124-08
Control Number

Appendix B

CalEEMod Emissions Modeling

Pacific Pointe

South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	494.00	1000sqft	25.00	494,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	11			**Operational Year**	2016
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Changed lot acreage to reflect project site

Construction Phase - Adjusted construction schedule per applicant

Trips and VMT - Adjusted trips per applicant schedule

Demolition -

Land Use Change -

Sequestration -

Mobile Land Use Mitigation -

Area Mitigation -

Architectural Coating - Corrected square footage

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	741,000.00	494,000.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblConstructionPhase	NumDays	20.00	66.00
tblConstructionPhase	PhaseEndDate	12/29/2016	10/29/2016
tblLandUse	LotAcreage	11.34	25.00
tblProjectCharacteristics	OperationalYear	2014	2016
tblSequestration	NumberOfNewTrees	0.00	368.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2015	0.7216	6.0466	5.7116	8.8500e-003	0.5200	0.3295	0.8495	0.1874	0.3077	0.4950	0.0000	778.7641	778.7641	0.1203	0.0000	781.2897
2016	0.8402	3.4794	3.7401	6.6300e-003	0.2475	0.1977	0.4452	0.0666	0.1854	0.2520	0.0000	564.7893	564.7893	0.0702	0.0000	566.2641
Total	**1.5618**	**9.5259**	**9.4517**	**0.0155**	**0.7675**	**0.5272**	**1.2947**	**0.2540**	**0.4931**	**0.7470**	**0.0000**	**1,343.5534**	**1,343.5534**	**0.1905**	**0.0000**	**1,347.5538**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2015	0.7216	6.0466	5.7116	8.8500e-003	0.5200	0.3295	0.8495	0.1874	0.3077	0.4950	0.0000	778.7636	778.7636	0.1203	0.0000	781.2892
2016	0.8402	3.4793	3.7401	6.6300e-003	0.2475	0.1977	0.4452	0.0666	0.1854	0.2520	0.0000	564.7890	564.7890	0.0702	0.0000	566.2638
Total	**1.5618**	**9.5259**	**9.4517**	**0.0155**	**0.7675**	**0.5272**	**1.2947**	**0.2540**	**0.4931**	**0.7470**	**0.0000**	**1,343.5526**	**1,343.5526**	**0.1905**	**0.0000**	**1,347.5530**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.3581	6.0000e-005	6.4700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0123	0.0123	3.0000e-005	0.0000	0.0130
Energy	0.0501	0.4555	0.3826	2.7300e-003		0.0346	0.0346		0.0346	0.0346	0.0000	2,199.3296	2,199.3296	0.0878	0.0253	2,209.0139
Mobile	1.9662	7.0342	25.9554	0.0632	4.3627	0.0965	4.4593	1.1673	0.0888	1.2561	0.0000	5,043.1012	5,043.1012	0.2043	0.0000	5,047.3910
Waste						0.0000	0.0000		0.0000	0.0000	124.3441	0.0000	124.3441	7.3485	0.0000	278.6632
Water						0.0000	0.0000		0.0000	0.0000	36.2423	425.6694	461.9117	3.7420	0.0919	568.9959
Total	**4.3744**	**7.4898**	**26.3445**	**0.0659**	**4.3627**	**0.1312**	**4.4939**	**1.1673**	**0.1234**	**1.2907**	**160.5864**	**7,668.1124**	**7,828.6989**	**11.3827**	**0.1172**	**8,104.0770**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.3581	6.0000e-005	6.4700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0123	0.0123	3.0000e-005	0.0000	0.0130
Energy	0.0501	0.4555	0.3826	2.7300e-003		0.0346	0.0346		0.0346	0.0346	0.0000	2,199.3296	2,199.3296	0.0878	0.0253	2,209.0139
Mobile	1.9662	7.0342	25.9554	0.0632	4.3627	0.0965	4.4593	1.1673	0.0888	1.2561	0.0000	5,043.1012	5,043.1012	0.2043	0.0000	5,047.3910
Waste						0.0000	0.0000		0.0000	0.0000	124.3441	0.0000	124.3441	7.3485	0.0000	278.6632
Water						0.0000	0.0000		0.0000	0.0000	36.2423	425.6694	461.9117	3.7413	0.0918	568.9381
Total	**4.3744**	**7.4898**	**26.3445**	**0.0659**	**4.3627**	**0.1312**	**4.4939**	**1.1673**	**0.1234**	**1.2907**	**160.5864**	**7,668.1124**	**7,828.6989**	**11.3820**	**0.1171**	**8,104.0192**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.01**	**0.12**	**0.00**

2.3 Vegetation

Vegetation

	CO2e
Category	MT
New Trees	260.5440
Total	**260.5440**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2015	1/28/2015	5	20	
2	Site Preparation	Site Preparation	1/29/2015	2/11/2015	5	10	
3	Grading	Grading	2/12/2015	4/1/2015	5	35	
4	Building Construction	Building Construction	4/2/2015	8/31/2016	5	370	
5	Paving	Paving	9/1/2016	9/28/2016	5	20	
6	Architectural Coating	Architectural Coating	9/29/2016	10/29/2016	5	66	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 87.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 494,000; Non-Residential Outdoor: 247,000 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	207.00	81.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	41.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0451	0.4836	0.3607	4.0000e-004		0.0245	0.0245		0.0229	0.0229	0.0000	37.4413	37.4413	0.0102	0.0000	37.6544
Total	**0.0451**	**0.4836**	**0.3607**	**4.0000e-004**	**0.0000**	**0.0245**	**0.0245**	**0.0000**	**0.0229**	**0.0229**	**0.0000**	**37.4413**	**37.4413**	**0.0102**	**0.0000**	**37.6544**

3.2 Demolition - 2015

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.7000e-004	9.8000e-004	0.0102	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.5970	1.5970	9.0000e-005	0.0000	1.5989
Total	**6.7000e-004**	**9.8000e-004**	**0.0102**	**2.0000e-005**	**1.6500e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.5970**	**1.5970**	**9.0000e-005**	**0.0000**	**1.5989**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0451	0.4836	0.3607	4.0000e-004		0.0245	0.0245		0.0229	0.0229	0.0000	37.4412	37.4412	0.0102	0.0000	37.6544
Total	**0.0451**	**0.4836**	**0.3607**	**4.0000e-004**	**0.0000**	**0.0245**	**0.0245**	**0.0000**	**0.0229**	**0.0229**	**0.0000**	**37.4412**	**37.4412**	**0.0102**	**0.0000**	**37.6544**

3.2 Demolition - 2015

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.7000e-004	9.8000e-004	0.0102	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.5970	1.5970	9.0000e-005	0.0000	1.5989
Total	**6.7000e-004**	**9.8000e-004**	**0.0102**	**2.0000e-005**	**1.6500e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.5970**	**1.5970**	**9.0000e-005**	**0.0000**	**1.5989**

3.3 Site Preparation - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0263	0.2845	0.2132	2.0000e-004		0.0154	0.0154		0.0142	0.0142	0.0000	18.6506	18.6506	5.5700e-003	0.0000	18.7675
Total	**0.0263**	**0.2845**	**0.2132**	**2.0000e-004**	**0.0903**	**0.0154**	**0.1058**	**0.0497**	**0.0142**	**0.0639**	**0.0000**	**18.6506**	**18.6506**	**5.5700e-003**	**0.0000**	**18.7675**

3.3 Site Preparation - 2015

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-004	5.9000e-004	6.1000e-003	1.0000e-005	9.9000e-004	1.0000e-005	1.0000e-003	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.9582	0.9582	5.0000e-005	0.0000	0.9594
Total	**4.0000e-004**	**5.9000e-004**	**6.1000e-003**	**1.0000e-005**	**9.9000e-004**	**1.0000e-005**	**1.0000e-003**	**2.6000e-004**	**1.0000e-005**	**2.7000e-004**	**0.0000**	**0.9582**	**0.9582**	**5.0000e-005**	**0.0000**	**0.9594**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0263	0.2845	0.2132	2.0000e-004		0.0154	0.0154		0.0142	0.0142	0.0000	18.6505	18.6505	5.5700e-003	0.0000	18.7675
Total	**0.0263**	**0.2845**	**0.2132**	**2.0000e-004**	**0.0903**	**0.0154**	**0.1058**	**0.0497**	**0.0142**	**0.0639**	**0.0000**	**18.6505**	**18.6505**	**5.5700e-003**	**0.0000**	**18.7675**

3.3 Site Preparation - 2015

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-004	5.9000e-004	6.1000e-003	1.0000e-005	9.9000e-004	1.0000e-005	1.0000e-003	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.9582	0.9582	5.0000e-005	0.0000	0.9594
Total	**4.0000e-004**	**5.9000e-004**	**6.1000e-003**	**1.0000e-005**	**9.9000e-004**	**1.0000e-005**	**1.0000e-003**	**2.6000e-004**	**1.0000e-005**	**2.7000e-004**	**0.0000**	**0.9582**	**0.9582**	**5.0000e-005**	**0.0000**	**0.9594**

3.4 Grading - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1518	0.0000	0.1518	0.0629	0.0000	0.0629	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1186	1.3833	0.8897	1.0800e-003		0.0665	0.0665		0.0612	0.0612	0.0000	102.9739	102.9739	0.0307	0.0000	103.6195
Total	**0.1186**	**1.3833**	**0.8897**	**1.0800e-003**	**0.1518**	**0.0665**	**0.2183**	**0.0629**	**0.0612**	**0.1242**	**0.0000**	**102.9739**	**102.9739**	**0.0307**	**0.0000**	**103.6195**

3.4 Grading - 2015

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5600e-003	2.2800e-003	0.0237	5.0000e-005	3.8400e-003	3.0000e-005	3.8700e-003	1.0200e-003	3.0000e-005	1.0500e-003	0.0000	3.7264	3.7264	2.1000e-004	0.0000	3.7308
Total	**1.5600e-003**	**2.2800e-003**	**0.0237**	**5.0000e-005**	**3.8400e-003**	**3.0000e-005**	**3.8700e-003**	**1.0200e-003**	**3.0000e-005**	**1.0500e-003**	**0.0000**	**3.7264**	**3.7264**	**2.1000e-004**	**0.0000**	**3.7308**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1518	0.0000	0.1518	0.0629	0.0000	0.0629	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1186	1.3833	0.8897	1.0800e-003		0.0665	0.0665		0.0612	0.0612	0.0000	102.9737	102.9737	0.0307	0.0000	103.6193
Total	**0.1186**	**1.3833**	**0.8897**	**1.0800e-003**	**0.1518**	**0.0665**	**0.2183**	**0.0629**	**0.0612**	**0.1242**	**0.0000**	**102.9737**	**102.9737**	**0.0307**	**0.0000**	**103.6193**

3.4 Grading - 2015

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5600e-003	2.2800e-003	0.0237	5.0000e-005	3.8400e-003	3.0000e-005	3.8700e-003	1.0200e-003	3.0000e-005	1.0500e-003	0.0000	3.7264	3.7264	2.1000e-004	0.0000	3.7308
Total	**1.5600e-003**	**2.2800e-003**	**0.0237**	**5.0000e-005**	**3.8400e-003**	**3.0000e-005**	**3.8700e-003**	**1.0200e-003**	**3.0000e-005**	**1.0500e-003**	**0.0000**	**3.7264**	**3.7264**	**2.1000e-004**	**0.0000**	**3.7308**

3.5 Building Construction - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3586	2.9429	1.8370	2.6300e-003		0.2074	0.2074		0.1951	0.1951	0.0000	239.1145	239.1145	0.0600	0.0000	240.3743
Total	**0.3586**	**2.9429**	**1.8370**	**2.6300e-003**		**0.2074**	**0.2074**		**0.1951**	**0.1951**	**0.0000**	**239.1145**	**239.1145**	**0.0600**	**0.0000**	**240.3743**

3.5 Building Construction - 2015

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0800	0.8160	0.9952	1.7300e-003	0.0488	0.0136	0.0624	0.0139	0.0125	0.0264	0.0000	158.3189	158.3189	1.2600e-003	0.0000	158.3454
Worker	0.0904	0.1324	1.3758	2.7400e-003	0.2226	2.0000e-003	0.2246	0.0591	1.8300e-003	0.0609	0.0000	215.9834	215.9834	0.0122	0.0000	216.2395
Total	**0.1704**	**0.9484**	**2.3710**	**4.4700e-003**	**0.2714**	**0.0156**	**0.2869**	**0.0730**	**0.0143**	**0.0873**	**0.0000**	**374.3022**	**374.3022**	**0.0135**	**0.0000**	**374.5849**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3586	2.9429	1.8370	2.6300e-003		0.2074	0.2074		0.1951	0.1951	0.0000	239.1142	239.1142	0.0600	0.0000	240.3740
Total	**0.3586**	**2.9429**	**1.8370**	**2.6300e-003**		**0.2074**	**0.2074**		**0.1951**	**0.1951**	**0.0000**	**239.1142**	**239.1142**	**0.0600**	**0.0000**	**240.3740**

3.5 Building Construction - 2015

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0800	0.8160	0.9952	1.7300e-003	0.0488	0.0136	0.0624	0.0139	0.0125	0.0264	0.0000	158.3189	158.3189	1.2600e-003	0.0000	158.3454
Worker	0.0904	0.1324	1.3758	2.7400e-003	0.2226	2.0000e-003	0.2246	0.0591	1.8300e-003	0.0609	0.0000	215.9834	215.9834	0.0122	0.0000	216.2395
Total	**0.1704**	**0.9484**	**2.3710**	**4.4700e-003**	**0.2714**	**0.0156**	**0.2869**	**0.0730**	**0.0143**	**0.0873**	**0.0000**	**374.3022**	**374.3022**	**0.0135**	**0.0000**	**374.5849**

3.5 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2963	2.4801	1.6101	2.3300e-003		0.1712	0.1712		0.1608	0.1608	0.0000	210.6736	210.6736	0.0523	0.0000	211.7709
Total	**0.2963**	**2.4801**	**1.6101**	**2.3300e-003**		**0.1712**	**0.1712**		**0.1608**	**0.1608**	**0.0000**	**210.6736**	**210.6736**	**0.0523**	**0.0000**	**211.7709**

3.5 Building Construction - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0627	0.6398	0.8213	1.5300e-003	0.0434	9.9800e-003	0.0533	0.0124	9.1800e-003	0.0216	0.0000	139.0015	139.0015	1.0100e-003	0.0000	139.0228
Worker	0.0722	0.1060	1.1030	2.4300e-003	0.1976	1.6800e-003	0.1993	0.0525	1.5500e-003	0.0540	0.0000	185.1141	185.1141	9.9600e-003	0.0000	185.3234
Total	**0.1349**	**0.7458**	**1.9243**	**3.9600e-003**	**0.2409**	**0.0117**	**0.2526**	**0.0648**	**0.0107**	**0.0756**	**0.0000**	**324.1156**	**324.1156**	**0.0110**	**0.0000**	**324.3461**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2963	2.4801	1.6101	2.3300e-003		0.1712	0.1712		0.1608	0.1608	0.0000	210.6734	210.6734	0.0523	0.0000	211.7706
Total	**0.2963**	**2.4801**	**1.6101**	**2.3300e-003**		**0.1712**	**0.1712**		**0.1608**	**0.1608**	**0.0000**	**210.6734**	**210.6734**	**0.0523**	**0.0000**	**211.7706**

3.5 Building Construction - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0627	0.6398	0.8213	1.5300e-003	0.0434	9.9800e-003	0.0533	0.0124	9.1800e-003	0.0216	0.0000	139.0015	139.0015	1.0100e-003	0.0000	139.0228
Worker	0.0722	0.1060	1.1030	2.4300e-003	0.1976	1.6800e-003	0.1993	0.0525	1.5500e-003	0.0540	0.0000	185.1141	185.1141	9.9600e-003	0.0000	185.3234
Total	**0.1349**	**0.7458**	**1.9243**	**3.9600e-003**	**0.2409**	**0.0117**	**0.2526**	**0.0648**	**0.0107**	**0.0756**	**0.0000**	**324.1156**	**324.1156**	**0.0110**	**0.0000**	**324.3461**

3.6 Paving - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0209	0.2239	0.1482	2.2000e-004		0.0126	0.0126		0.0116	0.0116	0.0000	21.0138	21.0138	6.3400e-003	0.0000	21.1469
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0209**	**0.2239**	**0.1482**	**2.2000e-004**		**0.0126**	**0.0126**		**0.0116**	**0.0116**	**0.0000**	**21.0138**	**21.0138**	**6.3400e-003**	**0.0000**	**21.1469**

3.6 Paving - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-004	8.8000e-004	9.1900e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.5419	1.5419	8.0000e-005	0.0000	1.5436
Total	**6.0000e-004**	**8.8000e-004**	**9.1900e-003**	**2.0000e-005**	**1.6500e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.5419**	**1.5419**	**8.0000e-005**	**0.0000**	**1.5436**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0209	0.2239	0.1482	2.2000e-004		0.0126	0.0126		0.0116	0.0116	0.0000	21.0138	21.0138	6.3400e-003	0.0000	21.1469
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0209**	**0.2239**	**0.1482**	**2.2000e-004**		**0.0126**	**0.0126**		**0.0116**	**0.0116**	**0.0000**	**21.0138**	**21.0138**	**6.3400e-003**	**0.0000**	**21.1469**

3.6 Paving - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-004	8.8000e-004	9.1900e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.5419	1.5419	8.0000e-005	0.0000	1.5436
Total	**6.0000e-004**	**8.8000e-004**	**9.1900e-003**	**2.0000e-005**	**1.6500e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.5419**	**1.5419**	**8.0000e-005**	**0.0000**	**1.5436**

3.7 Architectural Coating - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.3816					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.0500e-003	0.0261	0.0207	3.0000e-005		2.1600e-003	2.1600e-003		2.1600e-003	2.1600e-003	0.0000	2.8086	2.8086	3.3000e-004	0.0000	2.8155
Total	**0.3857**	**0.0261**	**0.0207**	**3.0000e-005**		**2.1600e-003**	**2.1600e-003**		**2.1600e-003**	**2.1600e-003**	**0.0000**	**2.8086**	**2.8086**	**3.3000e-004**	**0.0000**	**2.8155**

3.7 Architectural Coating - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8100e-003	2.6600e-003	0.0276	6.0000e-005	4.9500e-003	4.0000e-005	4.9900e-003	1.3100e-003	4.0000e-005	1.3500e-003	0.0000	4.6358	4.6358	2.5000e-004	0.0000	4.6411
Total	**1.8100e-003**	**2.6600e-003**	**0.0276**	**6.0000e-005**	**4.9500e-003**	**4.0000e-005**	**4.9900e-003**	**1.3100e-003**	**4.0000e-005**	**1.3500e-003**	**0.0000**	**4.6358**	**4.6358**	**2.5000e-004**	**0.0000**	**4.6411**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.3816					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.0500e-003	0.0261	0.0207	3.0000e-005		2.1600e-003	2.1600e-003		2.1600e-003	2.1600e-003	0.0000	2.8086	2.8086	3.3000e-004	0.0000	2.8155
Total	**0.3857**	**0.0261**	**0.0207**	**3.0000e-005**		**2.1600e-003**	**2.1600e-003**		**2.1600e-003**	**2.1600e-003**	**0.0000**	**2.8086**	**2.8086**	**3.3000e-004**	**0.0000**	**2.8155**

3.7 Architectural Coating - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8100e-003	2.6600e-003	0.0276	6.0000e-005	4.9500e-003	4.0000e-005	4.9900e-003	1.3100e-003	4.0000e-005	1.3500e-003	0.0000	4.6358	4.6358	2.5000e-004	0.0000	4.6411
Total	**1.8100e-003**	**2.6600e-003**	**0.0276**	**6.0000e-005**	**4.9500e-003**	**4.0000e-005**	**4.9900e-003**	**1.3100e-003**	**4.0000e-005**	**1.3500e-003**	**0.0000**	**4.6358**	**4.6358**	**2.5000e-004**	**0.0000**	**4.6411**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.9662	7.0342	25.9554	0.0632	4.3627	0.0965	4.4593	1.1673	0.0888	1.2561	0.0000	5,043.1012	5,043.1012	0.2043	0.0000	5,047.3910
Unmitigated	1.9662	7.0342	25.9554	0.0632	4.3627	0.0965	4.4593	1.1673	0.0888	1.2561	0.0000	5,043.1012	5,043.1012	0.2043	0.0000	5,047.3910

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	3,443.18	652.08	335.92	11,515,989	11,515,989
Total	3,443.18	652.08	335.92	11,515,989	11,515,989

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.514315	0.060290	0.180146	0.139458	0.042007	0.006636	0.015782	0.029894	0.001929	0.002512	0.004343	0.000595	0.002093

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,703.4657	1,703.4657	0.0783	0.0162	1,710.1322
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,703.4657	1,703.4657	0.0783	0.0162	1,710.1322
NaturalGas Mitigated	0.0501	0.4555	0.3826	2.7300e-003		0.0346	0.0346		0.0346	0.0346	0.0000	495.8640	495.8640	9.5000e-003	9.0900e-003	498.8817
NaturalGas Unmitigated	0.0501	0.4555	0.3826	2.7300e-003		0.0346	0.0346		0.0346	0.0346	0.0000	495.8640	495.8640	9.5000e-003	9.0900e-003	498.8817

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	9.29214e+006	0.0501	0.4555	0.3826	2.7300e-003		0.0346	0.0346		0.0346	0.0346	0.0000	495.8640	495.8640	9.5000e-003	9.0900e-003	498.8817
Total		**0.0501**	**0.4555**	**0.3826**	**2.7300e-003**		**0.0346**	**0.0346**		**0.0346**	**0.0346**	**0.0000**	**495.8640**	**495.8640**	**9.5000e-003**	**9.0900e-003**	**498.8817**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	9.29214e+006	0.0501	0.4555	0.3826	2.7300e-003		0.0346	0.0346		0.0346	0.0346	0.0000	495.8640	495.8640	9.5000e-003	9.0900e-003	498.8817
Total		**0.0501**	**0.4555**	**0.3826**	**2.7300e-003**		**0.0346**	**0.0346**		**0.0346**	**0.0346**	**0.0000**	**495.8640**	**495.8640**	**9.5000e-003**	**9.0900e-003**	**498.8817**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	5.9527e+006	1,703.4657	0.0783	0.0162	1,710.1322
Total		**1,703.4657**	**0.0783**	**0.0162**	**1,710.1322**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	5.9527e+006	1,703.4657	0.0783	0.0162	1,710.1322
Total		**1,703.4657**	**0.0783**	**0.0162**	**1,710.1322**

6.0 Area Detail

6.1 Mitigation Measures Area

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.3581	6.0000e-005	6.4700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0123	0.0123	3.0000e-005	0.0000	0.0130
Unmitigated	2.3581	6.0000e-005	6.4700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0123	0.0123	3.0000e-005	0.0000	0.0130

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.5724					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.7851					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.3000e-004	6.0000e-005	6.4700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0123	0.0123	3.0000e-005	0.0000	0.0130
Total	**2.3581**	**6.0000e-005**	**6.4700e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0123**	**0.0123**	**3.0000e-005**	**0.0000**	**0.0130**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.5724					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.7851					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.3000e-004	6.0000e-005	6.4700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0123	0.0123	3.0000e-005	0.0000	0.0130
Total	**2.3581**	**6.0000e-005**	**6.4700e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0123**	**0.0123**	**3.0000e-005**	**0.0000**	**0.0130**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	461.9117	3.7413	0.0918	568.9381
Unmitigated	461.9117	3.7420	0.0919	568.9959

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	114.238 / 0	461.9117	3.7420	0.0919	568.9959
Total		**461.9117**	**3.7420**	**0.0919**	**568.9959**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	114.238 / 0	461.9117	3.7413	0.0918	568.9381
Total		**461.9117**	**3.7413**	**0.0918**	**568.9381**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	124.3441	7.3485	0.0000	278.6632
Unmitigated	124.3441	7.3485	0.0000	278.6632

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	612.56	124.3441	7.3485	0.0000	278.6632
Total		**124.3441**	**7.3485**	**0.0000**	**278.6632**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	612.56	124.3441	7.3485	0.0000	278.6632
Total		**124.3441**	**7.3485**	**0.0000**	**278.6632**

9.0 Operational Offroad

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

10.0 Vegetation

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	260.5440	0.0000	0.0000	260.5440

10.2 Net New Trees

Species Class

	Number of Trees	Total CO2	CH4	N2O	CO2e
		MT			
Miscellaneous	368	260.5440	0.0000	0.0000	260.5440
Total		**260.5440**	**0.0000**	**0.0000**	**260.5440**

Pacific Pointe

South Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	494.00	1000sqft	25.00	494,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	11			**Operational Year**	2016
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Changed lot acreage to reflect project site

Construction Phase - Adjusted construction schedule per applicant

Trips and VMT - Adjusted trips per applicant schedule

Demolition -

Land Use Change -

Sequestration -

Mobile Land Use Mitigation -

Area Mitigation -

Architectural Coating - Corrected square footage

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	741,000.00	494,000.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblConstructionPhase	NumDays	20.00	66.00
tblConstructionPhase	PhaseEndDate	12/29/2016	10/29/2016
tblLandUse	LotAcreage	11.34	25.00
tblProjectCharacteristics	OperationalYear	2014	2016
tblSequestration	NumberOfNewTrees	0.00	368.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2015	6.8674	79.1621	52.2726	0.0738	18.2675	3.8042	21.3575	9.9840	3.4998	12.8269	0.0000	7,026.9261	7,026.9261	1.9497	0.0000	7,067.8692
2016	35.2314	36.6186	40.0128	0.0738	2.8200	2.1010	4.9209	0.7578	1.9713	2.7291	0.0000	6,899.1257	6,899.1257	0.8009	0.0000	6,915.9455
Total	**42.0988**	**115.7807**	**92.2853**	**0.1476**	**21.0875**	**5.9051**	**26.2785**	**10.7418**	**5.4711**	**15.5560**	**0.0000**	**13,926.0518**	**13,926.0518**	**2.7506**	**0.0000**	**13,983.8147**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2015	6.8674	79.1621	52.2726	0.0738	18.2675	3.8042	21.3575	9.9840	3.4998	12.8269	0.0000	7,026.9261	7,026.9261	1.9497	0.0000	7,067.8692
2016	35.2314	36.6186	40.0128	0.0738	2.8200	2.1010	4.9209	0.7578	1.9713	2.7291	0.0000	6,899.1257	6,899.1257	0.8009	0.0000	6,915.9455
Total	**42.0988**	**115.7807**	**92.2853**	**0.1476**	**21.0875**	**5.9051**	**26.2785**	**10.7418**	**5.4711**	**15.5560**	**0.0000**	**13,926.0518**	**13,926.0518**	**2.7506**	**0.0000**	**13,983.8147**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	12.9228	5.0000e-004	0.0517	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1081	0.1081	3.1000e-004		0.1145
Energy	0.2746	2.4959	2.0965	0.0150		0.1897	0.1897		0.1897	0.1897		2,995.0492	2,995.0492	0.0574	0.0549	3,013.2765
Mobile	14.5521	47.5944	193.2340	0.4788	32.3258	0.7022	33.0281	8.6364	0.6457	9.2821		42,046.6929	42,046.6929	1.6397		42,081.1263
Total	**27.7494**	**50.0908**	**195.3823**	**0.4938**	**32.3258**	**0.8921**	**33.2179**	**8.6364**	**0.8356**	**9.4720**		**45,041.8501**	**45,041.8501**	**1.6974**	**0.0549**	**45,094.5173**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	12.9228	5.0000e-004	0.0517	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1081	0.1081	3.1000e-004		0.1145
Energy	0.2746	2.4959	2.0965	0.0150		0.1897	0.1897		0.1897	0.1897		2,995.0492	2,995.0492	0.0574	0.0549	3,013.2765
Mobile	14.5521	47.5944	193.2340	0.4788	32.3258	0.7022	33.0281	8.6364	0.6457	9.2821		42,046.6929	42,046.6929	1.6397		42,081.1263
Total	**27.7494**	**50.0908**	**195.3823**	**0.4938**	**32.3258**	**0.8921**	**33.2179**	**8.6364**	**0.8356**	**9.4720**		**45,041.8501**	**45,041.8501**	**1.6974**	**0.0549**	**45,094.5173**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2015	1/28/2015	5	20	
2	Site Preparation	Site Preparation	1/29/2015	2/11/2015	5	10	
3	Grading	Grading	2/12/2015	4/1/2015	5	35	
4	Building Construction	Building Construction	4/2/2015	8/31/2016	5	370	
5	Paving	Paving	9/1/2016	9/28/2016	5	20	
6	Architectural Coating	Architectural Coating	9/29/2016	10/29/2016	5	66	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 87.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 494,000; Non-Residential Outdoor: 247,000 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	207.00	81.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	41.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	4.5083	48.3629	36.0738	0.0399		2.4508	2.4508		2.2858	2.2858		4,127.1934	4,127.1934	1.1188		4,150.6886
Total	**4.5083**	**48.3629**	**36.0738**	**0.0399**	**0.0000**	**2.4508**	**2.4508**	**0.0000**	**2.2858**	**2.2858**		**4,127.1934**	**4,127.1934**	**1.1188**		**4,150.6886**

3.2 Demolition - 2015

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0692	0.0866	1.0745	2.1300e-003	0.1677	1.4800e-003	0.1691	0.0445	1.3500e-003	0.0458		184.8048	184.8048	9.9400e-003		185.0135
Total	**0.0692**	**0.0866**	**1.0745**	**2.1300e-003**	**0.1677**	**1.4800e-003**	**0.1691**	**0.0445**	**1.3500e-003**	**0.0458**		**184.8048**	**184.8048**	**9.9400e-003**		**185.0135**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	4.5083	48.3629	36.0738	0.0399		2.4508	2.4508		2.2858	2.2858	0.0000	4,127.1934	4,127.1934	1.1188		4,150.6886
Total	**4.5083**	**48.3629**	**36.0738**	**0.0399**	**0.0000**	**2.4508**	**2.4508**	**0.0000**	**2.2858**	**2.2858**	**0.0000**	**4,127.1934**	**4,127.1934**	**1.1188**		**4,150.6886**

3.2 Demolition - 2015

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0692	0.0866	1.0745	2.1300e-003	0.1677	1.4800e-003	0.1691	0.0445	1.3500e-003	0.0458		184.8048	184.8048	9.9400e-003		185.0135
Total	**0.0692**	**0.0866**	**1.0745**	**2.1300e-003**	**0.1677**	**1.4800e-003**	**0.1691**	**0.0445**	**1.3500e-003**	**0.0458**		**184.8048**	**184.8048**	**9.9400e-003**		**185.0135**

3.3 Site Preparation - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	5.2609	56.8897	42.6318	0.0391		3.0883	3.0883		2.8412	2.8412		4,111.7444	4,111.7444	1.2275		4,137.5225
Total	**5.2609**	**56.8897**	**42.6318**	**0.0391**	**18.0663**	**3.0883**	**21.1545**	**9.9307**	**2.8412**	**12.7719**		**4,111.7444**	**4,111.7444**	**1.2275**		**4,137.5225**

3.3 Site Preparation - 2015

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0830	0.1039	1.2894	2.5500e-003	0.2012	1.7700e-003	0.2030	0.0534	1.6200e-003	0.0550		221.7657	221.7657	0.0119		222.0162
Total	**0.0830**	**0.1039**	**1.2894**	**2.5500e-003**	**0.2012**	**1.7700e-003**	**0.2030**	**0.0534**	**1.6200e-003**	**0.0550**		**221.7657**	**221.7657**	**0.0119**		**222.0162**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	5.2609	56.8897	42.6318	0.0391		3.0883	3.0883		2.8412	2.8412	0.0000	4,111.7444	4,111.7444	1.2275		4,137.5224
Total	**5.2609**	**56.8897**	**42.6318**	**0.0391**	**18.0663**	**3.0883**	**21.1545**	**9.9307**	**2.8412**	**12.7719**	**0.0000**	**4,111.7444**	**4,111.7444**	**1.2275**		**4,137.5224**

3.3 Site Preparation - 2015

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0830	0.1039	1.2894	2.5500e-003	0.2012	1.7700e-003	0.2030	0.0534	1.6200e-003	0.0550		221.7657	221.7657	0.0119		222.0162
Total	**0.0830**	**0.1039**	**1.2894**	**2.5500e-003**	**0.2012**	**1.7700e-003**	**0.2030**	**0.0534**	**1.6200e-003**	**0.0550**		**221.7657**	**221.7657**	**0.0119**		**222.0162**

3.4 Grading - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	6.7751	79.0467	50.8400	0.0618		3.8022	3.8022		3.4980	3.4980		6,486.2433	6,486.2433	1.9364		6,526.9080
Total	**6.7751**	**79.0467**	**50.8400**	**0.0618**	**8.6733**	**3.8022**	**12.4755**	**3.5965**	**3.4980**	**7.0945**		**6,486.2433**	**6,486.2433**	**1.9364**		**6,526.9080**

3.4 Grading - 2015

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0922	0.1154	1.4326	2.8300e-003	0.2236	1.9700e-003	0.2255	0.0593	1.8000e-003	0.0611		246.4063	246.4063	0.0133		246.6847
Total	**0.0922**	**0.1154**	**1.4326**	**2.8300e-003**	**0.2236**	**1.9700e-003**	**0.2255**	**0.0593**	**1.8000e-003**	**0.0611**		**246.4063**	**246.4063**	**0.0133**		**246.6847**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	6.7751	79.0467	50.8400	0.0618		3.8022	3.8022		3.4980	3.4980	0.0000	6,486.2433	6,486.2433	1.9364		6,526.9080
Total	**6.7751**	**79.0467**	**50.8400**	**0.0618**	**8.6733**	**3.8022**	**12.4755**	**3.5965**	**3.4980**	**7.0945**	**0.0000**	**6,486.2433**	**6,486.2433**	**1.9364**		**6,526.9080**

3.4 Grading - 2015

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0922	0.1154	1.4326	2.8300e-003	0.2236	1.9700e-003	0.2255	0.0593	1.8000e-003	0.0611		246.4063	246.4063	0.0133		246.6847
Total	**0.0922**	**0.1154**	**1.4326**	**2.8300e-003**	**0.2236**	**1.9700e-003**	**0.2255**	**0.0593**	**1.8000e-003**	**0.0611**		**246.4063**	**246.4063**	**0.0133**		**246.6847**

3.5 Building Construction - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.6591	30.0299	18.7446	0.0268		2.1167	2.1167		1.9904	1.9904		2,689.5771	2,689.5771	0.6748		2,703.7483
Total	**3.6591**	**30.0299**	**18.7446**	**0.0268**		**2.1167**	**2.1167**		**1.9904**	**1.9904**		**2,689.5771**	**2,689.5771**	**0.6748**		**2,703.7483**

3.5 Building Construction - 2015

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7655	7.9596	8.7806	0.0177	0.5061	0.1376	0.6437	0.1441	0.1266	0.2707		1,787.0434	1,787.0434	0.0140		1,787.3383
Worker	0.9547	1.1947	14.8277	0.0293	2.3138	0.0204	2.3341	0.6136	0.0187	0.6323		2,550.3056	2,550.3056	0.1372		2,553.1866
Total	**1.7202**	**9.1543**	**23.6084**	**0.0470**	**2.8198**	**0.1580**	**2.9778**	**0.7577**	**0.1452**	**0.9029**		**4,337.3490**	**4,337.3490**	**0.1512**		**4,340.5249**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.6591	30.0299	18.7446	0.0268		2.1167	2.1167		1.9904	1.9904	0.0000	2,689.5771	2,689.5771	0.6748		2,703.7483
Total	**3.6591**	**30.0299**	**18.7446**	**0.0268**		**2.1167**	**2.1167**		**1.9904**	**1.9904**	**0.0000**	**2,689.5771**	**2,689.5771**	**0.6748**		**2,703.7483**

3.5 Building Construction - 2015

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7655	7.9596	8.7806	0.0177	0.5061	0.1376	0.6437	0.1441	0.1266	0.2707		1,787.0434	1,787.0434	0.0140		1,787.3383
Worker	0.9547	1.1947	14.8277	0.0293	2.3138	0.0204	2.3341	0.6136	0.0187	0.6323		2,550.3056	2,550.3056	0.1372		2,553.1866
Total	**1.7202**	**9.1543**	**23.6084**	**0.0470**	**2.8198**	**0.1580**	**2.9778**	**0.7577**	**0.1452**	**0.9029**		**4,337.3490**	**4,337.3490**	**0.1512**		**4,340.5249**

3.5 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.4062	28.5063	18.5066	0.0268		1.9674	1.9674		1.8485	1.8485		2,669.2864	2,669.2864	0.6620		2,683.1890
Total	**3.4062**	**28.5063**	**18.5066**	**0.0268**		**1.9674**	**1.9674**		**1.8485**	**1.8485**		**2,669.2864**	**2,669.2864**	**0.6620**		**2,683.1890**

3.5 Building Construction - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.6766	7.0345	8.0794	0.0176	0.5062	0.1142	0.6204	0.1442	0.1050	0.2492		1,767.4034	1,767.4034	0.0127		1,767.6697
Worker	0.8617	1.0777	13.4267	0.0293	2.3138	0.0193	2.3331	0.6136	0.0178	0.6314		2,462.4359	2,462.4359	0.1262		2,465.0868
Total	**1.5384**	**8.1123**	**21.5061**	**0.0470**	**2.8200**	**0.1336**	**2.9536**	**0.7578**	**0.1228**	**0.8806**		**4,229.8393**	**4,229.8393**	**0.1389**		**4,232.7565**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.4062	28.5063	18.5066	0.0268		1.9674	1.9674		1.8485	1.8485	0.0000	2,669.2864	2,669.2864	0.6620		2,683.1890
Total	**3.4062**	**28.5063**	**18.5066**	**0.0268**		**1.9674**	**1.9674**		**1.8485**	**1.8485**	**0.0000**	**2,669.2864**	**2,669.2864**	**0.6620**		**2,683.1890**

3.5 Building Construction - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.6766	7.0345	8.0794	0.0176	0.5062	0.1142	0.6204	0.1442	0.1050	0.2492		1,767.4034	1,767.4034	0.0127		1,767.6697
Worker	0.8617	1.0777	13.4267	0.0293	2.3138	0.0193	2.3331	0.6136	0.0178	0.6314		2,462.4359	2,462.4359	0.1262		2,465.0868
Total	**1.5384**	**8.1123**	**21.5061**	**0.0470**	**2.8200**	**0.1336**	**2.9536**	**0.7578**	**0.1228**	**0.8806**		**4,229.8393**	**4,229.8393**	**0.1389**		**4,232.7565**

3.6 Paving - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0898	22.3859	14.8176	0.0223		1.2610	1.2610		1.1601	1.1601		2,316.3767	2,316.3767	0.6987		2,331.0495
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.0898**	**22.3859**	**14.8176**	**0.0223**		**1.2610**	**1.2610**		**1.1601**	**1.1601**		**2,316.3767**	**2,316.3767**	**0.6987**		**2,331.0495**

3.6 Paving - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0624	0.0781	0.9730	2.1200e-003	0.1677	1.4000e-003	0.1691	0.0445	1.2900e-003	0.0458		178.4374	178.4374	9.1500e-003		178.6295
Total	**0.0624**	**0.0781**	**0.9730**	**2.1200e-003**	**0.1677**	**1.4000e-003**	**0.1691**	**0.0445**	**1.2900e-003**	**0.0458**		**178.4374**	**178.4374**	**9.1500e-003**		**178.6295**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0898	22.3859	14.8176	0.0223		1.2610	1.2610		1.1601	1.1601	0.0000	2,316.3767	2,316.3767	0.6987		2,331.0495
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.0898**	**22.3859**	**14.8176**	**0.0223**		**1.2610**	**1.2610**		**1.1601**	**1.1601**	**0.0000**	**2,316.3767**	**2,316.3767**	**0.6987**		**2,331.0495**

3.6 Paving - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0624	0.0781	0.9730	2.1200e-003	0.1677	1.4000e-003	0.1691	0.0445	1.2900e-003	0.0458		178.4374	178.4374	9.1500e-003		178.6295
Total	**0.0624**	**0.0781**	**0.9730**	**2.1200e-003**	**0.1677**	**1.4000e-003**	**0.1691**	**0.0445**	**1.2900e-003**	**0.0458**		**178.4374**	**178.4374**	**9.1500e-003**		**178.6295**

3.7 Architectural Coating - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	34.6923					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3685	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966		281.4481	281.4481	0.0332		282.1449
Total	**35.0607**	**2.3722**	**1.8839**	**2.9700e-003**		**0.1966**	**0.1966**		**0.1966**	**0.1966**		**281.4481**	**281.4481**	**0.0332**		**282.1449**

3.7 Architectural Coating - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1707	0.2135	2.6594	5.8100e-003	0.4583	3.8300e-003	0.4621	0.1215	3.5200e-003	0.1251		487.7289	487.7289	0.0250		488.2539
Total	**0.1707**	**0.2135**	**2.6594**	**5.8100e-003**	**0.4583**	**3.8300e-003**	**0.4621**	**0.1215**	**3.5200e-003**	**0.1251**		**487.7289**	**487.7289**	**0.0250**		**488.2539**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	34.6923					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3685	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966	0.0000	281.4481	281.4481	0.0332		282.1449
Total	**35.0607**	**2.3722**	**1.8839**	**2.9700e-003**		**0.1966**	**0.1966**		**0.1966**	**0.1966**	**0.0000**	**281.4481**	**281.4481**	**0.0332**		**282.1449**

3.7 Architectural Coating - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1707	0.2135	2.6594	5.8100e-003	0.4583	3.8300e-003	0.4621	0.1215	3.5200e-003	0.1251		487.7289	487.7289	0.0250		488.2539
Total	**0.1707**	**0.2135**	**2.6594**	**5.8100e-003**	**0.4583**	**3.8300e-003**	**0.4621**	**0.1215**	**3.5200e-003**	**0.1251**		**487.7289**	**487.7289**	**0.0250**		**488.2539**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	14.5521	47.5944	193.2340	0.4788	32.3258	0.7022	33.0281	8.6364	0.6457	9.2821		42,046.6929	42,046.6929	1.6397		42,081.1263
Unmitigated	14.5521	47.5944	193.2340	0.4788	32.3258	0.7022	33.0281	8.6364	0.6457	9.2821		42,046.6929	42,046.6929	1.6397		42,081.1263

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	3,443.18	652.08	335.92	11,515,989	11,515,989
Total	3,443.18	652.08	335.92	11,515,989	11,515,989

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.514315	0.060290	0.180146	0.139458	0.042007	0.006636	0.015782	0.029894	0.001929	0.002512	0.004343	0.000595	0.002093

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.2746	2.4959	2.0965	0.0150		0.1897	0.1897		0.1897	0.1897		2,995.0492	2,995.0492	0.0574	0.0549	3,013.2765
NaturalGas Unmitigated	0.2746	2.4959	2.0965	0.0150		0.1897	0.1897		0.1897	0.1897		2,995.0492	2,995.0492	0.0574	0.0549	3,013.2765

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	25457.9	0.2746	2.4959	2.0965	0.0150		0.1897	0.1897		0.1897	0.1897		2,995.0492	2,995.0492	0.0574	0.0549	3,013.2765
Total		**0.2746**	**2.4959**	**2.0965**	**0.0150**		**0.1897**	**0.1897**		**0.1897**	**0.1897**		**2,995.0492**	**2,995.0492**	**0.0574**	**0.0549**	**3,013.2765**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	25.4579	0.2746	2.4959	2.0965	0.0150		0.1897	0.1897		0.1897	0.1897		2,995.0492	2,995.0492	0.0574	0.0549	3,013.2765
Total		**0.2746**	**2.4959**	**2.0965**	**0.0150**		**0.1897**	**0.1897**		**0.1897**	**0.1897**		**2,995.0492**	**2,995.0492**	**0.0574**	**0.0549**	**3,013.2765**

6.0 Area Detail

6.1 Mitigation Measures Area

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	12.9228	5.0000e-004	0.0517	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1081	0.1081	3.1000e-004		0.1145
Unmitigated	12.9228	5.0000e-004	0.0517	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1081	0.1081	3.1000e-004		0.1145

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.1366					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	9.7812					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.0400e-003	5.0000e-004	0.0517	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1081	0.1081	3.1000e-004		0.1145
Total	**12.9228**	**5.0000e-004**	**0.0517**	**0.0000**		**1.9000e-004**	**1.9000e-004**		**1.9000e-004**	**1.9000e-004**		**0.1081**	**0.1081**	**3.1000e-004**		**0.1145**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.1366					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	9.7812					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.0400e-003	5.0000e-004	0.0517	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1081	0.1081	3.1000e-004		0.1145
Total	**12.9228**	**5.0000e-004**	**0.0517**	**0.0000**		**1.9000e-004**	**1.9000e-004**		**1.9000e-004**	**1.9000e-004**		**0.1081**	**0.1081**	**3.1000e-004**		**0.1145**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

Appendix C

Traffic Study

LINSCOTT
LAW &
GREENSPAN
engineers

TRAFFIC IMPACT ANALYSIS

PACIFIC POINTE EAST

Long Beach, California

March 13, 2014

Engineers & Planners
Traffic
Transportation
Parking

LINSCOTT LAW & GREENSPAN engineers

TRAFFIC IMPACT ANALYSIS

PACIFIC POINTE EAST

Long Beach, California
March 13, 2014

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TABLE OF CONTENTS

SECTION PAGE

1.0 Introduction 1
1.1 Scope of Work 1
1.2 Study Area 2

2.0 Project Description 3
2.1 Site Access 3

3.0 Existing Conditions 5
3.1 Street Network 5
3.2 Existing Public Transit 6
3.3 Existing Area Traffic Volumes 7
3.4 Existing Intersection Conditions 7
3.4.1 Intersection Capacity Utilization (ICU) Method of Analysis (Signalized Intersections) 7
3.4.2 Highway Capacity Manual (HCM) Method of Analysis (Unsignalized Intersections) 10
3.5 Level of Service Criteria 10
3.6 Existing Level of Service Results 10
3.7 Conant Street at Faculty Avenue Traffic Signal Warrant Analysis 13
3.7.1 California MUTCD Policy/Criteria 13
3.7.2 Existing Traffic Volumes 14
3.7.3 Traffic Signal Warrant Evaluation 14

4.0 Traffic Forecasting Methodology 17

5.0 Project Traffic Characteristics 18
5.1 Project Traffic Generation 18
5.2 Project Traffic Distribution and Assignment 20
5.3 Existing Plus Project Traffic Conditions 20

6.0 Future Traffic Conditions 21
6.1 Ambient Traffic Growth 21
6.2 Related Projects Traffic Characteristics 21
6.3 Year 2016 Traffic Volumes 21

7.0 Traffic Impact Analysis Methodology 24
7.1 Impact Criteria and Thresholds 24
7.2 Traffic Impact Analysis Scenarios 24

TABLE OF CONTENTS

SECTION PAGE

8.0 Peak Hour Intersection Capacity Analysis 25
8.1 Existing Plus Project Traffic Conditions 25
8.1.1 Existing Traffic Conditions 25
8.1.2 Existing Plus Project Traffic Conditions 25
8.2 Year 2016 Traffic Conditions 25
8.2.1 Year 2016 Cumulative Traffic Conditions 26
8.2.2 Year 2016 Cumulative Plus Project Traffic Conditions 26

9.0 Site Access And Internal Circulation Evaluation 29
9.1 Site Access 29
9.2 Internal Circulation 29

10.0 Traffic Signal Warrant Analysis 31
10.1.1 Traffic Signal Warrant Results 31

11.0 Recommend Improvements 33
11.1 Existing Plus Project Traffic Conditions 33
11.2 Year 2016 Plus Project Traffic Conditions 33
11.3 Project-Specific Improvements 33

12.0 Congestion Management Program Compliance Assessment 34
12.1 Traffic Impact Review 34
12.1.1 Intersections 34
12.1.2 Freeways 35
12.2 Transit Impact Review 35

13.0 Construction Traffic Impact Assessment 36
13.1 Construction Traffic Trip Generation 36
13.2 Construction Traffic Assessment 37
13.3 Construction Management Plan Criteria 39

14.0 Summary Of Findings And Conclusions 40

APPENDICES

APPENDIX

A. Existing Traffic Count Data

B. Intersection Level of Service Calculation Worksheets

C. Project Driveway Level of Service Calculation Worksheets

D. Traffic Signal Warrant Analysis Worksheets

LIST OF FIGURES

SECTION – FIGURE #		FOLLOWING PAGE
1-1	Vicinity Map	2
2-1	Existing Site	4
2-2	Proposed Site Plan	4
3-1	Existing Roadway Conditions and Intersection Controls	7
3-2	Existing AM Peak Hour Traffic Volumes	7
3-3	Existing PM Peak Hour and Daily Traffic Volumes	7
5-1	Project Trip Distribution Pattern (Passenger Cars)	20
5-2	Project Trip Distribution Pattern (Trucks)	20
5-3	AM Peak Hour Project Traffic Volumes	20
5-4	PM Peak Hour and Daily Project Traffic Volumes	20
5-5	Existing Plus Project AM Peak Hour Traffic Volumes	20
5-6	Existing Plus Project PM Peak Hour and Daily Traffic Volumes	20
6-1	Related Projects Location Map	23
6-2	AM Peak Hour Related Projects Traffic Volumes	23
6-3	PM Peak Hour and Daily Related Projects Traffic Volumes	23
6-4	Year 2016 Cumulative AM Peak Hour Traffic Volumes	23
6-5	Year 2016 Cumulative PM Peak Hour and Daily Traffic Volumes	23
6-6	Year 2016 Cumulative Plus Project AM Peak Hour Traffic Volumes	23
6-7	Year 2016 Cumulative Plus Project PM Peak Hour and Daily Traffic Volumes	23

LIST OF TABLES

SECTION—TABLE #		PAGE
2–1	Project Development Summary	4
3–1	City of Long Beach Clearance Intervals	8
3–2	Level of Service Criteria for Signalized Intersections (ICU Methodology)	9
3–3	Level of Service Criteria for Unsignalized Intersections	11
3–4	Existing Peak Hour Levels of Service	12
3–5	Existing Daily Traffic Volumes for Conant Street at Faculty Avenue	15
3–6	Existing Traffic Signal Warrant Analysis Summary for Conant Street at Faculty Avenue	16
5–1	Project Traffic Generation Forecast	19
6–1	Location and Description of Related Projects	22
6–2	Related Projects Traffic Generation Forecast	23
8–1	Existing Plus Project Peak Hour Intersection Capacity Analysis	27
8–2	Year 2016 Cumulative Plus Project Peak Hour Intersection Capacity Analysis	28
9–1	Project Driveway Peak Hour Intersection Capacity Analysis	30
10–1	Traffic Signal Warrant Analysis Summary	32
13–1	Project Construction-Related Traffic Generation	38

TRAFFIC IMPACT ANALYSIS

PACIFIC POINTE EAST

Long Beach, California
March 13, 2014

1.0 INTRODUCTION

This Traffic Impact Analysis report addresses the potential traffic impacts and circulation needs associated with the development of the Pacific Pointe East Project (hereinafter referred to as Project). The Project site is generally located south of Conant Street, east of Lakewood Boulevard, and north of the Skylinks Golf Course in the City of Long Beach, California. The Project site is located in Douglas Aircraft Planned Development District (PD-19), which allows new development intensity to equal no more than 5,503 vehicle trips to and from the site in the weekday peak period between 4:00 PM and 6:00 PM.

This report documents the findings and recommendations of a traffic impact analysis, conducted by Linscott, Law & Greenspan, Engineers (LLG) to determine the potential impacts associated with the proposed Project.

1.1 Scope of Work

The traffic analysis evaluates the existing operating conditions at six (6) key intersections within the project vicinity, estimates the trip generation potential of the proposed Project, and forecasts future operating conditions without and with the Project. Where necessary, intersection improvements/mitigation measures are identified to offset the impact of the proposed Project. This traffic report satisfies the traffic impact requirements of the City of Long Beach and is consistent with the requirements and procedures outlined in the most current *Congestion Management Program (CMP) for Los Angeles County.* The Scope of Work for this report has been developed in coordination with City of Long Beach Traffic Engineering staff.

The Project site has been visited and an inventory of adjacent area roadways and intersections was performed. Existing peak hour traffic information has been collected at the six (6) key study locations on a "typical" weekday for use in the preparation of intersection level of service calculations. Information concerning related projects (planned and/or approved) in the vicinity of the project has been researched at the City of Long Beach and the City of Lakewood. Based on our research, seven (7) related projects were considered in the cumulative traffic analysis for this project.

Based on City of Long Beach requirement's, this traffic report analyzes existing and future (near-term) weekday AM and PM peak hour traffic conditions for eexisting and Year 2016 traffic conditions without and with the proposed Project. Peak hour traffic forecasts for the Year 2016 horizon year have been projected by increasing existing traffic volumes by an annual growth rate of two percent (2%) per year and adding traffic volumes generated by seven (7) related projects.

1.2 Study Area

The key area intersections evaluated in this report provide both regional and local access to the study area. The study intersections were selected in coordination with the City of Long Beach Traffic Engineer and consist of the following:

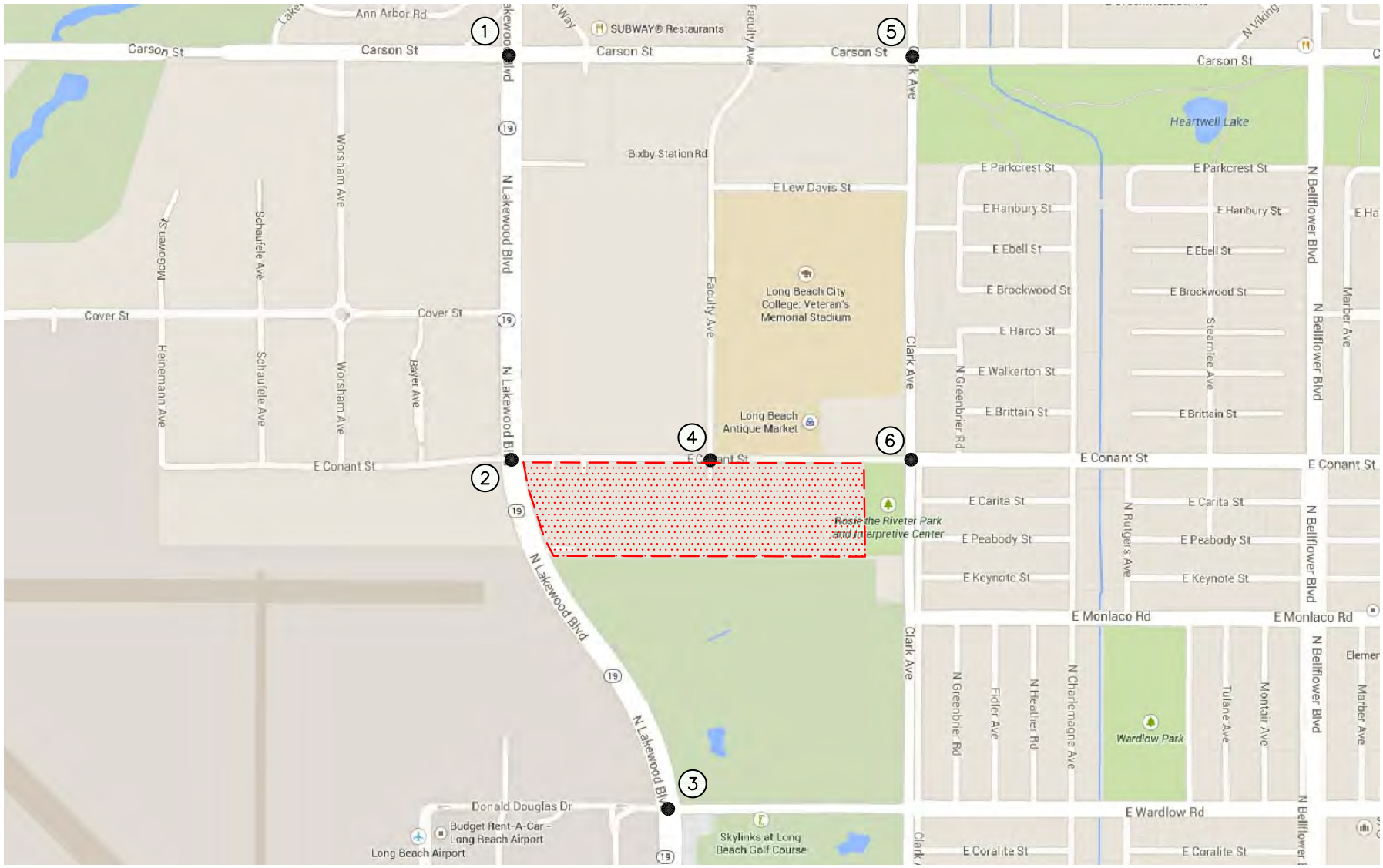
1. Lakewood Boulevard at Carson Street[1]
2. Lakewood Boulevard at Conant Street
3. Lakewood Boulevard at Donald Douglas Drive/Wardlow Road
4. Faculty Avenue at Conant Street
5. Clark Avenue at Carson Street
6. Clark Avenue at Conant Street

Figure 1-1 presents a Vicinity Map, which illustrates the general location of the project and depicts the study locations and surrounding street system.

Level of Service (LOS) calculations for the AM and PM peak hours at these key study intersections were performed to evaluate the future potential traffic impacts associated with anticipated area growth, related projects, and the proposed Project. Included in this traffic study report are:

- Existing traffic counts,
- Estimated project traffic generation/distribution/assignment,
- Estimated cumulative project traffic generation/distribution/assignment,
- AM and PM peak hour capacity analyses for existing conditions,
- AM and PM peak hour capacity analyses for existing plus project conditions,
- AM and PM peak hour capacity analyses for future (Year 2016) conditions without and with project traffic,
- Site Access and Internal Circulation Evaluation,
- Traffic Signal Warrant Analysis
- Recommended Improvements,
- Congestion Management Program Compliance Assessment, and
- Construction Traffic Impact Assessment.

[1] Los Angeles County CMP intersection.



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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

SOURCE: GOOGLE

KEY

(#) = STUDY INTERSECTION

= PROJECT SITE

FIGURE 1-1

VICINITY MAP

PACIFIC POINTE EAST, LONG BEACH

2.0 PROJECT DESCRIPTION

The Project site is a 24.82 acre rectangular-shaped parcel of land, now developed with surface parking spaces, that is generally located south of Conant Street, east of Lakewood Boulevard, and north of the Skylinks Golf Course. The Project site is located in Douglas Aircraft Planned Development District (PD-19). Located directly north of the Project site, across Conant Street, west of Faculty Avenue and east of Lakewood Boulevard is the former Boeing C-717 site that is developed with 1,064,615 square-feet (SF) of building area[2]. Similar to the Project, the former Boeing C-717 site is located within PD-19. East of Faculty Avenue and north of Conant Street is the Long Beach City College campus. Bordering the Project site to the east, on the southeast corner of Conant Street and Clark Avenue, is Rosie the Riveter Park and Interpretive Center. ***Figure 2-1*** presents an existing aerial of the Project site.

Figure 2-2 presents the site plan for the proposed Project. As shown, the proposed Pacific Pointe East development will consist of three new industrial buildings. These buildings would be speculative developments with an open floor, intended for light industrial, light manufacturing, warehouse, office, and/or research & development land uses. Based on information provided by Rincon Consultants, Inc., the three buildings would have a total area of 494,000 square feet (SF) and provide 722 parking spaces broken down as follows:

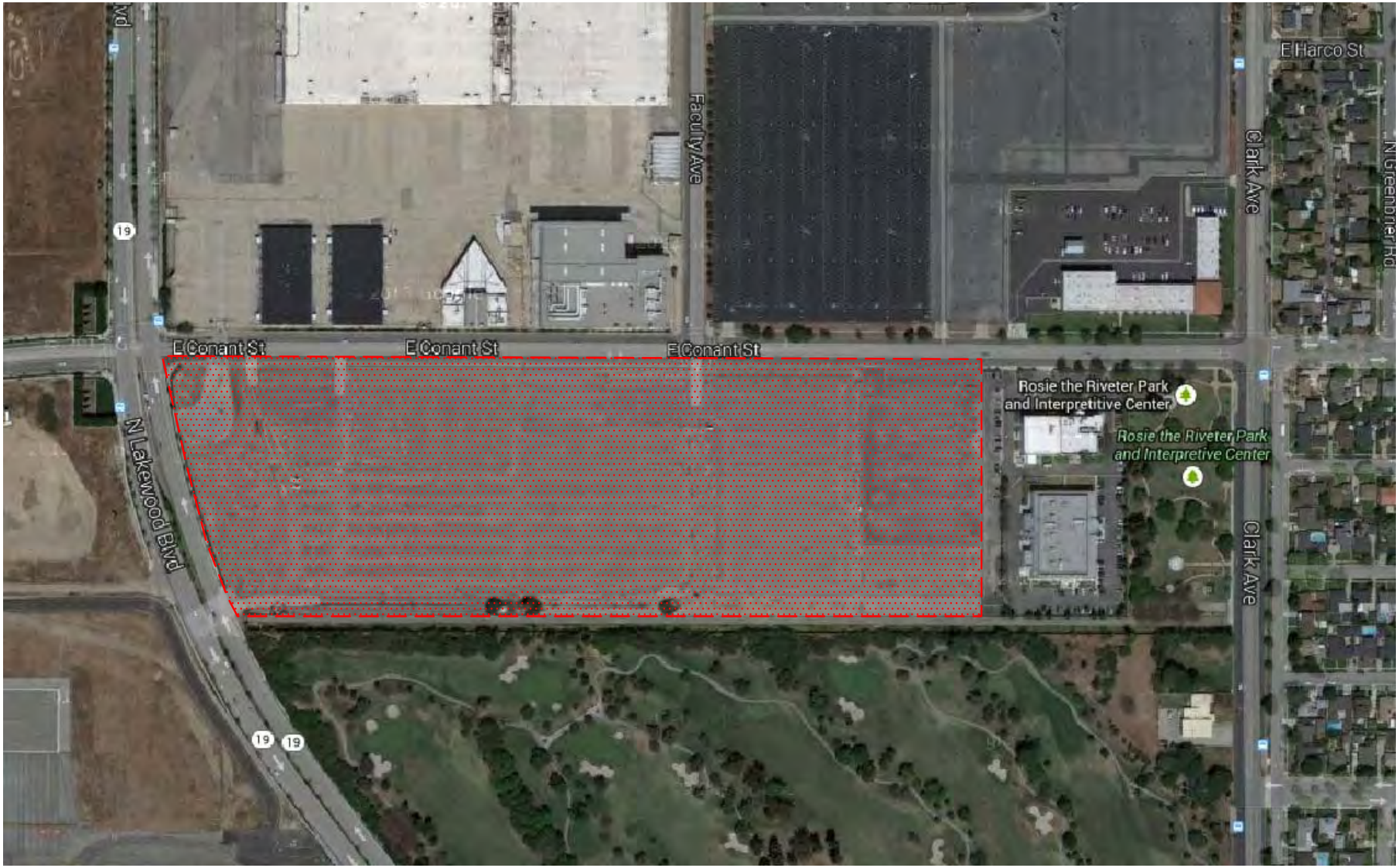
- Building 9 – 144,000 SF with 221 parking spaces
- Building 10 – 118,000 SF with 156 parking spaces
- Building 11 – 232,000 SF with 345 parking spaces

Given that the potential tenant mix has not been determined at this time, Buildings 9 and 10 have been assumed to be manufacturing type uses, whereas Building 11 is assumed to be occupied by warehouse/storage uses. ***Table 2-1*** presents the development summary for the proposed uses of the Project. The Project is expected to be completed by the Year 2016 and is assumed to be completed in one phase.

2.1 Site Access

Access to the Project will be provided via four driveways to be located along Conant Street. Driveways 1, 3, and 4 will provide full access to the site, whereas Driveway 2, due to its proximity to the Conant Street/Faculty Avenue intersections, will provide right-turn in/right-turn out only access to the site.

[2] The former Boeing C-717 site will be renovated to accommodate the Mercedes-Benz West Coast Campus. The Mercedes –Benz West Coast Campus will include a Vehicle Preparation Center, Learning and Performance Center, Regional Offices, and a Classic Car Center (Source: City of Long Beach/Sares-Regis Group).



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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

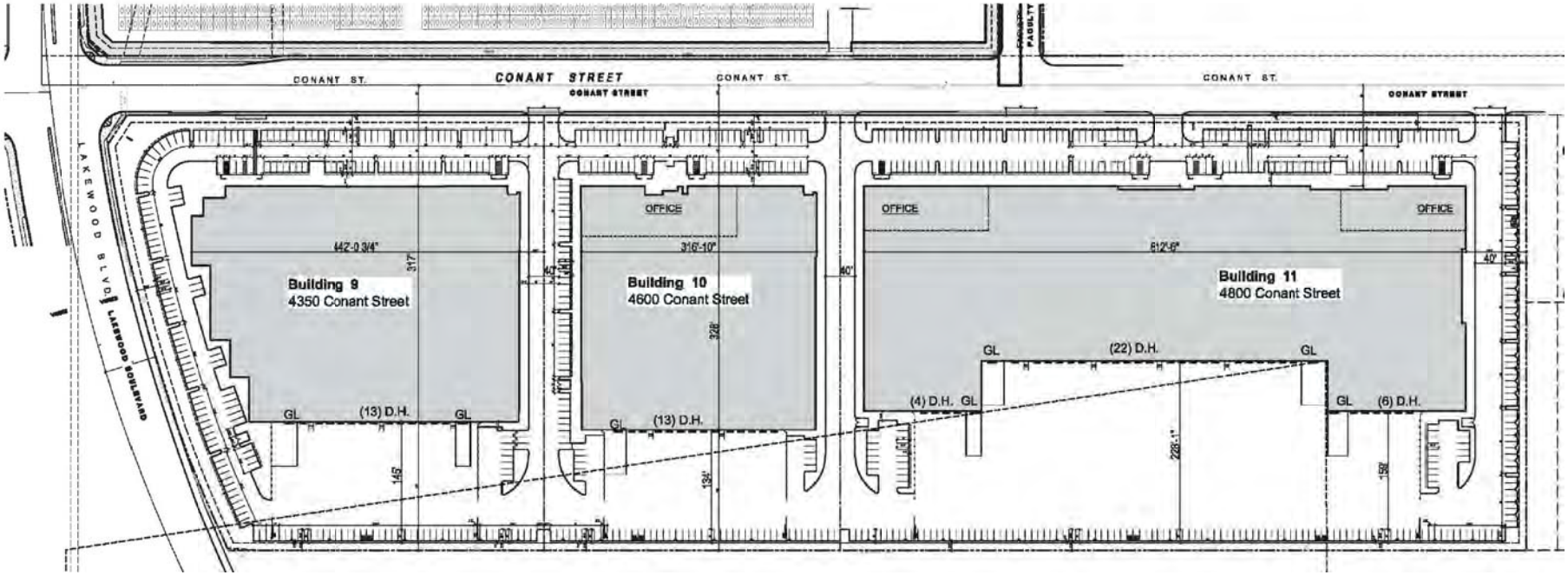
KEY

= PROJECT SITE

FIGURE 2-1

EXISTING SITE

PACIFIC POINTE EAST, LONG BEACH



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SOURCE: PACIFIC POINTE EAST, NOVEMBER 22, 2013

LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

FIGURE 2-2

PROPOSED SITE PLAN

PACIFIC POINTE EAST, LONG BEACH

TABLE 2-1

PROJECT DEVELOPMENT SUMMARY[3]

Land Use / Project Description	Building 9 Floor Area (SF-GFA)	Building 10 Floor Area (SF-GFA)	Building 11 Floor Area (SF-GFA)	Total Project Floor Area (SF-GFA)
Manufacturing/Industrial Building Floor Area Allocation				
❑ Office	15,000 SF	15,000 SF	20,000 SF	50,000 SF
❑ Manufacturing	129,000 SF	103,000 SF	--	232,000 SF
❑ Warehousing	--	--	212,000 SF	212,000 SF
Total Building Floor Area	**144,000 SF**	**118,000 SF**	**232,000 SF**	**494,000 SF**
Vehicular Parking Supply				
❑ Standard	193 spaces	152 spaces	300 spaces	645 spaces
❑ Van Accessible	2 spaces	2 spaces	4 spaces	8 spaces
❑ Standard Accessible	5 spaces	2 spaces	6 spaces	13 spaces
❑ Van Pool	11 spaces	0 spaces	20 spaces	31 spaces
❑ Car Pool	10 spaces	0 spaces	15 spaces	25 spaces
Total Vehicular Parking Supply	**221 spaces**	**156 spaces**	**345 spaces**	**722 spaces**

Notes:

- SF-GFA = square feet of gross floor area

[3] Source: Rincon Consultants, Inc.

3.0 EXISTING CONDITIONS

3.1 Street Network

Regional access to the project site is provided by the I-405 Freeway located south of the project. Other key roadways in the local area network include Lakewood Boulevard, Faculty Avenue, Clark Avenue, Carson Street, Conant Street, and Wardlow Road. The following discussion provides a brief synopsis of these key area streets. The descriptions are based on an inventory of existing roadway conditions.

Lakewood Boulevard is primarily an eight-lane, divided roadway that borders the Project site on the west. Lakewood Boulevard is oriented in the north-south direction. North of Conant Street, Lakewood Boulevard is a six-lane, divided roadway. The posted speed limit along Lakewood Boulevard is 45 miles per hour (mph). Parking is not permitted on either side of the roadway within the vicinity of the Project. The key study intersections of Lakewood Boulevard at Carson Street, Conant Street and Donald Douglas Drive/Wardlow Road are controlled by traffic signals.

Faculty Avenue is a two-lane, undivided roadway oriented in the north-south direction. The posted speed limit along Faculty Avenue is 30 mph. Parking is not permitted on either side of the roadway within the vicinity of the Project, but angled parking is available along a cul-de-sac located at the northern end of Faculty Avenue. The key study intersection of Faculty Avenue at Conant Street is controlled by an all-way stop.

Clark Avenue is primarily a four-lane, divided roadway located east of the Project site. Clark Avenue is oriented in the north-south direction. South of Conant Street, Clark Avenue is a five-lane, divided roadway, with three lanes in the southbound direction and two lanes in the northbound direction. The posted speed limit along Clark Avenue is 40 mph. North of Conant Street, parking is permitted on the east side and restricted on the west side. South of Conant Street, parking is not permitted on either side of the roadway. The key study intersections of Clark Avenue at Carson Street and Conant Street are controlled by traffic signals.

Carson Street is primarily a five-lane, divided roadway located north of the Project site. Carson Street is oriented in the east-west direction, with three lanes in the westbound direction and two lanes in the eastbound direction. West of Lakewood Boulevard and east of Clark Avenue, Carson Street is a six-lane, divided roadway. The posted speed limit along Carson Street is 40 mph. Parking is permitted on both sides of the roadway within the vicinity of the Project.

Conant Street is a four-lane, divided roadway that borders the Project site on the north. Conant Street is oriented in the east-west direction. West of Faculty Avenue, parking is not permitted on either side of the roadway. East of Faculty Avenue, parking is permitted on the south side and restricted on the north side.

Wardlow Road is a four-lane, divided roadway located south of the Project site. Wardlow Road is oriented in the east-west direction. The posted speed limit along Wardlow Road is 35 mph. Parking is permitted on both sides of the roadway within the vicinity of the Project.

Figure 3-1 presents an inventory of the existing roadway conditions for the arterials and intersections evaluated in this report. The number of travel lanes and intersection controls for the key area intersections are identified.

3.2 Existing Public Transit

The Long Beach Transit (LBT) provides public transit services in the vicinity of the proposed Project. A brief description of the transit services is as follows:

LBT Route 93:

- Route 93 extends from Alondra Boulevard and Woodruff Avenue to Fifth Street Station.
- Route 93 traverses the study area on Carson Street and Clark Avenue, and operates throughout the day, Monday through Friday.
- During the weekday AM peak hour, Route 93 provides headways of 3 buses in the eastbound direction and 2 buses in the westbound direction. During the weekday PM peak hour, Route 93 provides headways of 2 buses in the eastbound direction and 3 buses in the westbound direction.

LBT Routes 101 and 103:

- The routes extend from Santa Fe Avenue and Willow Street to Norwalk Boulevard and Carson Street.
- The route traverses the study area on Carson Street, Lakewood Boulevard, and Clark Avenue, and operates throughout the day, Monday through Friday.
- During the weekday AM and PM peak hours, in the eastbound/westbound directions, Routes 101 and 103 provide headways of 2 buses in each direction.

LBT Routes 111 and 112:

- The route extends from the Downtown Long Beach Station to Lakewood Regional Medical Center.
- These routes traverse the study area on Carson Street, Lakewood Boulevard, and Clark Avenue, and operate throughout the day, Monday through Sunday.
- During the weekday AM peak hour, Route 111 provides headways of 2 buses in both the northbound and southbound directions. During the weekday PM peak hour, Route 111 provides headways of 2 buses in the northbound direction and 1 bus in the southbound direction.
- During the weekday AM peak hour, Route 112 provides a headway of 2 buses in the southbound direction. During the weekday PM peak hour, Route 112 provides a headway of 1 bus in the southbound direction. Route 112 does not provide any buses in the northbound direction during the AM or PM peak hours.

LBT Route 176:

- The route extends from the Lakewood Mall to San Gabriel and Pacific Coast Highway.
- The route traverses the study area on Carson Street and Lakewood Boulevard, and operates throughout the day, Monday through Friday.
- During the weekday AM and PM peak hours, in the northbound/southbound directions, Route 176 provides headways of 2 buses in each direction.

3.3 Existing Area Traffic Volumes

Manual vehicular turning movement counts were conducted at the six (6) key study locations during the weekday morning and evening peak commuter periods to determine the existing AM peak hour and PM peak hour traffic volumes. Traffic counts at the six (6) key study intersections were conducted in February 2014 by Transportation Studies, Inc. ***Figures 3-2*** and ***3-3*** depict the existing AM and PM peak hour traffic volumes at the six (6) key study intersections, respectively. *Figure 3-3* also presents the existing average daily traffic volumes for the roadway segments in the vicinity of the proposed Project.

Appendix A contains the detailed manual turning movement count sheets for the key study intersections evaluated in this report.

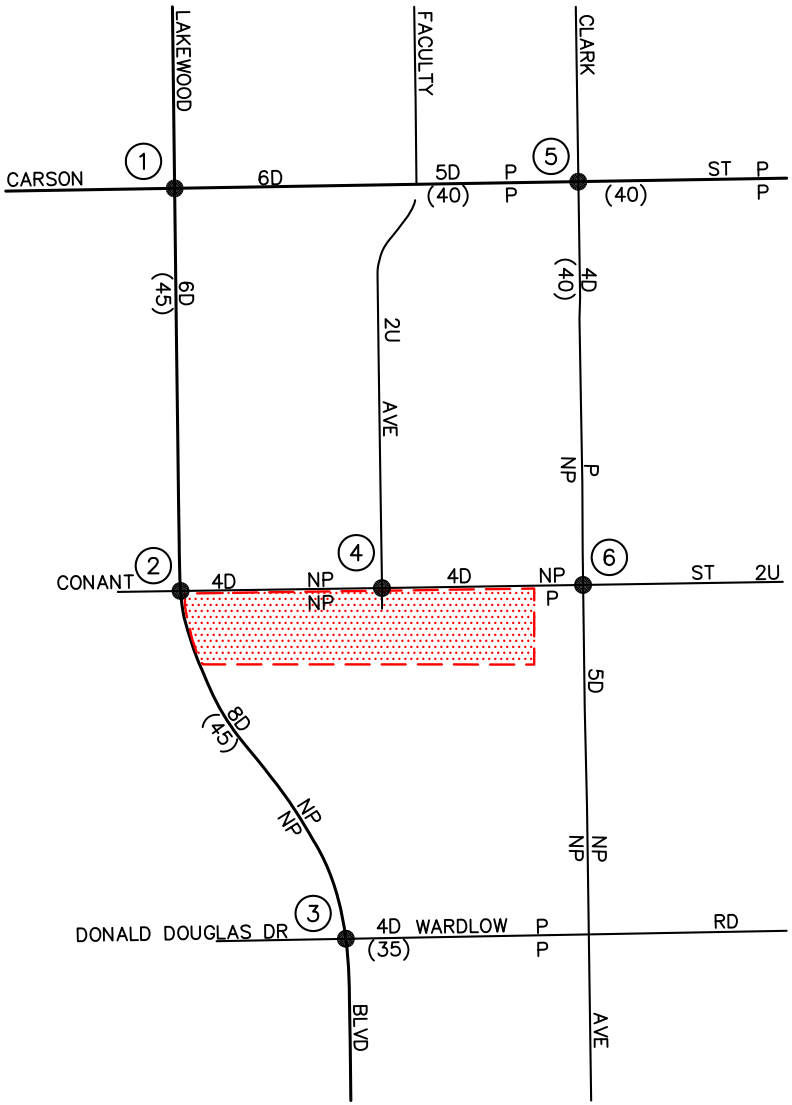
3.4 Existing Intersection Conditions

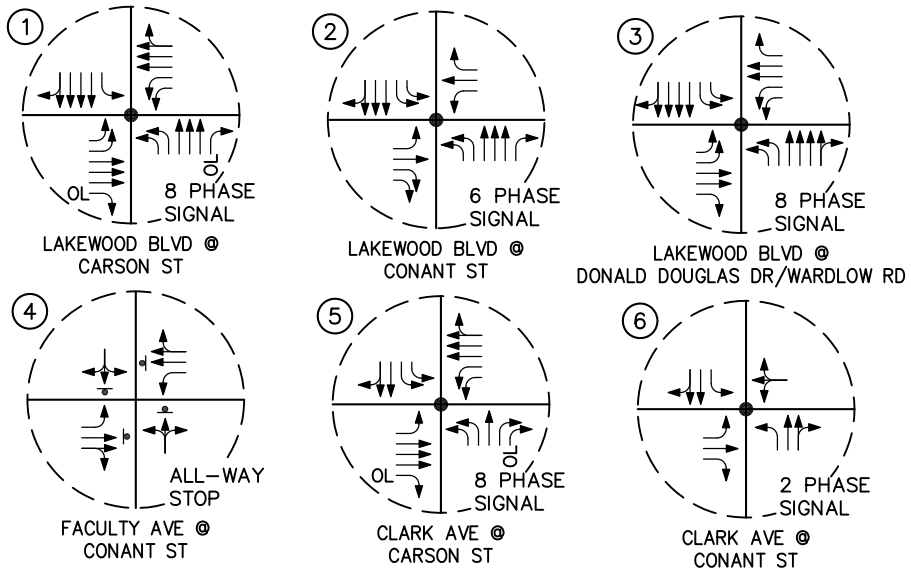
Existing AM and PM peak hour operating conditions for the key study intersections were evaluated using the *Intersection Capacity Utilization (ICU) Methodology* for signalized intersections and the methodology outlined in Chapter 17 of the *Highway Capacity Manual 2000 (HCM 2000)* for unsignalized intersections.

3.4.1 *Intersection Capacity Utilization (ICU) Method of Analysis (Signalized Intersections)*

In conformance with City of Long Beach and LA County CMP requirements, existing AM and PM peak hour operating conditions for the key signalized study intersections were evaluated using the *Intersection Capacity Utilization* (ICU) method. The ICU technique is intended for signalized intersection analysis and estimates the volume to capacity (V/C) relationship for an intersection based on the individual V/C ratios for key conflicting traffic movements. The ICU numerical value represents the percent signal (green) time, and thus capacity, required by existing and/or future traffic. It should be noted that the ICU methodology assumes uniform traffic distribution per intersection approach lane and optimal signal timing.

Per LA County CMP requirements, the ICU calculations use a lane capacity of 1,600 vehicles per hour (vph) for left-turn, through, and right-turn lanes, and dual left turn capacity of 2,880 vph. A clearance interval is also added to each Level of Service calculation. Per City of Long Beach requirements, clearance intervals are based on the number of phases in the intersection and whether the left turning movements are all fully protected or whether some of them are permitted with other left-turn movements being protected. ***Table 3-1*** shows the City of Long Beach clearance intervals used in the analysis of the key study intersections.





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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

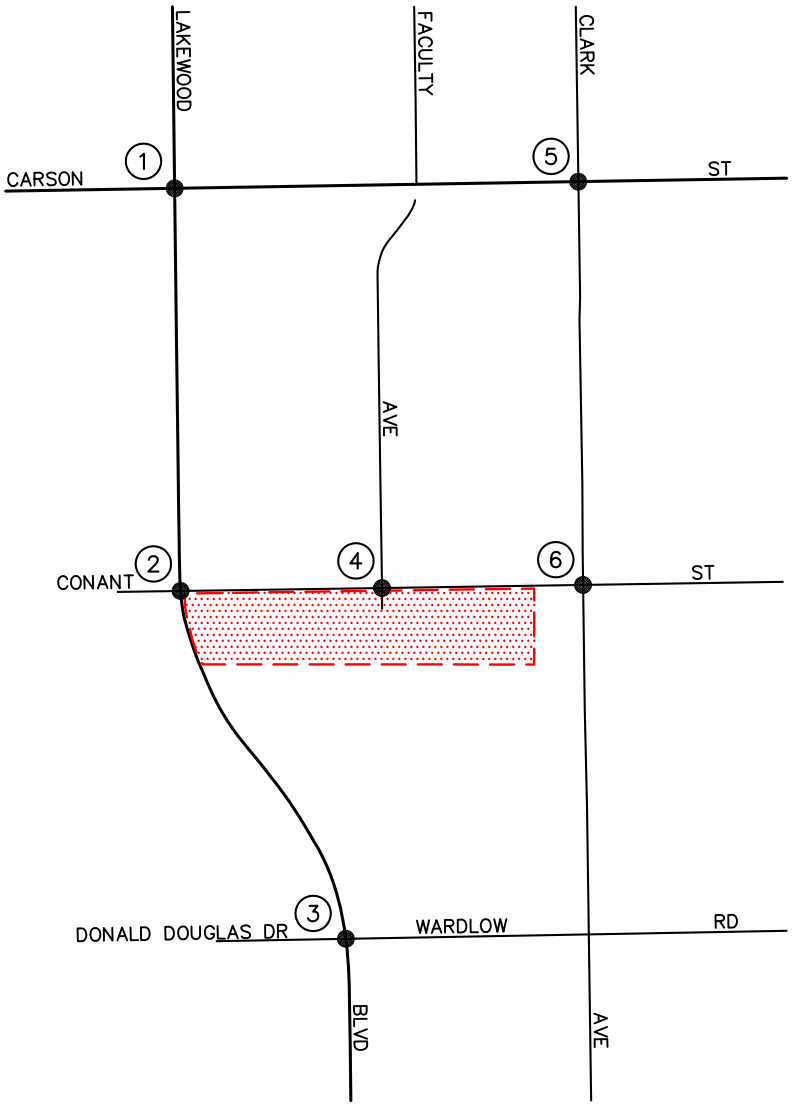
KEY

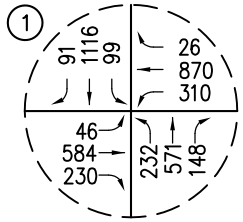
(#) = STUDY INTERSECTION
← = APPROACH LANE ASSIGNMENT
● = TRAFFIC SIGNAL, ⊤ = STOP SIGN
P = PARKING, NP = NO PARKING
U = UNDIVIDED, D = DIVIDED
2 = NUMBER OF TRAVEL LANES
(XX)= POSTED SPEED LIMIT (MPH)
OL = OVERLAP
▭ = PROJECT SITE

FIGURE 3–1

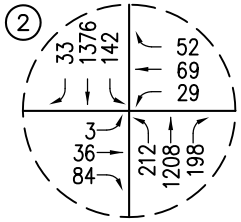
EXISTING ROADWAY CONDITIONS AND INTERSECTION CONTROLS

PACIFIC POINTE EAST, LONG BEACH

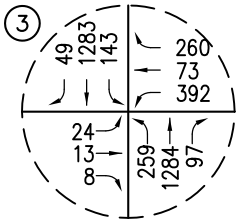




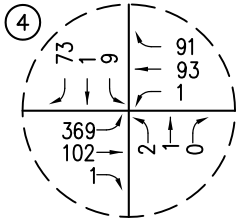
LAKEWOOD BLVD @
CARSON ST



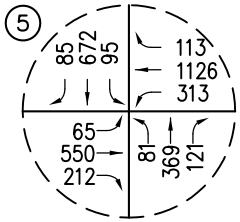
LAKEWOOD BLVD @
CONANT ST



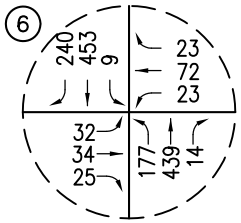
LAKEWOOD BLVD @
DONALD DOUGLAS DR/WARDLOW RD



FACULTY AVE @
CONANT ST



CLARK AVE @
CARSON ST



CLARK AVE @
CONANT ST

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N NO SCALE

KEY

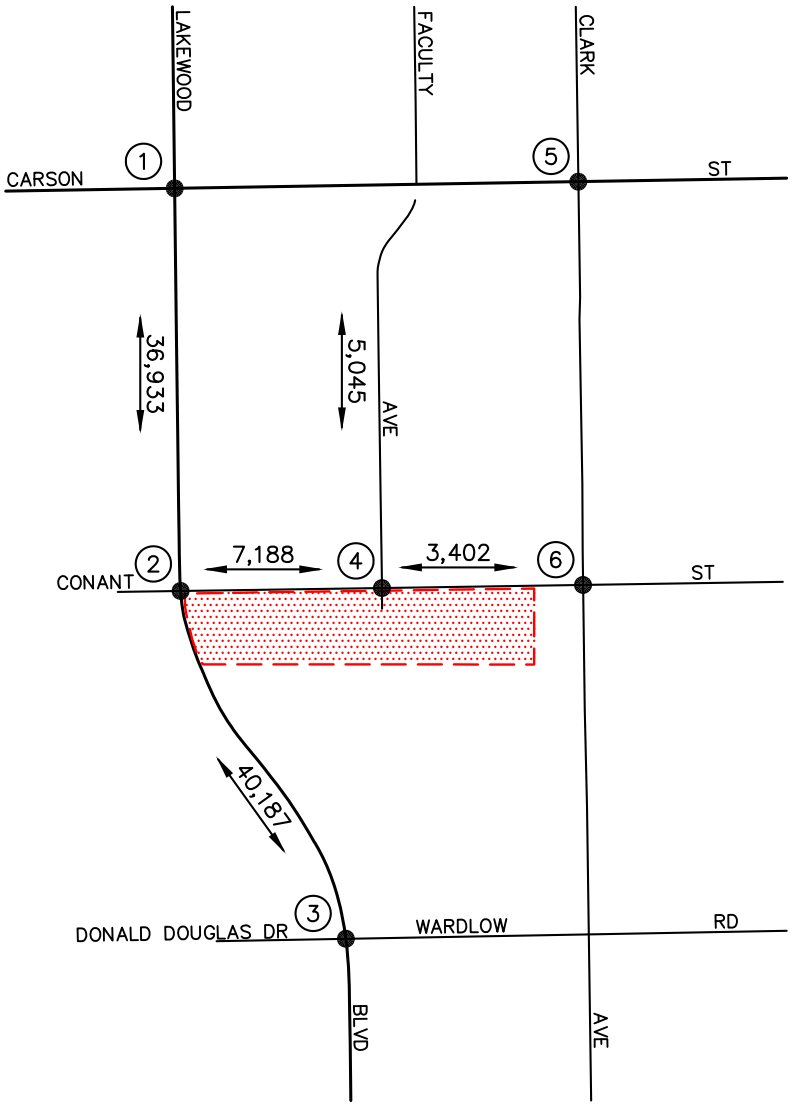
(#) = STUDY INTERSECTION

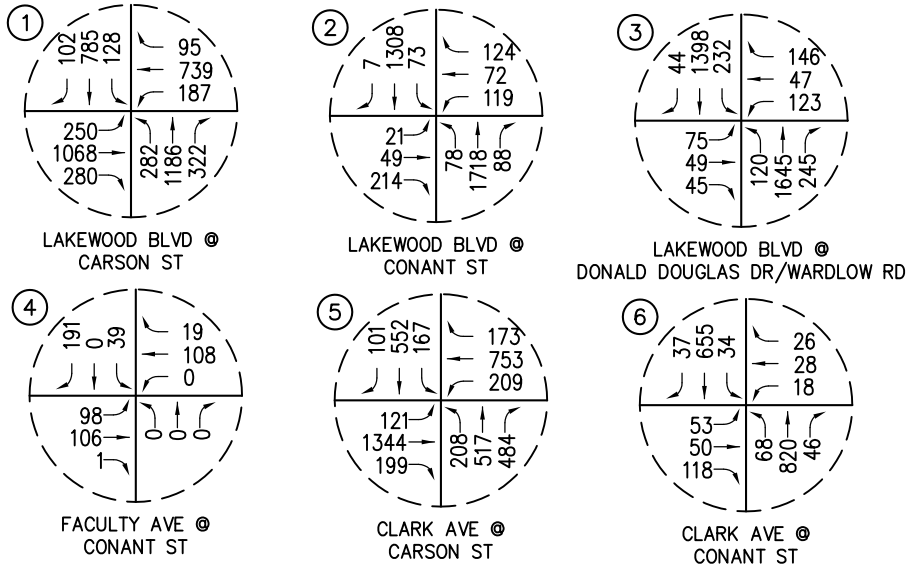
= PROJECT SITE

FIGURE 3–2

EXISTING AM PEAK HOUR TRAFFIC VOLUMES

PACIFIC POINTE EAST, LONG BEACH





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N NO SCALE

KEY

(#) = STUDY INTERSECTION

XX,XXX = DAILY TRAFFIC VOLUMES

= PROJECT SITE

FIGURE 3-3

EXISTING PM PEAK HOUR AND DAILY TRAFFIC VOLUMES

PACIFIC POINTE EAST, LONG BEACH

TABLE 3-1

CITY OF LONG BEACH CLEARANCE INTERVALS[4]

Number of Signal Phases	Left-turn Phasing Type	Clearance Interval (percent)
2	Permitted	10%
3	Protected and Permitted	12%
3	Fully Protected	15%
4	Protected and Permitted	14%
4	Fully Protected	18%

[4] Source: *City of Long Beach Guidelines for Signalized Intersection Analysis, 2004.*

TABLE 3-2

LEVEL OF SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS (ICU METHODOLOGY)[5]

Level of Service (LOS)	Intersection Capacity Utilization Value (V/C)	Level of Service Description
A	≤ 0.600	EXCELLENT. No vehicle waits longer than one red light, and no approach phase is fully used.
B	0.601 – 0.700	VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.
C	0.701 – 0.800	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.
D	0.801 – 0.900	FAIR. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.
E	0.901 – 1.000	POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.
F	> 1.000	FAILURE. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Potentially very long delays with continuously increasing queue lengths.

[5] Source: *Transportation Research Board Circular 212 - Interim Materials on Highway Capacity.*

The ICU value translates to a Level of Service (LOS) estimate, which is a relative measure of the intersection performance. The six qualitative categories of Level of Service have been defined along with the corresponding ICU value range and are shown in ***Table 3-2***. The ICU value is the sum of the critical volume to capacity ratios at an intersection; it is not intended to be indicative of the LOS of each of the individual turning movements.

3.4.2 *Highway Capacity Manual (HCM) Method of Analysis (Unsignalized Intersections)*

The 2000 HCM unsignalized methodology for stop-controlled intersections was utilized for the analysis of the unsignalized intersections. This methodology estimates the average control delay for each of the subject movements and determines the level of service for each movement. For all-way stop controlled intersections, the overall average control delay measured in seconds per vehicle, and level of service is then calculated for the entire intersection. For one-way and two-way stop-controlled (minor street stop-controlled) intersections, this methodology estimates the worst side street delay, measured in seconds per vehicle and determines the level of service for that approach. The HCM control delay value translates to a Level of Service (LOS) estimate, which is a relative measure of the intersection performance. The six qualitative categories of Level of Service have been defined along with the corresponding HCM control delay value range, as shown in ***Table 3-3***.

3.5 Level of Service Criteria

According to the City of Long Beach, LOS D is the minimum acceptable condition that should be maintained during the peak commute hours, or the current LOS if the existing LOS is worse than LOS D (i.e. LOS E of F).

3.6 Existing Level of Service Results

Table 3-4 summarizes the existing peak hour service level calculations for the six (6) key study intersections based on existing traffic volumes and current street geometrics. Review of Table *3-4* indicates that one of the six (6) key study intersections currently operates at an unacceptable level of service during the PM peak hour. The intersection of Clark Avenue at Carson Street currently operates at unacceptable LOS E during the PM peak hour. The remaining five key study intersections currently operate at acceptable levels of service during the AM and PM peak hours.

Appendix B contains the existing AM peak hour and PM peak hour level of service calculations for the six (6) key study intersections.

TABLE 3-3

LEVEL OF SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS

Level of Service (LOS)	Highway Capacity Manual Delay Value (sec/veh)	Level of Service Description
A	≤ 10.0	Little or no delay
B	> 10.0 and ≤ 15.0	Short traffic delays
C	> 15.0 and ≤ 25.0	Average traffic delays
D	> 25.0 and ≤ 35.0	Long traffic delays
E	> 35.0 and ≤ 50.0	Very long traffic delays
F	> 50.0	Severe congestion

TABLE 3-4

EXISTING PEAK HOUR LEVELS OF SERVICE

Key Intersection		Time Period	Control Type	ICU/HCM	LOS
1.	Lakewood Boulevard at	AM	8 Phase	0.678	B
	Carson Street	PM	Signal	0.795	C
2.	Lakewood Boulevard at	AM	6 Phase	0.552	A
	Conant Street	PM	Signal	0.665	B
3.	Lakewood Boulevard at	AM	8 Phase	0.649	B
	Donald Douglas Drive/Wardlow Road	PM	Signal	0.673	B
4.	Faculty Avenue at	AM	All-Way	11.3 s/v	B
	Conant Street	PM	Stop	8.7 s/v	A
5.	Clark Avenue at	AM	8 Phase	0.743	C
	Carson Street	PM	Signal	**0.914**	**E**
6.	Clark Avenue at	AM	2 Phase	0.521	A
	Conant Street	PM	Signal	0.470	A

Notes:
Bold ICU/LOS and HCM/LOS values indicate adverse service levels based on City LOS standards
s/v = seconds per vehicle (delay)

3.7 Conant Street at Faculty Avenue Traffic Signal Warrant Analysis

Per the direction of City staff, a traffic signal warrant analysis of Conant Street at Facility Avenue has been conducted based on existing traffic volumes, current intersection lane geometrics and controls, and the signal warrant criteria/guidelines contained in the *California Manual of Uniform Traffic Control Devices (MUTCD).*

Faculty Avenue is a two-lane local street. At the intersection with Conant Street, Faculty Avenue provides one approach lane and one departure lane. The posted speed limit on Faculty Avenue is 30 mph. Eastbound and westbound traffic on Conant Street is controlled via a stop sign, as is southbound traffic on Faculty Avenue.

3.7.1 *California MUTCD Policy/Criteria*

The justification for the installation of a traffic signal at an intersection is based on several guidelines, which include the warrants set forth in the *California Manual of Uniform Traffic Control Devices (MUTCD).* The warrants consider conditions involving traffic volumes on the intersecting streets, the difficulty of vehicles on a side street crossing a major street, the number of recorded accidents that may be correctable by a traffic signal, and special conditions that may be improved by a traffic signal.

Other factors taken into consideration for the installation of a traffic signal include: approach conditions, driver confusion and comfort level, safety conditions, future land uses, and other indications demonstrating the need for right of way assignment beyond that which could be provided by stop signs.

Traffic signals exert a significant influence on vehicle and pedestrian traffic flow. Traffic signals are designed to draw the attention of drivers approaching an intersection. Their main purpose is to safely assign the right-of-way to various traffic movements, and thus, may be notably advantageous. Some advantages include:

- Provide for the orderly movement of traffic,
- Can increase the traffic handling capacity of the intersection,
- Reduce the frequency of certain types of accidents (especially the right angle type),
- Can be coordinated to provide for continuous, or nearly continuous movement, of traffic at a definite speed along a given route, and
- Permit minor street traffic, vehicular or pedestrian, to enter, or cross, continuous traffic on the major street.

However, improper or unwarranted traffic control signals may also cause disadvantages. In some circumstances, traffic signals may cause more problems than it solves. Possible disadvantages include:

- Excessive motorist delays,
- Disobedience of the signal indications,
- Increased accident frequency (rear-end collisions may increase), and
- Reduce intersection capacity.

3.7.2 *Existing Traffic Volumes*

Table 3-5 summarizes the existing hourly approach traffic volumes on Conant Street and Faculty Avenue. Existing daily traffic counts for this intersection were collected by Transportation Studies, Inc. in February 2014. *Appendix A* also contains the daily approach counts at this intersection.

3.7.3 *Traffic Signal Warrant Evaluation*

This assessment is made on the basis of signal warrant criteria published in the *California Manual on Uniform Traffic Control Devices (CA MUTCD)*. For the study intersection of Conant Street at Faculty Avenue, the need for signalization is assessed on the basis of the following traffic signal warrants as described in the *CA MUTCD)* using existing daily traffic volumes collected at this intersection.

Warrant No. #1A:	Minimum vehicular volumes warrant
Warrant No. #1B:	Interruption of continuous traffic warrant
Warrant No. #2:	Four hour warrant
Warrant No. #3:	Peak hour warrant

The results of the traffic signal warrant analysis based on existing Year 2014 Traffic Conditions is summarized in ***Table 3-6***. As shown, based on the existing traffic volumes and current intersection geometrics, the study intersection did not satisfy any of the applicable signal warrants identified above. *Appendix A* also the detailed traffic signal warrant worksheet for the Conant Street at Facility Avenue based on existing traffic volume conditions.

As noted in *Table 3-4*, the unsignalized intersection of Conant Street at Faculty Avenue currently operates at LOS B during the weekday AM peak hour and LOS A during the weekday PM peak hour.

TABLE 3-5

EXISTING DAILY TRAFFIC VOLUMES FOR CONANT STREET AT FACULTY AVENUE[6]

Time Period	Conant Street (Major)			Faculty Avenue (Minor)	Combined
	EB	WB	Total	SB	Total
12:00 AM	10	4	14	0	14
1:00 AM	6	5	11	2	13
2:00 AM	2	1	3	1	4
3:00 AM	2	1	3	1	4
4:00 AM	4	7	11	0	11
5:00 AM	30	18	48	8	56
6:00 AM	101	53	154	20	174
7:00 AM	**383**	**160**	**543**	**129**	**672**
8:00 AM	**457**	**202**	**659**	**199**	**858**
9:00 AM	**278**	**168**	**446**	**221**	**667**
10:00 AM	**278**	**162**	**440**	**276**	**716**
11:00 AM	153	108	261	247	508
12:00 PM	**378**	**176**	**554**	**386**	**940**
1:00 PM	175	75	250	154	404
2:00 PM	**197**	**114**	**311**	**291**	**602**
3:00 PM	204	96	300	264	564
4:00 PM	193	103	296	253	549
5:00 PM	**208**	**130**	**338**	**277**	**615**
6:00 PM	**306**	**74**	**380**	**239**	**619**
7:00 PM	56	34	90	57	147
8:00 PM	34	21	55	102	157
9:00 PM	30	42	72	213	285
10:00 PM	8	17	25	35	60
11:00 PM	8	6	14	5	19
Total	**3,501**	**1,777**	**5,278**	**3,380**	**8,658**

Note: **Bold/Shaded** figures represent highest eight (8) hours of traffic volumes.

[6] Source: Daily traffic counts conducted by Transportation Studies, Inc. on February 11, 2014.

TABLE 3-5
EXISTING TRAFFIC SIGNAL WARRANT ANALYSIS SUMMARY
FOR CONANT STREET AT FACULTY AVENUE

California MUTCD Traffic Signal Warrant[7]		Warrant Satisfied?	
		Yes	**No**
Warrant 1A -	Minimum Vehicular Volume		
	100% Satisfied		X
	80% Satisfied		X
Warrant 1B -	Interruption of Continuous Traffic		
	100% Satisfied		X
	80% Satisfied		X
Warrant 2 -	Four Hour Volume		X
Warrant 3A -	Peak Hour Delay		X
Warrant 3B -	Peak Hour Volume		X
Warrant 4 -	Minimum Pedestrian Volume	Pedestrian Data Not Available	
Warrant 5 -	School Crossing	Pedestrian Data Not Available	
Warrant 6 -	Coordinated Signal System	Not Applicable	
Warrant 7 -	Crash Experience	Data Not Available	
Warrant 8 -	Roadway Network	Data Not Available	
TRAFFIC SIGNAL IS NOT WARRANTED			

[7] Source: *California Manual on Uniform Traffic Control Devices (MUTCD), Part 4 – Highway Traffic Signals*

4.0 TRAFFIC FORECASTING METHODOLOGY

In order to estimate the traffic impact characteristics of the proposed Project, a multi-step process has been utilized. The first step is traffic generation, which estimates the total arriving and departing traffic on a peak hour and daily basis. The traffic generation potential is forecast by applying the appropriate vehicle trip generation equations or rates to the project development tabulation.

The second step of the forecasting process is traffic distribution, which identifies the origins and destinations of inbound and outbound project traffic. These origins and destinations are typically based on demographics and existing/expected future travel patterns in the study area.

The third step is traffic assignment, which involves the allocation of project traffic to study area streets and intersections. Traffic assignment is typically based on minimization of travel time, which may or may not involve the shortest route, depending on prevailing operating conditions and travel speeds. Traffic distribution patterns are indicated by general percentage orientation, while traffic assignment allocates specific volume forecasts to individual roadway links and intersection turning movements throughout the study area.

With the forecasting process complete and project traffic assignments developed, the impact of the project is isolated by comparing operational (LOS) conditions at selected key intersections using expected future traffic volumes with and without forecast project traffic. The need for site-specific and/or cumulative local area traffic improvements can then be evaluated.

5.0 PROJECT TRAFFIC CHARACTERISTICS

5.1 Project Traffic Generation

Traffic generation is expressed in vehicle trip ends, defined as one-way vehicular movements, either entering or exiting the generating land use. Generation equations and/or rates used in the traffic forecasting procedure are found in the Ninth Edition of *Trip Generation*, published by the Institute of Transportation Engineers (ITE) [Washington D.C., 2012].

Table 5-1 summarizes the trip generation rates used in forecasting the vehicular trips generated by the proposed Project and presents the forecast daily and peak hour project traffic volumes for a "typical" weekday. As shown in the upper portion of this table, the trip generation potential for the proposed Project was forecast using ITE Land Use Code 140: Manufacturing average trip rates and ITE Land Use 150: Warehousing average trip rates. Specifically, ITE Land Use Code 140: Manufacturing average trip rates were utilized to estimate the trip generation potential for Buildings 9 and 10 and ITE Land Use Code 150: Warehousing average trip rates were utilized to estimate the trip generation potential for Building 11. To provide a conservative assessment, no adjustment to the Project's trip generation forecast has been applied in this analysis to account for the Transportation Demand Management (TDM) Program required of Project by the City.

As shown in the upper portion of *Table 5-1* (i.e. below the trip generation rates), Buildings 9, 10, and 11 of the Project site are forecast to generate 1,827 daily trips, with 261 trips (205 inbound, 56 outbound) produced in the AM peak hour and 266 trips (87 inbound, 179 outbound) produced in the PM peak hour on a "typical" weekday. A comparison of the Project's 266 PM peak hour trips indicates that it is significantly less than the 5,503 PM peak hour trip threshold that is allowed within PD-19.

To account for the truck trip potential of the proposed Project, truck traffic was forecast using the following daily, AM peak hour and PM peak hour truck percentages for manufacturing uses and warehouse uses based on information contained within the *San Bernardino/Riverside County Warehouse/Distribution Center Vehicle Trip Generation Study (January 2005).* A passenger car equivalent (PCE) of 2.5 was applied to each truck trip generation estimate.

- Manufacturing Truck Percentages = Daily: 12%, AM: 14% and PM: 9%
- Warehousing Truck Percentages = Daily: 16%, AM: 19% and PM: 12%

Review of the middle portion of *Table 5-1* shows that Building 9 is forecast to generate 649 daily PCE trips with 128 PCE trips forecast during the AM peak hour and 119 PCE trips forecast during the PM peak hour. Building 10 is forecast to generate 532 daily PCE trips with 105 PCE trips forecast during the AM peak hour and 99 PCE trips forecast during the PM peak hour. Building 11 is forecast to generate 1,024 daily PCE trips with 90 PCE trips forecast during the AM peak hour and 89 PCE trips forecast during the PM peak hour.

Overall, as shown in the lower portion of *Table 5-1*, the trip generation potential for the proposed Project (i.e. Buildings 9, 10 and 11) totals 2,205 daily PCE trips, with 323 PCE trips (253 inbound, 70 outbound) forecast during the AM peak hour and 307 PCE trips (100 inbound, 207 outbound) forecast during the PM peak hour.

TABLE 5-1

PROJECT TRAFFIC GENERATION FORECAST[8]

Project Description	Daily	AM Peak Hour			PM Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
Trip Generation Rates:							
▪ 140: Manufacturing (TE/1000 SF)	3.82	0.57	0.16	0.73	0.26	0.47	0.73
▪ 150: Warehousing (TE/1000 SF)	3.56	0.24	0.06	0.30	0.08	0.24	0.32
Trip Generation Forecast:							
Pacific Pointe East – Lot D							
▪ Building 9 - Manufacturing (144,000 SF)	550	82	23	105	37	68	105
▪ Building 10 - Manufacturing (118,000 SF)	451	67	19	86	31	55	86
▪ Building 11 - Warehousing (232,000 SF)	826	56	14	70	19	56	75
Total Project Trip Generation Potential	**1,827**	**205**	**56**	**261**	**87**	**179**	**266**
▪ Building 9 - Manufacturing (144,000 SF)							
Passenger Cars Trips	484	71	19	90	34	62	96
Truck PCE Trips[9]	165	28	10	38	8	15	23
Building 9 Total PCE Trips	**649**	**99**	**29**	**128**	**42**	**77**	**119**
▪ Building 10 - Manufacturing (118,000 SF)							
Passenger Cars Trips	397	58	16	74	28	50	78
Truck PCE Trips[9]	135	23	8	31	8	13	21
Building 10 Total PCE Trips	**532**	**81**	**24**	**105**	**36**	**63**	**99**
▪ Building 11 - Warehousing (232,000 SF)							
Passenger Cars Trips	694	45	12	57	17	49	66
Truck PCE Trips[10]	330	28	5	33	5	18	23
Building 11 Total PCE Trips	**1,024**	**73**	**17**	**90**	**22**	**67**	**89**
Total Project Trip Generation (494,000 SF)							
Passenger Cars Trips	***1,575***	***174***	***47***	***221***	***79***	***161***	***240***
Truck PCE Trips	***630***	***79***	***23***	***102***	***21***	***46***	***67***
Total Project PCE Trip Generation:	***2,205***	***253***	***70***	***323***	***100***	***207***	***307***

Notes:
- TE/1000 SF = Trip ends per 1,000 SF of development

8 Source: *Trip Generation*, 9th Edition, Institute of Transportation Engineers (ITE) [Washington, D.C. (2012)].

9 Manufacturing Truck Estimates: AM peak hour: 14% trucks, PM peak hour: 9% trucks, ADT: 12% trucks, P.C.E. = 2.5 vehicles per truck.

10 Warehousing Truck Estimates: AM peak hour: 19% trucks, PM peak hour: 12% trucks, ADT: 16% trucks, P.C.E. = 2.5 vehicles per truck.

5.2 Project Traffic Distribution and Assignment

Traffic distribution determines the directional orientation of traffic. It is based upon the location, intensity of use, accessibility of existing and planned residential areas, employment centers, and other commercial activities. Traffic assignment is the determination of specific trip routes, given the previously developed traffic distribution. Primary factors in route selection are the generalized travel direction, minimum time and minimum distance paths.

The general, directional traffic distribution pattern for the passenger cars and truck components of the Project are graphically presented in ***Figure 5-1*** and ***Figure 5-2,*** respectively. Project traffic volumes entering and exiting the project site have been distributed and assigned to the adjacent street system based upon the following considerations:

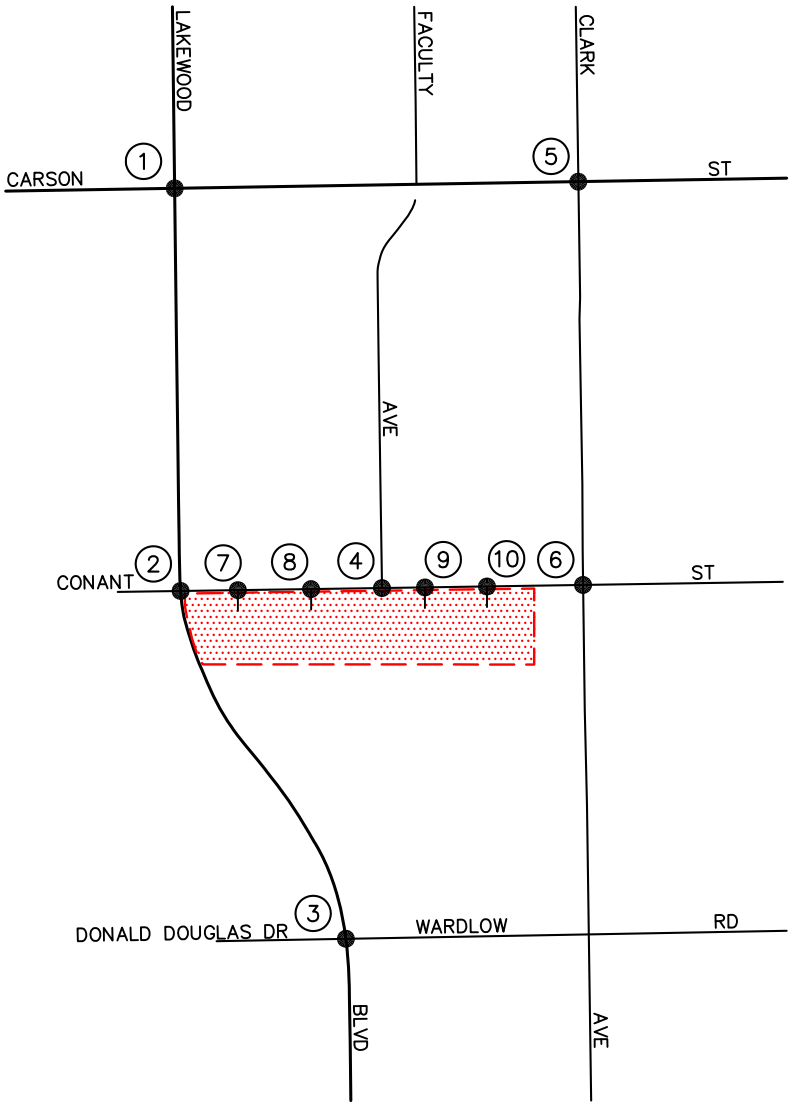
- the site's proximity to major traffic carriers (i.e. I-405 Freeway and Lakewood Boulevard),
- expected localized traffic flow patterns based on adjacent street channelization and presence of traffic signals and turn restrictions at the study intersections,
- existing intersection traffic volumes,
- ingress/egress availability at the project site, and
- existing truck routes in the area.

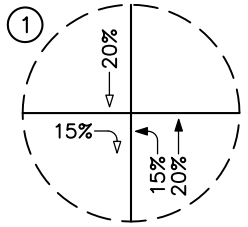
The anticipated AM and PM peak hour project traffic volumes associated with the proposed Project are presented in ***Figures 5-3*** and ***5-4***, respectively. *Figure 5-4* also presents the daily project traffic volumes. Please note that the traffic volume assignments presented in *Figures 5-3* and *5-4* reflect the traffic distribution characteristics illustrated in *Figures 5-1* and *5-2* and the project traffic generation forecast presented in *Table 5-1*. It should be noted that the trip generation methodology and forecasts were approved by City staff prior to proceeding with further analyses.

5.3 Existing Plus Project Traffic Conditions

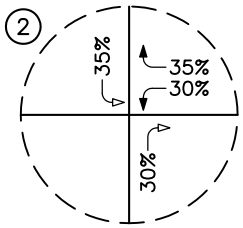
The existing plus project traffic conditions have been generated based upon existing conditions and the estimated project traffic. These forecast traffic conditions have been prepared pursuant to the California Environmental Quality Act (CEQA) guidelines, which require that the potential impacts of a Project be evaluated upon the circulation system as it currently exists. This traffic volume scenario and the related intersection capacity analyses will identify the roadway improvements necessary to mitigate the direct traffic impacts of the Project, if any.

Figures 5-5 and ***5-6*** present projected AM and PM peak hour traffic volumes at the six (6) key study intersections with the addition of the trips generated by the proposed Project to existing traffic volumes, respectively. *Figure 5-6* also presents the existing plus project daily traffic volumes.





LAKEWOOD BLVD @ CARSON ST



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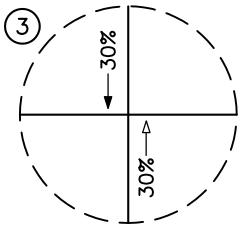

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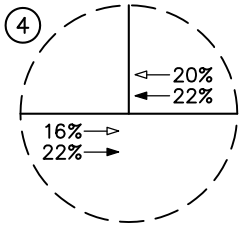
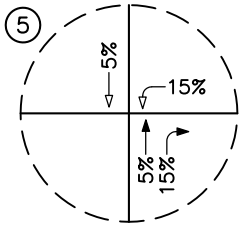
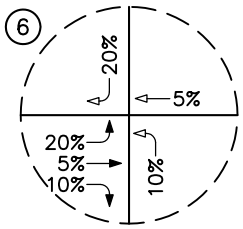


FACULTY AVE @ CONANT ST



CLARK AVE @ CARSON ST



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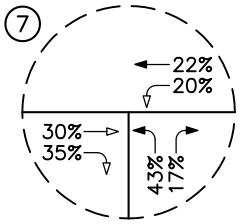

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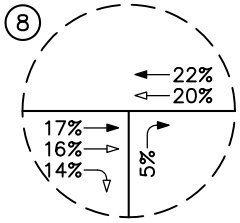

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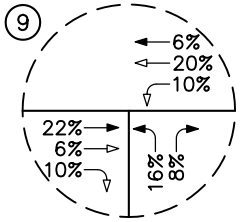

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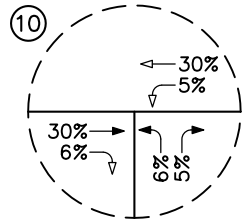

DRIVEWAY NO. 4 @ CONANT ST

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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

⇦ = INBOUND PERCENTAGE

← = OUTBOUND PERCENTAGE

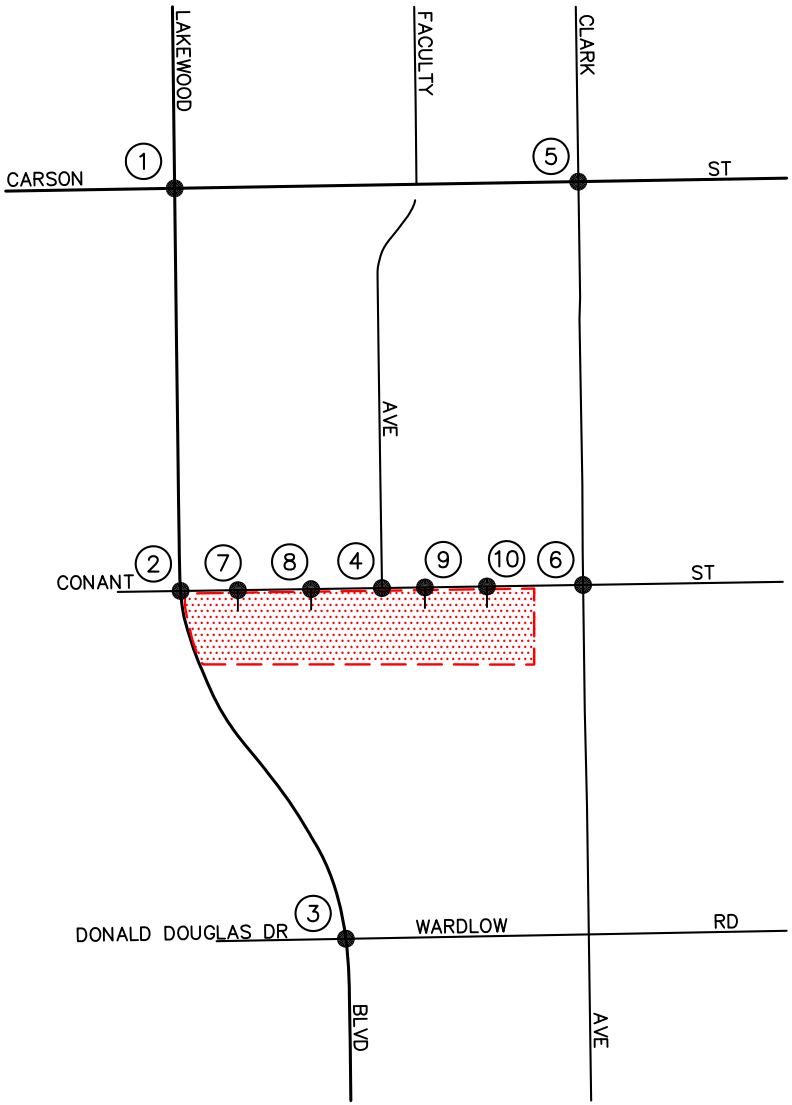
(#) = STUDY INTERSECTION

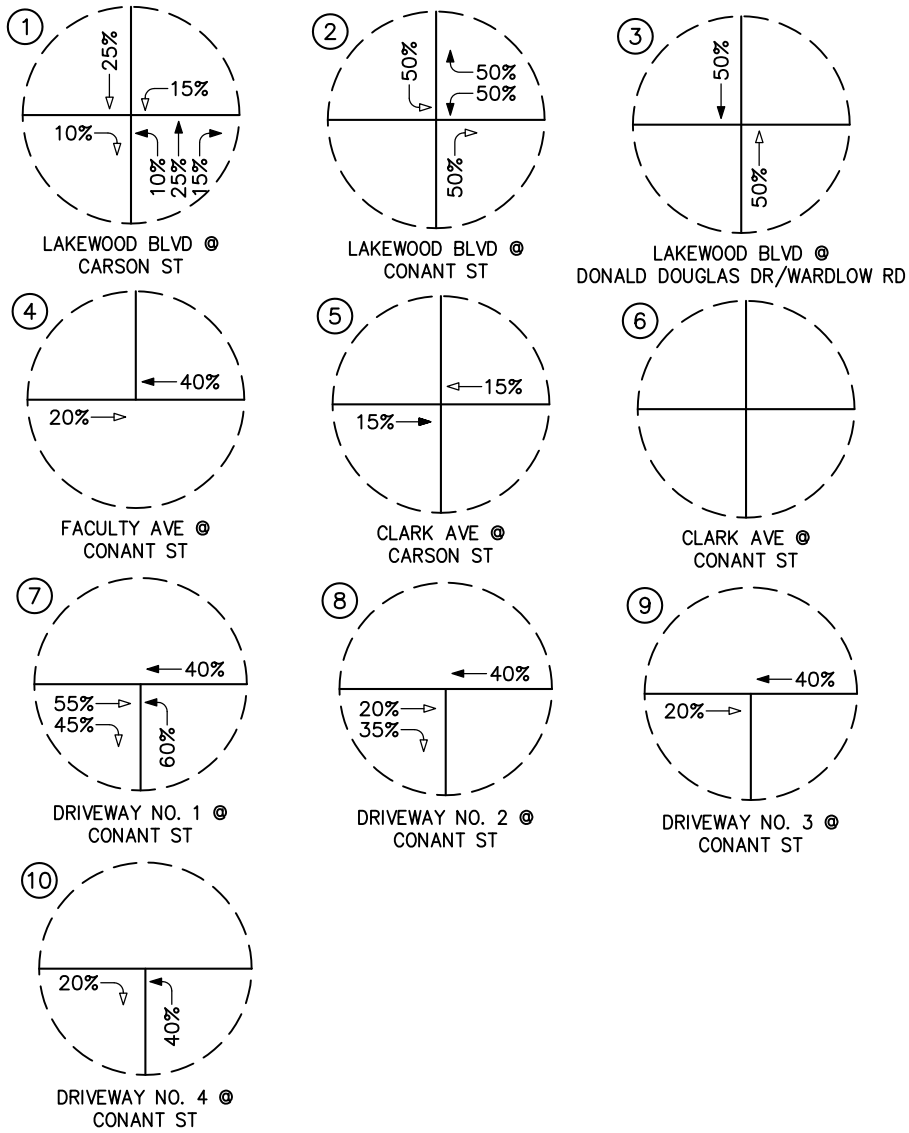
▒ = PROJECT SITE

FIGURE 5–1

PROJECT TRIP DISTRIBUTION PATTERN (PASSENGER CARS)

PACIFIC POINTE EAST, LONG BEACH





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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

⇦ = INBOUND PERCENTAGE

← = OUTBOUND PERCENTAGE

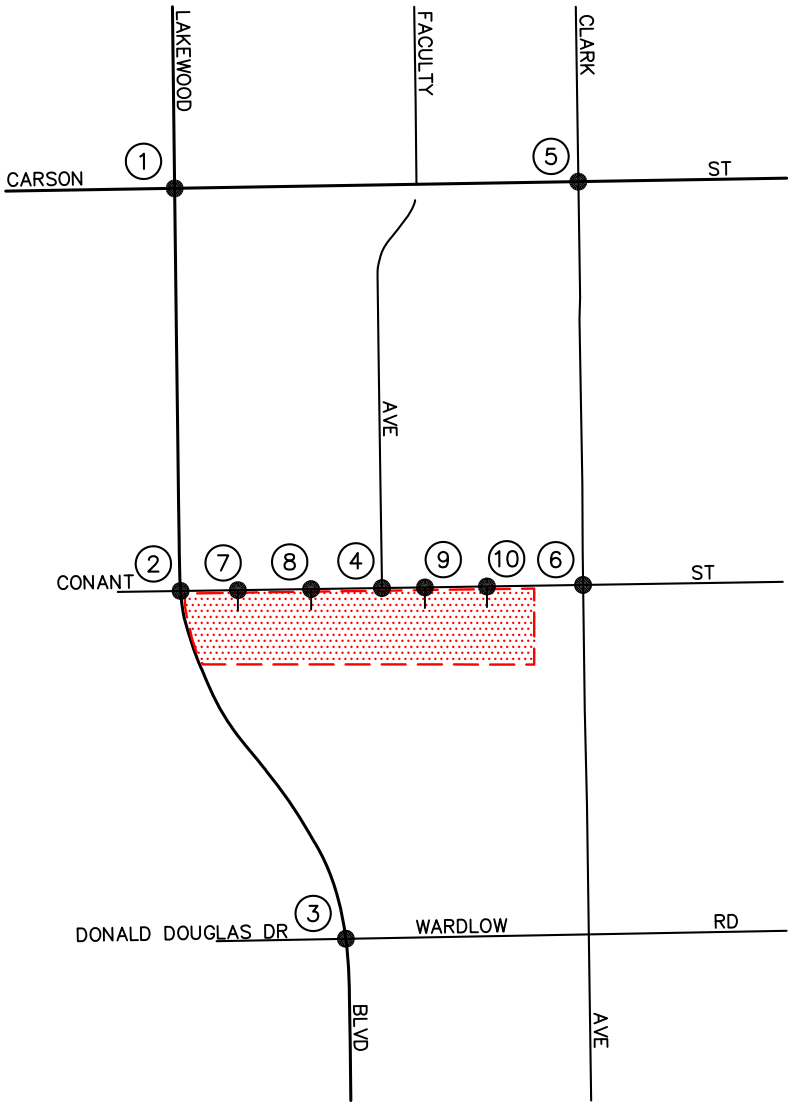
(#) = STUDY INTERSECTION

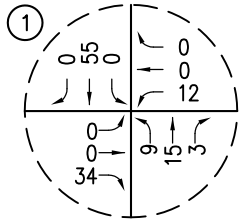
= PROJECT SITE

FIGURE 5–2

PROJECT TRIP DISTRIBUTION PATTERN (TRUCKS)

PACIFIC POINTE EAST, LONG BEACH





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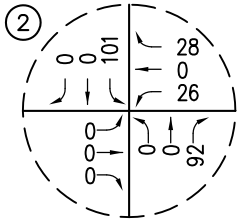
CARSON ST



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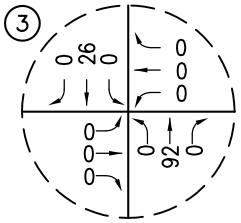
CONANT ST



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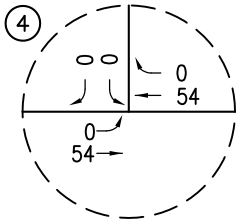
DONALD DOUGLAS DR/WARDLOW RD



FACULTY AVE @
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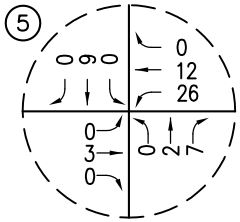
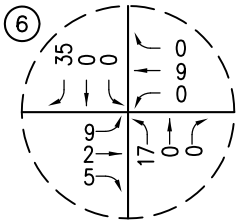


CLARK AVE @
CARSON ST



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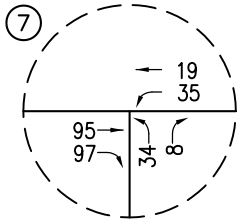

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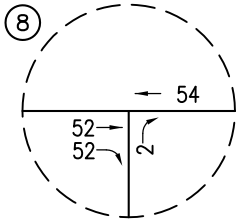

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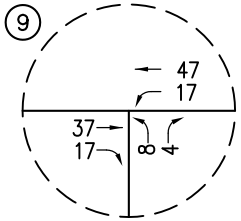

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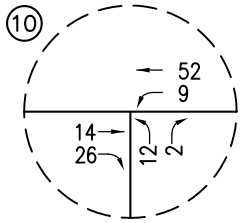

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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

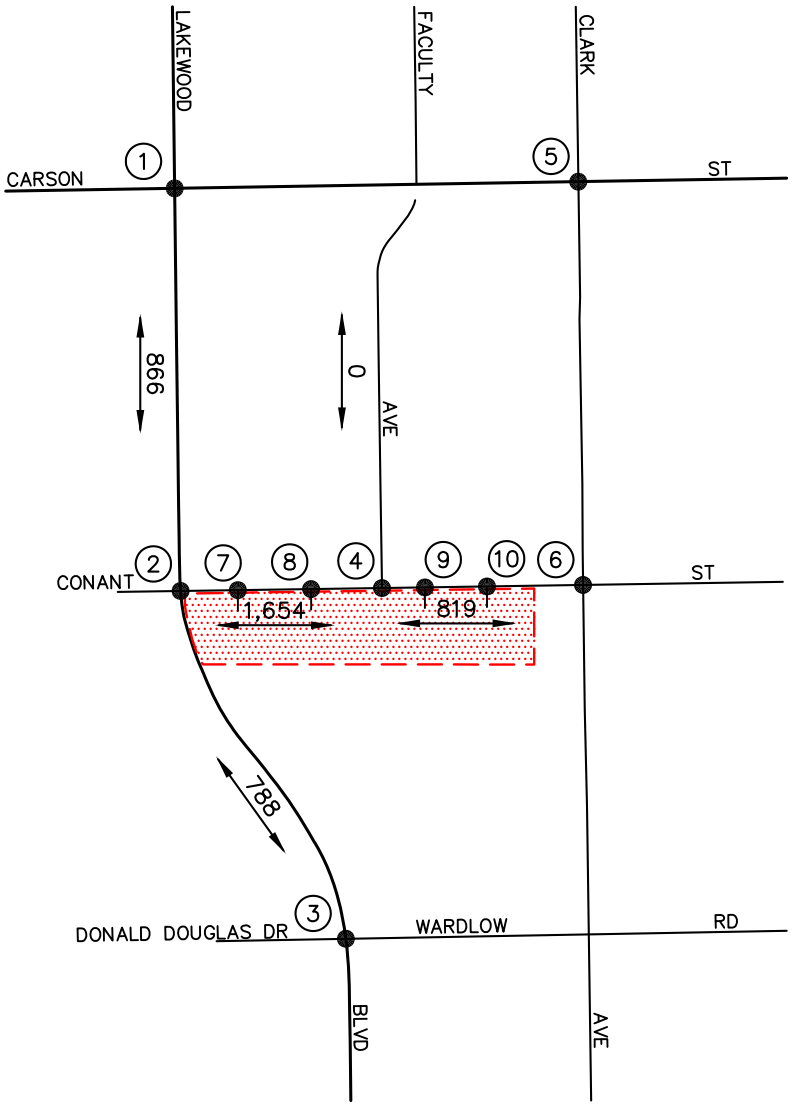
(#) = STUDY INTERSECTION

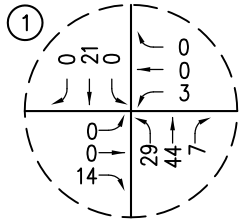
= PROJECT SITE

FIGURE 5-3

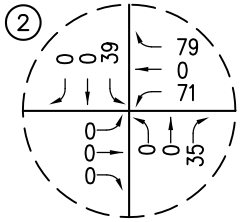
AM PEAK HOUR PROJECT TRAFFIC VOLUMES

PACIFIC POINTE EAST, LONG BEACH





LAKEWOOD BLVD @
CARSON ST



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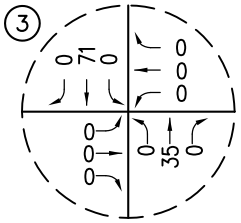

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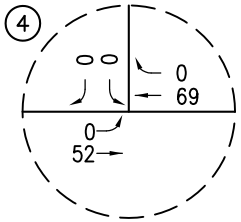
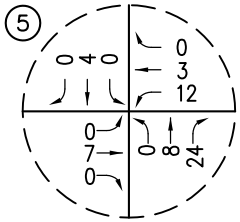
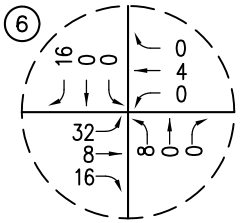
DONALD DOUGLAS DR/WARDLOW RD



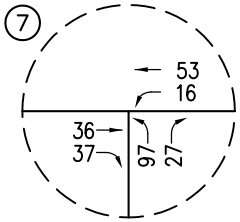
FACULTY AVE @
CONANT ST



CLARK AVE @
CARSON ST



CLARK AVE @
CONANT ST



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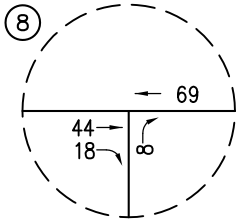

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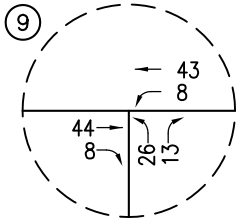

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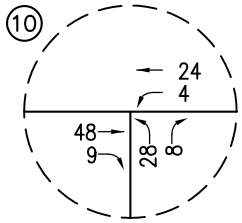

DRIVEWAY NO. 4 @
CONANT ST

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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

(#) = STUDY INTERSECTION

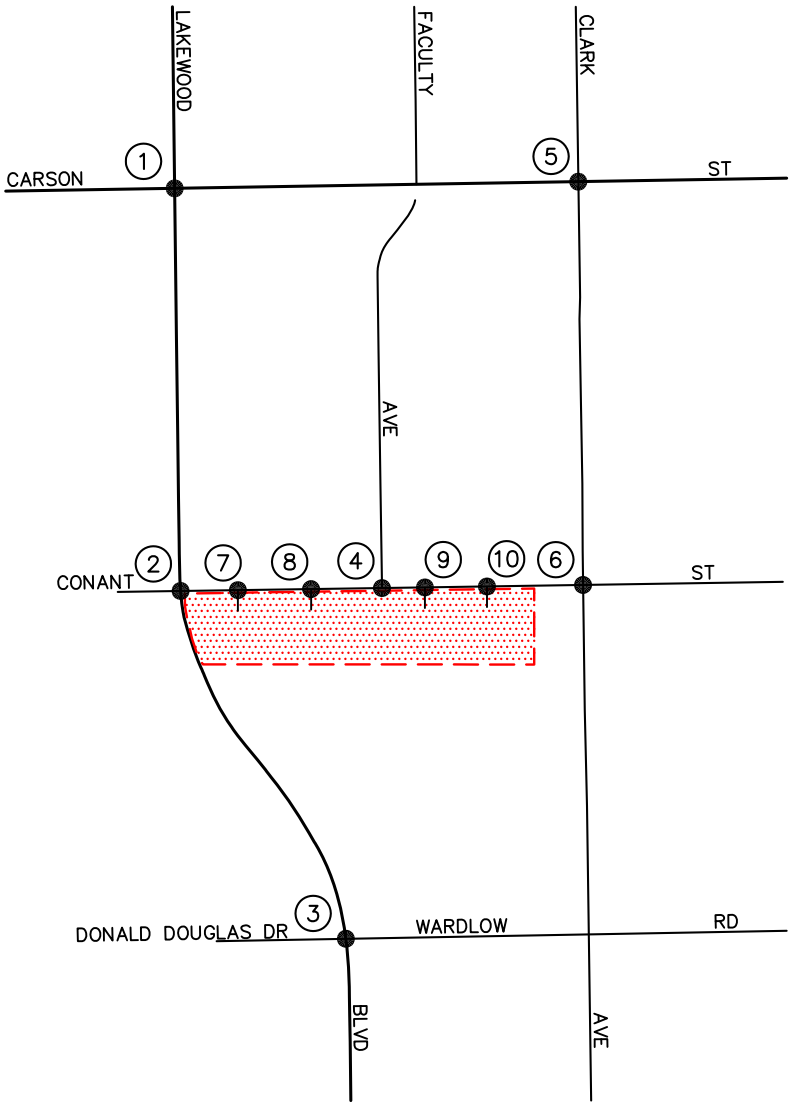
XX,XXX = DAILY TRAFFIC VOLUMES

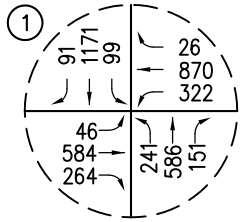
= PROJECT SITE

FIGURE 5–4

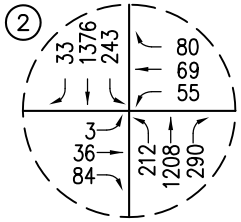
PM PEAK HOUR AND DAILY PROJECT TRAFFIC VOLUMES

PACIFIC POINTE EAST, LONG BEACH

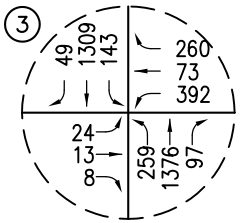




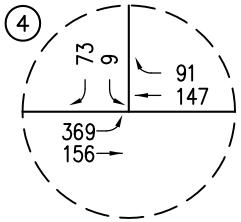
LAKEWOOD BLVD @ CARSON ST



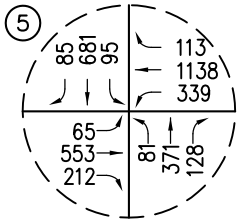
LAKEWOOD BLVD @ CONANT ST



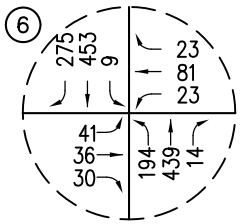
LAKEWOOD BLVD @ DONALD DOUGLAS DR/WARDLOW RD



FACULTY AVE @ CONANT ST



CLARK AVE @ CARSON ST



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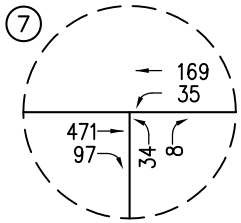

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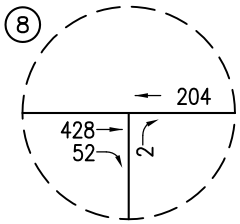

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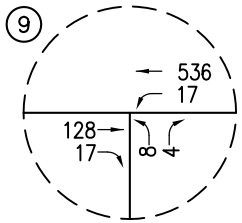

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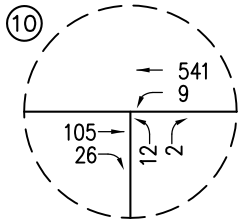

DRIVEWAY NO. 4 @ CONANT ST

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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

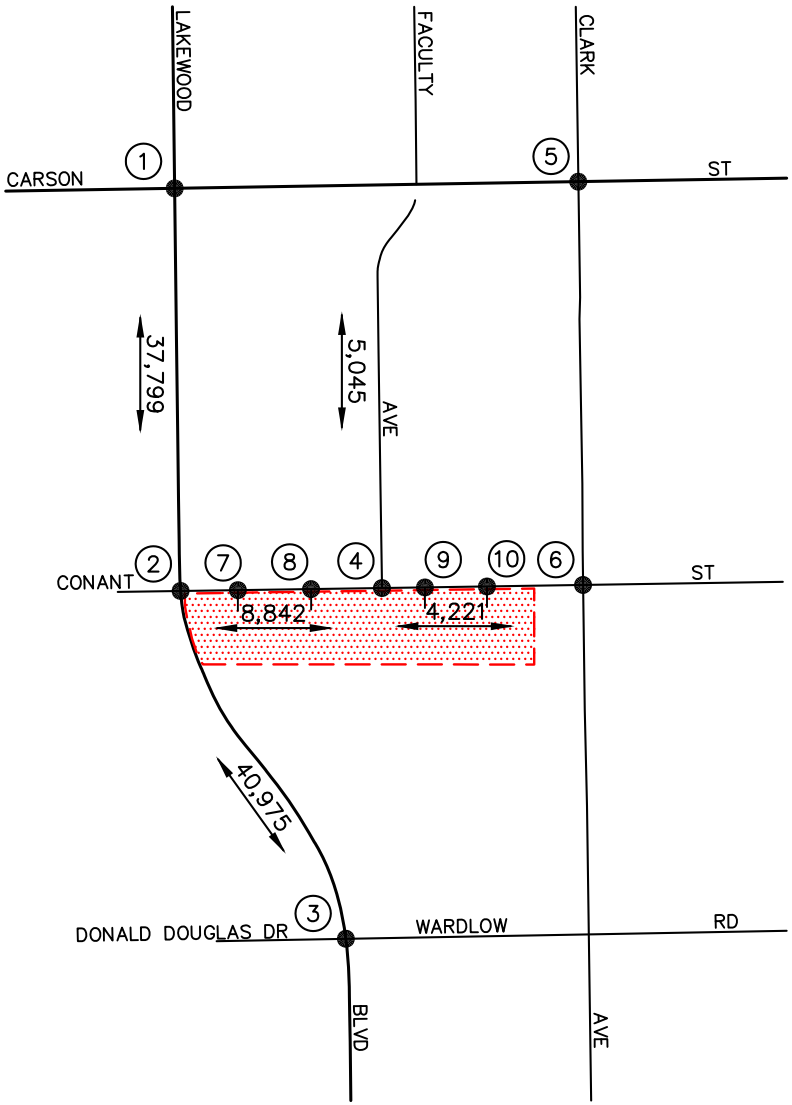
(#) = STUDY INTERSECTION

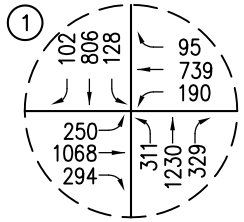
= PROJECT SITE

FIGURE 5-5

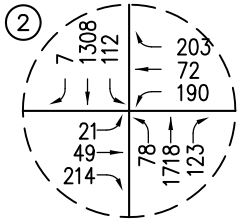
EXISTING PLUS PROJECT AM PEAK HOUR TRAFFIC VOLUMES

PACIFIC POINTE EAST, LONG BEACH





LAKEWOOD BLVD @
CARSON ST



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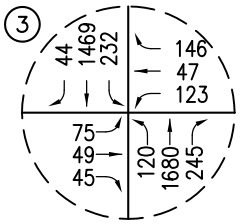
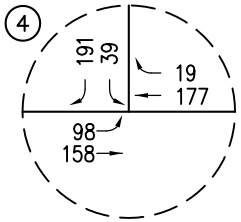
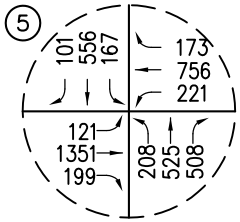


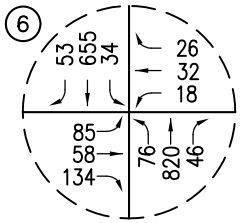
LAKEWOOD BLVD @
DONALD DOUGLAS DR/WARDLOW RD



FACULTY AVE @
CONANT ST



CLARK AVE @
CARSON ST



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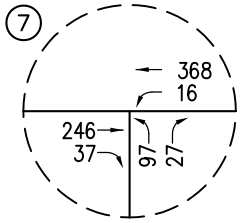

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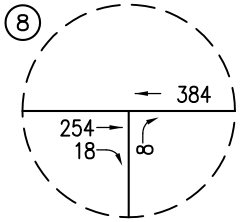

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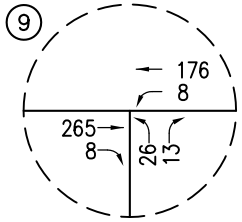

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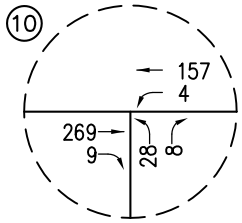

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N NO SCALE

KEY

(#) = STUDY INTERSECTION

XX,XXX = DAILY TRAFFIC VOLUMES

= PROJECT SITE

FIGURE 5-6

EXISTING PLUS PROJECT PM PEAK HOUR AND DAILY TRAFFIC VOLUMES

PACIFIC POINTE EAST, LONG BEACH

6.0 FUTURE TRAFFIC CONDITIONS

6.1 Ambient Traffic Growth

Horizon year, background traffic growth estimates have been calculated using an ambient growth factor. The ambient traffic growth factor is intended to include unknown and future related projects in the study area, as well as account for regular growth in traffic volumes due to the development of projects outside the study area. The future growth in traffic volumes has been calculated at two percent (2%) per year. Applied to existing Year 2014 traffic volumes results in a four percent (4%) increase growth in existing volumes to horizon year 2016.

6.2 Related Projects Traffic Characteristics

In order to make a realistic estimate of future on-street conditions prior to implementation of the proposed Project, the status of other known development projects (related projects) in the area has been researched. With this information, the potential impact of the proposed Project can be evaluated within the context of the cumulative impact of all ongoing development. Based on our research, there are seven (7) related projects within a two-mile radius of the project that are either located in the City of Long Beach or the City of Lakewood. These projects have either been built, but not yet fully occupied, or are being processed for approval. These seven (7) related projects have been included as part of the cumulative background setting.

Table 6-1 provides the location and a brief description for each of the seven (7) related projects. ***Figure 6-1*** graphically illustrates the location of the related projects. These related projects are expected to generate vehicular traffic, which may affect the operating conditions of the key study intersections.

Table 6-2 presents the development totals and resultant trip generation for the related projects. As shown in *Table 6-2*, the related projects are expected to generate a combined total of 6,132 daily trips on a "typical" weekday, with 493 trips (380 inbound and 113 outbound) forecast during the AM peak hour, and 621 trips (207 inbound and 414 outbound) forecast during the PM peak hour.

6.3 Year 2016 Traffic Volumes

Figures 6-2 and ***6-3*** present AM and PM peak hour cumulative project traffic volumes at the key study intersections for the Year 2016, respectively. *Figure 6-3* also presents the daily related project traffic volumes. ***Figures 6-4*** and ***6-5*** present future AM and PM peak hour cumulative traffic volumes at the key study intersections for the Year 2016, respectively. *Figure 6-5* also presents the Year 2016 daily cumulative traffic volumes. Please note that the cumulative traffic volumes represent the accumulation of existing traffic, ambient growth traffic, and related projects traffic.

Figures 6-6 and ***6-7*** illustrate Year 2016 forecast AM and PM peak hour traffic volumes with the inclusion of the trips generated by the proposed Project, respectively. *Figure 6-7* also presents the Year 2016 daily cumulative plus project traffic volumes.

TABLE 6-1

LOCATION AND DESCRIPTION OF RELATED PROJECTS[11]

No.	Related Project	Address	Jurisdiction	Description/Size
	City of Long Beach			
1.	Building 8 at Pacific Pointe South	3865 Lakewood Boulevard	Long Beach	58,645 SF of industrial/warehouse space
2.	Urbana Medical Office Development	3824 Schaufele Avenue	Long Beach	91,560 SF of medical office space within two (2) buildings
3.	Mercedes Benz West Coast Campus	3860 Lakewood Boulevard	Long Beach	Renovation of 1,064,615 SF of existing warehouse space to accommodate: ✓ Vehicle Preparation Center (VPC) – 45,745 SF /100 staff ✓ Learning and Performance Center (LPC) – 48,140 SF/ 40 staff ✓ Regional Office (Western Region) – 50 staff within 8,358 SF ✓ Classic Car Center – 30 staff
	City of Lakewood			
4.	Chuck E. Cheese	5151 Lakewood Boulevard	Lakewood	2,000 SF expansion
5.	Applebee's	4935 Graywood Avenue	Lakewood	5,757 SF restaurant
6.	Gymnasium	4007 Paramount Boulevard, #109	Lakewood	4,488 SF gymnasium
7.	YMCA	5835 Carson Street	Lakewood	9,554 SF gymnasium

Notes:

- SF = Square-Feet

[11] Source: City of Long Beach Planning Department and City of Lakewood Planning Department.

TABLE 6-2

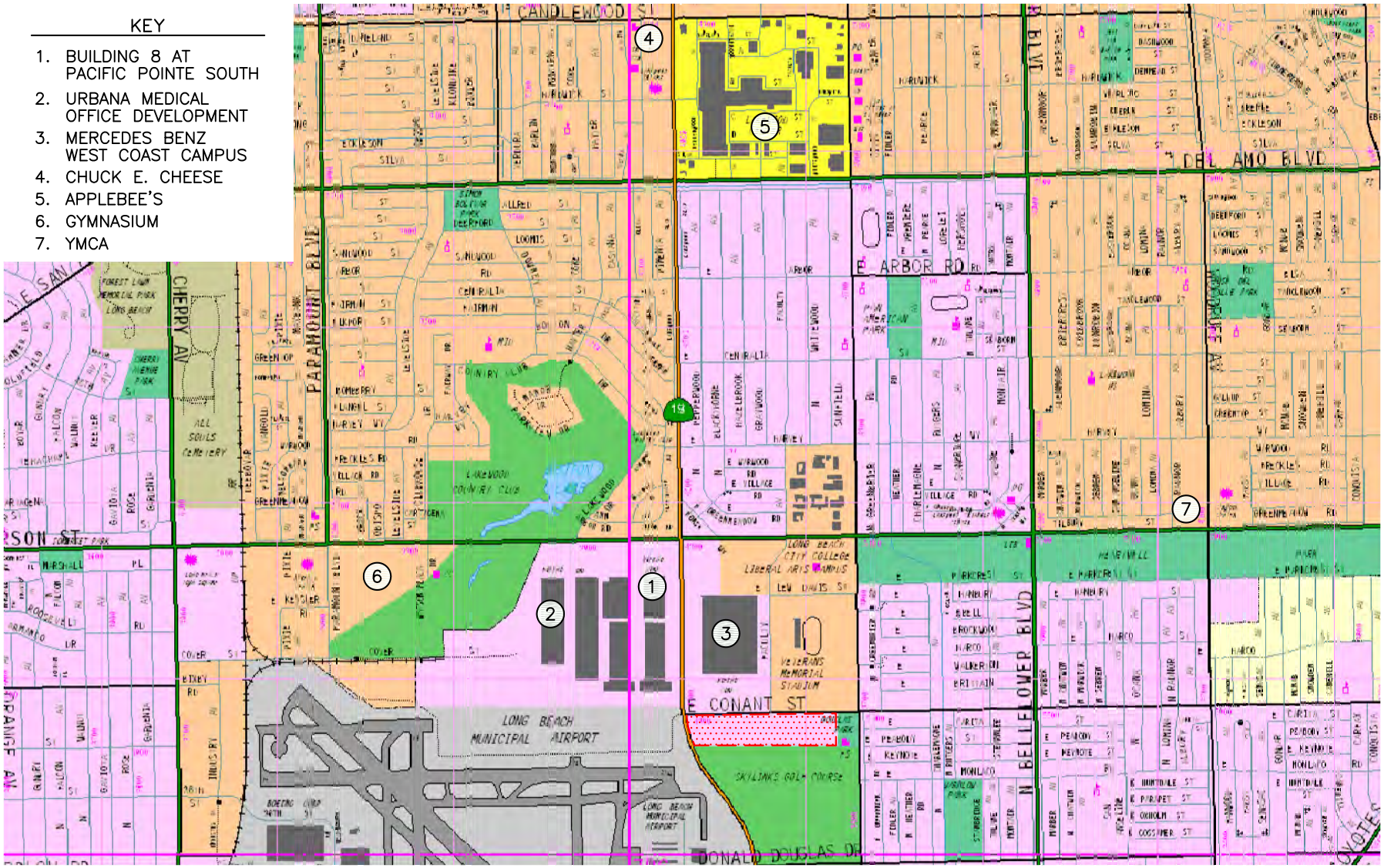
RELATED PROJECTS TRAFFIC GENERATION FORECAST[12]

No. / Related Projects Description	Daily 2-way	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
City of Long Beach							
1. Building 8 at Pacific Pointe South	409	47	7	54	7	50	57
2. Urbana Medical Office Development	3,308	173	46	219	92	235	327
3. Mercedes Benz West Coast Campus							
Warehouse (100 employees)	389	37	14	51	21	38	59
Technical School (40 staff)	622	49	17	66	32	24	56
Corporate Office (30 employees)	117	21	2	23	2	17	19
Museum (30 employees)	174	23	4	27	3	14	17
Sub-Total	*1,302*	*130*	*37*	*167*	*58*	*93*	*151*
City of Lakewood							
4. Chuck E. Cheese	254	12	10	22	12	8	20
5. Applebee's	518	2	3	5	29	14	43
Pass-by (Daily: 25%; PM: 44%)	-130	-	-	-	-13	-6	-19
Sub-Total	*388*	*2*	*3*	*5*	*16*	*8*	*24*
6. Gymnasium	148	3	3	6	9	7	16
7. YMCA	323	13	7	20	13	13	26
Total Related Projects Trip Generation Potential	**6,132**	**380**	**113**	**493**	**207**	**414**	**621**

[12] Source: *Trip Generation*, 9th Edition, Institute of Transportation Engineers (ITE) [Washington, D.C. (2012)].

KEY

1. BUILDING 8 AT PACIFIC POINTE SOUTH
2. URBANA MEDICAL OFFICE DEVELOPMENT
3. MERCEDES BENZ WEST COAST CAMPUS
4. CHUCK E. CHEESE
5. APPLEBEE'S
6. GYMNASIUM
7. YMCA



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N NO SCALE

SOURCE: THOMAS BROS.

KEY

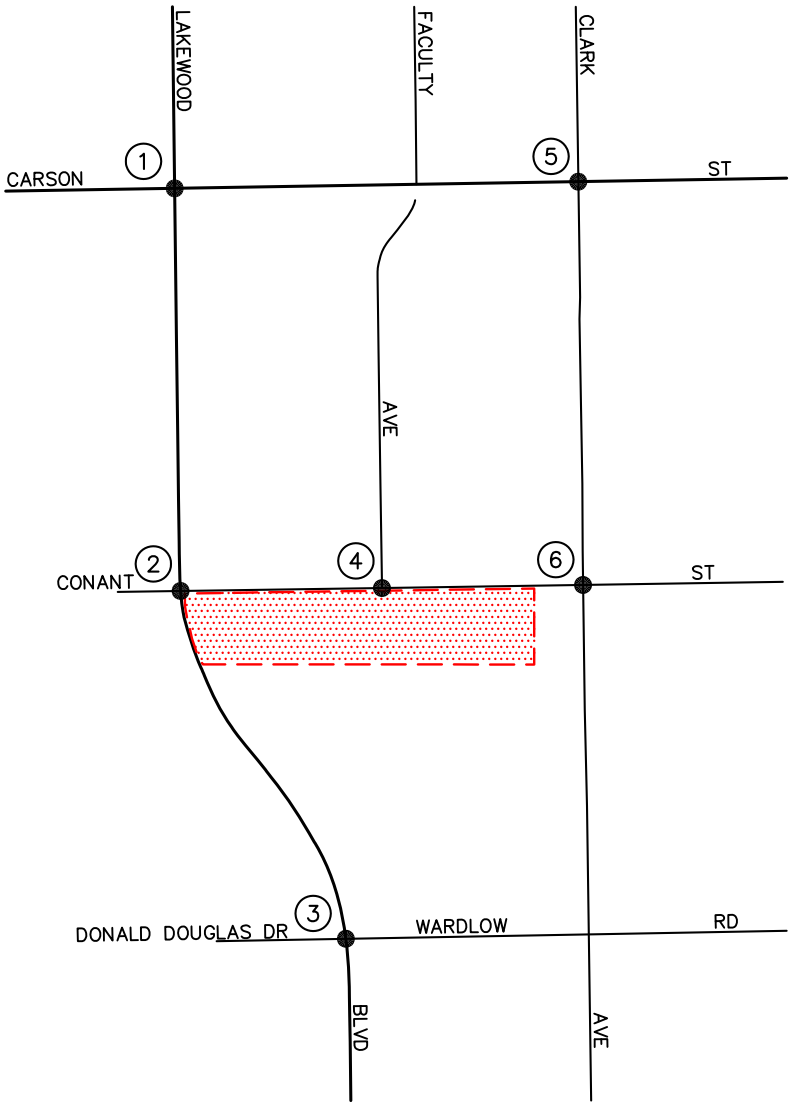
(#) = RELATED PROJECTS LOCATION

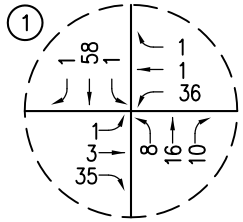
= PROJECT SITE

FIGURE 6-1

RELATED PROJECTS LOCATION MAP

PACIFIC POINTE EAST, LONG BEACH





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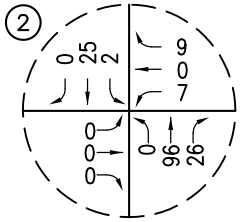

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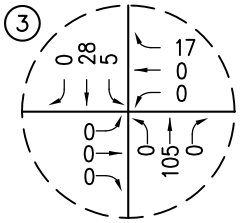

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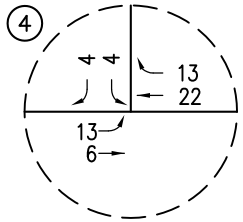
DONALD DOUGLAS DR/WARDLOW RD



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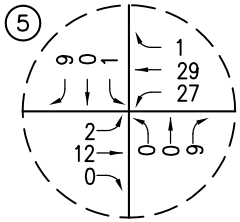

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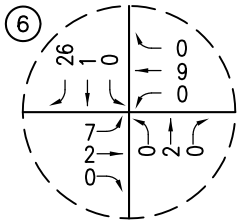

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N NO SCALE

KEY

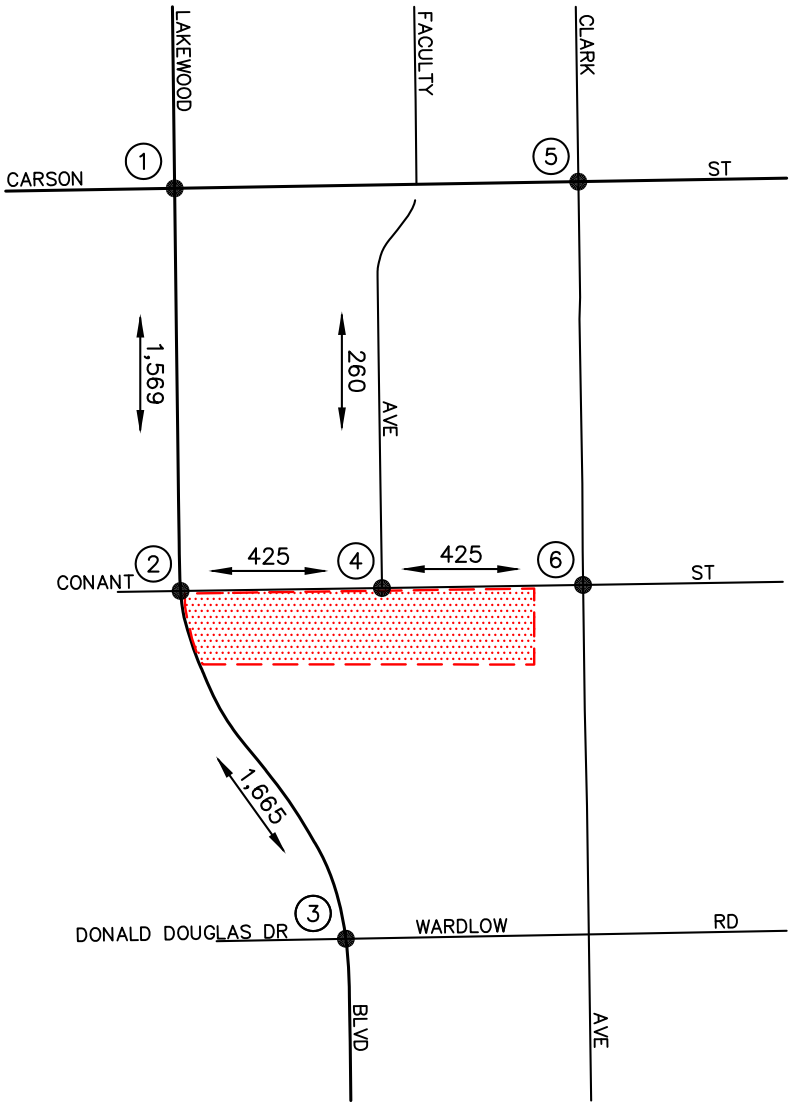
(#) = STUDY INTERSECTION

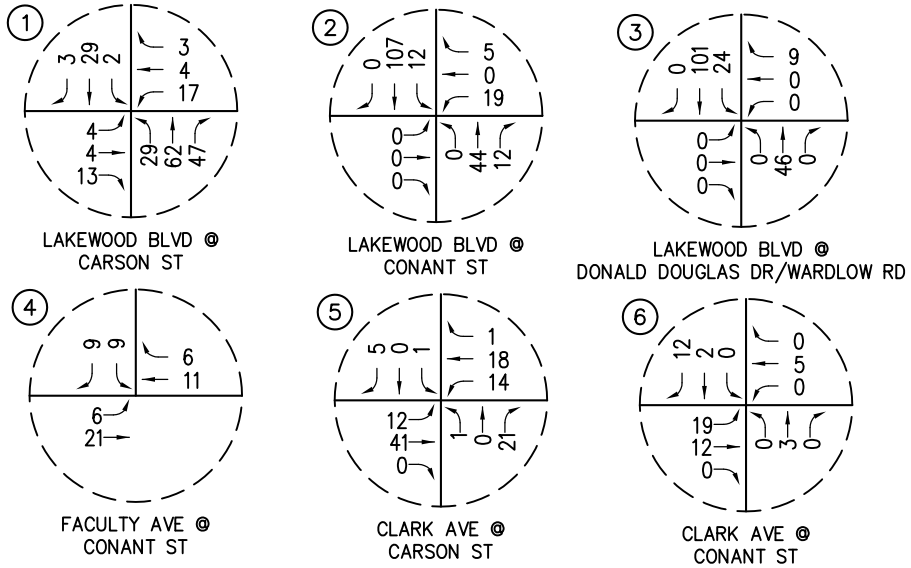
= PROJECT SITE

FIGURE 6–2

AM PEAK HOUR RELATED PROJECTS TRAFFIC VOLUMES

PACIFIC POINTE EAST, LONG BEACH





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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

(#) = STUDY INTERSECTION

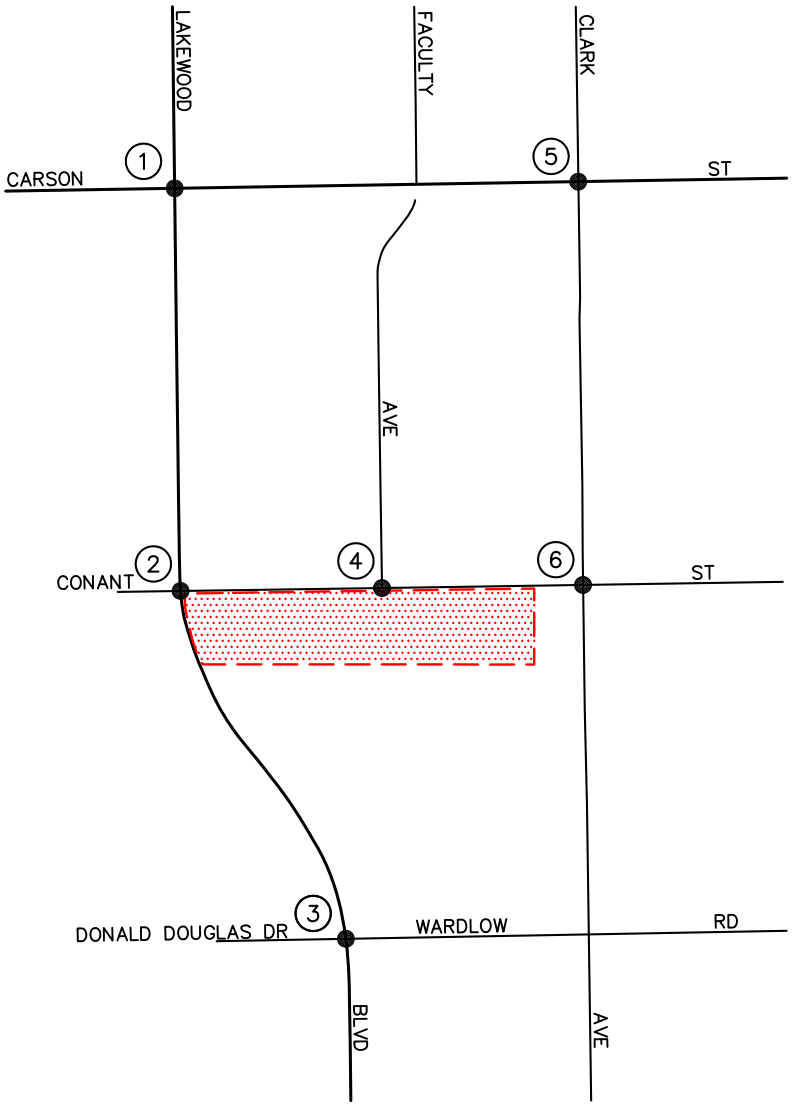
XX,XXX = DAILY TRAFFIC VOLUMES

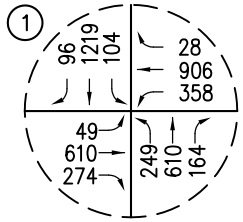
= PROJECT SITE

FIGURE 6–3

PM PEAK HOUR AND DAILY RELATED PROJECTS TRAFFIC VOLUMES

PACIFIC POINTE EAST, LONG BEACH





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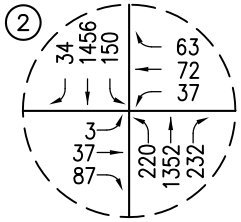
CARSON ST



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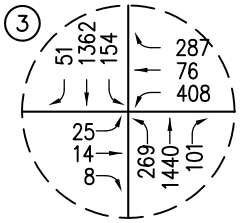

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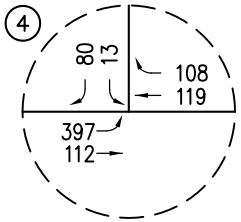

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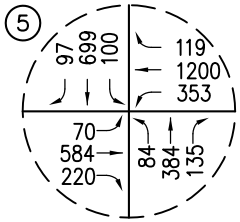

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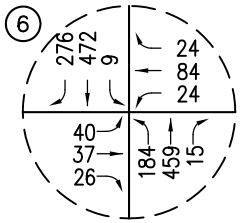

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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

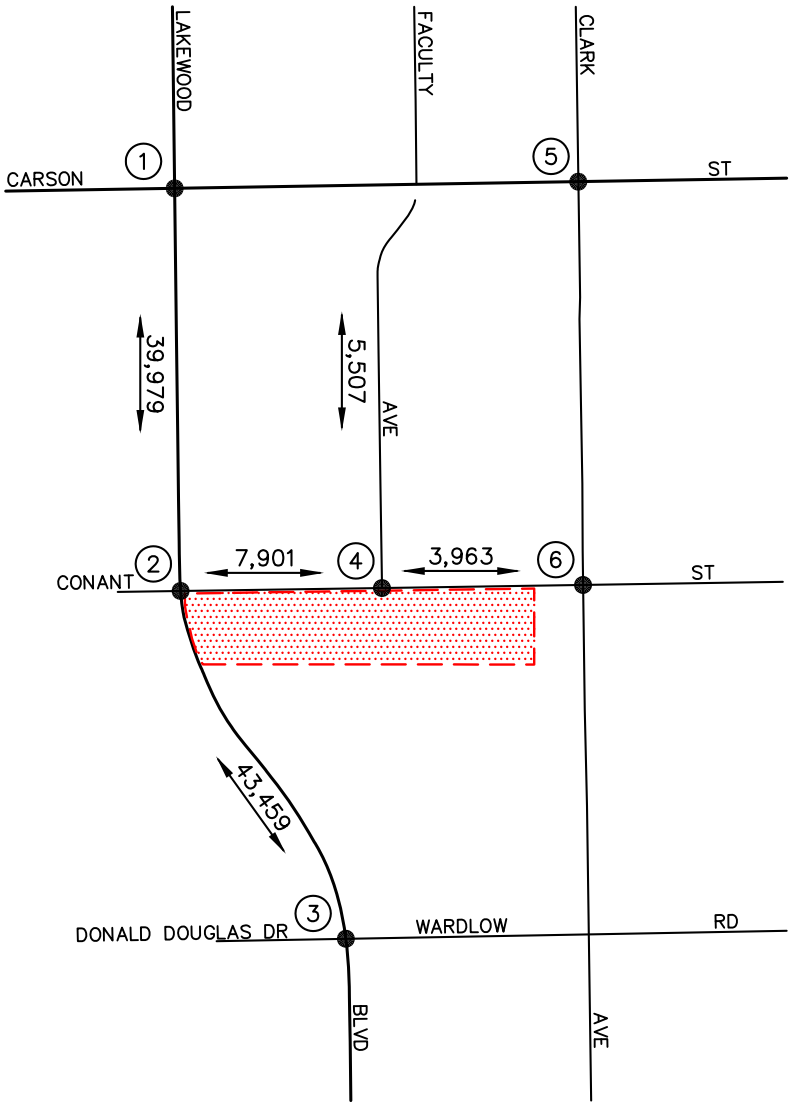
(#) = STUDY INTERSECTION

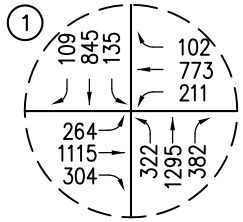
= PROJECT SITE

FIGURE 6–4

YEAR 2016 CUMULATIVE AM PEAK HOUR TRAFFIC VOLUMES

PACIFIC POINTE EAST, LONG BEACH





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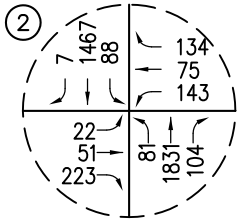

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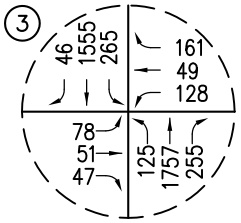

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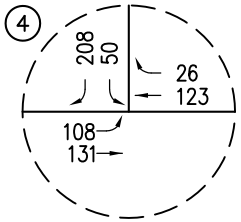
DONALD DOUGLAS DR/WARDLOW RD



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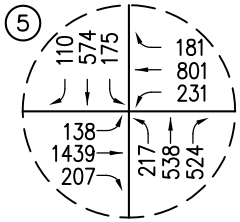

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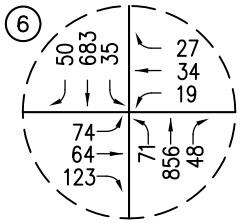

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N NO SCALE

KEY

(#) = STUDY INTERSECTION

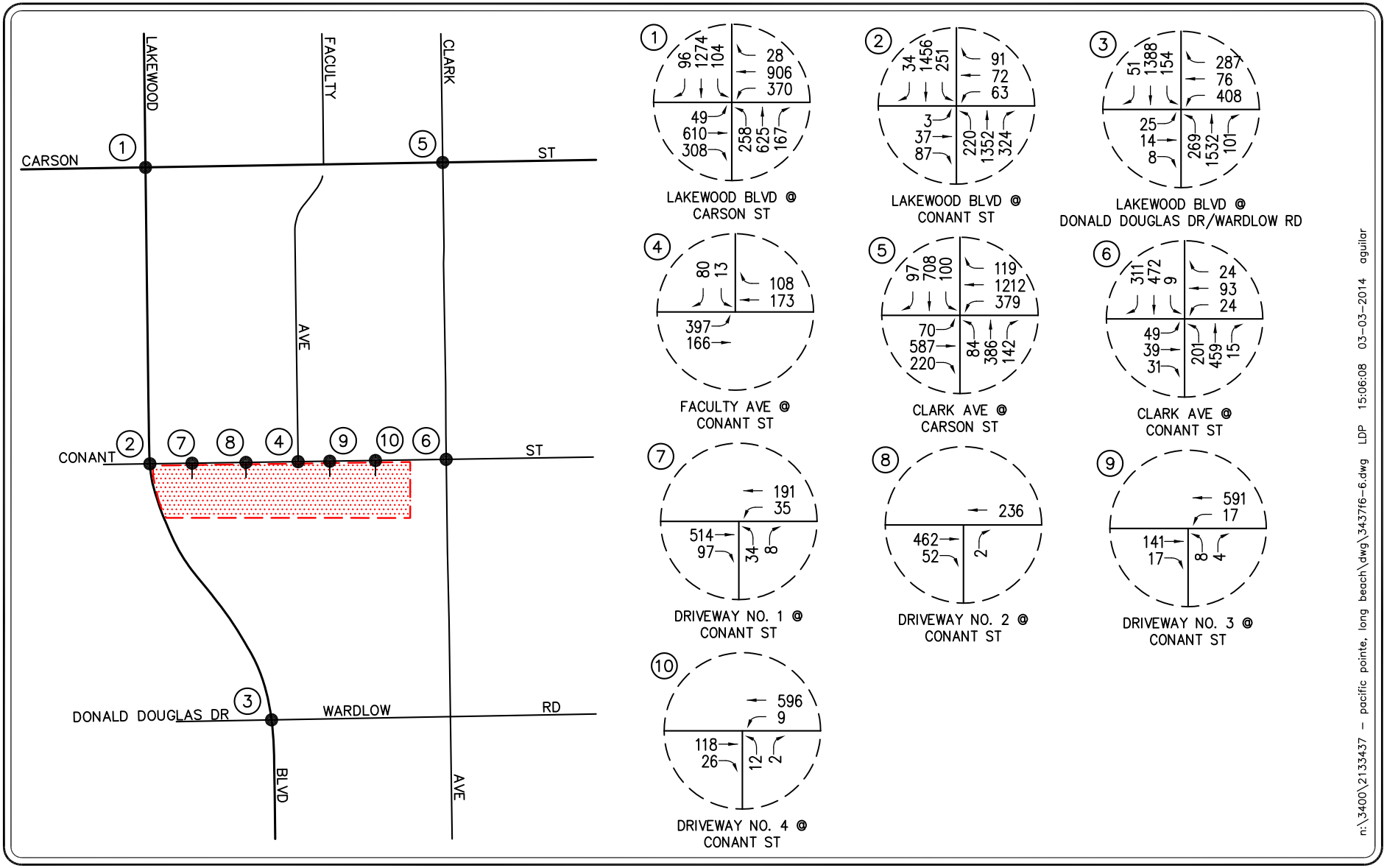
XX,XXX = DAILY TRAFFIC VOLUMES

= PROJECT SITE

FIGURE 6–5

YEAR 2016 CUMULATIVE PM PEAK HOUR AND DAILY TRAFFIC VOLUMES

PACIFIC POINTE EAST, LONG BEACH



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N NO SCALE

KEY

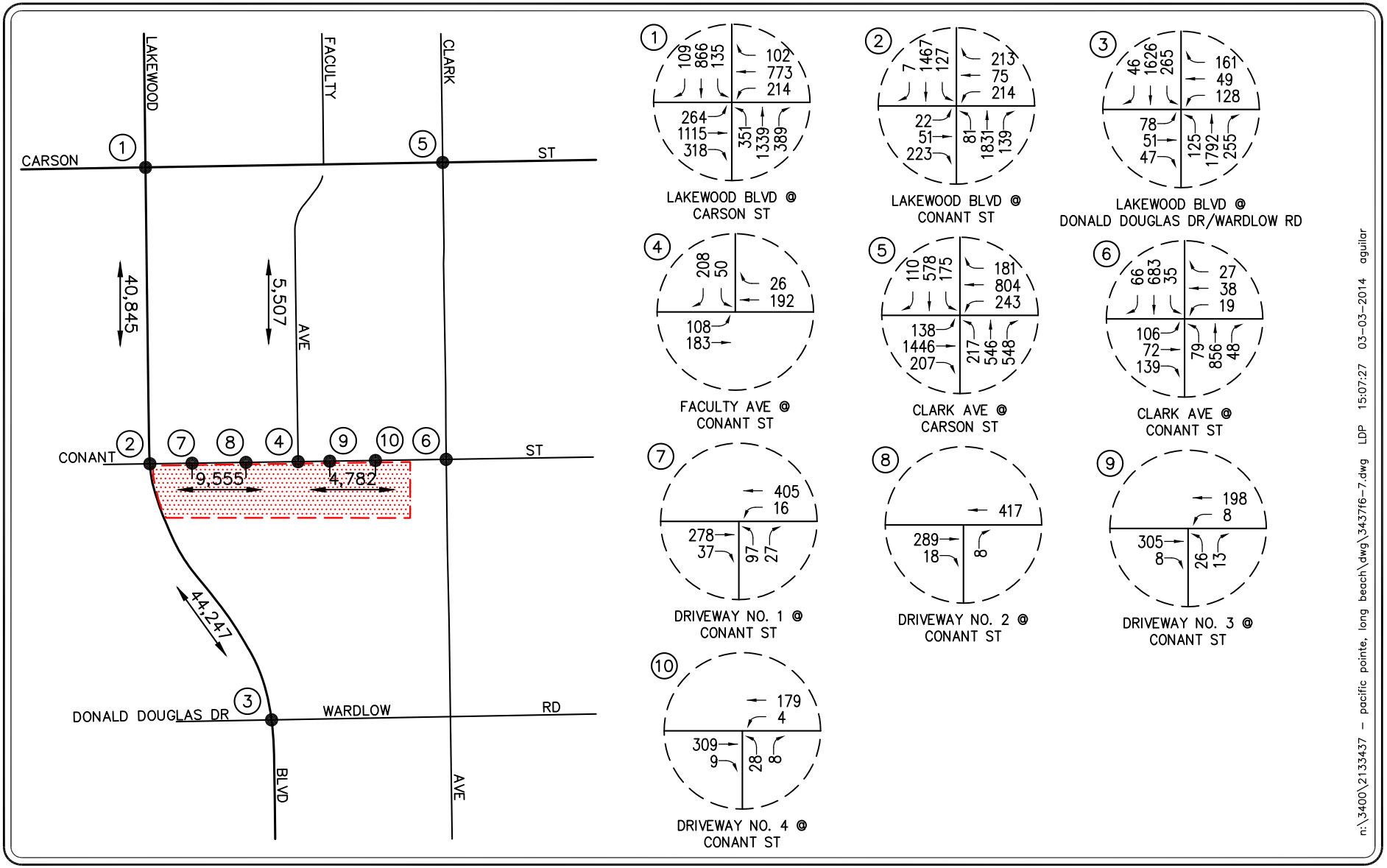
(#) = STUDY INTERSECTION

= PROJECT SITE

FIGURE 6-6

YEAR 2016 CUMULATIVE PLUS PROJECT AM PEAK HOUR TRAFFIC VOLUMES

PACIFIC POINTE EAST, LONG BEACH



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N NO SCALE

KEY

(#) = STUDY INTERSECTION

XX,XXX = DAILY TRAFFIC VOLUMES

= PROJECT SITE

FIGURE 6–7

YEAR 2016 CUMULATIVE PLUS PROJECT PM PEAK HOUR AND DAILY TRAFFIC VOLUMES

PACIFIC POINTE EAST, LONG BEACH

7.0 TRAFFIC IMPACT ANALYSIS METHODOLOGY

7.1 Impact Criteria and Thresholds

The relative impact of the added Project traffic volumes generated by the proposed Project during the AM and PM peak hours was evaluated based on analysis of future operating conditions at the key study intersections, without, then with, the proposed Project. The previously discussed capacity analysis procedures were utilized to investigate the future volume-to-capacity relationships and service level characteristics at each study intersection. The significance of the potential impacts of the Project at each key intersection was then evaluated using the City's LOS standards and traffic impact criteria defined below.

Impacts to local and regional transportation systems are considered significant if:

- An unacceptable peak hour Level of Service (LOS) (i.e. LOS E or F) at any of the key intersections is projected. The City of Long Beach considers LOS D (ICU = 0.801 - 0.900) to be the minimum acceptable LOS for all intersections. For the City of Long Beach, the current LOS, if worse than LOS D (i.e. LOS E or F), should also be maintained; and

- The project increases traffic demand at the study intersection by 2% of capacity (ICU increase ≥ 0.020), causing or worsening LOS E or F (ICU > 0.901). At unsignalized intersections, a "significant" adverse traffic impact is defined as a project that: adds 2% of more traffic delay (seconds per vehicle) at an intersection operating LOS E or F.

7.2 Traffic Impact Analysis Scenarios

The following scenarios are those for which level of service (LOS) calculations have been performed at the key intersections for existing and near-term (Year 2016) traffic conditions for a typical weekday:

A. Existing Traffic Conditions;
B. Existing Plus Project Traffic Conditions;
C. Scenario (B) with Mitigation, if necessary,
D. Year 2016 Cumulative Traffic Conditions (existing plus ambient growth to Year 2016 at 2% per year plus related projects traffic);
E. Year 2016 Cumulative Plus Project Traffic Conditions; and
F. Scenario (E) with Mitigation, if necessary.

8.0 PEAK HOUR INTERSECTION CAPACITY ANALYSIS

8.1 Existing Plus Project Traffic Conditions

Table 8-1 summarizes the peak hour Level of Service results at the key study intersections for Existing Plus Project traffic conditions. The first column (1) of ICU/LOS and HCM/LOS values in *Table 8-1* presents a summary of existing AM and PM peak hour traffic conditions (which were also presented in *Table 3-4*). The second column (2) presents existing traffic conditions with the addition of traffic generated by the proposed Project. The third column (3) shows the increase in ICU or HCM value due to the added peak hour project trips and indicates whether the traffic associated with the project will have a significant impact based on the LOS standards and the significant impact criteria defined in this report.

8.1.1 *Existing Traffic Conditions*

As previously presented in *Table 3-4*, one of the six (6) key study intersections currently operates at an unacceptable level of service during the PM peak hour. The intersection of Clark Avenue at Carson Street currently operates at unacceptable LOS E during the PM peak hour. The remaining five (5) key study intersections currently operate at acceptable levels of service during the AM and PM peak hours.

8.1.2 *Existing Plus Project Traffic Conditions*

Review of columns 2 and 3 of *Table 8-1* indicates that traffic associated with the proposed Project ***will not*** significantly impact any of the six (6) key study intersections, when compared to the LOS standards and significant impact criteria specified in this report. Although the intersection of Clark Avenue at Carson Street is forecast to operate at unacceptable LOS E during the PM peak hour with the addition of project traffic, the proposed Project is expected to add less than 0.020 to the ICU value. The remaining five key study intersections are forecast to continue to operate at an acceptable LOS with the addition of Project generated traffic to existing traffic.

Appendix B contains the existing plus project AM peak hour and PM peak hour level of service calculations for the six (6) key study intersections.

8.2 Year 2016 Traffic Conditions

Table 8-2 summarizes the peak hour Level of Service results at the key study intersections for Year 2016 traffic conditions. The first column (1) of ICU/LOS and HCM/LOS values in *Table 8-2* presents a summary of existing AM and PM peak hour traffic conditions (which were also presented in *Table 3-4*). The second column (2) lists future Year 2016 cumulative traffic conditions (existing plus ambient growth traffic plus related projects traffic) based on existing intersection geometry, but without any traffic generated by the proposed Project. The third column (3) presents future forecast traffic conditions with the addition of traffic generated by the proposed Project. The fourth column (4) shows the increase in ICU or HCM value due to the added peak hour project trips and indicates whether the traffic associated with the project will have a significant impact based on the LOS standards and the significant impact criteria defined in this report.

8.2.1 *Year 2016 Cumulative Traffic Conditions*

An analysis of future (Year 2016) traffic conditions indicates that the addition of ambient traffic growth and related projects traffic will adversely impact one of the key study intersections. The intersection of Clark Avenue at Carson Street is forecast to continue to operate at unacceptable LOS E during the PM peak hour in the Year 2016. The remaining five key study intersections are forecast to continue to operate at an acceptable LOS in the Year 2016 with the addition of ambient traffic growth and related projects traffic to existing traffic.

8.2.2 *Year 2016 Cumulative Plus Project Traffic Conditions*

Review of columns 3 and 4 of *Table 8-2* indicates that traffic associated with the proposed Project ***will not*** significantly impact any of the six (6) key study intersections, when compared to the LOS standards and significant impact criteria specified in this report. Although the intersection of Clark Avenue at Carson Street is forecast to operate at unacceptable LOS E during the PM peak hour with the addition of project traffic in the Year 2016, the proposed Project is expected to add less than 0.020 to the ICU value. The remaining five key study intersections are forecast to continue to operate at an acceptable LOS with the addition of Project generated traffic in the Year 2016.

Appendix B presents the Year 2016 plus project AM peak hour and PM peak hour level of service ccalculations for the six (6) key study intersections.

TABLE 8-1

EXISTING PLUS PROJECT PEAK HOUR INTERSECTION CAPACITY ANALYSIS

Key Intersections	Time Period	(1) Existing Traffic Conditions		(2) Existing Plus Project Traffic Conditions		(3) Project Significant Impact[13]	
		ICU/HCM	LOS	ICU/HCM	LOS	Increase	Yes/No
1. Lakewood Boulevard at Carson Street	AM	0.678	B	0.694	B	0.016	No
	PM	0.795	C	0.805	D	0.010	No
2. Lakewood Boulevard at Conant Street	AM	0.552	A	0.568	A	0.016	No
	PM	0.665	B	0.722	C	0.057	No
3. Lakewood Boulevard at Donald Douglas Dr/Wardlow Rd	AM	0.649	B	0.653	B	0.004	No
	PM	0.673	B	0.679	B	0.006	No
4. Faculty Avenue at Conant Street	AM	11.3 s/v	B	11.1 s/v	B	0.0 s/v	No
	PM	8.7 s/v	A	9.0 s/v	A	0.3 s/v	No
5. Clark Avenue at Carson Street	AM	0.743	C	0.749	C	0.006	No
	PM	**0.914**	**E**	**0.924**	**E**	0.010	No
6. Clark Avenue at Conant Street	AM	0.521	A	0.554	A	0.033	No
	PM	0.470	A	0.493	A	0.023	No

Notes:
Bold ICU/LOS and HCM/LOS values indicate adverse service levels based on City LOS standards
s/v = seconds per vehicle (delay)

[13] A significant project impact is defined as a 0.020 or greater increase in ICU value of a signalized intersection or a 2% or more increase in delay at an unsignalized location where the final level of service is LOS E or LOS F.

TABLE 8-2

YEAR 2016 CUMULATIVE PLUS PROJECT PEAK HOUR INTERSECTION CAPACITY ANALYSIS

Key Intersections	Time Period	(1) Existing Traffic Conditions		(2) Year 2016 Cumulative Traffic Conditions		(3) Year 2016 Cumulative Plus Project Traffic Conditions		(4) Project Significant Impact[14]	
		ICU/HCM	LOS	ICU/HCM	LOS	ICU/HCM	LOS	Increase	Yes/No
1. Lakewood Boulevard at Carson Street	AM	0.678	B	0.723	C	0.739	C	0.016	No
	PM	0.795	C	0.840	D	0.850	D	0.010	No
2. Lakewood Boulevard at Conant Street	AM	0.552	A	0.577	A	0.593	A	0.016	No
	PM	0.665	B	0.711	C	0.769	C	0.058	No
3. Lakewood Boulevard at Donald Douglas Dr/Wardlow Rd	AM	0.649	B	0.682	B	0.686	B	0.004	No
	PM	0.673	B	0.714	C	0.720	C	0.006	No
4. Faculty Avenue at Conant Street	AM	11.3 s/v	B	12.0 s/v	B	11.9 s/v	B	0.0 s/v	No
	PM	8.7 s/v	A	9.0 s/v	A	9.4 s/v	A	0.4 s/v	No
5. Clark Avenue at Carson Street	AM	0.743	C	0.776	C	0.782	C	0.006	No
	PM	**0.914**	**E**	**0.957**	**E**	**0.968**	**E**	0.011	No
6. Clark Avenue at Conant Street	AM	0.521	A	0.556	A	0.589	A	0.033	No
	PM	0.470	A	0.501	A	0.523	A	0.022	No

Notes:
Bold ICU/LOS and HCM/LOS values indicate adverse service levels based on City LOS standards
s/v = seconds per vehicle (delay)

[14] A significant project impact is defined as a 0.020 or greater increase in ICU value of a signalized intersection or a 2% or more increase in delay at an unsignalized location where the final level of service is LOS E or LOS F.

9.0 SITE ACCESS AND INTERNAL CIRCULATION EVALUATION

9.1 Site Access

As shown previously in *Figure 2-2*, aaccess to the proposed Project will be provided via four driveways to be located on Conant Street. Driveways 1, 3, and 4 will provide full access to the site, while Driveway 2 will provide right-turn in/right-turn out only access to the site.

Table 9-1 summarizes the intersection operations at the proposed project driveways located along Conant Street for near-term (Year 2016) traffic conditions at completion and full occupancy of the proposed Project. The operations analysis for the project driveways is based on the *Highway Capacity Manual 2000* (HCM 2000) unsignalized methodology. Review of *Table 9-1* shows that the proposed project driveways are forecast to operate at acceptable LOS C or better during the AM and PM peak hours for Year 2016 traffic conditions. As such, project access will be adequate. Motorists entering and exiting the Project site will be able to do so comfortably, safely, and without undue congestion.

Appendix C presents the level of service calculation worksheets for the proposed project driveways located along Conant Street.

9.2 Internal Circulation

The on-site circulation layout of the proposed Project as illustrated in *Figure 2-2* on an overall basis is adequate. Curb return radii have been confirmed and are generally adequate for small service/delivery (Fedex, UPS) trucks and trash trucks. Curb return radii for full-sized trucks and/or fire trucks are also generally adequate. However, these larger vehicles will require the use of both the inbound lane and outbound lane to access the site from the curb lane along Conant Street. Nonetheless, prior to finalization of the site plan, it is recommended that a detailed truck access and circulation evaluation be prepared during the refinement of the project site plan.

TABLE 9-1

PROJECT DRIVEWAY PEAK HOUR INTERSECTION CAPACITY ANALYSIS

Key Intersections	Time Period	(1) Year 2016 Cumulative Plus Project	
		HCM	LOS
1. Project Driveway 1 at Conant Street	AM	15.4	C
	PM	13.9	B
2. Project Driveway 2 at Conant Street	AM	9.8	A
	PM	9.2	A
3. Project Driveway 3 at Conant Street	AM	11.0	B
	PM	11.0	B
4. Project Driveway 4 at Conant Street	AM	11.4	B
	PM	11.2	B

10.0 TRAFFIC SIGNAL WARRANT ANALYSIS

Per the direction of City of Long Beach staff, the level of service analysis at Faculty Avenue and Conant Street is supplemented with an assessment of the need for signalization of the intersection. This assessment is made on the basis of signal warrant criteria adopted by Caltrans. For this study, the need for signalization is assessed on the basis of the peak-hour traffic signal warrant; Warrant #3 described in the current *California Manual on Uniform Traffic Control Devices (MUTCD).* Warrant #3 has two parts: 1) Part A evaluates peak hour vehicle delay for traffic on the minor street approach with the highest delay and 2) Part B evaluates peak-hour traffic volumes on the major and minor streets. This method provides an indication of whether peak-hour traffic conditions or peak-hour traffic volume levels are, or would be, sufficient to justify installation of a traffic signal. Other traffic signal warrants are available, however, they cannot be checked under future conditions (cumulative without and with Project) because they rely on data for which forecasts are not available (such as accidents, pedestrian volume, and four- or eight-hour vehicle volumes).

The decision to install a traffic signal should not be based purely on the warrants alone. Instead, the installation of a signal should be considered and further analysis performed when one or more of the warrants are satisfied. Additionally, engineering judgment is exercised on a case-by-case basis to evaluate the effect a traffic signal will have on certain types of accidents and traffic conditions at the subject intersection as well as at adjacent intersections.

10.1.1 *Traffic Signal Warrant Results*

Table 10-1 summarizes the results of the peak-hour traffic signal warrant analysis for Existing plus Project traffic conditions and Year 2016 Cumulative plus Project traffic conditions (i.e. Part A and Part B for Warrant #3). As shown, the intersection of Faculty Avenue/Conant Street does not exceed the thresholds of Warrant #3, Part A and/or B, and thus does not satisfy the traffic signal warrant under Existing plus Project traffic conditions and Year 2016 Cumulative plus Project traffic conditions. It should be noted that the intersection of Faculty Avenue and Conant Street is forecast to operate at acceptable LOS B or better during the AM and PM peak hours under Existing plus Project traffic conditions and Year 2016 Cumulative plus Project traffic conditions (refer to *Tables 8-1* and *8-2).*

Appendix D contains the traffic signal warrant worksheets

TABLE 10-1
TRAFFIC SIGNAL WARRANT ANALYSIS SUMMARY[15]

Key Intersection	Time Period	(1) Existing Plus Project Traffic Conditions		(2) Year 2016 Cumulative Plus Project Traffic Conditions	
		Part A of Warrant 3 Satisfied?	**Part B of Warrant 3 Satisfied?**	**Part A of Warrant 3 Satisfied?**	**Part B of Warrant 3 Satisfied?**
4. Faculty Avenue at Conant Street	AM	--	No	--	No
	PM	--	No	--	No

Notes:

- Signal Warrant checks based on Warrant 3, Part A - Peak-Hour Delay Warrant and Part B - Peak-Hour Volume Warrant contained in the *California MUTCD.*

15 *Appendix D* contains the Traffic Signal Warrant Analysis worksheets for the key unsignalized impacted study intersections.

11.0 RECOMMEND IMPROVEMENTS

11.1 Existing Plus Project Traffic Conditions

The results of the intersection capacity analysis presented previously in *Table 8-1* shows that the proposed Project will not significantly impact any of the six (6) key study intersections under the "Existing Plus Project" traffic scenario. Given that there are no significant project impacts, no improvements are required under this traffic scenario.

11.2 Year 2016 Plus Project Traffic Conditions

The results of the intersection capacity analysis presented previously in *Table 8-2* shows that the proposed Project will not significantly impact any of the six (6) key study intersections under the "Year 2016 Plus Project" traffic scenario. Given that there are no significant project impacts, no improvements are required under this traffic scenario.

11.3 Project-Specific Improvements

The following improvements are recommended to ensure that adequate ingress and egress to the project site is provided:

- Install a "STOP" sign and stop bar at the proposed Project Driveway 1 on Conant Street.
- Install a "STOP" sign and stop bar at the proposed Project Driveway 2 on Conant Street.
- Install a "STOP" sign and stop bar at the proposed Project Driveway 3 on Conant Street.
- Install a "STOP" sign and stop bar at the proposed Project Driveway 4 on Conant Street.

12.0 CONGESTION MANAGEMENT PROGRAM COMPLIANCE ASSESSMENT

The Congestion Management Program (CMP) was created statewide as a result of Proposition 111 and has been implemented locally by the Los Angeles County Metropolitan Transportation Authority (LACMTA). The CMP for Los Angeles County requires that the traffic impact of individual development projects of potential regional significance be analyzed. A specific system of arterial roadways plus all freeways comprise the CMP system.

12.1 Traffic Impact Review

As required by the current *Congestion Management Program for Los Angeles County*, a review has been made of designated monitoring locations on the CMP highway system for potential impact analysis. Per CMP TIA criteria, the geographic area examined in the TIA must include the following, at a minimum:

- All CMP arterial monitoring intersections, including freeway on and off-ramp intersections, where the project will add 50 or more trips during either the AM or PM weekday peak hours.

- Mainline freeway-monitoring stations where the project will add 150 or more trips, in either direction, during the AM or PM weekday peak hours.

12.1.1 *Intersections*

The following CMP intersection monitoring location within the project study area has been identified:

CMP Station	Int. No.	Intersection/Jurisdiction
No. 34	1	Lakewood Boulevard at Carson Street

As stated earlier, the CMP guidelines require that arterial monitoring intersection locations must be examined if the proposed project will add 50 or more trips during either the AM or PM weekday peak hours (of adjacent street traffic) at CMP monitoring intersections. Based on the proposed project's trip generation potential, trip distribution and trip assignment, the Project will add 50 or more trips at the identified CMP intersection during the weekday AM peak hour or PM peak hour. Therefore a CMP intersection traffic impact analysis is required.

- **Lakewood Boulevard at Carson Street** – Based on the results of a detailed analysis of project added trips to the CMP system, approximately 128 trips during the AM peak hour and 118 trips during the PM peak hour will be added by the project at this location. Per CMP TIA guidelines, intersection level of service analysis is therefore required. The impact analysis is discussed in detail in Section 8.0 of this traffic study report and the results are summarized in *Tables 8-1* and *8-2*. As presented previously, the intersection of Lakewood Boulevard/Carson Street is forecast to operate at acceptable LOS D or better during the AM and PM Peak hours. As such, the proposed Project will not impact this CMP location and no improvements are required.

12.1.2 *Freeways*

The following CMP freeway monitoring location in the project vicinity has been identified:

- CMP Station — Intersection/Jurisdiction
  No. 1065 — I-405, north of Route 22

As stated earlier, the CMP TIA guidelines require that freeway monitoring locations must be examined if the proposed project will add 150 or more trips (in either direction) during either the AM or PM weekday peak periods. Based on the project's trip generation potential and distribution pattern, the proposed Project will not add more than 150 trips during the AM or PM peak hour at this CMP mainline freeway-monitoring location. Therefore, a CMP freeway traffic impact analysis is not required.

12.2 Transit Impact Review

As required by the current *Congestion Management Program for Los Angeles County*, a review has been made of the potential impacts of the project on transit service. As previously discussed, a number of transit services exist in the project area, necessitating the following transit impact review.

The project trip generation, as shown in *Table 5-1*, was adjusted by values set forth in the CMP (i.e., person trips equal 1.4 times vehicle trips, and transit trips equal 3.5 percent of the total person trips) to estimate project-related transit trip generation. Pursuant to the CMP guidelines, the proposed Project is forecast to generate 16 transit trips (12 inbound and 4 outbound) during the AM peak hour and 15 transit trips (5 inbound and 10 outbound) during the PM peak hour. Over a 24-hour period the proposed Project is forecasted to generate 108 daily weekday transit trips.

It is anticipated that the existing transit service in the project area would be able to accommodate the project generated transit trips. Long Beach Transit (LBT) Routes No's. 93, 101, 103, 111, 112, and 176 currently serve the surrounding vicinity. Therefore, given the number of transit trips generated by the project and the existing transit routes in the project vicinity, it is concluded that the existing public transit system would not be significantly impacted by the proposed Project.

13.0 CONSTRUCTION TRAFFIC IMPACT ASSESSMENT

This section of the report qualitatively evaluates the potential traffic impacts associated with the construction activities at the project site. The construction activities include 1) Demolition, 2) Grading/Site Preparation and 3) Building Construction. The following section describes the potential construction related trips associated with each construction activity and provides a qualitative assessment as to whether or not the forecast construction trips will have an impact on the existing street system.

13.1 Construction Traffic Trip Generation

In order to forecast the potential construction related trips associated with the construction activities at the project site, the following assumptions, as provided by the project applicant, have been utilized for the three aforementioned construction components.

Demolition

- A five-day work week (Monday through Friday from 7:00 AM to 5:00 PM) was assumed.
- The demolition phase is anticipated to last approximately 5 weeks.
- 1 to 2 trucks will visit the site per day for the purposes of transferring equipment to and from the project site.
- A total of 12 employees will be on site Monday through Friday from 7:00 AM to 5:00 PM.

Grading/Site Preparation

- A five-day work week (Monday through Friday from 7:00 AM to 5:00 PM) was assumed.
- The grading/site preparation phase is anticipated to last approximately 4 weeks.
- 1 to 2 trucks will visit the site per day for the purposes of transferring equipment to and from the project site.
- A total of 30 employees will be on site Monday through Friday from 7:00 AM to 5:00 PM.

Building Construction

- A five-day work week (Monday through Friday from 7:00 AM to 5:00 PM) was assumed.
- The building construction phase is anticipated to last approximately 9.5 months.
- An average of 15 trucks will visit the site per day for the purpose of delivering concrete and other building materials throughout the workday.
- An average of 50 employees will be on site Monday through Friday from 7:00 AM to 5:00 PM.

In addition to the aforementioned assumptions for each construction component, the following assumptions were utilized for truck trips and employee trips.

- Each truckload requires an inbound trip and an outbound trip.
- The daily number of truck trips was averaged over the ten-hour workday to obtain the number of peak hour truck trips (50% entering and 50% exiting).
- All truck trips were converted to passenger car equivalents (P.C.E.'s) using a P.C.E. factor of 2.5.
- Each employee would make 2 trips per day (one during the AM peak hour and one during the PM peak hour).

Using the aforementioned assumptions, ***Table 13-1*** provides a summary of the forecast construction peak hour and daily traffic volumes for each of the three construction components. Review of the first row of *Table 13-1* shows that the demolition component is expected to generate 34 daily trips with 12 trips produced during the AM peak hour and 12 trips produced during the PM peak hour. Review of the second row of *Table 13-1* shows that the grading/site preparation component is expected to generate 70 daily trips with 30 trips produced during the AM peak hour and 30 trips produced during the PM peak hour. Review of the last row of *Table 13-1* shows that the building construction component is expected to generate 175 daily trips with 60 trips produced during the AM peak hour and 60 trips produced during the PM peak hour.

13.2 Construction Traffic Assessment

Construction related trips associated with trucks and employees traveling to and from the site in the morning and afternoon may result in some minor traffic delays; however, potential traffic interference caused by construction vehicles would create a temporary/short-term impact to vehicles using Lakewood Boulevard and Conant Street in the morning and afternoon hours and the number of construction workers will vary depending on the specific construction activities over time. Based on the location of the site, and the proximity of the I-405 Freeway, it is anticipated that a majority of the construction-related traffic will utilize the freeway to gain regional access to the site.

Traffic impacts to the adjacent roadway network will be minimal and **not** long-term. Further, since the construction-related trip generation potential of the proposed Project (i.e. all three construction components) is significantly less than that of the proposed Project and the proposed Project is not expected to significantly impact any of the six (6) key study intersections, no significant impacts resulting from construction traffic are anticipated, aside from the nuisance traffic that will occur as a result of construction-related traffic (e.g., construction materials, construction workers, etc.).

Nevertheless, to reduce the impact of construction-related traffic, the implementation of a construction management plan is recommended to minimize traffic impacts upon the local circulation system in the area.

TABLE 13-1

PROJECT CONSTRUCTION–RELATED TRAFFIC GENERATION

Project Description	Daily 2-Way	AM Peak Hour			PM Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
Demolition Generation Forecast:							
• Construction Truck Traffic (2 Trucks/Day)	4	0	0	0	0	0	0
Passenger Car Equivalent[16]	*10*	*0*	*0*	*0*	*0*	*0*	*0*
• Employees (12 Employees)	24	12	0	12	0	12	12
Total Demolition Construction Related Traffic Trip Generation Potential	**34**	**12**	**0**	**12**	**0**	**12**	**12**
Grading/Site Preparation Generation Forecast:							
• Construction Truck Traffic (2 Trucks/Day)	4	0	0	0	0	0	0
Passenger Car Equivalent[16]	*10*	*0*	*0*	*0*	*0*	*0*	*0*
• Employees (30 Employees)	60	30	0	30	0	30	30
Total Grading/Site Preparation Construction Related Traffic Trip Generation Potential	**70**	**30**	**0**	**30**	**0**	**30**	**30**
Building Construction Generation Forecast:							
• Construction Truck Traffic (15 Trucks/Day)	30	2	2	4	2	2	4
Passenger Car Equivalent[16]	*75*	*5*	*5*	*10*	*5*	*5*	*10*
• Employees (50 Employees)	100	50	0	50	0	50	50
Total Building Construction Related Traffic Trip Generation Potential	**175**	**55**	**5**	**60**	**5**	**55**	**60**

[16] A passenger car equivalent factor of 2.5 was applied to the truck trips to convert them into passenger car trips.

13.3 Construction Management Plan Criteria

To ensure impacts to the surrounding street system are kept a minimum, it is recommended that a Construction Management Plan for the proposed Project be developed. The Construction Management Plan should be developed in coordination with the City of Long Beach and at a minimum, address the following:

- Traffic control for any street closure, detour, or other disruption to traffic circulation.
- Identify the routes that construction vehicles will utilize for the delivery of construction materials (i.e. lumber, tiles, piping, windows, etc.), to access the site, traffic controls and detours, and proposed construction phasing plan for the project.
- Specify the hours during which transport activities can occur and methods to mitigate construction-related impacts to adjacent streets.
- Require the Applicant to keep all haul routes clean and free of debris including but not limited to gravel and dirt as a result of its operations. The Applicant shall clean adjacent streets, as directed by the City Engineer (or representative of the City Engineer), of any material which may have been spilled, tracked, or blown onto adjacent streets or areas.
- Hauling or transport of oversize loads will be allowed between the hours of 9:00 AM and 3:00 PM only, Monday through Friday, unless approved otherwise by the City Engineer. No hauling or transport will be allowed during nighttime hours, weekends or Federal holidays.
- Use of local streets shall be prohibited.
- Haul trucks entering or exiting public streets shall at all times yield to public traffic.
- If hauling operations cause any damage to existing pavement, street, curb, and/or gutter along the haul route, the applicant will be fully responsible for repairs. The repairs shall be completed to the satisfaction of the City Engineer.
- All construction-related parking and staging of vehicles will be kept out of the adjacent public roadways and will occur on-site.
- This Plan shall meet standards established in the current *California Manual on Uniform Traffic Control Device (MUTCD)* as well as City of Long Beach requirements.

14.0 SUMMARY OF FINDINGS AND CONCLUSIONS

- ***Project Description*** – The pproject site is a 24.82 acre rectangular-shaped parcel of land, now developed with surface parking spaces, that is generally located south of Conant Street, east of Lakewood Boulevard, and north of the Skylinks Golf Course. The Project site is located in Douglas Aircraft Planned Development District (PD-19), which allows new development intensity to equal no more than 5,503 vehicle trips to and from the site in the weekday peak period between 4:00 PM and 6:00 PM.

  The proposed Pacific Pointe East development will consist of three new industrial buildings. These buildings would be speculative developments with an open floor, intended for light industrial, light manufacturing, warehouse, office, and/or research & development land uses. Based on information provided by Rincon Consultants, Inc., the three buildings would have a total area of 494,000 square feet (SF) and provide 722 parking spaces broken down as follows:

  - Building 9 – 144,000 SF with 221 parking spaces
  - Building 10 – 118,000 SF with 156 parking spaces
  - Building 11 – 232,000 SF with 345 parking spaces

  Given that the potential tenant mix has not been determined at this time, we have assumed, for the purposes of this analysis, that Buildings 9 and 10 will be occupied by manufacturing type uses, whereas Building 11 will be occupied by warehouse/storage use. The Project is expected to be completed by the Year 2016 and is assumed to be completed in one phase. Access to the Project will be provided via four driveways to be located along Conant Street. Driveways 1, 3, and 4 will provide full access to the site, while Driveway 2 will provide right-turn in/right-turn out only access to the site.

- ***Study Scope*** – The following intersections were selected for detailed peak hour level of service analyses under Existing Traffic Conditions, Existing Plus Project Traffic Conditions, Year 2016 Cumulative Traffic Conditions and Year 2016 Cumulative plus Project Traffic Conditions:

  1. Lakewood Boulevard at Carson Street[17]
  2. Lakewood Boulevard at Conant Street
  3. Lakewood Boulevard at Donald Douglas Drive/Wardlow Road
  4. Faculty Avenue at Conant Street
  5. Clark Avenue at Carson Street
  6. Clark Avenue at Conant Street

  The analysis is focused on assessing potential traffic impacts during the morning and evening commute peak hours (i.e. between 7:00-9:00 AM, and 4:00-6:00 PM) on a typical weekday.

[17] Los Angeles County CMP intersection.

- ***Existing Traffic Conditions*** – One of the six (6) key study intersections currently operates at an unacceptable level of service during the PM peak hour. The intersection of Clark Avenue at Carson Street currently operates at unacceptable LOS E during the PM peak hour. The remaining five key study intersections currently operate at acceptable levels of service during the AM and PM peak hours.

- ***Project Trip Generation*** – On a "typical" weekday, the proposed Project (i.e. Buildings 9, 10 and 11) is forecast to generate 2,205 daily PCE trips, with 323 PCE trips (253 inbound, 70 outbound) forecast during the AM peak hour and 307 PCE trips (100 inbound, 207 outbound) forecast during the PM peak hour. A comparison of the Project's PM peak hour trip generation potential indicates that it is significantly less than the 5,503 PM peak hour trip threshold that is allowed within PD-19.

- ***Related Projects Trip Generation*** – Seven (7) related projects were considered as part of the cumulative traffic analysis. On a typical weekday, the seven (7) related projects are expected to generate a combined total of 6,132 daily trips on a "typical" weekday, with 493 trips (380 inbound and 113 outbound) forecast during the AM peak hour, and 621 trips (207 inbound and 414 outbound) forecast during the PM peak hour.

- ***Existing Plus Project Traffic Conditions*** – The proposed Project ***will not*** significantly impact any of the six (6) key study intersections, when compared to the LOS standards and significant impact criteria specified in this report. Although the intersection of Clark Avenue at Carson Street is forecast to operate at unacceptable LOS E during the PM peak hour with the addition of project traffic, the proposed Project is expected to add less than 0.020 to the ICU value. The remaining five key study intersections are forecast to continue to operate at an acceptable LOS with the addition of Project generated traffic to existing traffic.

- ***Year 2016 Cumulative Plus Project Traffic Conditions*** – The proposed Project ***will not*** significantly impact any of the six (6) key study intersections, when compared to the LOS standards and significant impact criteria specified in this report. Although the intersection of Clark Avenue at Carson Street is forecast to operate at unacceptable LOS E during the PM peak hour with the addition of project traffic in the Year 2016, the proposed Project is expected to add less than 0.020 to the ICU value. The remaining five key study intersections are forecast to continue to operate at an acceptable LOS with the addition of Project generated traffic in the Year 2016.

- ***Site Access and Internal Circulation Evaluation –*** The proposed project driveways are forecast to operate at acceptable LOS C or better during the AM and PM peak hours for Year 2016 traffic conditions. As such, project access will be adequate. Motorists entering and exiting the Project site will be able to do so comfortably, safely, and without undue congestion.

  The on-site circulation layout of the proposed Project on an overall basis is adequate. Curb return radii have been confirmed and are generally adequate for small service/delivery (Fedex, UPS) trucks and trash trucks. Curb return radii for full-sized trucks and/or fire trucks are also generally adequate. However, these larger vehicles will require the use of both the inbound lane and outbound lane to access the site from the curb lane along Conant Street. Nonetheless, prior

to finalization of the site plan, it is recommended that a detailed truck access and circulation evaluation be prepared during the refinement of the project site plan.

- ***Recommended Improvements*** **–** The results of the intersection capacity analysis presented previously in *Tables 8-1* and *8-2* shows that the proposed Project will not significantly impact the six (6) key study intersections under the "Existing Plus Project" and "Year 2016 Plus Project" traffic scenarios. Given that there are no significant project impacts, no intersection improvements are required of the proposed project.

- ***Project Specific Improvements*** **–** The following improvements are recommended to ensure that adequate ingress and egress to the project site is provided:

  - Install a "STOP" sign and stop bar at the proposed Project Driveway 1 on Conant Street.
  - Install a "STOP" sign and stop bar at the proposed Project Driveway 2 on Conant Street.
  - Install a "STOP" sign and stop bar at the proposed Project Driveway 3 on Conant Street.
  - Install a "STOP" sign and stop bar at the proposed Project Driveway 4 on Conant Street.

- ***Congestion Management Program (CMP)*** **–** No significant impacts are expected to occur on the Los Angeles County Congestion Management Program roadway network due to the development and full occupancy of the proposed Project.

- ***Construction Traffic Impact Assessment*** **–** Construction related trips associated with trucks and employees traveling to and from the site in the morning and afternoon may result in some minor traffic delays; however, potential traffic interference caused by construction vehicles would create a temporary/short-term impact to vehicles using Lakewood Boulevard and Conant Street in the morning and afternoon hours and the number of construction workers will vary depending on the specific construction activities over time. Based on the location of the site, and the proximity of the I-405 Freeway, it is anticipated that a majority of the construction-related traffic will utilize the freeway to gain regional access to the site. Traffic impacts to the adjacent roadway network will be minimal and **not** long-term. Further, since the construction-related trip generation potential of the proposed Project (i.e. all three construction components) is significantly less than that of the proposed Project and the proposed Project is not expected to significantly impact any of the six (6) key study intersections, no significant impacts resulting from construction traffic are anticipated, aside from the nuisance traffic that will occur as a result of construction-related traffic (e.g., construction materials, construction workers, etc.).

  To ensure impacts to the surrounding street system are kept a minimum, it is recommended that a Construction Management Plan for the proposed Project be developed. The Construction Management Plan should be developed in coordination with the City of Long Beach and at a minimum, address the following:

  - Traffic control for any street closure, detour, or other disruption to traffic circulation.
  - Identify the routes that construction vehicles will utilize for the delivery of construction materials (i.e. lumber, tiles, piping, windows, etc.), to access the site, traffic controls and detours, and proposed construction phasing plan for the project.

- Specify the hours during which transport activities can occur and methods to mitigate construction-related impacts to adjacent streets.
- Require the Applicant to keep all haul routes clean and free of debris including but not limited to gravel and dirt as a result of its operations. The Applicant shall clean adjacent streets, as directed by the City Engineer (or representative of the City Engineer), of any material which may have been spilled, tracked, or blown onto adjacent streets or areas.
- Hauling or transport of oversize loads will be allowed between the hours of 9:00 AM and 3:00 PM only, Monday through Friday, unless approved otherwise by the City Engineer. No hauling or transport will be allowed during nighttime hours, weekends or Federal holidays.
- Use of local streets shall be prohibited.
- Haul trucks entering or exiting public streets shall at all times yield to public traffic.
- If hauling operations cause any damage to existing pavement, street, curb, and/or gutter along the haul route, the applicant will be fully responsible for repairs. The repairs shall be completed to the satisfaction of the City Engineer.
- All construction-related parking and staging of vehicles will be kept out of the adjacent public roadways and will occur on-site.
- This Plan shall meet standards established in the current *California Manual on Uniform Traffic Control Device (MUTCD)* as well as City of Long Beach requirements.