Department of City Planning

City Hall ● 200 Spring Street, Room 621 ● Los Angeles, CA 90012

INITIAL STUDY
LAX COMMUNITY PLAN AREA

Los Angeles International Airport (LAX) Sign District

Case No. ENV-2011-1965-EIR and Case No. CPC-2011-1964-SN

Council District No. 11

THIS DOCUMENT COMPRISES THE INITIAL STUDY ANALYSIS AS REQUIRED UNDER THE CALIFORNIA ENVIRONMENTAL QUALITY ACT

Project Address: LAX, One World Way, Los Angeles, CA 90045

Project Description: The proposed Project entails the development and implementation of a Sign District at LAX, in which commercial signage would be permitted subject to certain restrictions. The proposed Project includes a maximum of approximately 81,522 square feet (sq ft) of proposed new signage within the Landside Sub-Area and a maximum of approximately 289,600 sq ft of proposed new signage within the Airside Sub-Area. The proposed Project would include a range of off-site signage, including supergraphics, digital display signs, and other signs such as signs on passenger boarding bridges and signs on columns. Off-site signs advertise a business, use, facility, service or product not found at LAX (non-airport-related signage). The estimated implementation date for the construction and operation of the new signage within the Project site is 2013.

The proposed Project would include a sign ordinance which would contain provisions that establish regulations such as sign types, placement, number, dimensions, illumination, motion/animation, content, etc. The regulations of the proposed Sign District would supersede the regulations set forth in the Los Angeles Municipal Code. The proposed Project would also include a program to remove a number of billboards in the Los Angeles World Airport's control and compliance with other applicable requirements from the Department of City Planning.

APPLICANT:
City of Los Angeles
Los Angeles World Airports)
One World Way, Room 218
Los Angeles, CA 90045

PREPARED BY:
CDM Smith

March 2012

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I. INTRODUCTION

INTRODUCTION

The subject of this Initial Study (IS) is the proposed Los Angeles International Airport (LAX) Sign District (the "proposed Project"). The proposed Project is located within LAX. LAX is the sixth busiest airport in the world and the third busiest in the United States. The Project site includes the LAX Landside Sub-Area (also known as the Central Terminal Area [CTA]), a portion of the Airside Sub-Area, the area along Sepulveda Boulevard known as the Park One Property, and an area extending west of Taxiway R. The Project site is within the LAX Community Plan (LAX Plan) area, as well as the LAX Specific Plan area. The Project site is located entirely within the City of Los Angeles.

The proposed Project entails the development and implementation of a Sign District at LAX, in which commercial signage would be permitted subject to certain restrictions. The proposed Project includes a maximum of approximately 81,522 square feet (sq ft) of proposed new signage within the Landside Sub-Area and a maximum of approximately 289,600 sq ft of proposed new signage within the Airside Sub-Area. The proposed Project would include a range of off-site signage, including supergraphics, digital display signs, and other signs such as signs on passenger boarding bridges and signs on columns. Off-site signs advertise a business, use, facility, service or product not found at LAX (non-airport-related signage). The estimated implementation date for the construction and operation of the new signage within the Project site is 2013.

The proposed Project would include a sign ordinance which would contain provisions that establish regulations such as sign types, placement, number, dimensions, illumination, motion/animation, content, etc. The regulations of the proposed Sign District would supersede the regulations set forth in the Los Angeles Municipal Code. The proposed Project would also include a program to remove a number of billboards in the Los Angeles World Airport's control and compliance with other applicable requirements from the Department of City Planning.

Project Information

Project Title:	Los Angeles International Airport (LAX) Sign District
Project Location:	LAX, One World Way, Los Angeles, California 90045
Project Applicant:	City of Los Angeles Los Angeles World Airports (LAWA) One World Way, Room 218 Los Angeles, California 90045
Lead Agency:	City of Los Angeles Department of City Planning 200 North Spring Street, Room 601 Los Angeles, California 90012

Organization of the Initial Study

This Initial Study is organized into six sections as follows:

I. ***Introduction:*** This section provides introductory information such as the Project title, the Project applicant, an overview of the proposed Project itself, and the Lead Agency for the proposed Project.

II. ***Project Description:*** This section provides a detailed description of the environmental setting and the proposed Project, including proposed Project characteristics and requested discretionary actions.

III. ***Initial Study Checklist:*** This section contains the completed Initial Study (IS) Checklist.

IV. ***Environmental Impact Analysis:*** This section provides an assessment and discussion of the environmental impacts for each environmental issue identified in the IS Checklist. For those analyses that conclude that the proposed Project may result in a potentially significant effect, further analysis in an EIR is required.

V. ***References:*** This section presents references of the documents used in the preparation of the IS Checklist.

VI. ***List of Preparers and Persons Consulted:*** This section provides a list of City personnel, other governmental agencies, and consultant team members that participated in the preparation of the IS.

II. PROJECT DESCRIPTION

ENVIRONMENTAL SETTING

Project Location

The Los Angeles International Airport (LAX) Sign District Project (the "proposed Project") is located within LAX, which is located within the LAX Plan area in the City of Los Angeles. LAX encompasses approximately 3,900 acres and is situated at the western edge of the City of Los Angeles, as shown in Figure 1, Regional Location Map. To the north of LAX is the community of Westchester, to the south is the City of El Segundo, to the east is the City of Inglewood, and to the west is the Pacific Ocean.

As shown in Figure 2, Project Location Map, the Project site (i.e., Sign District) encompasses a 502-acre area within LAX, that includes the CTA, the area along Sepulveda Boulevard known as the Park One Property, and an area that extends to the west of Taxiway R. New signage would be limited to approximately 203 acres of the Project site comprised of two distinct sub-areas – Landside and Airside. The Landside Sub-Area (approximately 101-acres) includes the access areas associated with the CTA (i.e., lower and upper roadways associated with arrivals and departures, respectively), portions of the terminals facing the interior CTA roadway, parking structures, columns, Park One Property, and area along Sepulveda Boulevard immediately adjacent to the CTA. This sub-area is visible primarily by visitors, passengers, and airport employees. The Airside Sub-Area (approximately 102-acres) includes existing (as well as future) terminal concourses, gates, passenger boarding bridges, runways, airport access ways, and equipment to allow for the safe and efficient operation of airport airfield activities. This sub-area is primarily visible to passengers and employees within aircraft and employees associated with airfield operations. There is some limited visibility to passengers and employees from the gates. No new signs are proposed at the Park One Property, or along Sepulveda Boulevard. In total, the proposed signage would affect approximately 40 percent of the Proposed Project site (or approximately 203 acres of the 502-acre Project site).

LAND USE AND ZONING DESIGNATION

The Project site is located entirely within the LAX Plan area, as well as the LAX Specific Plan area. The Project site is in an area designated in the LAX Plan as "Airport Landside (Central Terminal Area)" and "Airport Airside." Existing zoning is LAX – L Zone (Airport Landside Sub-Area) and LAX – A Zone (Airport Airside Sub-Area). Section 14 of the LAX Specific Plan delineates the sign regulations associated with the placement of signage within the Airport Landside and Airside Sub-Areas, and provides for the establishment of a Sign District to permit off-site signs. Off-site signs are signs that advertise a business, use, facility, service or product not found at LAX (non-airport-related signage). The proposed Project would not affect existing land use or zoning and is in compliance with the LAX Plan and LAX Specific Plan.

DESCRIPTION OF THE SURROUNDING AREA

The Project site encompasses a portion of LAX. The land uses surrounding the Project site include airport operations and facilities (industrial uses including airfield operations including taxiways and runways) to the north, west, and south, and commercial and industrial uses to the east (along Sepulveda Boulevard and its intersection with Century Boulevard). The predominant land uses surrounding LAX to the north and south are residential and commercial, and to the east are primarily commercial and industrial. To the west of LAX are the El Segundo Sand Dunes and Pacific Ocean. Residential areas closest to the Project site are approximately 0.5 mile northeast to 0.75 mile north (community of Westchester) and 0.6 mile south (City of El Segundo). The environmental setting of the Project site is characterized by a highly-built environment with roadway and airfield vehicle and passenger movement activity within and adjacent to the Project site throughout the day and much of the night.

PROJECT CHARACTERISTICS

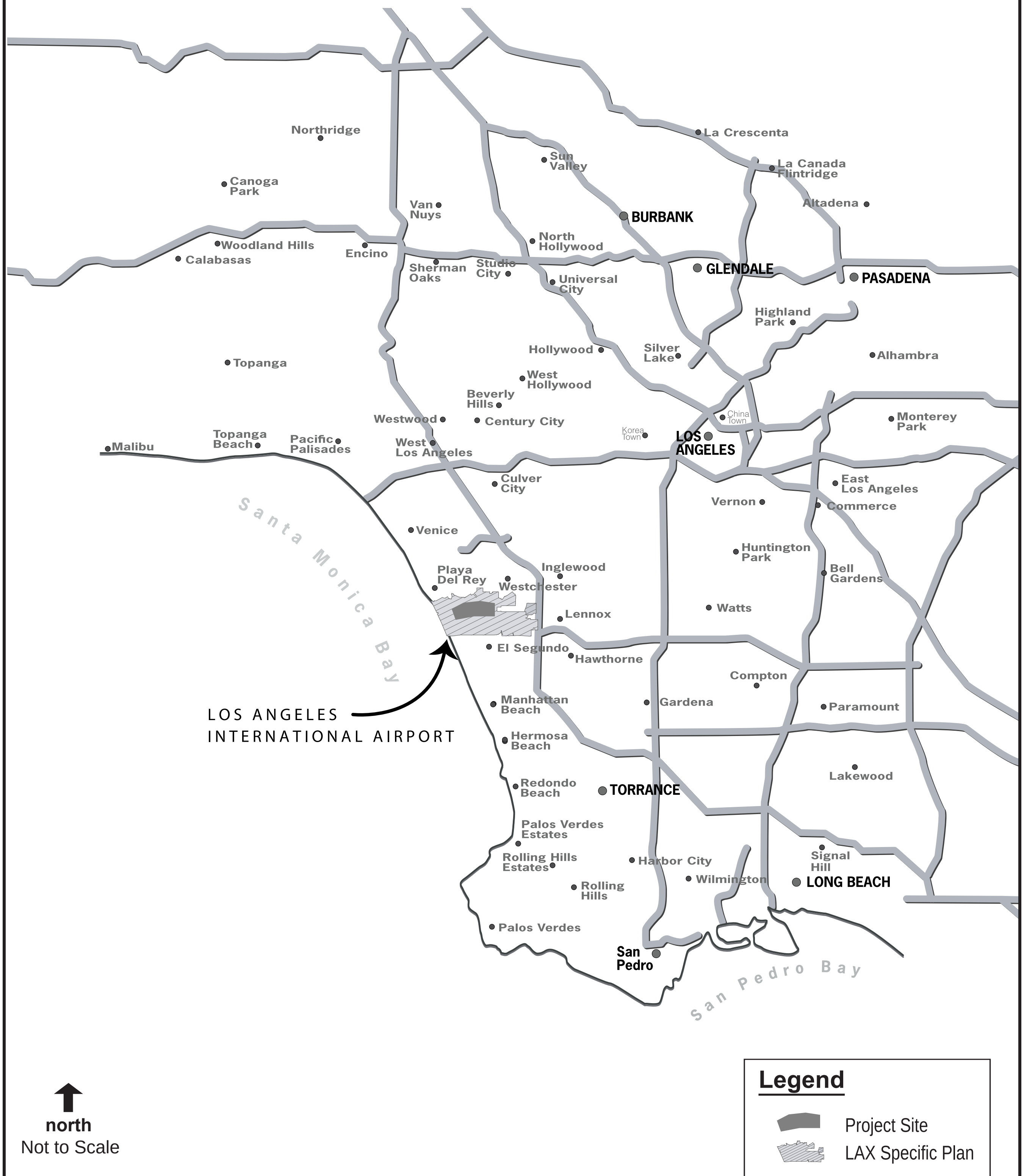
Proposed Development

The proposed Project entails the development and implementation of a Sign District at LAX to permit off-site signs (non-airport-related signage). The proposed Project includes a maximum of approximately 81,522 sq ft of proposed new signage within the Landside Sub-Area and a maximum of approximately 289,600 sq ft of proposed new signage within the Airside Sub-Area. The proposed Project would include a sign ordinance which would govern the type and size of allowable off-site signs and their placement throughout the Project site.

The proposed Project would contain provisions that establish regulations such as sign types, number of signs, sign dimensions, sign placement, sign illumination, sign motion/animation, sign content, etc. The regulations of the proposed Sign District would supersede the regulations set forth in the Los Angeles Municipal Code (LAMC). As part of the proposed Project, signage would be limited to the CTA and portions of the Airside Sub-Area - no new signage is proposed beyond these areas (see Figure 1). The proposed Project has been designed to limit visibility from off-site locations (i.e., surrounding communities) and to not visually or negatively affect airport operations or affect or alter historical buildings within LAX. In addition, the proposed Project would require findings of compliance with the City of Los Angeles General Plan, LAX Plan, and LAX Specific Plan.

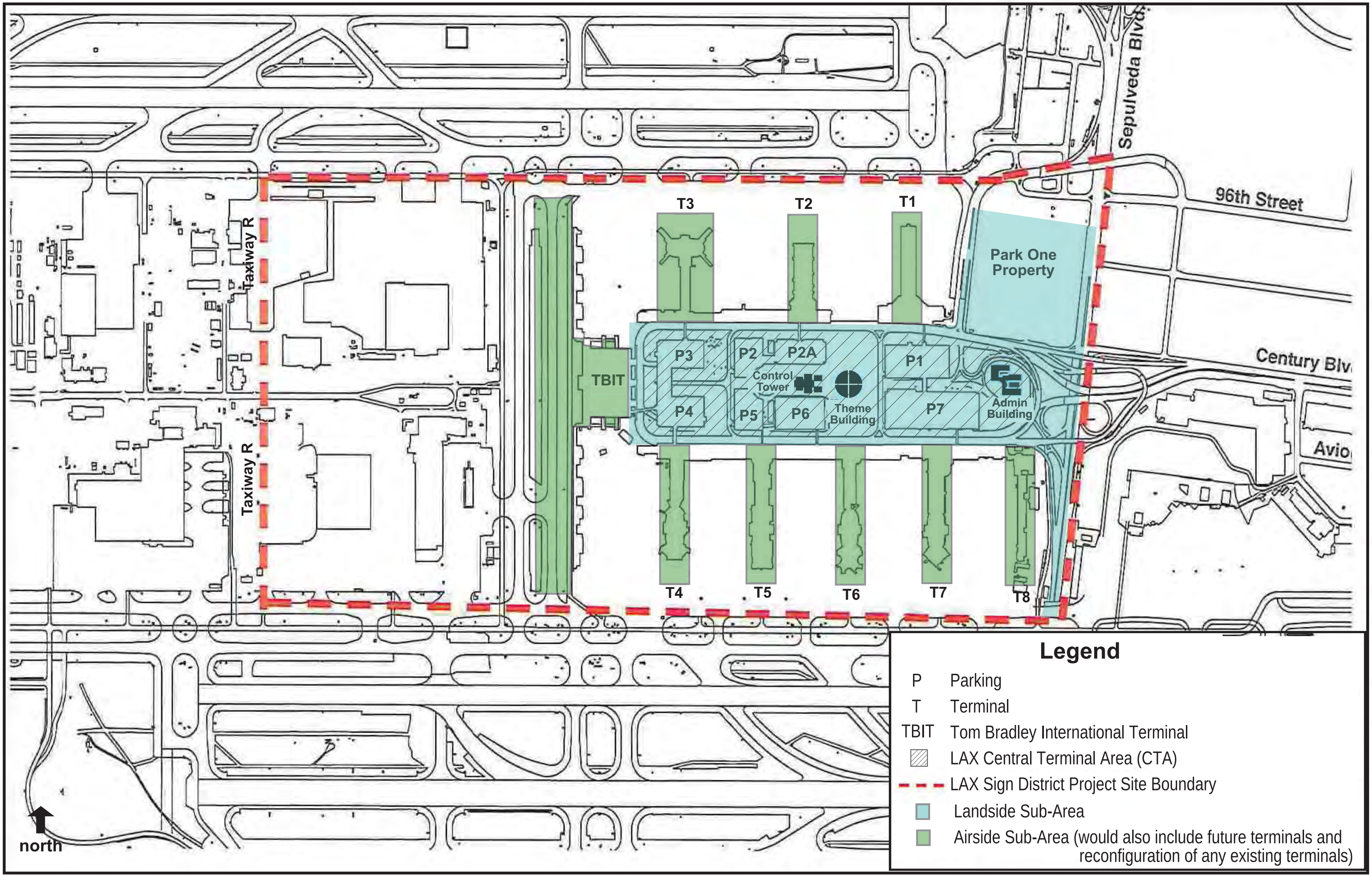
Table 1 lists all the types of proposed and existing off-site signs that would be allowed in the proposed Sign District/Project site and their proposed locations within LAX. As detailed in Table 1, the proposed Project would include a range of off-site signage, including supergraphics, digital display signs, signs on passenger boarding bridges, signs on columns, and hanging signs. Because on-site signs (signs which promote a business, use, facility, service or product located on-site at LAX or airport-related) are already allowed within the proposed Sign District, on-site signs are not a part of the proposed Project.

Off-site signs would not be permitted on a number of buildings within the Project site including the Theme Building, the Airport Traffic Control Tower, and the Administration East Buildings (including the former Airport Traffic Control Tower [1961]). These buildings are shown in Figure 2. In addition,



Prepared by: CDM Smith, 2012

LAX Sign District Project	Regional Location Map	Figure 1



LAX Sign District Project	Project Location Map	Figure 2

the proposed Project would include a plan to remove a number of billboards in LAWA's control and compliance with other applicable requirements from the Department of City Planning.

As part of the proposed Project, the Sign District would allow flexibility to provide either a digital display or supergraphic at the locations where a digital display has been proposed. The analysis of environmental impacts in the Initial Study and the forthcoming draft EIR for the proposed Project will be prepared based on the maximum use and intensity, but would allow for a reduced intensity of use. This will ensure that the environmental analysis accounts for the total maximum potential scope of the proposed Project.

Signage within LAX is regulated through existing LAX planning documents. The LAX Specific Plan establishes procedures for approval of all projects within the LAX Specific Plan area, including signage. The LAX Specific Plan, approved by the Los Angeles City Council in December 2004 and effective January 20, 2005, anticipates the erection, installation, or construction of new off-site signs, pursuant to the establishment of a sign district as set forth in LAMC Section 13.11. The proposed Project implements this element of the LAX Specific Plan.

Pursuant to the LAX Specific Plan, LAWA submitted an application to the City of Los Angeles, Department of City Planning on August 2, 2011 for the proposed Sign District.

DISCRETIONARY ACTIONS

The City of Los Angeles is the Lead Agency for the proposed Project. In order to permit development of the proposed Project, approval of the following discretionary actions would be required:

- Supplemental Use District (SUD) for signage (i.e., Sign District);
- Other approvals (as needed), ministerial or otherwise, may be necessary, as the City finds appropriate, in order to execute and implement the proposed Project. Such approvals may include, but are not limited to: sign (including sign support structures) and electrical permits from the City of Los Angeles, and review by the Federal Aviation Administration, as applicable.

Other reviewing agencies for the proposed Project (and this Initial Study) may include, but are not limited to, the following:

- Los Angeles Fire Department.
- City of Los Angeles Department of Building and Safety
- Federal Aviation Administration (FAA).
- California Department of Transportation (Caltrans).
- Los Angeles Department of Transportation.
- South Coast Air Quality Management District.

Table 1.
Types of Signs, Definitions, and Locations

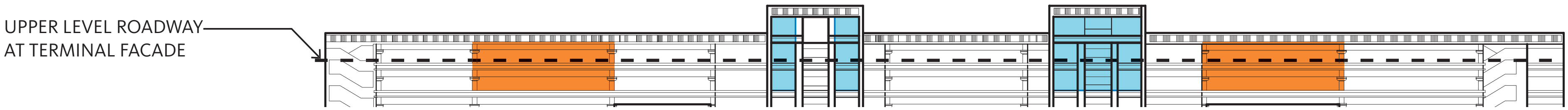
Types of Signs	Definitions	Locations	Figures
Supergraphic Sign	**A supergraphic sign is an off-site sign which consists of an image applied to a wall/facade, which is printed on vinyl or similar material.**	**Parking Structures 1-7 (including 2A and 2B); Terminal Buildings 1-7**	**Figures 3 to 14**[1]
Digital Display	**Digital display signs will show images, on a building face or any structural component. Two types of digital display signs are proposed: Controlled Refresh (CR) I with an image refresh rate of no more than one refresh event every eight seconds, and CR III with no more than one refresh event every 12 hours.**	**CR I: Parking Structures 1-7 (including 2A and 2B); CR III: Sky Bridges at Terminals 1-7, Tom Bradley International Terminal - TBIT (upper level east elevation), Terminal 1 (upper level east elevation), and Terminal 4 (upper level north elevation).**	**Figures 5 to 12 and 14**
Column Wrap Sign	**Column wrap signs are digitally printed on a unique vinyl material designed to adhere to the existing columns that support the CTA upper level roadway.**	**Alternating columns that flank the terminal curb areas of the internal lower roadway lower level roadway of TBIT and Terminals 1-7**	**Figures 15 to 17**
Passenger Boarding Bridge	**A passenger boarding bridge sign is a supergraphic sign that is applied to the exterior of the boarding bridges located in the Airside Sub-Area that connects passengers from the terminals to the aircraft.**	**Boarding Bridges at TBIT and existing Terminals 1-8 and future terminals (Airside Sub-Area)**	**Figure 18**
Hanging Sign	**A hanging sign is a type of sign with individual channel letters and/or a prefabricated image that is suspended from an architectural feature or projection.**	**Throughout CTA**	**Figure 19**
Existing Billboards	**A billboard is a supported sign panel that is attached to pole(s), post(s), or column(s) and that may be cantilevered over a building or structure.**	**Park One Property [no new billboard signs are proposed at this location, nor along Sepulveda Boulevard, as part of the proposed Project]**	**Figure 2**

[1] *It is assumed that the approved Sign District would allow flexibility to use the locations where a digital display has been proposed for supergraphics; therefore, figures associated with digital displays are referenced in Table 1 under supergraphics.*

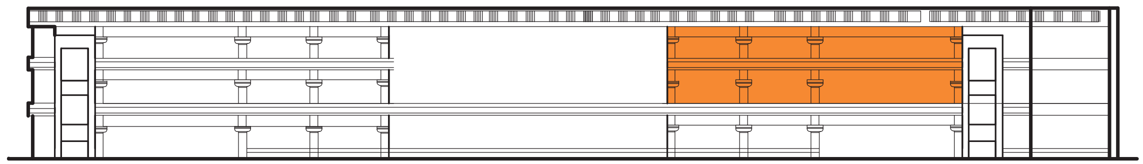
LAX Sign District Project	Supergraphic (Example)	Figure 3

LAX Sign District Project	Supergraphic (Example)	Figure 4

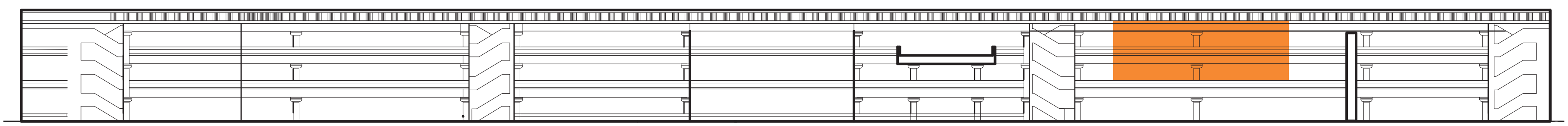
LAX Sign District Project	Digital Display (Example)	Figure 5



PARKING STRUCTURE 1 - NORTH ELEVATION



PARKING STRUCTURE 1 - EAST ELEVATION



PARKING STRUCTURE 1 - SOUTH ELEVATION

SIGN TYPE LEGEND

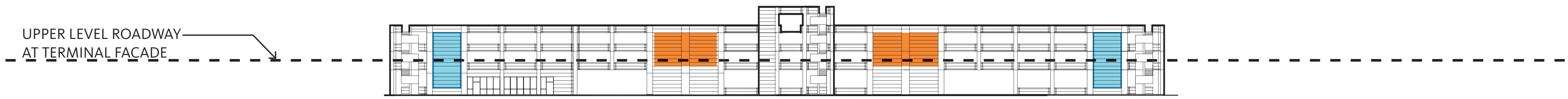
- SUPERGRAPHICS SIGNS
- CONTROLLED REFRESH I

Not to Scale

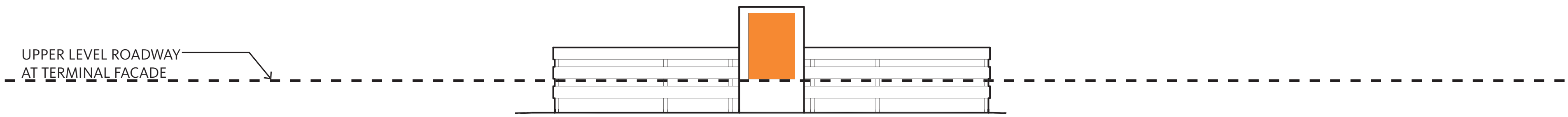
Source: Gensler, 2012

Note: Locations proposed for Controlled Refresh I could be used for Supergraphic signs in lieu of digital.

LAX Sign District Project	Parking Structure 1	Figure 6



PARKING STRUCTURE 2A - NORTH ELEVATION



PARKING STRUCTURE 2B - NORTH ELEVATION

SIGN TYPE LEGEND

- SUPERGRAPHICS SIGNS
- CONTROLLED REFRESH I

Not to Scale

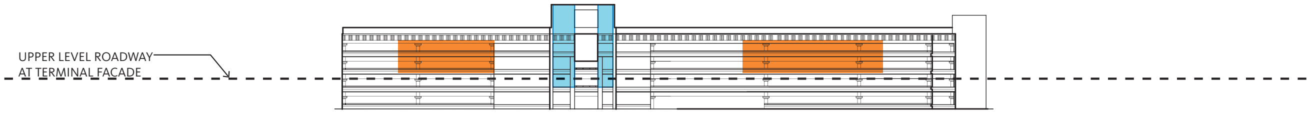
Source: Gensler, 2012

Note: Locations proposed for Controlled Refresh I could be used for Supergraphic signs in lieu of digital.

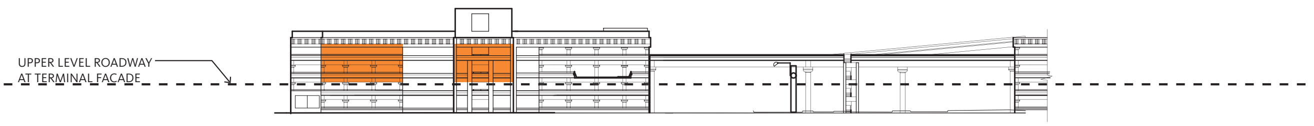
LAX Sign District Project

Parking Structures 2A and 2B

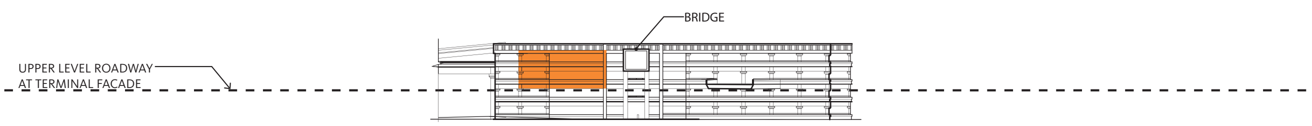
Figure **7**



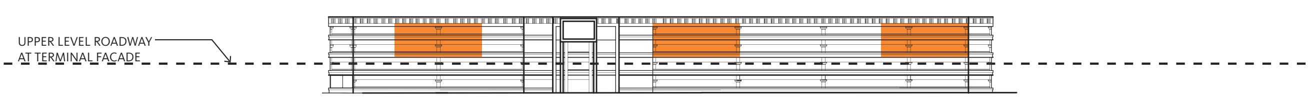
PARKING STRUCTURE 3 - NORTH ELEVATION



PARKING STRUCTURE 3 - WEST ELEVATION



PARKING STRUCTURE 4 - WEST ELEVATION



PARKING STRUCTURE 4 - SOUTH ELEVATION

SIGN TYPE LEGEND

SUPERGRAPHICS SIGNS

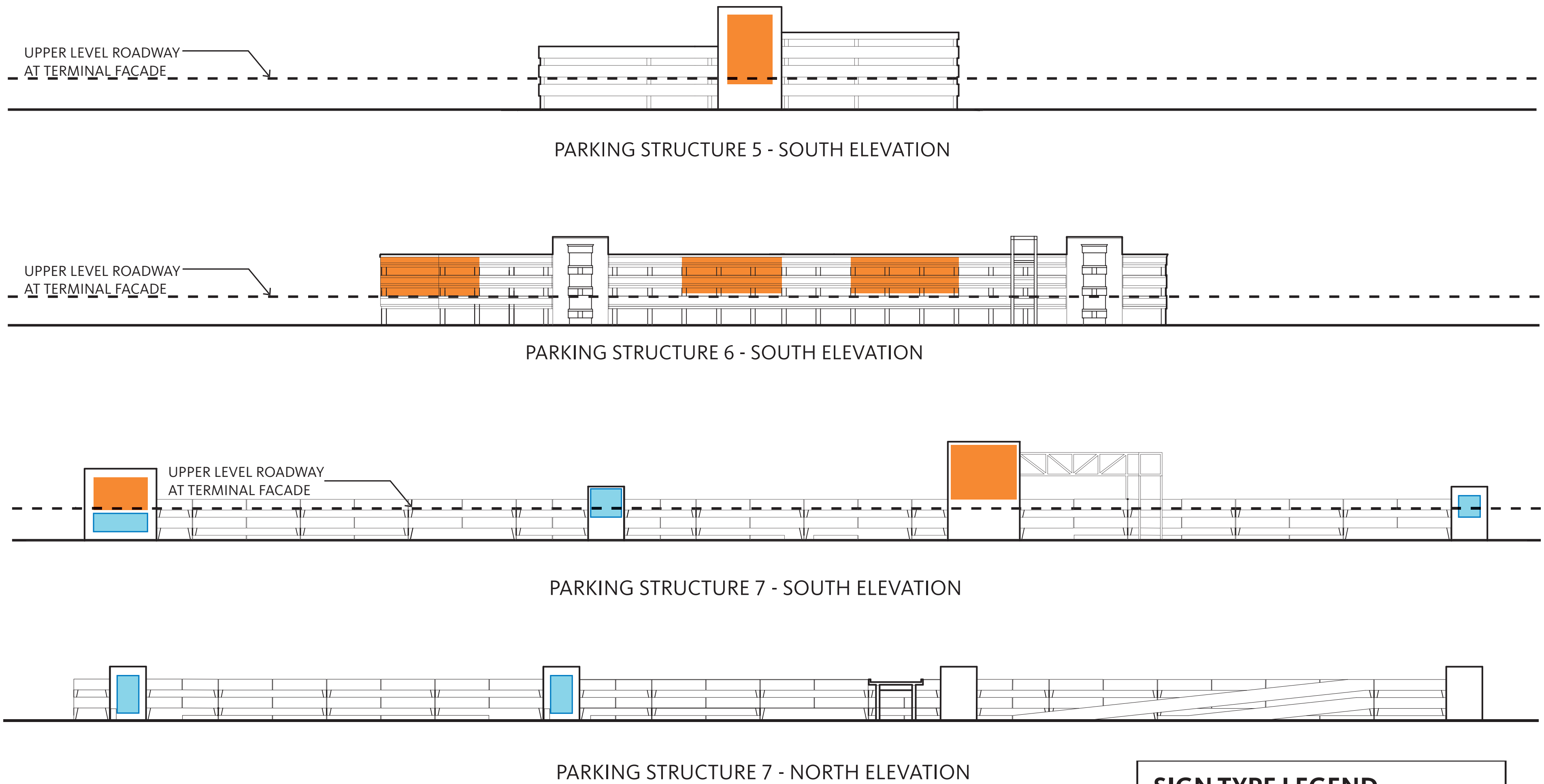
CONTROLLED REFRESH I

Not to Scale

Source: Gensler, 2012

Note: Locations proposed for Controlled Refresh I could be used for Supergraphic signs in lieu of digital.

LAX Sign District Project | **Parking Structures 3 and 4** | Figure 8



SIGN TYPE LEGEND

SUPERGRAPHICS SIGNS

CONTROLLED REFRESH I

Not to Scale

Source: Gensler, 2012

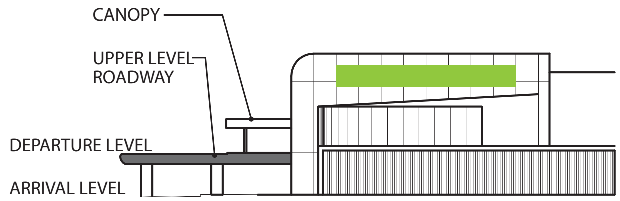
Note: Locations proposed for Controlled Refresh I could be used for Supergraphic signs in lieu of digital.

LAX Sign District Project

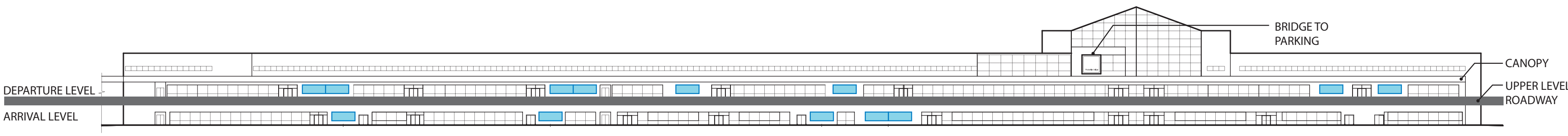
Parking Structures 5, 6, and 7

Figure **9**

TERMINAL 1 - SOUTH ELEVATION



TERMINAL 1 - EAST ELEVATION



TERMINAL 2 - SOUTH ELEVATION

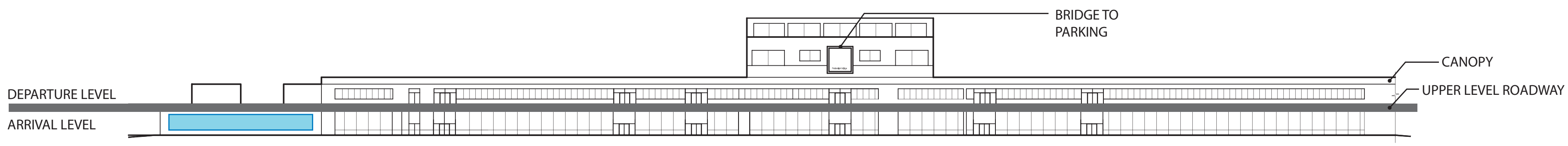
SIGN TYPE LEGEND
SUPERGRAPHICS SIGNS
CONTROLLED REFRESH III

Not to Scale

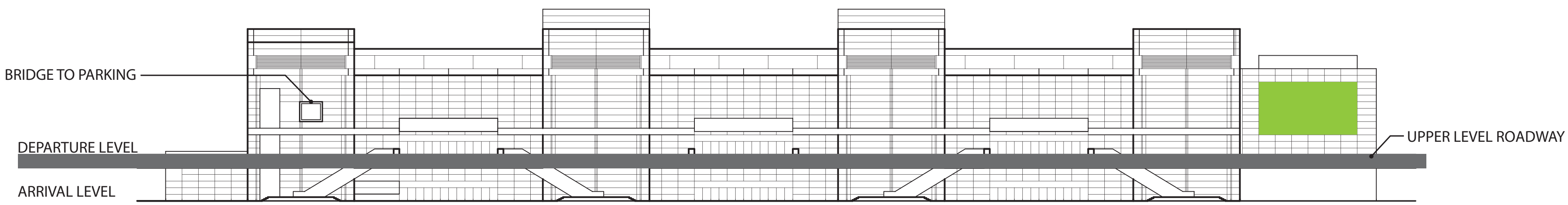
Source: Gensler, 2012

Note: Locations proposed for Controlled Refresh III could be used for Controlled Refresh I or Supergraphic signs in lieu of digital.

LAX Sign District Project	Terminals 1 and 2	Figure 10



TERMINAL 3 - SOUTH ELEVATION



TOM BRADLEY INTERNATIONAL
TERMINAL - EAST ELEVATION

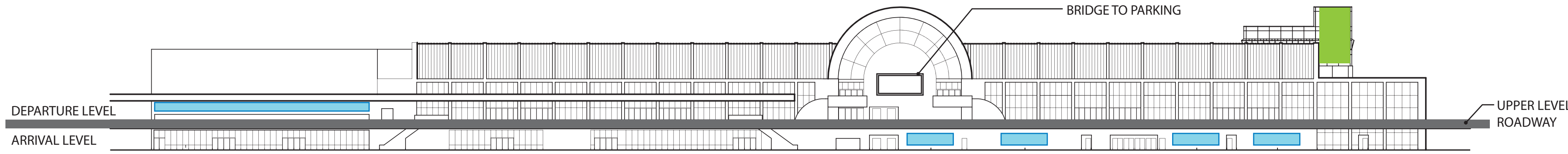
SIGN TYPE LEGEND
SUPERGRAPHICS SIGNS
CONTROLLED REFRESH III

Not to Scale

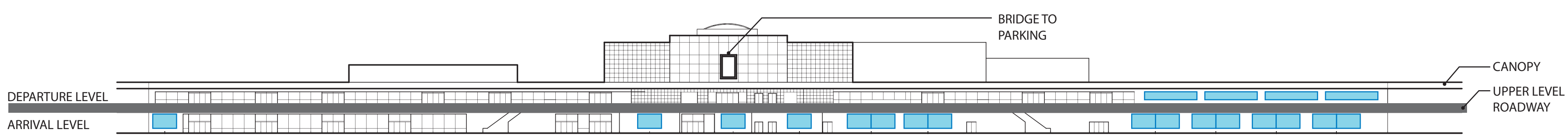
Source: Gensler, 2012

Note: Locations proposed for Controlled Refresh III could be used for Controlled Refresh I or Supergraphic signs in lieu of digital.

LAX Sign District Project	Terminals 3 and TBIT	Figure 11



TERMINAL 4 - NORTH ELEVATION



TERMINAL 5 - NORTH ELEVATION

SIGN TYPE LEGEND
SUPERGRAPHICS SIGNS
CONTROLLED REFRESH III

Not to Scale

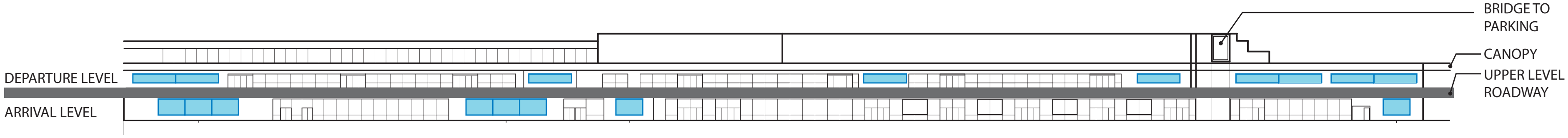
Source: Gensler, 2012

Note: Locations proposed for Controlled Refresh III could be used for Controlled Refresh I or Supergraphic signs in lieu of digital.

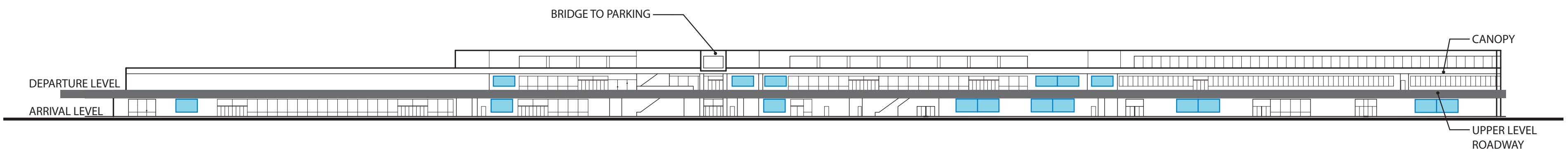
LAX Sign District Project

Terminals 4 and 5

Figure **12**



TERMINAL 6 - NORTH ELEVATION



TERMINAL 7 - NORTH ELEVATION

SIGN TYPE LEGEND
SUPERGRAPHICS SIGNS

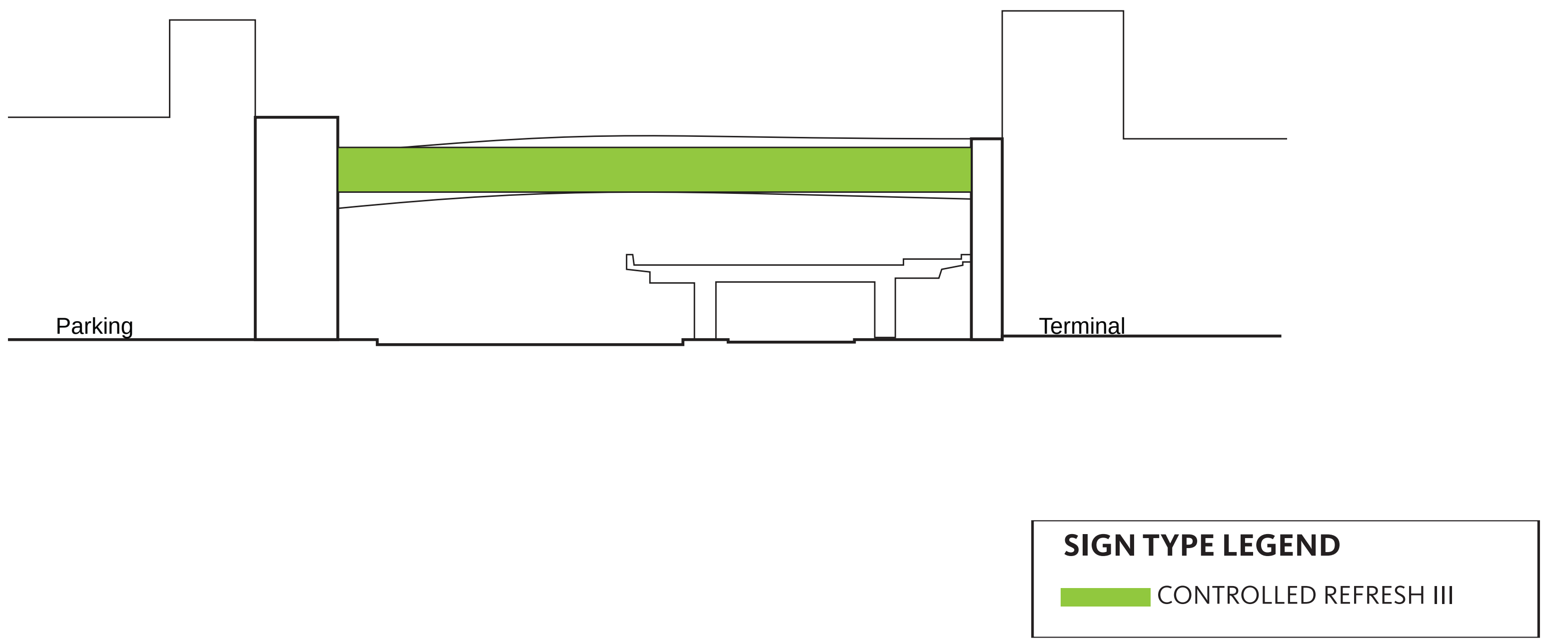
Not to Scale

Source: Gensler, 2012

LAX Sign District Project

Terminals 6 and 7

Figure **13**

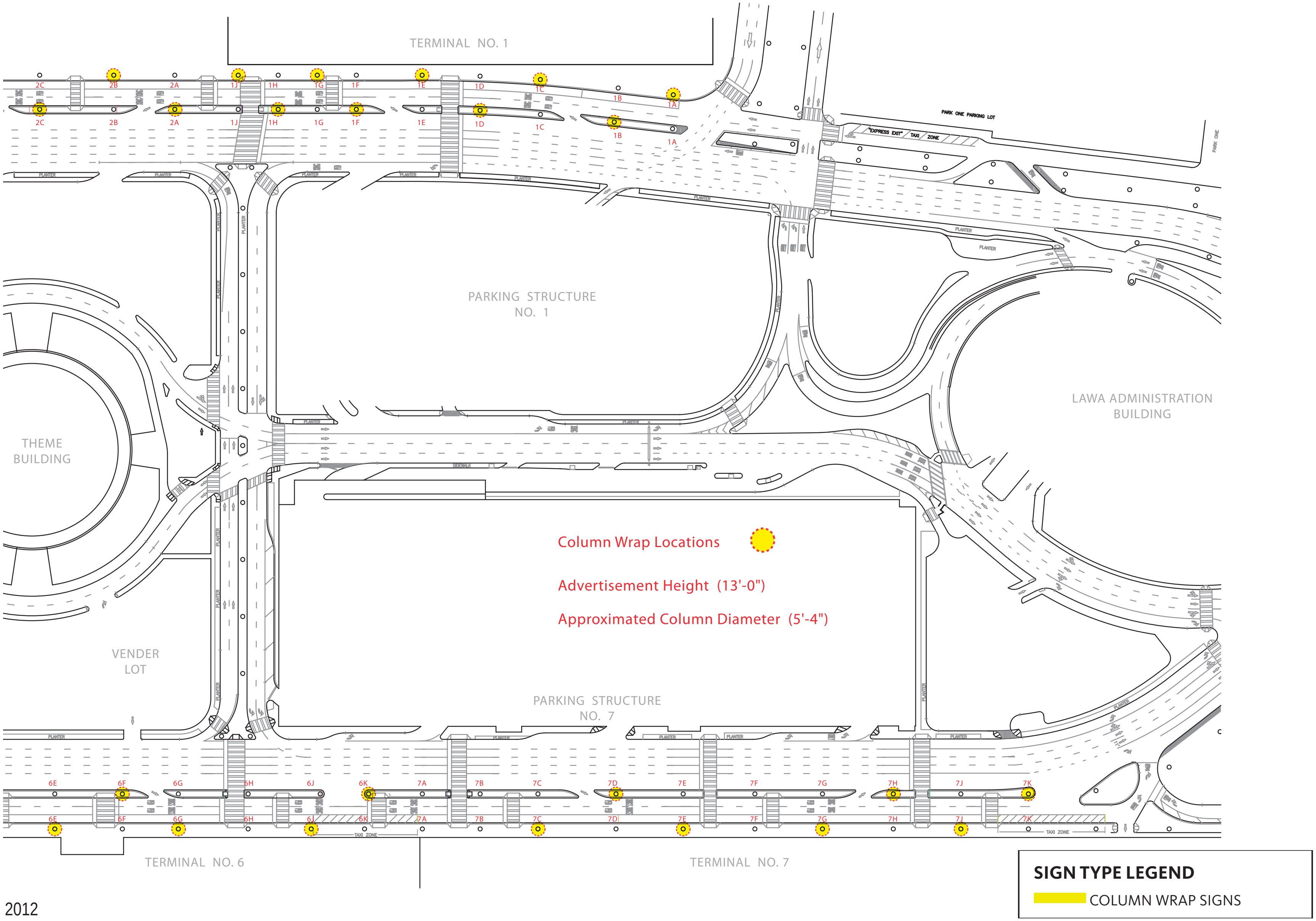


Not to Scale
Source: Gensler, 2012

Note: Locations proposed for Controlled Refresh III could be used for Supergraphic signs in lieu of digital.

LAX Sign District Project	Typical Sky Bridge	Figure 14

LAX Sign District Project	**Column Wrap (Example)**	Figure **15**



Not to Scale

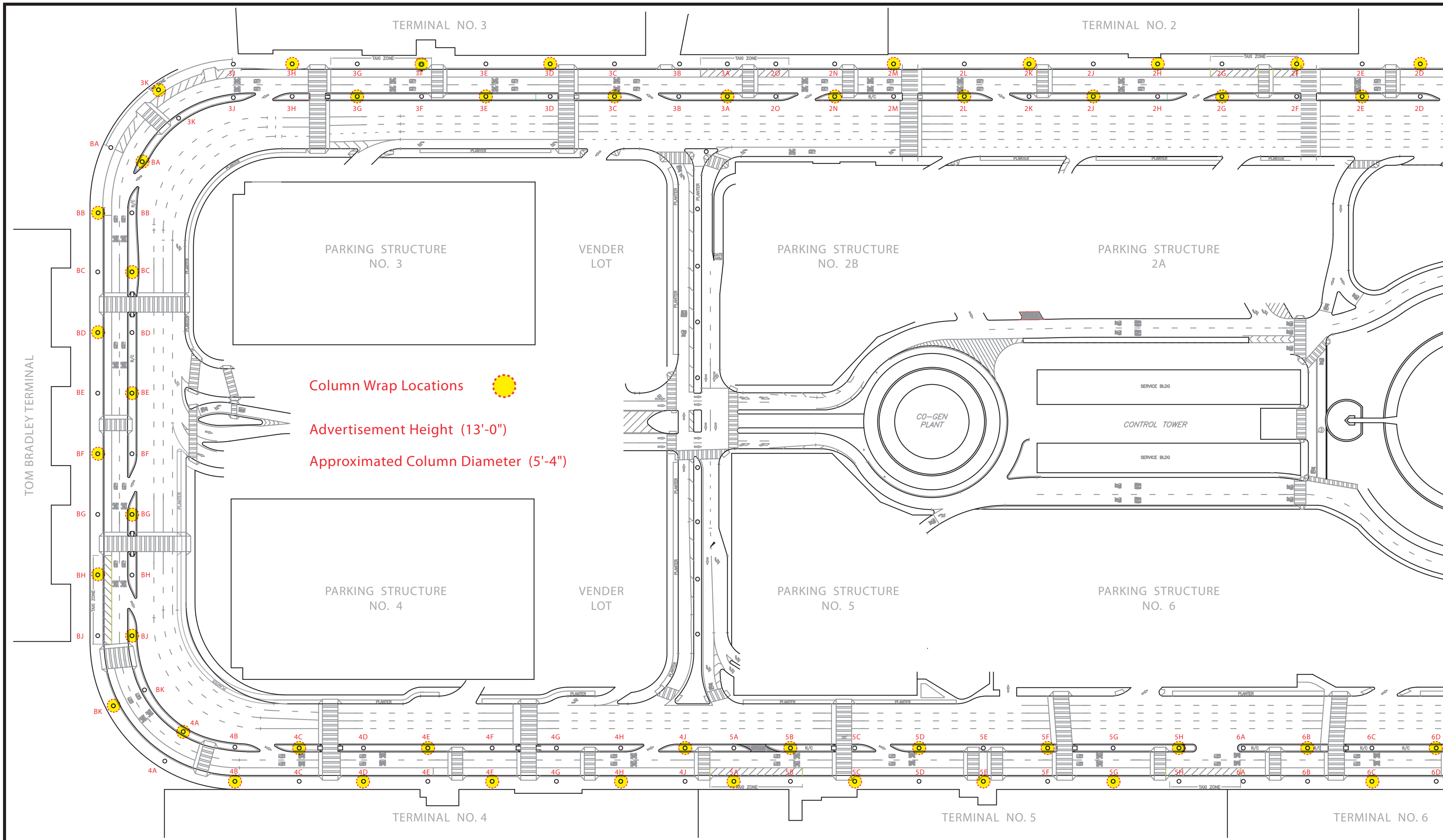
Source: Gensler, 2012

LAX Sign District Project

Column Wrap Signs - Site Locations Lower Level East Portion

Figure

16



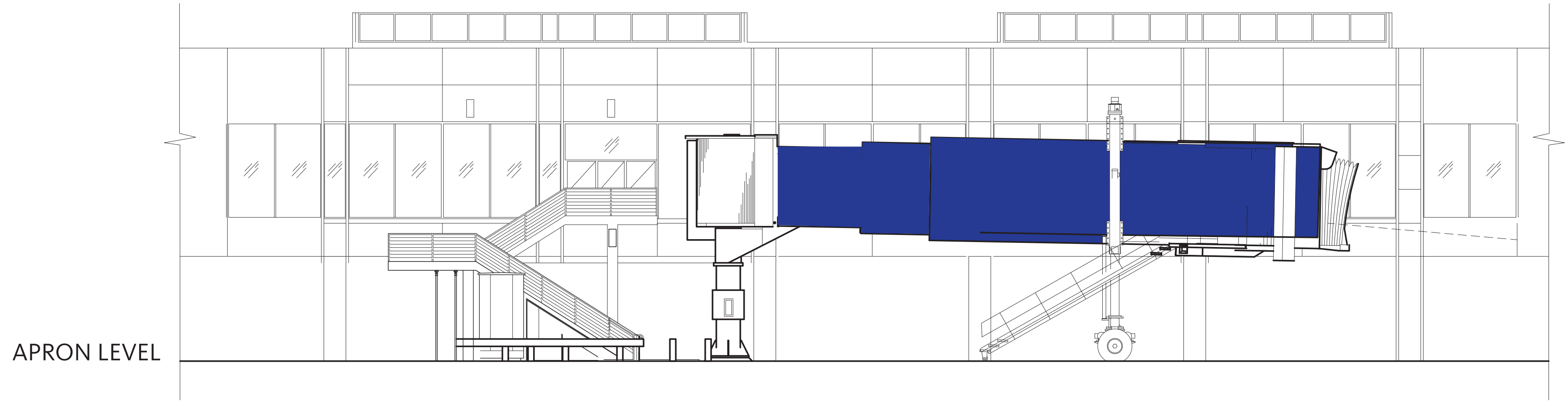
Not to Scale

Source: Gensler, 2012

LAX Sign District Project

Column Wrap Signs - Site Locations Lower Level West Portion

Figure 17



TYPICAL BOARDING BRIDGE

1 SIGN EACH SIDE OF BOARDING BRIDGE

SIGN TYPE LEGEND

PASSENGER BOARDING BRIDGE SIGNS

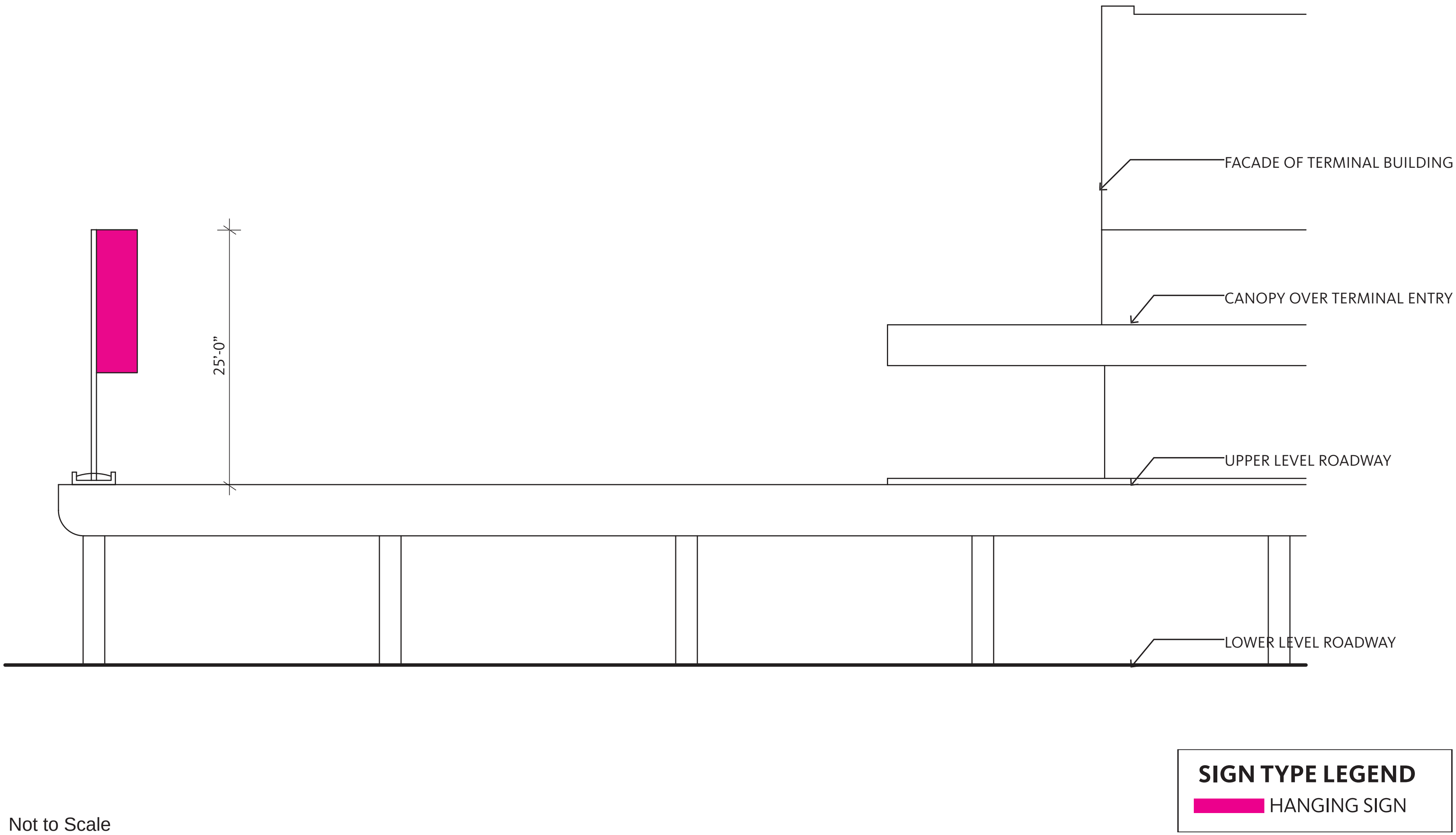
Not to Scale

Source: Gensler, 2012

LAX Sign District Project

Typical Boarding Bridge

Figure **18**



Not to Scale

Source: Gensler, 2012

LAX Sign District Project	Typical Hanging Signs - Upper Level Roadway	Figure 19

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III. INITIAL STUDY CHECKLIST

LEAD CITY AGENCY	COUNCIL DISTRICT	DATE
City of Los Angeles, Department of City Planning	Council District 11	March 16, 2012

RESPONSIBLE AGENCIES

PROJECT TITLE/NO.	CASE NO.
Los Angeles International Airport (LAX) Sign District	ENV-2011-1965-EIR CPC-2011-1964-SN

PREVIOUS ACTIONS CASE NO.	
LAX Specific Plan	☐ **DOES have significant changes from previous actions.** ☒ **DOES NOT have significant changes from previous actions.**

PROJECT DESCRIPTION:
The proposed Project entails the development and implementation of a Sign District at LAX, in which commercial signage would be permitted subject to certain restrictions. The proposed Project includes a maximum of approximately 81,522 square feet (sq ft) of proposed new signage within the Landside Sub-Area and a maximum of approximately 289,600 sq ft of proposed new signage within the Airside Sub-Area. The proposed Project would include a range of off-site signage, including supergraphics, digital display signs, and other signs such as signs on passenger boarding bridges and signs on columns. Off-site signs advertise a business, use, facility, service or product not found at LAX (non-airport-related signage). The estimated implementation date for the construction and operation of the new signage within the Project site is 2013. The proposed Project would include a sign ordinance which would contain provisions that establish regulations such as sign types, placement, number, dimensions, illumination, motion/animation, content, etc. The regulations of the proposed Sign District would supersede the regulations set forth in the Los Angeles Municipal Code. The proposed Project would also include a program to remove a number of billboards in the Los Angeles World Airport's control and compliance with other applicable requirements from the Department of City Planning.

ENVIRONMENTAL SETTING:
The boundary of the Project site encompasses approximately 502 acres of LAX. However, because the proposed Project would be limited to specific terminals, parking structures, columns, and boarding bridges, the Project would only affect approximately 40 percent of the 502-acres (approximately 203 acres total). The immediate environmental setting is characterized by a highly-built environment with vehicle and passenger movement activity within and adjacent to the site throughout the day and much of the night. The adjacent area is a highly-developed, urbanized area consisting of airport, commercial, transportation (i.e., interstate highways) and residential uses.

PROJECT LOCATION
The Project site is within LAX, which is situated within the City of Los Angeles, an incorporated city within Los Angeles County. The Project site includes the LAX CTA, the area along Sepulveda Boulevard known as the Park One Property, and extends west of Taxiway R. The proposed Project would also include a program to remove existing and future billboards in LAWA's control and compliance with other applicable requirements from the Department of City Planning.

PLANNING DISTRICT		STATUS:
LAX Plan		☐ **PRELIMINARY** ☐ **PROPOSED** ______________ ☒ **ADOPTED** **December 2004**
EXISTING ZONING – LAX Specific Plan LAX - L Zone: Airport Landside Sub-Area; LAX - A Zone: Airport Airside Sub-Area	**MAX. DENSITY ZONING** Not Applicable	☒ **DOES CONFORM TO PLAN**
PLANNED LAND USE & ZONE same as existing	**MAX. DENSITY PLAN** Not Applicable	☐ **DOES NOT CONFORM TO PLAN**
SURROUNDING LAND USES North - Airport Airfield (LAX North Airfield, specifically Taxilane D and service road) East - Airport Landside (roads and commercial) South - Airport Airfield (South Airfield) West - Airport Landside (taxiway, fuel farm, and gates)	**PROJECT DENSITY** Not Applicable	☐ **NO DISTRICT PLAN**

DETERMINATION (To be completed by Lead Agency)

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 on the project have been made by or agreed to by the Project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

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

☐ I find 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 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 potentially 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]	Senior city planner
SIGNATURE	TITLE

EVALUATION OF ENVIRONMENTAL IMPACTS:

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants based on a project-specific screening analysis).

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less that significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of a mitigation measure has reduced an effect from "Potentially Significant Impact" to

"Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section XVII, "Earlier Analysis," cross referenced).

5) Earlier analysis must be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR, or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:

   1) Earlier Analysis Used. Identify and state where they are available for review.
   2) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
   3) Mitigation Measures. For effects that are "Less Than Significant With Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources: A sources list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whichever format is selected.

9) The explanation of each issue should identify:
   1) The significance criteria or threshold, if any, used to evaluate each question; and
   2) The mitigation measure identified, if any, to reduce the impact to less than significance.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

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

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

INITIAL STUDY CHECKLIST (To be completed by the Lead City Agency)

☞ BACKGROUND

PROPONENT NAME	**PHONE NUMBER***
Los Angeles World Airports - Herb Glasgow	424-646-5180
PROPONENT ADDRESS	
One World Way, Room 218, Los Angeles, CA 90045	
AGENCY REQUIRING CHECKLIST	**DATE SUBMITTED**
City of Los Angeles, Department of City Planning	March 16, 2012
PROPOSAL NAME (If Applicable)*	
Los Angeles International Airport (LAX) Sign District Project	

ENVIRONMENTAL IMPACTS (Explanations of all potentially and less than significant impacts are required to be attached on separate sheets)

	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, or other locally recognized desirable aesthetic natural feature within a city-designated 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?	☒	☐	☐	☐
II. AGRICULTURAL AND FOREST RESOURCES. 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 Department 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, or Farmland of Statewide Importance, 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 the existing zoning for agricultural use, or a Williamson Act Contract?	☐	☐	☐	☒
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 or conversion of forest land to non-forest use?	☐	☐	☐	☒

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
III. AIR QUALITY. The significance criteria established by the South Coast Air Quality Management District (SCAQMD) may be relied upon to make the following determinations. Would the project:				
a. Conflict with or obstruct implementation of the applicable South Coast Air Quality Management District plans?	☐	☐	☒	☐
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 air basin is non-attainment (O_3, NO_2, PM_{10}, $PM_{2.5}$, and lead) under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐
d. Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e. Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐
IV. BIOLOGICAL RESOURCES. Would the project:				
a. Have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations 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 the City or regional plans, policies, or regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
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 tree preservation policy or ordinance (e.g., oak trees or California walnut woodlands)?	☐	☐	☐	☒
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?	☐	☐	☐	☒
V. CULTURAL RESOURCES: Would the project:				

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Cause a substantial adverse change in significance of a historical resource as defined in State CEQA §15064.5?	☐	☐	☒	☐
b. Cause a substantial adverse change in significance of an archaeological resource pursuant to State CEQA §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?	☐	☐	☐	☒
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? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
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, or that would become 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 Los Angeles Building Code (2002), 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?	☐	☐	☐	☒
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 an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐
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?	☐	☐	☐	☒

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
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 one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d. Be located on a site which is included on a list of hazardous materials 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?	☒	☐	☐	☐
f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for the people residing or working in the 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?	☐	☐	☐	☒
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 with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of 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 land 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 through 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	☐	☐	☐	☒

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
provide substantial additional sources of polluted runoff?				
f. Otherwise substantially degrade water quality?	☐	☐	☐	☒
g. Place housing within a 100-year flood plain as mapped on federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h. Place within a 100-year flood plain structures which would impede or redirect flood flows?	☐	☐	☐	☒
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?	☐	☐	☐	☒
X. LAND USE AND PLANNING. Would the project:				
a. Physically divide an established community?	☐	☐	☐	☒
b. Conflict with 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, coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☒	☐	☐	☐
c. Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒
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?	☐	☐	☐	☒
XII. NOISE. Would the project result in:				
a. Exposure of persons to or generation of noise in level in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b. Exposure of people to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c. A substantial permanent increase in ambient noise levels in the project vicinity 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?	☐	☐	☐	☒

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
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 levels?	☐	☐	☐	☒
XIII. POPULATION AND HOUSING. 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?	☐	☐	☐	☒
XIV. PUBLIC SERVICES. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, 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:				
a. Fire protection?	☐	☐	☒	☐
b. Police protection?	☐	☐	☐	☒
c. Schools?	☐	☐	☐	☒
d. Parks?	☐	☐	☐	☒
e. Other governmental services (including roads)?	☐	☐	☐	☒
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?	☐	☐	☐	☒
XVI. TRANSPORTATION/CIRCULATION. Would the project:				
a. Conflict with an applicable plan, ordinance or policy establishing measures 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,	☐	☐	☒	☐

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
pedestrian and bicycle paths, and mass transit?				
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 to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☒	☐	☐	☐
e. Result in inadequate emergency access?	☐	☐	☒	☐
f. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☐	☒
XVII. UTILITIES. 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 stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
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?	☐	☐	☒	☐
XVIII. MANDATORY FINDINGS OF SIGNIFICANCE.				
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or	☐	☐	☐	☒

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
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 which are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of an individual 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 cause substantial adverse effects on human beings, either directly or indirectly?	☒	☐	☐	☐

☞ **DISCUSSION OF THE ENVIRONMENTAL EVALUATION (Attach additional sheets if necessary)**

(SEE ATTACHMENT A - **EXPLANATION OF CHECKLIST DETERMINATION)**

IV. ENVIRONMENTAL IMPACT ANALYSIS

The following analysis provides the supporting documentation for the determination presented in the City of Los Angeles Initial Study (IS) and California Environmental Quality Act (CEQA) Environmental Checklist presented in Section III of this document. Each response that is provided below evaluates how the proposed Project (as defined in Section II, Project Description) may affect the existing environmental conditions at the Project site and the surrounding environment. The EIR will evaluate topics for which the potential for an impact has been identified. The EIR will analyze the identified potentially significant impacts and, where appropriate, identify mitigation measures, and explain how measures would reduce the identified impacts.

I. AESTHETICS

Would the project:

a. Have a substantial adverse effect on a scenic vista?

No Impact. The Project site is not located adjacent to or within the viewshed of a designated scenic highway or vista. To the extent that there are scenic vistas to the north and northwest of the City and the coastline from vantage points at higher elevations to the south of the airport, the Project site is well below this line-of-sight and does not enter into or contribute to scenic vistas. As such, no impacts on a scenic vista would occur, and, this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings, or other locally recognized desirable aesthetic natural feature within a city-designated scenic highway?

Less than Significant Impact. As detailed in Response No. V.a. below, of the previously-identified historical resources at LAX, only the Theme Building (currently the Encounter restaurant) is located within the Project site. Although no signage would be placed on or at the building, the Theme Building and its “Setting” includes views of the airport and local mountains. The proposed Project would place static supergraphic, digital, column wrap and hanging off-site (non-airport-related) signs within approved areas at the airport, including within the CTA, which are visible from the restaurant associated with the Theme Building. The signs would be located along the faces of existing and future structures, columns and equipment. Signs would not extend above the height of the terminal buildings or parking structures. As a result, the signs would not interfere with scale, proportion, or massing of the Theme Building setting.

The Project site is approximately two miles east of a City-designated scenic highway (Vista Del Mar from Imperial Highway to Culver Boulevard, and Culver Boulevard from Vista Del Mar to Lincoln Boulevard). Based on distance and intervening features (i.e., the Project site is east of the Los Angeles/El Segundo Dunes); the proposed Project is not anticipated to impact a locally recognized desirable aesthetic natural feature within a City-designated scenic highway.

Therefore, implementation of the proposed Project would not damage scenic resources, including historical resources or other locally recognized desirable aesthetic natural features within a City-designated scenic highway or from other non-designated locales. As such, no significant impacts on scenic resources would occur, and, this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

c. Substantially degrade the existing visual character or quality of the site and its surroundings?

Potentially Significant Impact. The Project site is a highly disturbed area within a busy international airport. The Project site is currently being used for gates, terminals, passenger processing (including arrival and departure activities), aircraft apron and parking areas. The majority of structures surrounding the Project site are of a utilitarian style of architecture. Existing signage within the proposed Project area is primarily limited to wayfinding signs around the CTA, Airfield Operations Area Signs (AOA Signs), such as runway/taxiway designation signs, location signs, direction signs, destination signs including terminal gate signs, and information signs within the Airside Sub-Area, and billboards in the Park One Property. Several structures with notable architecture (i.e., the Theme Building and former (1961) airport traffic control tower) are located within the Project area, however, no signage would be placed on or at the Theme Building and former airport traffic control tower. As discussed further under Cultural Resources (Item V.a), the views of the Theme Building and its Setting are not expected to change and therefore the visual character and quality of the Theme Building would not adversely be affected. However, the proposed Project would increase the amount and locations of signage throughout the Project site, which could potentially result in a change in visual character and affect views of the Project site in general. In addition, the proposed Project would introduce additional off-site signage throughout the CTA, where none is currently allowed. Therefore, the draft EIR will evaluate the potential for the proposed Project to have significant aesthetic impacts related to visual character and quality.

d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Potentially Significant Impact. The Project site is located within a heavily lighted urban area. There are many existing sources of light in the Project area, including building lighting, street lighting, traffic, and airfield lights (runway and taxiway lighting). New lighted signs, including new digital display signs, would add to the existing sources of light in the Project area; however, such lighting would be directed downward/inward toward the signs to minimize spillover. Digital display lighting intensity will also be controlled. Although the proposed Project is not expected to create substantial light or glare impacts, this issue will be further addressed in the draft EIR to provide additional analysis.

II. AGRICULTURAL AND FOREST RESOURCES. *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 Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:*

a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, 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 the existing zoning for agricultural use, or a Williamson Act Contract?

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 or conversion of forest land to non-forest use?

a-e. No Impact. The Project site is located within a developed airport and is surrounded by airport uses, urbanized areas, and the Los Angeles/El Segundo Dunes. There are no agricultural resources or operations within the vicinity of the Project site, including prime or unique farmlands or farmlands of statewide of local importance. Further, there are no Williamson Act contracts in effect within the LAX vicinity.[2] The proposed Project would be consistent with the current airport-related and urban uses and would not convert farmland to non-agricultural use nor would it result in any conflicts with existing zoning for agricultural use or a Williamson Act contract. Therefore, no impacts to agricultural resources would occur with implementation of the proposed Project. As such, this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

III. AIR QUALITY.

The significance criteria established by the South Coast Air Quality Management District (SCAQMD) may be relied upon to make the following determinations. *Would the project:*

a. Conflict with or obstruct implementation of the applicable South Coast Air Quality Management District plans?

Less than Significant Impact. The proposed Project is located in the South Coast Air Basin (SCAB), which is under the jurisdiction of the SCAQMD. The SCAQMD is the regional agency responsible for air quality regulations within the SCAB including enforcing the California Ambient Air Quality Standards (CAAQS) and implementing strategies to improve air quality and to mitigate effects from new growth. The SCAQMD, in association with the California Air Resources Board (CARB) and the Southern California Association of Governments (SCAG), is responsible for preparing the Air Quality Management Plan (AQMP) that details how the region intends to attain or maintain the state and federal ambient air quality standards.

The Final 2007 AQMP[3] describes the SCAQMD's plan to attain the federal fine particulate matter less than or equal to 2.5 microns (μm) in diameter ($PM_{2.5}$) and 8-hour ozone (O_3) standards. Long-term operational emissions, with the exception of periodic replacement of the advertising material (signage), would not occur as a result of the proposed Project; therefore, only construction-related emissions were assessed for compliance with the Final 2007 AQMP. Although the SCAQMD cannot directly regulate mobile source emissions, the Final 2007 AQMP requires the use of cleaner (as compared to "baseline") in-use (i.e., existing) off-road (i.e., non-highway) equipment. In 2007, CARB

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2 City of Los Angeles, LAWA, Final Environmental Impact Report, Los Angeles International Airport Proposed Master Plan Improvements, Section 4.16, April 2004.

3 South Coast Air Quality Management District, Final 2007 Air Quality Management Plan, June 2007.

adopted a regulation to reduce diesel particulate matter and nitrogen oxides (NOx) emissions from in-use (existing) off-road heavy-duty diesel vehicles. Any construction equipment necessary to install signs would operate in compliance with state law and would therefore be consistent with the objectives of the Final 2007 AQMP.

The City of Los Angeles adopted an Air Quality Element that is part of the General Plan.[4] Objective 1.3 of the Air Quality Element is to reduce particulate matter emissions from unpaved areas, parking lots, and construction sites. Any construction-related activities associated with the proposed Project would be relatively minor and would not involve grading, trenching, or other activities that would cause fugitive dust emissions. No excavation would occur; however, should the installation of any sign or removal of billboards require the ground to be disturbed, then all activities would be performed in compliance with the SCAQMD's Rule 403 for fugitive dust control. Operations would involve periodic replacement of the advertising material, which would also be minor and not involve grading, trenching, or other activities that would cause fugitive dust emissions. The proposed Project would be consistent with the Air Quality Element of the General Plan.

As discussed above, the proposed Project would not obstruct or conflict with the applicable SCAQMD plan and thus, no significant impacts would occur with implementation of the proposed Project. As such, this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Less than Significant Impact. The California Clean Air Act, signed into law in 1988, established the CAAQS; all areas of the state are required to achieve and maintain the CAAQS by the earliest practicable date. Regions of the state that have not met one or more of the CAAQS are known as nonattainment areas, while regions that meet the CAAQS are known as attainment areas.

The proposed Project would be located in the Los Angeles County sub-area of the SCAB. Los Angeles County is designated as a state nonattainment area for O_3, $PM_{2.5}$, inhalable particulate matter less than or equal to 10 μm in diameter (PM_{10}), nitrogen dioxide (NO_2), and lead; and an attainment or unclassified area for carbon monoxide (CO), sulfur dioxide (SO_2), sulfates, hydrogen sulfide, and visibility reducing particles.

The SCAQMD publishes thresholds of significance for these pollutants.[5] If the proposed Project results in substantial emissions that would exceed the significance criteria, then a significant impact would occur. Appendix A of this Initial Study contains the air quality worksheets and calculations. Table 2 summarizes the mass daily thresholds for construction and operation.

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4 City of Los Angeles, Department of City Planning, Air Quality Element: An Element of the General Plan of the City of Los Angeles, November 1992.

5 South Coast Air Quality Management District, SCAQMD Air Quality Significance Thresholds, March 2011.

Table 2.
SCAQMD Mass Daily Pollutant Emission Thresholds

Pollutant	Construction	Operation
NO_x	100 lbs/day	55 lbs/day
VOC	75 lbs/day	55 lbs/day
PM_{10}	150 lbs/day	150 lbs/day
$PM_{2.5}$	55 lbs/day	55 lbs/day
SO_x	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Lead	3 lbs/day	3 lbs/day

Source: SCAQMD, 2011.
Key:
CO = carbon monoxide
lbs/day = pounds per day
NO_x = nitrogen oxides
PM_{10} = inhalable particulate matter
$PM_{2.5}$ = fine particulate matter
SO_x = sulfur oxides
VOC = volatile organic compounds

Any construction-related emissions would be limited and would only consist of the equipment necessary to install signage on the face of the structures and equipment and remove existing and future billboards (those in LAWA's control). Construction would be relatively minor and not involve grading or trenching. One-time installation of framework to hold the supergraphic signs and digital displays would occur on parking structures, terminal facades, and several of the sky bridges (Terminals 3, 5, and 6 have existing frames that would not require any additional work).

The type of equipment, length of time, and number of workers required for frame and sign installation and billboard removal would vary depending on the sign type as presented below:

Landside Sub-Area

***Digital Displays* -** The digital display framework would be secured on the face of the structure using hand-held drilling equipment. The assembly/installation of appurtenant equipment such as lights, and an electrical box would be completed within the delineated work zone. The equipment required is estimated to consist of two cranes (i.e., cherry pickers or lifts) and two pickup/utility trucks. It would take an estimated two days (8 hours a day) to construct and four workers.

Supergraphics - A frame would be secured to the structure using hand-held drilling equipment. Installing the frames for supergraphic signs would consist of drilling holes (using hand-held equipment) for placement of hooks or rail system on buildings, nighttime welding of supports and painting. Installation of each frame would take approximately one week (i.e., 40 hours of work) and would require two lifts, portable lighting and portable arrowboard (to direct traffic). It would take an estimated four to five workers. Once the frame has been installed, a truck (general utility or flatbed) would bring the supergraphic to the site. The supergraphic would be hoisted/positioned into place and attached to building surfaces using hooks, rails or adhesives (the method of securing the supergraphic would depend on the surface of the structure where the supergrahic will be placed). The equipment required is estimated to consist of two cranes (i.e., cherry pickers or lifts) and one pickup/utility truck. It would take an estimated crew of two to three workers.

Column Wrap – Column wraps would be self-adhesive and thus, no frame or other site preparation would be required. Column wrap signage is anticipated to require one lift and one pickup/utility truck. It would take an estimated crew of two workers approximately six hours to install signs on six columns (i.e., one hour per column).

Hanging Signs – Hanging signs would be suspended from an architectural feature or projection. The projection is anticipated to resemble a frame. The frames associated with hanging signs are anticipated to require one lift and an estimated crew of two workers approximately six hours to install.

Existing Billboard Removal **–** Removal of the existing and future billboards in LAWA's control would require a crane to remove the billboard(s) and pole, which would be placed on a flatbed truck. Once disassembled, the hole where the pole was removed would be filled and the surface restored in accordance with all applicable standards. It would take an estimated two days (8 hours a day) to remove a billboard structure (which may include two billboard faces) and up to six workers.

Airside Sub-Area

Passenger Boarding Bridge – Similar to column wraps, the signage designed for placement on the passenger boarding bridges throughout the Airside Sub-area would be self-adhesive and thus, no frame or other site preparation would be required. It is anticipated that signage would require one lift and one pickup/utility truck. It would take an estimated crew of two workers approximately three hours to install signs on one passenger boarding bridge (both sides).

Supergraphics **–** Installation would be similar as under the Landside Sub-Area discussion above, but these would be limited to existing and future terminal buildings within the Airside Sub-Area.

Operation of the proposed Project includes the changing of the supergraphic signs, column wraps and passenger boarding bridge signage, as well as annual maintenance of the digital displays. It is estimated that on a worst-case basis, the larger supergraphics would be changed a maximum of once every three months and column wraps and passenger boarding bridge signage would be changed a maximum of once per month. The digital sign copy would be changed remotely and not require any on-site work other than maintenance. Maintenance of the digital display and other signage would occur as needed. Changes to sign copy would occur overnight between the hours of 11:00 p.m. through approximately 3:00 to 4:00 a.m. The equipment required is estimated to consist of a boom lift and one pickup/utility truck. It would take an estimated crew of three workers. Equipment would be brought to the site the day of installation and removed the following day.

It is possible that a combination of the several types of proposed signage would be installed at the same time throughout the Project site.

The California Emissions Estimator Model (CalEEMod) was used to estimate construction-related emissions based on the types and quantity of off-road construction equipment, number of construction workers, and number of pickup, utility, or flatbed trucks. Installation of various sign types (i.e., digital display, supergraphics, passenger boarding bridge signs, column wraps, and hanging signs), as well as billboard removal, could occur concurrently and thus would represent a potential worst-case. Table 3 summarizes maximum estimated criteria pollutant emissions from Project construction activities.

Table 3.
Estimated Construction Emissions

	Emissions (pounds per day)					
	VOC	**NOx**	**CO**	**SO2**	**PM10**	**PM2.5**
Peak Day	4	20	16	<1	2	1
Threshold	75	100	550	150	150	55
Significant?	No	No	No	No	No	No

Source: CDM Smith, 2012
Key:
CO = carbon monoxide
lbs/day = pounds per day
NO_x = nitrogen oxides
PM_{10} = inhalable particulate matter
$PM_{2.5}$ = fine particulate matter
SO_2 = sulfur dioxide
VOC = volatile organic compounds

As stated in Response No. III.a. and described above, long-term operational emissions would be very minor and only consist of periodic replacement of advertising materials, which would include the same types of vehicles as would construction (pickup/utility truck(s), construction workers, and one or two cherry picker/lift[s]). Emission factors published by the SCAQMD were used to estimate emissions from on-road vehicles. A roundtrip travel distance of approximately 27 miles was used in the calculations, based on default assumptions in CalEEMod. Table 4 summarizes maximum estimated criteria pollutant emissions from Project operational activities.

Table 4.
Estimated Operational Emissions

	Emissions (pounds per day)					
Equipment	**VOC**	**NOx**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Boom lift	0.07	0.82	0.27	<0.01	0.04	0.03
Pickup/Utility /Truck	0.06	0.46	0.41	<0.01	0.02	0.01
Crew	0.06	0.06	0.61	<0.01	0.01	<0.01
Total	0.19	1.35	1.29	<0.01	0.06	0.05
Threshold	55	55	550	150	150	55
Significant?	No	No	No	No	No	No

Source: CDM Smith, 2012
Key:
CO = carbon monoxide
lbs/day = pounds per day
NO_x = nitrogen oxides
PM_{10} = inhalable particulate matter
$PM_{2.5}$ = fine particulate matter
SO_2 = sulfur dioxide
VOC = volatile organic compounds

The analysis indicates that no pollutant would exceed the SCAQMD's thresholds of significance for construction or operational emissions. Emissions would therefore not violate an air quality standard or contribute substantially to an existing or projected air quality violation and therefore, no significant impacts would occur with implementation of the proposed Project. As such, this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

c. Result in a cumulatively considerable net increase of any criteria pollutant for which the air basin is non-attainment (O_3, NO_2, PM_{10}, $PM_{2.5}$, and lead) under an applicable federal or state ambient air quality?

Less Than Significant Impact. Cumulative impacts occur when the impact of one project when added to other past, present, or reasonably foreseeable future projects could cause a significant impact. In other words, although an individual project would be less than significant, the combined impacts from other projects could cause a significant impact. Since any potential emissions associated with the proposed Project would be substantially less than the significance criteria in Response No. III.b. above, the proposed Project would not result in a cumulatively considerable net increase in any criteria pollutant. As such, this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

d. Expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact. As described in Response No. III.b. above, daily construction emissions from installation of the new signage or removal from the existing and future billboards (those in LAWA's control) would be substantially below significance thresholds. Diesel particulate matter is listed as a toxic air contaminant in California and would be subject to human health risk standards of 10 in 1 million for the maximum individual cancer risk and 1.0 (project increment) for the chronic and acute hazard indices. The closest sensitive receptors (i.e., hospitals, K-12 schools, residences, and day care centers) are the residential areas within the City of El Segundo to the south (approximately 0.6 mile) and the community of Westchester to the northeast (approximately 0.5 mile) and north (approximately 0.75 mile), from the Project site. Based on the limited duration of the installation activities, any impact on sensitive receptors would be minimal. The impact to sensitive receptors would be less than significant. As such, this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

e. Create objectionable odors affecting a substantial number of people?

Less Than Significant Impact. During installation of the signs and periodic replacement of the advertising material, there would be diesel exhaust from construction equipment. Due to the short installation period and distance to sensitive receptors, there would be no impact from diesel exhaust. In addition, only minimal, if any, materials or chemicals to install the new signage would be stored on-site; however, the types and quantities are not anticipated to have the potential to cause odor impacts. As such, there would be a less than significant impact and this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

IV. BIOLOGICAL RESOURCES.

Would the project:

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

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 tree preservation policy or ordinance (e.g., oak trees or California walnut woodlands)?

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-f. No Impact. The proposed Project would establish new signage within the Landside Sub-Area (i.e., core of the CTA) and portions of the Airside Sub-Area, and remove existing and future billboards in LAWA's control. The sign areas are highly urbanized areas and devoid of candidate, sensitive or special status biological resources. Wildlife use of the airport is generally limited to common species. The vegetation within the Project site is ruderal (i.e., weeds) and ornamental vegetation (i.e., palm trees, Giant Bird of Paradise, various shrubs and groundcover) planted to denote perimeters or as a buffer. As part of the proposed Project's construction and operation, signage would be placed in a manner that does not adversely impact the landscaping within the Landside Sub-Area (i.e., CTA). There is no landscaping within the Airside Sub-Area. Therefore, no impacts to sensitive or special status species or habitats are expected to occur. There is no riparian habitat or other sensitive natural community at the Project site or near the vicinity of the proposed Project. Therefore, there would be no potential impacts to any riparian or other sensitive natural community. There is no adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan that includes the Project site or immediate vicinity. The Dunes Specific Plan Area, a designated Los Angeles County Significant Ecological Area, is located at the far western portion of the boundaries of LAX. It is well removed from the Project site and would not be impacted by the proposed Project. Therefore, this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

V. CULTURAL RESOURCES.

Would the project:

a. Cause a substantial adverse change in significance of a historical resource as defined in State CEQA §15064.5?

Less than Significant Impact. Previously-identified historical resources at LAX include the following:[6]

- Hangar One (listed on the National Register of Historic Places) on the southeastern portion of LAX near the northwest corner of Aviation Boulevard and Imperial Highway;
- Theme Building (eligible for the National Register of Historic Places) in the center of the LAX terminals;
- WWII Munitions Storage Bunker (eligible for the National Register of Historic Places) near the western boundary of LAX; and
- Intermediate Terminal Complex (eligible for the California Register of Historical Resources) on the south side of Century Boulevard between Sepulveda Boulevard and Airport Boulevard.

Of these, only the Theme Building is located within the Project site. Constructed in 1961-1962, the Theme Building was the centerpiece of the large expansion of LAX which converted it into a "jet-age" airport. The arresting design of parabolic arches with a flying saucer-shaped restaurant suspended between them was conceived by joint venture architects William L. Pereira, Charles Luckman, Welton Becket, and Paul R. Williams. The Theme Building was designated Los Angeles Historic-Cultural Monument No. 570 in 1992, is eligible for listing in the California Register for architectural merit under Criterion 3, and is considered eligible for the National Register of Historic Places under Criteria Consideration G and Criterion C for exceptional architectural significance.

With regard to historical resources, comprehensive surveys of LAX and adjacent areas were completed in association with the LAX Master Plan EIS/EIR[7], as well as the LAX Master Plan

6 City of Los Angeles, LAWA, Final Environmental Impact Report, Los Angeles International Airport Proposed Master Plan Improvements, Section 4.9.1, April 2004.

7 City of Los Angeles, LAWA, Final Environmental Impact Report, Los Angeles International Airport Proposed Master Plan Improvements, Section 4.9.1, April 2004.

Supplemental Section 106 evaluation process.[8] The purpose of this evaluation was to update previous historical resource information. The evaluation identified structures and spatial relationships/views remaining from the "Central Complex" of the "jet-age" airport that contribute to the setting of the Theme Building. The "Central Complex" is the grouping of support services located in the center of the CTA, which consists of parking structures, as well as the old and new airport traffic control towers, new central utility plant (currently under construction), the Theme Building, and portions of the Modern and Central Service Facility Buildings. Although several of the original buildings that made up the Central Complex have been altered and no longer contribute to the setting associated with the "jet-age" airport, the axial view between the Theme Building and the 1961 Airport Traffic Control Tower remains, and two Modern storage buildings from the Central Service Facility also remain intact located immediately adjacent to the Theme Building on the west. While the 1961 Airport Traffic Control Tower is substantially altered and not individually eligible, the axial relationship between the Theme Building and the 1961 Airport Traffic Control Tower to the east remains and this primary east-west view still conveys the spatial relationships and original design intent of the Central Complex of which the Theme Building was the centerpiece within the context of the "jet-age" airport. Based on the results of the evaluation, not only was the Theme Building a potential historical resource but also its "Setting" (i.e., surroundings and/or the setting that contributes to the significance of the building).

There are no other structures within the Project site that are potentially historic. The existing Terminals 1, 2, 4, 5, 6, 7, 8 and Tom Bradley International Terminal (TBIT) were redeveloped from 1984-1989 and are not eligible for listing as historical resources nor are they considered historically significant. The earlier control tower, while considered state-of-the-art in 1961, was considerably altered in 1996 when the Federal Aviation Administration relocated to the new airport traffic control tower. Terminal 3 was built in 1960 and underwent an extensive renovation in the early 1980s. This renovation expanded and remodeled the terminal to provide a second level ticketing facility and an upper level concourse connecting the terminal to the satellite building, which housed the gates. Terminal 3 is associated with the Los Angeles "jet-age" International Airport of the early 1960s; however, the renovations may have adversely affected the overall integrity of the structure and therefore, it is not considered potentially eligible for listing as a historical resource. None of the parking structures are considered potentially historic.

The proposed Project includes potential for signage on terminal facades, parking structures, sky bridges, columns, and hanging signs throughout the CTA (Landside Sub-Area) and signage within a portion of the Airside Sub-Area (i.e., supergraphics and passenger boarding bridge signs). No signage would be placed on or at the Theme Building; therefore, there would be no direct impacts and no adverse indirect impacts on historical resources because of their design, distance, and intervening development. Although signage is proposed on the parking structures, including the internal roadway areas that traverse the Central Complex, there would be no interruption of primary views that characterize the Theme Building and its Setting. The signs would be located along the faces of structures, columns, and equipment and would not extend above the height of the terminal buildings or parking structures. As a result, the signs would not interfere with scale, proportion, or massing of the Theme Building and its Setting, or adversely reduce or change the setting and primary views of the Theme Building, and therefore, construction and operation of the proposed Project would not cause a

[8] City of Los Angeles, LAWA, Final Environmental Impact Report, Los Angeles International Airport Proposed Master Plan Improvements, Appendix S-G, Supplemental Section 106 Report, prepared by PCR Services Corporation, June 2003.

substantial adverse change in significance of a historical resource. Therefore, the proposed Project would not cause a direct or indirect substantial adverse change in significance of a historical resource and this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

b. Cause a substantial adverse change in significance of an archaeological resource pursuant to State CEQA §15064.5?

No Impact. The Project site is a highly disturbed area that has long been, and is currently being, used for airport and airport-related uses. Any resources that may have existed on the site at one time are likely to have been displaced or damaged and, as a result, the overall sensitivity of the site with respect to buried resources is low. Additionally, no excavation into soils is expected to occur, which would further limit the potential for archaeological resources to be encountered with implementation of the proposed Project. Therefore, this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

No Impact. A previous records search identified the presence of two vertebrate fossil occurrences within the airport area, three more in the immediate vicinity of the airport, and one within approximately two miles of the airport.[9] These fossils were found at depths ranging from 13 to 70 feet. As discussed for archaeological resources above, the Project site is a highly disturbed area and no excavation/grading is planned for the proposed Project. Therefore, this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

d. Disturb any human remains, including those interred outside of formal cemeteries?

No Impact. The Project site is developed with an airport and airport-related uses, and is located within a highly urbanized area. Based on previous surveys conducted at LAX and the results of the record searches completed in 1995, 1997, and 2000, no traditional burial sites have been identified within the LAX boundaries or in the vicinity.[10] In addition, no grading or excavation activities are planned as part of the proposed Project. Therefore, this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

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9 City of Los Angeles, LAWA, Final Environmental Impact Report, Los Angeles International Airport Proposed Master Plan Improvements, Section 4.9.1, April 2004.

10 City of Los Angeles, LAWA, Final Environmental Impact Report, Los Angeles International Airport Proposed Master Plan Improvements, Section 4.22, April 2004.

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? Refer to Division of Mines and Geology Special Publication 42.

No Impact. Fault rupture is the surface displacement that occurs along the surface of a fault during an earthquake. The Project site is located within the seismically active southern California region, but it is not located within an Alquist-Priolo Special Study Zone.[11] Geotechnical literature indicates that the Charnock Fault, a potentially active fault, may be located near or through the eastern portion of the Project site. However, evaluations have indicated that the Charnock Fault is considered to have low potential for surface rupture independently or in conjunction with movement on the Newport-Inglewood Fault Zone, which is located approximately three miles east of the Project site.[12] The proposed Project would involve the establishment of new signage within the Project site mounted on structures (i.e., facades, sky and passenger boarding bridges, columns, and poles) and removal of billboards (those in LAWA's control). Construction of framework and mounting of the signs would comply with current Los Angeles Building Code (LABC) and Uniform Building Code (UBC) requirements and would not affect foundations or result in other structural or engineering modifications that could increase exposure of people or structures to risk associated with rupture of a known earthquake fault. Therefore, this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

ii. Strong seismic ground shaking?

No Impact. The Project site is located in the seismically active southern California region; however, there is no evidence of faulting on the site, and it is not located within an Alquist-Priolo Special Study Zone.[13] The proposed Project would involve the placement of new signage mounted on structures (i.e., facades, sky and passenger boarding bridges, columns, and poles) and removal of billboards (those in LAWA's control). Construction of framework and mounting of the signs would comply with current LABC and UBC requirements and would not affect foundations or result in other structural or engineering modifications that could increase exposure of people or structures to risk associated with strong seismic ground shaking. Therefore, this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

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[11] City of Los Angeles, LAWA, Final Environmental Impact Report, Los Angeles International Airport Proposed Master Plan Improvements, Section 4.22, April 2004.

[12] City of Los Angeles, LAWA, Final Environmental Impact Report, Los Angeles International Airport Proposed Master Plan Improvements, Section 4.22, April 2004.

[13] City of Los Angeles, LAWA, Final Environmental Impact Report, Los Angeles International Airport Proposed Master Plan Improvements, Section 4.22, April 2004.

iii. Seismic-related ground failure, including liquefaction?

No Impact. Liquefaction is a seismic hazard that occurs when strong ground shaking causes saturated granular soil (such as sand) to liquefy and lose strength. The susceptibility of soil to liquefy tends to decrease as the density of the soil increases and the intensity of ground shaking decreases. Liquefaction could potentially occur in very localized areas with perched groundwater[14] conditions including immediately to the west of the CTA where average groundwater depth was detected at 24 feet below ground surface; however, previous reports have indicated that the overall potential for liquefaction at the Project site is considered low.

Strong ground shaking will also tend to densify loose to medium dense deposits of partially saturated granular soils and could result in seismic settlement of foundations and the ground surface at the Project site. Due to variations in material type, seismic settlements would tend to vary considerably across LAX, but the overall potential for damaging seismically-induced settlement is considered to be low.[15]

Seismically-induced ground shaking can also cause slope-related hazards through various processes including slope failure, lateral spreading,[16] flow liquefaction, and ground lurching.[17] The eastern portion of the Project site, near Sepulveda Boulevard contains existing slopes that are relatively small in area and of low angle and height (less than 15 feet); therefore, the overall potential for such failures is considered to be low.[18] In addition, no signage is proposed in the area of these existing slopes.

As the potential for liquefaction and seismic settlement at the Project site is low, and the proposed Project would not cause any new structures to be built or modify any existing or future structures, there would be no impacts associated with seismic-related ground failure and liquefaction and therefore, this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

iv. Landslides?

No Impact. The Project site and vicinity are relatively flat and are primarily surrounded by existing airport and urban development. Furthermore, the City of Los Angeles Landslide Inventory and Hillside Areas map does not identify any areas in the vicinity of the Project site that contain unstable slopes which may be prone to seismically-produced landslides.[19] Implementation of the proposed Project would not result in the exposure of people or structures to the risk of landslides during a seismic

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[14] Groundwater, generally shallow, that is isolated and not connected to an aquifer.

[15] City of Los Angeles, LAWA, Final Environmental Impact Report, Los Angeles International Airport Proposed Master Plan Improvements, Section 4.22, April 2004.

[16] Lateral Spreading: Deformation of very gently sloping ground (or virtually flat ground adjacent to an open body of water) that occurs when cyclic shear stresses caused by an earthquake induce liquefaction, reducing the shear strength of the soil and causing failure and "spreading" of the slope.

[17] Ground Lurching: Ground-lurching (and related lateral extension) is the horizontal movement of soil, sediments, or fill located on relatively steep embankments or scarps as a result of earthquake-induced ground shaking. Damage includes lateral movement of the slope in the direction of the slope face, ground cracks, slope bulging, and other deformations.

[18] City of Los Angeles, LAWA, Final Environmental Impact Report, Los Angeles International Airport Proposed Master Plan Improvements, Section 4.22, April 2004.

[19] City of Los Angeles Planning Department, Safety Element of the City of Los Angeles General Plan, Exhibit C, Landslide Inventory & Hillside Areas In the City of Los Angeles, November 1996.

event. Therefore, this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

b. Result in substantial soil erosion or the loss of topsoil?

No Impact. The potential for soil erosion on the Project site is low due to the level topography of the Project site. In addition, the Project site is developed with buildings and covered with impervious surfaces and the proposed Project would not involve any excavation or grading. Therefore, no impacts related to soil erosion are anticipated, and as such, this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

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

No Impact. Settlement of foundation soils beneath existing engineered structures or fills typically results from the consolidation and/or compaction of the foundation soils in response to the increased load induced by the structure or fill. The presence of undocumented and typically weak artificial fill at the Project site creates the potential for settlement.[20] However, the proposed Project would only place signs on structures and equipment and remove billboards (those in LAWA's control) and as such would not cause any risk associated with unstable geologic units or soils. As such, this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3). See also Response Nos. VI.a.iii and VI.a.iv above.

d. Be located on expansive soil, as defined in Table 18-1-B of the Los Angeles Building Code (2002), creating substantial risks to life or property?

No Impact. Expansive soils are typically composed of certain types of silts and clays that have the capacity to shrink or swell in response to changes in soil moisture content. Shrinking or swelling of foundation soils can lead to damage to foundations and engineered structures including tilting and cracking. Fill materials located in some portions of the Project area could be prone to expansion, and some portions of the Lakewood Formation found beneath portions of the Project site may also be susceptible, due to their higher content of clay and silt.[21]

The proposed Project would involve the placement of new signage mounted on structures and equipment (i.e., facades, sky and passenger boarding bridges, columns, and poles) and removal of billboards (those in LAWA's control). Construction of framework and mounting of the signs would comply with current LABC and UBC requirements and would not affect foundations or result in other structural or engineering modifications that could increase exposure of people or structures to risk associated with expansive soils. As such, this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

[20] City of Los Angeles, LAWA, Final Environmental Impact Report, Los Angeles International Airport Proposed Master Plan Improvements, Section 4.22, April 2004.
[21] City of Los Angeles, LAWA, Final Environmental Impact Report, Los Angeles International Airport Proposed Master Plan Improvements, Section 4.22, April 2004.

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?

No Impact. The Project site is located in an urbanized area where wastewater infrastructure is currently in place. The proposed Project involves establishment and implementation of a Sign District which would not involve wastewater or use septic tanks or alternative wastewater disposal systems. Therefore, the ability of on-site soils to support septic tanks or alternative wastewater systems would not be relevant to the proposed Project. Therefore, this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

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?

Less Than Significant Impact. The proposed Project could generate greenhouse gas (GHG) emissions from vehicle exhaust (i.e., trucks, cherry picker/lift[s], and construction worker commuting) associated with installation of signs, removal of existing and future billboards (those in LAWA's control), and periodic replacement of the advertising material. Additionally, purchased electricity necessary to operate the signs (digital display signs and lighting of other types of signage) would cause indirect GHG emissions. The operation of the proposed digital display signs (Controlled Refresh I and Controlled Refresh III combined) would consume approximately 272 kilowatts at full power. Assuming that it operated at full power 24 hours per day, approximately 2,383,499 kilowatt-hours per year (kWh/year) would be consumed.

To evaluate the significance of operating the digital display and lighting of other signage, indirect GHG emissions from purchased electricity were estimated using carbon dioxide emission factors from the Los Angeles Department of Water and Power;[22] methane and nitrous oxide emission factors were obtained from the U.S. Environmental Protection Agency's Emissions & Generation Resource Integrated Database (eGRID).[23] Using global warming potential factors from the Intergovernmental Panel on Climate Change's Second Assessment Report,[24] total carbon dioxide equivalent (CO_2e) emissions were estimated to be approximately 1,331 metric tons per year for all digital displays (i.e., 38,649 sq ft) operating continuously at full power.

As previously stated for the air quality analysis (Response No. III.b. above), CalEEMod was used to estimate construction-related emissions based on the types and quantity of off-road construction equipment, number of construction workers, and number of pickup, utility, or flatbed trucks. Additional long-term operational emissions would be very minor and only consist of periodic replacement of advertising materials, which would include the same types of vehicles as would construction (pickup/utility truck(s), construction workers, and one or two cherry picker/lift[s]). Emission factors

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[22] California Climate Action Registry, Los Angeles Department of Water and Power, 2007 Annual Entity Emissions: Electric Power Generation/Electric Utility Sector.

[23] United States Environmental Protection Agency, eGRID2010 Version 1.1, Available: http://www.epa.gov/cleanenergy/energy-resources/egrid/index.html, October 27, 2011.

[24] Intergovernmental Panel on Climate Change, Climate Change 1995: The Science of Climate Change. Contribution of Working Group I to the Second Assessment Report of the Intergovernmental Panel on Climate Change, 1996.

published by the SCAQMD were used to estimate emissions from maintenance vehicles. A roundtrip travel distance of approximately 27 miles was used in the calculations, based on default assumptions in CalEEMod. Appendix B of this Initial Study contains the GHG emission worksheets and calculations. Table 5 summarizes maximum estimated emissions from construction and operational activities.

Table 5.
Greenhouse Gas Emissions Summary

Phase	**Emissions (metric tons per year)**			
	CO_2	**CH_4**	**N_2O**	**CO_2e**
Signage Operation	1,328	0.03	0.01	1,331
Maintenance	5	0.0002	n/a	5
Total Operation	1,333	0.03	0.01	1,336
Construction	4	n/a	n/a	4
Amortized Construction[1]	0.1	n/a	n/a	0.1
Total[2]	**1,333**	**0.03**	**0.01**	**1,336**

Source: CDM Smith, 2012.
Notes:
[1] Amortized construction emissions are defined as total construction emissions divided by the project lifetime. The project lifetime is assumed to be 30 years unless project-specific data is known.
[2] Total emissions are defined as annual operational emissions plus amortized construction emissions.
Key: CH_4 = methane n/a = not available
CO_2 = carbon dioxide N_2O = nitrous oxide CO_2e = carbon dioxide equivalent

The SCAQMD[25] has established a draft GHG emissions significance threshold of 10,000 metric tons CO_2e per year ($MTCO_2e$/year) for industrial facilities. While the SCAQMD has not formally adopted other GHG significance thresholds, in the GHG CEQA Significance Threshold Working Group September 28, 2010 meeting, the SCAQMD proposed a tiered approach that could be applied to projects. In that tiered approach, the SCAQMD proposed a draft quantitative screening threshold for commercial projects of 1,400 $MTCO_2e$/year, as well as a separate option for all non-industrial projects of 3,000 $MTCO_2e$/year amongst other options in the tiers.[26]

While the proposed installation and maintenance of the Sign District is not typically reflective of an industrial project because there are no stationary sources (e.g., boilers, heaters, or engines), it also does not meet the standard interpretation of a residential or commercial development which are usually characterized by high vehicle miles traveled and low stationary source emissions. As a result, the use of the commercial/residential thresholds proposed or finalized by the SCAQMD would not be directly applicable to the proposed Project because the Project is not strictly residential or commercial and the area's population would not travel to LAX for the sole purpose of looking at the signs.

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[25] South Coast Air Quality Management District, SCAQMD Air Quality Significance Thresholds, March 2011.
[26] South Coast Air Quality Management District, Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group #15, September 10, 2010.

Emissions associated with the Sign District are from vehicle exhaust associated with construction equipment, construction workers, and various trucks, as well as indirect emissions from purchased electricity. The indirect electricity emissions ultimately occur because of the combustion of fossil fuels in stationary sources. In the absence of an adopted significance threshold directly applicable to this Project, this analysis utilizes the industrial emissions threshold.

The SCAQMD recommends adding amortized construction emissions (amortized over the life of the Project) to the estimated operational emissions. This approach was therefore used to evaluate significance. As shown in Table 5, total emissions (operational plus amortized construction) would not exceed 10,000 $MTCO_2e$/year and would be less than significant. Therefore, this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

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

Less Than Significant Impact. As discussed in Response No. VII.a. above, GHG emissions that would occur from the installation and operation of the proposed Project would be substantially less than the SCAQMD's proposed GHG significance threshold. SCAQMD staff proposed this threshold so that projects would be captured to prevent new development from substantially hindering progress towards achieving the goals of Executive Order S-3-05,[27] which sets statewide GHG emission reduction targets. GHG emissions from the proposed Project would not conflict with Assembly Bill (AB 32), the purpose of which is to reduce statewide GHG emissions to 1990 levels by 2020, or S-3-05 and would be less than significant. Therefore, this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

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?

a-b. No Impact. All hazardous materials storage, handling, and disposal is required to comply with existing federal, state, and local regulations designed to reduce the potential for accidental releases of a hazardous material and minimize the impact of an accident should one occur. The proposed Project involves establishment and implementation of a Sign District, and would not involve the use, handling, or storage of any potentially hazardous materials, nor would it involve excavation that could potentially disturb contaminated soils or groundwater. Therefore, this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

[27] South Coast Air Quality Management District, Board Meeting Minutes, Agenda No. 31, Attachment D, December 5, 2008.

c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

No Impact. As discussed in Response No. VIII.a-b above, construction and operation of the proposed Project would not result in the handling of hazardous materials. In addition, there are no schools located or proposed within one-quarter mile of the Project site. Therefore, this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

d. Be located on a site which is included on a list of hazardous materials 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?

No Impact. An Environmental Data Resources (EDR) regulatory database review was performed for all of LAX in August 2011.[28] LAX was listed in several databases searched by EDR as a facility with underground storage tanks (USTs) and a facility with emissions of carbon monoxide, organic hydrocarbon gases, nitrogen oxides, sulfur oxides, and particulate matter. The proposed Project involves placing signs on structures and equipment and removing billboards (those in LAWA’s control). It would not involve any excavation or otherwise disturb any of the listed hazardous sites listed in the EDR Report. Therefore, this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

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. The Project site is located within a public airport. Numerous safeguards are required by law to minimize the potential for and the effects from an accident if one were to occur. FAA's Airport Design Standards establish, among other things, land use related guidelines to protect people and property on the ground, including establishment of safety zones that keep areas near runways free of objects that could interfere with aviation activities. City of Los Angeles Ordinance No. 132,319 regulates building height limits and land uses within the Hazard Area established by the Planning and Zoning Code to protect aircraft approaching and departing from LAX from obstacles. In addition to the many safeguards required by law, LAWA and tenants of LAX maintain Emergency Response and Evacuation Plans that also serve to minimize the potential for and the effects of an accident.

The proposed Project involves placing signs on structures and equipment and removing billboards (those in LAWA’s control) and would not extend above the height of the terminal buildings, parking structures, and equipment, and therefore would not interfere with aviation activities. All construction activities and sign size and placement would comply with applicable aviation-related safeguards, and thus would not create a safety hazard. As discussed under Response No. I.d., sign lighting, including digital displays, would be directed inward and/or downward to minimize light spillover. As such, lighting from proposed signs is not anticipated to present a distraction that could constitute a safety hazard. Two types of digital displays are being proposed as part of the proposed Project – Controlled Refresh I and Controlled Refresh III. Controlled Refresh (CR) I has an image refresh rate of no more than one refresh event every eight seconds. CR III has no more than one refresh event every 12 hours. Proposed locations for CR I and CR III digital displays within the Project site

[28] Environmental Data Resources Inc. (EDR) . EDR Data Map Area Study, Los Angeles, California. August 2011.

have been chosen being mindful of driver, pedestrian and pilot safety. However, this issue will be addressed further in the draft EIR in the aesthetics and traffic analyses to provide additional detail and analysis.

Although there would be a temporary and minimal increase in construction jobs, none of the proposed improvements would increase the existing long-term employment or passenger capacity at LAX. Therefore, the proposed Project would not result in a significant impact with regard to safety for people working in the Project site or area. Therefore, this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

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

No Impact. The Project site is not located within the vicinity of a private airstrip but rather within a public airport. See Response No. VIII.e. above. Therefore, this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less Than Significant Impact. LAWA and tenants of LAX maintain Emergency Response Evacuation Plans to minimize the potential for and the effects of an accident, should one occur. The proposed Project involves placement of signs on structures and equipment and removal of existing and future billboards in LAWA's control and would not impair implementation of an emergency response plan or emergency evacuation plan. Construction of the proposed Project, as well as periodic changes to the advertising material (i.e., replacement of supergraphics and banners), may result in temporary periodic closures to local airport circulation roads or lanes within the Project site. As discussed in Response No. XVI.e-f, the road closures may temporarily impact intersection and emergency access routes at specific locations for a short period within the Project vicinity. The impacts to emergency access and intersection obstruction would be temporary and occur only at limited access points at any one time. Other areas of the CTA and Airside Sub-Area would be kept clear and unobstructed at all times during sign installation in accordance with FAA, State Fire Marshal, and Los Angeles Fire Code regulations. Therefore, the proposed Project would not significantly impair implementation or physically interfere with an adopted emergency response plan or emergency evacuation plan. As such, this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

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?

No Impact. The Project site and vicinity are predominantly paved and/or developed. There is landscaping within the Landside Sub-Area (i.e., CTA) of the Project site, but this landscaping is regularly maintained and does not constitute a fire hazard. Furthermore, the Project site is not within a City of Los Angeles Wildfire Hazard Area, as delineated in the Safety Element of the General Plan.[29] Therefore, implementation of the proposed Project would not result in the exposure of people or structures to hazards associated with wildland fires and no mitigation measures or further evaluation are

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29 City of Los Angeles Planning Department, Safety Element of the City of Los Angeles General Plan, Exhibit D, Selected Wildfire Hazard Areas In the City of Los Angeles, November 1996.

required. As such, this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

IX. HYDROLOGY AND WATER QUALITY.

Would the project:

a. Violate any water quality standards or waste discharge requirements?

No Impact. The agency with jurisdiction over water quality within the Project area is the Los Angeles Regional Water Quality Control Board (LARWQCB). The Clean Water Act (CWA) prohibits the discharge of pollutants to waters of the United States from any point source unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. In accordance with the CWA, the Project site is within the region covered by NPDES Permit No. CAS004001 issued by the LARWQCB. The proposed Project involves placement of signs on structures and equipment and removal of billboards (those in LAWA's control), and as such would not cause any violations associated with water quality standards or water discharge requirements. The proposed Project would not change the amount of impervious surfaces at the Project site or otherwise alter existing drainage patterns or surface water runoff quantities on the Project site. As such, implementation of the proposed Project would not result in impacts on surface water quality. Therefore, this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

b. Substantially deplete groundwater supplies or interfere with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of 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 land 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 through 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?

b-f. No Impact. The Project site is located within the West Coast Groundwater Basin.[30] Groundwater beneath the Project site is not used for municipal or agricultural purposes.[31] Construction and operation of the proposed Project would not involve dewatering and, thus, would not deplete groundwater supplies. In addition, the proposed Project involves placement of signs on structures and equipment and removal of billboards (those in LAWA's control) and would not change the amount of

30 City of Los Angeles, LAWA, Final Environmental Impact Report, Los Angeles International Airport Proposed Master Plan Improvements, Section 4.7, April 2004.

31 City of Los Angeles, LAWA, Final Environmental Impact Report, Los Angeles International Airport Proposed Master Plan Improvements, Section 4.7, April 2004.

permeable surface areas, drainage patterns, or affect stormwater drainage systems. Implementation of the proposed Project would not substantially deplete groundwater supplies or interfere with groundwater recharge, and, as such, no impacts would occur and these issues will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

g. Place housing within a 100-year flood plain as mapped on federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

h. Place within a 100-year flood plain structures which would impede or redirect flood flows?

g-h. No Impact. The proposed Project is located within the boundaries of the LAX Master Plan study area, and no 100-year floodplain areas are located within the LAX Master Plan boundaries.[32] Further, the proposed Project does not involve the construction of housing. Therefore, no impacts resulting from the placement of housing or other structures within a 100-year floodplain would occur. As such, this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

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?

No Impact. Please see Response No. IX.g-h above. In addition, as delineated on the City of Los Angeles Inundation and Tsunami Hazard Areas map,[33] the Project site is not within a boundary of an inundation area from a flood control basin. Further, the Project site is not located within the downstream influence of any levee or dam. Therefore, no impacts due to the exposure of people or structures to a risk of loss, injury, or death involving flooding as a result of the failure of a levee or dam would occur. As such, this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

j. Inundation by seiche, tsunami, or mudflow?

No Impact. The Project site is located approximately 1.5 miles east of the Pacific Ocean and is not delineated as a potential inundation or tsunami impacted area in the City of Los Angeles Inundation and Tsunami Hazard Areas map.[34] Mudflows are not a risk as the Project site is located on, and is surrounded by, relatively level terrain and urban development. Therefore, no impacts resulting from inundation by seiche, tsunami, or mudflow are anticipated to occur. As such, this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

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[32] City of Los Angeles, LAWA, Final Environmental Impact Report, Los Angeles International Airport Proposed Master Plan Improvements, Section 4.13, April 2004.

[33] City of Los Angeles Planning Department, Safety Element of the City of Los Angeles General Plan, Exhibit G, Inundation & Tsunami Hazard Areas in the City of Los Angeles, November 1996.

[34] City of Los Angeles Planning Department, Safety Element of the City of Los Angeles General Plan, Exhibit G, Inundation & Tsunami Hazard Areas in the City of Los Angeles, November 1996.

X. LAND USE AND PLANNING.

Would the project:

a. Physically divide an established community?

No Impact. The Project site is located entirely within the boundaries of a developed airport in an urbanized area and placement of signs on structures and equipment and removal of billboards (those in LAWA's control) would not disrupt or divide the physical arrangement of an established community. Thus, the proposed Project would not divide an established community. As such, this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

b. Conflict with 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, coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Potentially Significant Impact. Land use designations and development regulations applicable to the Project site are set forth in the General Plan, the LAX Plan,[35] and LAX Specific Plan[36] (both LAX plans were approved by the Los Angeles City Council in December 2004). The Project site is in an area designated in the LAX Plan as "Airport Landside (Central Terminal Area)" and "Airport Airside." Within the LAX Specific Plan, the site is in an area designated as LAX – A Zone: Airport Airside Sub-Area" and "LAX - L Zone: Airport Landside Sub-Area." Section 14 of the LAX Specific Plan delineates the signage regulated by the Plan and permitted within the Airport Airside and Landside Sub-Areas, and provides for the establishment of a Sign District to permit off-site signs.

The proposed Project is in compliance with the purposes, intent and provisions of all three plans. While no inconsistencies with the applicable LAX plans are anticipated, the draft EIR will detail the consistencies of the proposed Project with these plans, as well as LAMC Section 13.11. Therefore, the draft EIR will evaluate the potential for the proposed Project to have significant land use impacts related to incompatibilities and/or inconsistencies with local regulations, plans, and policies.

c. Conflict with any applicable habitat conservation plan or natural community conservation plan?

No Impact. The Dunes Specific Plan Area, a designated Los Angeles County Significant Ecological Area, is located to the west of the Project site, opposite Pershing Drive. The proposed Project would be located within an urbanized airport area within and adjacent to existing airport uses and would not affect the Dunes Specific Plan Area. There is no adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved habitat conservation plan or other natural community conservation plan that includes the Project site. Therefore, the proposed Project would not conflict with any such plan, and, as such, this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

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35 City of Los Angeles, LAWA, LAX Plan, September 29, 2004.
36 City of Los Angeles, LAWA, Los Angeles International Airport Specific Plan, January 20, 2005.

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?

No Impact. The State Mining and Geology Board classify mineral resource zones throughout the State. The Project site is contained within a MRZ-3 zone, which represents areas with mineral deposits whose significance cannot be evaluated from available data.[37] The Project site is within the boundaries of the LAX airport and surrounded by airport-related uses. There are no actively-mined mineral or timber resources on the Project site, nor is the site available for mineral resource extraction given the existing airport use. Therefore, the proposed Project would not affect access to or the availability of valued mineral resources. As such, this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

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?

No Impact. The Project site is not within an area delineated on the City of Los Angeles Oil Field & Oil Drilling Areas map in the City of Los Angeles General Plan Safety Element.[38] Furthermore, the Project site is disturbed and in an area that is not available for mineral resource extraction due to the existing airport use. Therefore, the proposed Project would not affect the availability of a locally-important mineral resource recovery site. As such, this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

XII. NOISE.

Would the project result in:

a. Exposure of persons to or generation of noise in level in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

b. Exposure of people to or generation of excessive groundborne vibration or groundborne noise levels?

c. A substantial permanent increase in ambient noise levels in the project vicinity 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?

a-d. Less than Significant Impact. Construction and implementation of the proposed Project would not result in a substantial temporary or permanent increase in ambient noise levels, nor would it expose persons to generation of noise levels in excess of standards or excessive groundborne vibration or noise. The proposed Project involves placement of signs on structures and equipment and removal of billboards (those in LAWA's control). It is located within a public airport in an urban environment with many existing sources of noise including aviation noise and traffic noise, and is far removed from

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37 City of Los Angeles, LAWA, <u>Final Environmental Impact Report, Los Angeles International Airport Proposed Master Plan Improvements</u>, Section 4.17, April 2004.

38 City of Los Angeles Planning Department, <u>Safety Element of the City of Los Angeles General Plan</u>, Exhibit E, Oil Field & Oil Drilling Areas in the City of Los Angeles, November 1996.

sensitive receptors such as residential uses. Installation of the signs and periodic replacement of the advertising material, which would involve the use of equipment such as trucks and cherry picker/lifts, would not generate noise in excess of the City's noise ordinance, nor would it result in a substantial temporary increase in ambient noise levels.

With regard to roadway noise associated with construction traffic on area roads, traffic volumes on roads with good operating conditions (i.e., Level of Service of B or better) would have to increase at more than a three-fold rate to reach the City's threshold of significance of a 5 dBA increase, and would need to increase even more on roads with poor operating conditions (i.e., Level of Service C or worse). Given the limited scope of construction activities (installation and removal of signs), only a small amount of construction traffic would occur, and this would not result in a noise level increase that would exceed the threshold of significance.

Operation of the proposed Project would not generate any noise with the exception of periodic replacement of the advertising material as discussed above. Additionally, the proposed Project would not result in an increase in noise generating activities such as traffic, an increase in the number of daily flights arriving and departing from LAX, or the ambient growth in aviation activity at LAX that is projected to occur in the future. Therefore, noise impacts are considered to be less than significant, and as such, will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

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?

No Impact. The proposed Project would entail installation of signs on structures and removal of billboards (those in LAWA's control). As discussed under Response No. XII.a-d above, there would be no substantial temporary or permanent change in ambient noise levels. Further, no changes would be made to runway locations or configurations as part of the proposed Project. As such, no exposure of people to excessive noise levels would occur and as such, this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

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 levels?

No Impact. The Project site is not located within the vicinity of a private airstrip, but rather within a public airport. Therefore, this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

XIII. POPULATION AND HOUSING.

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)?

No Impact. The proposed Project involves placement of signs on structures and equipment and removal of billboards (those in LAWA's control) and does not include residential development. The proposed improvements would not increase existing long-term employment, passenger capacity or aircraft parking capacity at LAX. With no increase in long-term employment or passenger capacity, and no new homes proposed, the proposed Project would not induce substantial population growth. Furthermore, the Project site is located within a developed airport, and no new roads or extensions of existing roads or other growth-accommodating infrastructure are proposed. Therefore, the proposed Project would not directly or indirectly induce substantial population growth through extension of roads or other infrastructure. No impacts would occur, and as such, this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

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?

b-c. No Impact. There are no existing residential properties on the Project site. Implementation of the proposed Project would not displace housing. Therefore, no impacts on housing would occur, and as such, this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

XIV. PUBLIC SERVICES.

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, 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?

a. Fire protection?

Less Than Significant Impact. The City of Los Angeles Fire Department provides fire protection services throughout the Project site. Three LAFD fire stations are located at LAX (Fire Station Nos. 80, 51, and 95). Fire Station No. 80 is located within the Project boundary at 6911 World Way West; Fire Station No. 51, located at 10435 South Sepulveda Boulevard, is less than 0.5 mile south of the Project site; and Fire Station No. 95, located at 10010 International Road, is approximately one mile east of the Project site.[39] Construction of the proposed Project may result in temporary periodic closures or partial closures to local airport circulation roads. However, access to the Project site during construction would be kept clear and unobstructed at all times in accordance with FAA, State Fire Marshal, and Los Angeles Fire Code regulations. The periodic replacement of the advertising material, which would involve the use of equipment such as trucks and cherry picker/lifts, could result in lane closures within the CTA roadway. These lane closures would be of short duration and occur only at limited points at any one time. Other areas of the CTA and Airside Sub-Area would be kept clear and unobstructed at all times during sign installation in accordance with FAA, State Fire Marshal, and Los Angeles Fire Code regulations, and thereby would not create a significant impact.

Fire service requirements are generally based on the size of the building and relationships to other structures and property lines. The Project site is currently developed and no new structures would be constructed as part of the proposed Project. The proposed Project would comply with all applicable city, state, and federal codes and ordinances. All new signs and sign support structures would be made of noncombustible materials or plastics approved by both the Fire Department and Los Angeles Building

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39 City of Los Angeles, LAWA, Final Environmental Impact Report, Los Angeles International Airport Proposed Master Plan Improvements, Section 4.26.1, April 2004.

and Safety (LADBS). In addition, supergraphics would not cover windows or doors that could be used as exits in the case of a fire or other emergency situation. Therefore, the proposed Project would not result in any increase in demand for fire protection services that may result in the need for new or altered fire protection services nor would it affect response times. Accordingly, no significant impacts related to fire protection services would occur, and, as such, this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

b. Police protection?

No Impact. Both the Los Angeles World Airports Police Division (LAWA PD) and the City of Los Angeles Police Department LAX Detail (LAPD LAX Detail) provide police protection services to the Project site. The LAWA PD station is located a few feet north of the Park One property and the LAPD LAX Detail station is located within the Project site. Demand for on-airport police protection services is typically determined by increases in aircraft activity and employees. As discussed in Response No. XIII.a. above, the proposed Project entails placement of signs on structures and equipment and removal of billboards (those in LAWA's control). It would not add new buildings, increase existing passenger capacity or aircraft parking capacity at LAX, or increase long-term employment. Therefore, no impacts on airport police protection services are expected with implementation of the proposed Project, and, as such, this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

c. Schools?

No Impact. The proposed Project involves placement of signage on structures and equipment and removal of billboards (those in LAWA's control), and, therefore, does not include residential development. As discussed in Response No. XIII.a. above, the proposed improvements would not increase existing passenger capacity and would not increase long-term employment such that indirect growth would result in enrollment increases that would adversely impact schools. Therefore, no impacts to, or need for, new school facilities would occur and, as such, this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

d. Parks?

No Impact. The proposed Project involves placement of signage on structures and equipment and removal of billboards (those in LAWA's control), and, therefore, does not include residential development. As discussed in Response No. XIII.a. above, the proposed improvements would not increase existing passenger capacity or increase long-term employment such that additional demand for parks would occur. Therefore, no impacts to, or need for, new parks would occur and, as such, this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

e. Other governmental services (including roads)?

No Impact. The proposed Project would have no impacts on governmental services, including roads. As such, this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

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. No Impact. The proposed Project does not include development of recreational facilities nor does it include residential development that would increase demand for recreational facilities. As discussed in Response No. XIII.a. above, the proposed Project would not increase existing passenger capacity at LAX or increase long-term employment such that increased demand for neighborhood and regional parks or other recreational facilities would occur. Therefore, the proposed Project would not result in substantial physical deterioration of existing area recreational facilities or require the construction or expansion of recreational facilities. As such, this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

XVI. TRANSPORTATION/CIRCULATION.

Would the project:

a. Conflict with an applicable plan, ordinance or policy establishing measures 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?

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?

a-b. Less than Significant Impact. Construction of the proposed Project would generate a minimal amount of traffic associated with workers traveling to and from the construction employee parking area,[40] truck haul/delivery trips, and miscellaneous construction-related travel. Given the limited construction activities (installation of framework associated with the signage), these vehicle trips would not be sufficient to result in noticeable traffic impacts on the local roadway system during the construction period. The proposed Project would temporarily modify the traffic flow during the installation of the framework for the supergraphics, hanging signs, and digital display signs. However, construction-related lane closures would be of short duration and occur only at limited points at any one time. Other areas of the CTA and Airside Sub-Area would be kept clear and unobstructed at all times during sign installation in accordance with FAA, State Fire Marshal, and Los Angeles Fire Code regulations, and thereby would not create a significant impact.

The proposed Project involves periodically installing and removing advertising material (signage) throughout the Project site. As discussed in Response No. XIII.a., the proposed Project would not increase existing passenger capacity or aircraft parking capacity at LAX, nor would it increase the

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[40] It is anticipated that parking for construction employees would be located on surface parking lots near the CTA and therefore, there would be no need to shuttle employees to the job site.

number of employees traveling to LAX each day**.** The operation of the proposed Project would not generate any increase in traffic. As such, this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

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?

No Impact. The proposed Project involves placement of signs on structures and equipment and removal of billboards (those in LAWA's control) and would not change air traffic patterns or increase airport operations. Therefore, the proposed Project would have no impact on air traffic patterns. As such, this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

d. Substantially increase hazards to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Potentially Significant Impact. Construction equipment would be required to use local roadways; however, this is not anticipated to create a safety hazard. Should it be necessary, travel lanes would be closed or restricted to allow for construction access and activities. However, the increase of off-site (non-airport related) signage could potentially create design hazards should it detract from directional/wayfinding signs designed to aid motorists navigating the CTA or aviation personnel within the Airside Sub-Area . As discussed under Response No. I.d., signage lighting, including the digital display signs, would be directed inwards/downwards to minimize light spillover. In addition, all digital display signage will have restricted animation to minimize distractions. As such, lighted signs are not anticipated to present a distraction that could constitute a safety hazard or substantially increase a safety hazard. However, this issue will be addressed further in the draft EIR to provide additional detail and analysis. Therefore, the draft EIR will evaluate the potential for the proposed Project to have significant traffic impacts related to design hazards.

e. Result in inadequate emergency access?

Less than Significant Impact. Construction of the proposed Project may require periodic temporary closures of the airport circulation lanes/roadways during the construction phase. These related lane closures would be of short duration and occur only at limited points at any one time so as not to impact intersection flow and emergency access routes within the Project site. In addition, areas of the CTA and Airside Sub-Area would be kept clear and unobstructed at all times during construction in accordance with FAA, State Fire Marshal, and Los Angeles Fire Code regulations, and thereby would not result in a significant impact. As with the construction of the proposed Project, operation involves the periodic installation and removal of advertising material, which could also require temporary lane closures (this applies mostly to supergraphics and, depending on the location, column wraps and hanging signs). As appropriate, the installation and removal of advertising material would occur during nighttime hours (approximately 11:00 p.m. to 4:00 a.m.) when traffic volume is the lowest. As with construction activities, any temporary lane or roadway closures would occur in accordance with FAA, State Fire Marshal, and Los Angeles Fire Code regulations and not result in inadequate emergency access. Therefore, this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

f. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

No Impact. The proposed Project involves the placement of signage on structures and equipment and removal of billboards (those in LAWA's control). It would not conflict with, nor hinder performance of policies, plans, or programs regarding alternative forms of transportation. Therefore, this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

XVII. UTILITIES.

Would the project:

a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

No Impact. Sanitary wastewater generated by activities at the Project site is treated at the Hyperion Treatment Plant. The City of Los Angeles has an approved plan to accommodate future and cumulative wastewater treatment capacity and is implementing the components that comprise its plan through the monitoring of triggers (i.e., population growth, regulatory changes, and other policy decisions) as part of their implementation strategy. As discussed in Response No. XIII.a., the proposed Project would not increase existing employment or passenger capacity at LAX or otherwise affect wastewater generation. Therefore, this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

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?

No Impact. As discussed in Response No. XIII.a., the proposed Project would not increase existing employment or passenger capacity at LAX or otherwise affect water use or wastewater generation. As such, implementation of the proposed Project would not require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities. No impact to water or wastewater facilities would occur, and therefore, this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

c. Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

No Impact. As discussed in Response No. IX.b-f, the proposed Project involves placement of signs on structures and equipment and removal of billboards (those in LAWA's control) and would not change the amount of permeable surface areas, drainage patterns, or affect stormwater drainage systems. As discussed in Response No. XIII.a., the proposed Project would not increase existing employment or passenger capacity at LAX or otherwise affect water use or wastewater generation. As such, implementation of the proposed Project would not require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities. No impact to water or wastewater facilities would occur, and therefore, this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

d. Have sufficient water supplies available to serve the project from existing entitlements and resource, or are new or expanded entitlements needed?

No Impact. The LADWP is the water purveyor for the Project site. LADWP is responsible for supplying, treating, and distributing water within the City. According to LADWP, it has met the immediate needs of its customers and is well positioned to continue to do so in the future.[41] The proposed Project would not increase existing employment or passenger capacity at LAX or otherwise affect water use. As such, no new or expanded water supply entitlements are needed. Therefore, this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

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?

No Impact. As discussed in Response Nos. XVII.a. and b. above, the proposed Project would not increase employment or passenger capacity at LAX or otherwise affect wastewater generation. Therefore, no impact to wastewater facilities would occur, and this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

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?

f-g. Less Than Significant Impact. All solid waste from the Project site is transferred to the Sunshine Canyon Landfill. Sunshine Canyon Landfill is located at 14747 San Fernando Road in Sylmar, CA, approximately 82 miles from the Project site. Sunshine Canyon Landfill is owned and operated by BFI, and has a maximum permitted throughput of 12,100 tons per day, with 5,500 tons per day allotted for City use and 6,600 for County use.[42] As of July 31, 2007, this facility had a remaining capacity of 112,300,000 cubic yards, and currently has an estimated closure date of 2037. The waste types accepted at this facility include construction and demolition debris, green materials, industrial, inert, and mixed municipal.

Implementation of the proposed Project would result in the generation of solid waste from removal of the billboards (those in LAWA's control) and periodic disposal of signage when advertisements are updated/replaced. Vinyl advertising (supergraphics, passenger boarding bridge signs, column signs, and hanging signs) would be changed approximately every 30 days or longer, with longer display periods ranging from six weeks to several months. Periodic replacement of the LED lights on the digital display signs would also be required. Although LED lights cannot be recycled, their disposal requires no particular procedure unlike other fluorescent light bulbs. The solid waste generated from replacing signage and lighting would be negligible and would not exceed the current capacity available at the Sunshine Landfill. In addition, no inert solid waste is anticipated to be generated as a result of the proposed Project. Therefore, this issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

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41 City of Los Angeles Department of Water and Power, Urban Water Management Plan, 2010.

42 California Integrated Waste Management Board (CIWMB)/CalRecycle. 2010. Active Landfills Profile for Sunshine Canyon Landfill (19-AA-0052). Available at: <http://www.calrecycle.ca.gov/SWFacilities/Directory/19-AA-2000/Detail/> Last accessed August 2011.

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE.

a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to 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?

No Impact. The proposed Project is located on a disturbed site within a developed airport. There are no plants or animal species listed on any state of federal lists for endangered, threatened or special status species or riparian/wetland areas, trees, or wildlife movement corridors at the Project site. Therefore, the proposed Project would not have an impact on biological resources.

The proposed Project is located on a previously developed highly disturbed site. Further, it does not involve excavation and thus would not result in destruction of archaeological or paleontological resources. Therefore, the proposed Project would not have an impact on archaeological, or paleontological resources.

The Theme Building and its Setting (a City of Los Angeles Historic Cultural Monument and eligible for the California Register of Historical Resources and National Register of Historic Places) is located within the Project site. No signage would be placed on or at the Theme Building and therefore, construction and operation of the proposed Project would not directly affect this historical resource nor any of the other historical resources at LAX. Signage is proposed on the parking structures, including the internal roadway areas that traverse the Central Complex. No indirect impact on the Theme Building and its Setting is anticipated as there would be no interruption of primary views that characterize the historical resource. The signs would be located along the faces of existing and future structures, columns, and equipment. Signs would not extend above the height of the terminal buildings, parking structures, or equipment (such as the passenger boarding bridges). As a result, the signs would not interfere with scale, proportion, or massing of the Theme Building and its Setting, or adversely reduce or change the setting and primary views of the Theme Building. Therefore, construction and operation of the proposed Project would not cause a direct or indirect substantial adverse change in significance of a historical resource.

Therefore, these issue will not be discussed in the draft EIR consistent with State CEQA Guidelines Section 15063(c)(3).

b. Does the project have impacts which are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of an individual 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).

Potentially Significant Impact. Implementation of the proposed Project may result in cumulative impacts when considered with other past, present and probable future projects on the airport and in the surrounding area. The potential for the proposed Project to contribute to cumulative adverse environmental impacts will be evaluated in the draft EIR.

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

Potentially Significant Impact. Implementation of the proposed Project may result in adverse environmental effects which could potentially result in substantial adverse effects on human beings, either directly or indirectly. The potential for the proposed Project to cause substantial adverse effects on human beings will be evaluated in the draft EIR.

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APPENDIX A: AIR QUALITY WORKSHEETS AND CALCULATIONS

Construction Emissions Summary

	Emissions (lbs/day)					
Season	**ROG**	**NOx**	**CO**	**SO2**	**PM10**	**PM2.5**
Summer	4.56	20.42	16.42	0.03	1.98	1.26
Winter	4.59	20.57	16.28	0.03	1.98	1.26
Maximum	5	21	16	0	2	1
Threshold	75	100	550	150	150	55
Significant?	No	No	No	No	No	No

Source:

SCAQMD. 2011. SCAQMD Air Quality Significance Thresholds. Accessed on: 02 08 2012. Available at: http://www.aqmd.gov/ceqa/handbook/signthres.pdf.

Operational Emissions Summary

	Emissions (lbs/day)					
Season	**ROG**	**NOx**	**CO**	**SO2**	**PM10**	**PM2.5**
Boom lift	0.07	0.82	0.27	0.00	0.04	0.03
Pickup/Utility Truck	0.06	0.46	0.41	0.00	0.02	0.01
Crew	0.06	0.06	0.61	0.00	0.01	0.00
Total	0.19	1.35	1.29	0.00	0.06	0.05
Threshold	55	55	550	150	150	55
Significant?	No	No	No	No	No	No

Source:

SCAQMD. 2011. SCAQMD Air Quality Significance Thresholds. Accessed on: 02 08 2012. Available at: http://www.aqmd.gov/ceqa/handbook/signthres.pdf.

Maintenance Equipment

Boom lift	1
Pickup/Utility Truck	1
Crew	3

Round-trip Distance 26.6 miles (based on CalEEMod default)

	Emissions (lbs/day)					
Source	**ROG**	**NOx**	**CO**	**SOx**	**PM10**	**PM2.5**
Boom lift	0.07	0.82	0.27	0.00	0.04	0.03
Pickup/Utility Truck	0.06	0.46	0.41	0.00	0.02	0.01
Crew	0.06	0.06	0.61	0.00	0.01	0.00
Total	0.19	1.35	1.29	0.00	0.06	0.05

LAX Sign District

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Industrial Park	0	1000sqft

1.2 Other Project Characteristics

Urbanization Urban

Wind Speed (m/s) 2.2

Utility Company Los Angeles Department of Water & Power

Climate Zone 11

Precipitation Freq (Days) 33

1.3 User Entered Comments

Project Characteristics - 2013 used as operational year to be later than construction year (2012).

Land Use - Land use type only used as a proxy - type will not be used in calculations.

Construction Phase - Phase type is used as proxy because project-specific equipment will be used. Start/end dates estimated based on when Initial Study was completed. Phases overlapped to the maximum extent feasible.

Off-road Equipment - Default equipment set to zero; remaining equipment based on project description.

Off-road Equipment - Default equipment entered as zero to prevent overwriting issues; other equipment based on project description.

Off-road Equipment - Default eqiupment set to zero; remaining equipment based on project description

Off-road Equipment - Default equipment set to zero; other equipment based on project description

Off-road Equipment - Default equipment set to zero; remaining equipment based on project description.

Off-road Equipment - Defaults entered as zero to prevent overwriting issues; remaining equipment based on project description

Off-road Equipment - Default equipment set to zero; remaining equipment based on project description

Trips and VMT - Vendor trips (MHDT) = pickup trucks and flatbed trucks. Trips estimated from project description (workers x 2 for number of trips).

Grading - No land would be disturbed; acreage set to zero.

Vehicle Trips - No daily operational emissions.

Energy Use -

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					
2012	4.56	20.42	16.42	0.03	0.75	1.23	1.98	0.03	1.23	1.26	0.00	2,790.65	0.00	0.41	0.00	2,799.35
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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					
2012	4.56	20.42	16.42	0.03	0.03	1.23	1.26	0.03	1.23	1.26	0.00	2,790.65	0.00	0.41	0.00	2,799.35
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Energy	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Mobile	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
Total	**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**

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	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Energy	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Mobile	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
Total	**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

3.1 Mitigation Measures Construction

3.2 Digital Displays - 2012

Unmitigated Construction On-Site

Category	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
	lb/day										lb/day					
Fugitive Dust					0.00	0.00	0.00	0.00	0.00	0.00						0.00
Off-Road	1.02	3.05	2.88	0.00		0.27	0.27		0.27	0.27		313.23		0.09		315.16
Total	**1.02**	**3.05**	**2.88**	**0.00**	**0.00**	**0.27**	**0.27**	**0.00**	**0.27**	**0.27**		**313.23**		**0.09**		**315.16**

Unmitigated Construction Off-Site

Category	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
	lb/day										lb/day					
Hauling	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
Vendor	0.03	0.44	0.26	0.00	0.04	0.01	0.05	0.00	0.01	0.01		89.14		0.00		89.17
Worker	0.06	0.06	0.68	0.00	0.12	0.00	0.13	0.00	0.00	0.01		104.80		0.01		104.94
Total	**0.09**	**0.50**	**0.94**	**0.00**	**0.16**	**0.01**	**0.18**	**0.00**	**0.01**	**0.02**		**193.94**		**0.01**		**194.11**

3.2 Digital Displays - 2012

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					0.00	0.00	0.00	0.00	0.00	0.00						0.00
Off-Road	1.02	3.05	2.88	0.00		0.27	0.27		0.27	0.27	0.00	313.23		0.09		315.16
Total	**1.02**	**3.05**	**2.88**	**0.00**	**0.00**	**0.27**	**0.27**	**0.00**	**0.27**	**0.27**	**0.00**	**313.23**		**0.09**		**315.16**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.03	0.44	0.26	0.00	0.00	0.01	0.01	0.00	0.01	0.01		89.14		0.00		89.17
Worker	0.06	0.06	0.68	0.00	0.00	0.00	0.01	0.00	0.00	0.01		104.80		0.01		104.94
Total	**0.09**	**0.50**	**0.94**	**0.00**	**0.00**	**0.01**	**0.02**	**0.00**	**0.01**	**0.02**		**193.94**		**0.01**		**194.11**

3.3 Supergraphics - Frame installation - 2012

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					0.00	0.00	0.00	0.00	0.00	0.00						0.00
Off-Road	1.13	3.77	3.48	0.01		0.29	0.29		0.29	0.29		411.77		0.10		413.91
Total	**1.13**	**3.77**	**3.48**	**0.01**	**0.00**	**0.29**	**0.29**	**0.00**	**0.29**	**0.29**		**411.77**		**0.10**		**413.91**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.01	0.22	0.13	0.00	0.02	0.01	0.02	0.00	0.01	0.01		44.57		0.00		44.59
Worker	0.07	0.07	0.85	0.00	0.15	0.01	0.16	0.01	0.01	0.01		131.00		0.01		131.17
Total	**0.08**	**0.29**	**0.98**	**0.00**	**0.17**	**0.02**	**0.18**	**0.01**	**0.02**	**0.02**		**175.57**		**0.01**		**175.76**

3.3 Supergraphics - Frame installation - 2012

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					0.00	0.00	0.00	0.00	0.00	0.00						0.00
Off-Road	1.13	3.77	3.48	0.01		0.29	0.29		0.29	0.29	0.00	411.77		0.10		413.91
Total	**1.13**	**3.77**	**3.48**	**0.01**	**0.00**	**0.29**	**0.29**	**0.00**	**0.29**	**0.29**	**0.00**	**411.77**		**0.10**		**413.91**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.01	0.22	0.13	0.00	0.00	0.01	0.01	0.00	0.01	0.01		44.57		0.00		44.59
Worker	0.07	0.07	0.85	0.00	0.01	0.01	0.01	0.01	0.01	0.01		131.00		0.01		131.17
Total	**0.08**	**0.29**	**0.98**	**0.00**	**0.01**	**0.02**	**0.02**	**0.01**	**0.02**	**0.02**		**175.57**		**0.01**		**175.76**

3.4 Column Wrap - 2012

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					0.00	0.00	0.00	0.00	0.00	0.00						0.00
Off-Road	0.38	1.14	1.08	0.00		0.10	0.10		0.10	0.10		117.46		0.03		118.18
Total	**0.38**	**1.14**	**1.08**	**0.00**	**0.00**	**0.10**	**0.10**	**0.00**	**0.10**	**0.10**		**117.46**		**0.03**		**118.18**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.01	0.22	0.13	0.00	0.02	0.01	0.02	0.00	0.01	0.01		44.57		0.00		44.59
Worker	0.03	0.03	0.34	0.00	0.06	0.00	0.06	0.00	0.00	0.00		52.40		0.00		52.47
Total	**0.04**	**0.25**	**0.47**	**0.00**	**0.08**	**0.01**	**0.08**	**0.00**	**0.01**	**0.01**		**96.97**		**0.00**		**97.06**

3.4 Column Wrap - 2012

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					0.00	0.00	0.00	0.00	0.00	0.00						0.00
Off-Road	0.38	1.14	1.08	0.00		0.10	0.10		0.10	0.10	0.00	117.46		0.03		118.18
Total	**0.38**	**1.14**	**1.08**	**0.00**	**0.00**	**0.10**	**0.10**	**0.00**	**0.10**	**0.10**	**0.00**	**117.46**		**0.03**		**118.18**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.01	0.22	0.13	0.00	0.00	0.01	0.01	0.00	0.01	0.01		44.57		0.00		44.59
Worker	0.03	0.03	0.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00		52.40		0.00		52.47
Total	**0.04**	**0.25**	**0.47**	**0.00**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**		**96.97**		**0.00**		**97.06**

3.5 Passenger Boarding Bridge - 2012

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					0.00	0.00	0.00	0.00	0.00	0.00						0.00
Off-Road	0.38	1.14	1.08	0.00		0.10	0.10		0.10	0.10		117.46		0.03		118.18
Total	**0.38**	**1.14**	**1.08**	**0.00**	**0.00**	**0.10**	**0.10**	**0.00**	**0.10**	**0.10**		**117.46**		**0.03**		**118.18**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.01	0.22	0.13	0.00	0.02	0.01	0.02	0.00	0.01	0.01		44.57		0.00		44.59
Worker	0.03	0.03	0.34	0.00	0.06	0.00	0.06	0.00	0.00	0.00		52.40		0.00		52.47
Total	**0.04**	**0.25**	**0.47**	**0.00**	**0.08**	**0.01**	**0.08**	**0.00**	**0.01**	**0.01**		**96.97**		**0.00**		**97.06**

3.5 Passenger Boarding Bridge - 2012

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					0.00	0.00	0.00	0.00	0.00	0.00						0.00
Off-Road	0.38	1.14	1.08	0.00		0.10	0.10		0.10	0.10	0.00	117.46		0.03		118.18
Total	**0.38**	**1.14**	**1.08**	**0.00**	**0.00**	**0.10**	**0.10**	**0.00**	**0.10**	**0.10**	**0.00**	**117.46**		**0.03**		**118.18**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.01	0.22	0.13	0.00	0.00	0.01	0.01	0.00	0.01	0.01		44.57		0.00		44.59
Worker	0.03	0.03	0.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00		52.40		0.00		52.47
Total	**0.04**	**0.25**	**0.47**	**0.00**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**		**96.97**		**0.00**		**97.06**

3.6 Hanging Signs - 2012

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					0.00	0.00	0.00	0.00	0.00	0.00						0.00
Off-Road	0.38	1.14	1.08	0.00		0.10	0.10		0.10	0.10		117.46		0.03		118.18
Total	**0.38**	**1.14**	**1.08**	**0.00**	**0.00**	**0.10**	**0.10**	**0.00**	**0.10**	**0.10**		**117.46**		**0.03**		**118.18**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.03	0.03	0.34	0.00	0.06	0.00	0.06	0.00	0.00	0.00		52.40		0.00		52.47
Total	**0.03**	**0.03**	**0.34**	**0.00**	**0.06**	**0.00**	**0.06**	**0.00**	**0.00**	**0.00**		**52.40**		**0.00**		**52.47**

3.6 Hanging Signs - 2012

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					0.00	0.00	0.00	0.00	0.00	0.00						0.00
Off-Road	0.38	1.14	1.08	0.00		0.10	0.10		0.10	0.10	0.00	117.46		0.03		118.18
Total	**0.38**	**1.14**	**1.08**	**0.00**	**0.00**	**0.10**	**0.10**	**0.00**	**0.10**	**0.10**	**0.00**	**117.46**		**0.03**		**118.18**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.03	0.03	0.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00		52.40		0.00		52.47
Total	**0.03**	**0.03**	**0.34**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**		**52.40**		**0.00**		**52.47**

3.7 Existing Billboard removal - 2012

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					0.00	0.00	0.00	0.00	0.00	0.00						0.00
Off-Road	0.88	8.55	2.48	0.01		0.31	0.31		0.31	0.31		895.64		0.08		897.30
Total	**0.88**	**8.55**	**2.48**	**0.01**	**0.00**	**0.31**	**0.31**	**0.00**	**0.31**	**0.31**		**895.64**		**0.08**		**897.30**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.01	0.22	0.13	0.00	0.02	0.01	0.02	0.00	0.01	0.01		44.57		0.00		44.59
Worker	0.09	0.09	1.02	0.00	0.18	0.01	0.19	0.01	0.01	0.01		157.20		0.01		157.41
Total	**0.10**	**0.31**	**1.15**	**0.00**	**0.20**	**0.02**	**0.21**	**0.01**	**0.02**	**0.02**		**201.77**		**0.01**		**202.00**

3.7 Existing Billboard removal - 2012

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					0.00	0.00	0.00	0.00	0.00	0.00						0.00
Off-Road	0.88	8.55	2.48	0.01		0.31	0.31		0.31	0.31	0.00	895.64		0.08		897.30
Total	**0.88**	**8.55**	**2.48**	**0.01**	**0.00**	**0.31**	**0.31**	**0.00**	**0.31**	**0.31**	**0.00**	**895.64**		**0.08**		**897.30**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.01	0.22	0.13	0.00	0.00	0.01	0.01	0.00	0.01	0.01		44.57		0.00		44.59
Worker	0.09	0.09	1.02	0.00	0.01	0.01	0.01	0.01	0.01	0.01		157.20		0.01		157.41
Total	**0.10**	**0.31**	**1.15**	**0.00**	**0.01**	**0.02**	**0.02**	**0.01**	**0.02**	**0.02**		**201.77**		**0.01**		**202.00**

3.8 Supergraphics - Sign installation - 2012

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					0.00	0.00	0.00	0.00	0.00	0.00						0.00
Off-Road	1.76	17.11	4.95	0.02		0.62	0.62		0.62	0.62		1,791.28		0.16		1,794.59
Total	**1.76**	**17.11**	**4.95**	**0.02**	**0.00**	**0.62**	**0.62**	**0.00**	**0.62**	**0.62**		**1,791.28**		**0.16**		**1,794.59**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.01	0.22	0.13	0.00	0.02	0.01	0.02	0.00	0.01	0.01		44.57		0.00		44.59
Worker	0.04	0.04	0.51	0.00	0.09	0.00	0.10	0.00	0.00	0.01		78.60		0.00		78.70
Total	**0.05**	**0.26**	**0.64**	**0.00**	**0.11**	**0.01**	**0.12**	**0.00**	**0.01**	**0.02**		**123.17**		**0.00**		**123.29**

3.8 Supergraphics - Sign installation - 2012

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					0.00	0.00	0.00	0.00	0.00	0.00						0.00
Off-Road	1.76	17.11	4.95	0.02		0.62	0.62		0.62	0.62	0.00	1,791.28		0.16		1,794.59
Total	**1.76**	**17.11**	**4.95**	**0.02**	**0.00**	**0.62**	**0.62**	**0.00**	**0.62**	**0.62**	**0.00**	**1,791.28**		**0.16**		**1,794.59**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.01	0.22	0.13	0.00	0.00	0.01	0.01	0.00	0.01	0.01		44.57		0.00		44.59
Worker	0.04	0.04	0.51	0.00	0.00	0.00	0.01	0.00	0.00	0.01		78.60		0.00		78.70
Total	**0.05**	**0.26**	**0.64**	**0.00**	**0.00**	**0.01**	**0.02**	**0.00**	**0.01**	**0.02**		**123.17**		**0.00**		**123.29**

4.0 Mobile Detail

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	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
Unmitigated	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
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %		
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
Industrial Park	8.90	13.30	7.40	59.00	28.00	13.00

5.0 Energy Detail

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	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
NaturalGas Unmitigated	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	lb/day										lb/day					
Industrial Park	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Total		**0.00**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**0.00**		**0.00**	**0.00**	**0.00**

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	lb/day										lb/day					
Industrial Park	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Total		**0.00**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**0.00**		**0.00**	**0.00**	**0.00**

6.0 Area Detail

6.1 Mitigation Measures Area

	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	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Unmitigated	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	0.00					0.00	0.00		0.00	0.00						0.00
Consumer Products	0.00					0.00	0.00		0.00	0.00						0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Total	**0.00**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**0.00**		**0.00**		**0.00**

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	0.00					0.00	0.00		0.00	0.00						0.00
Consumer Products	0.00					0.00	0.00		0.00	0.00						0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Total	**0.00**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**0.00**		**0.00**		**0.00**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Vegetation

LAX Sign District

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Industrial Park	0	1000sqft

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Utility Company**	Los Angeles Department of Water & Power
Climate Zone	11	**Precipitation Freq (Days)**	33		

1.3 User Entered Comments

Project Characteristics - 2013 used as operational year to be later than construction year (2012).

Land Use - Land use type only used as a proxy - type will not be used in calculations.

Construction Phase - Phase type is used as proxy because project-specific equipment will be used. Start/end dates estimated based on when Initial Study was completed. Phases overlapped to the maximum extent feasible.

Off-road Equipment - Default equipment set to zero; remaining equipment based on project description.

Off-road Equipment - Default equipment entered as zero to prevent overwriting issues; other equipment based on project description.

Off-road Equipment - Default eqiupment set to zero; remaining equipment based on project description

Off-road Equipment - Default equipment set to zero; other equipment based on project description

Off-road Equipment - Default equipment set to zero; remaining equipment based on project description.

Off-road Equipment - Defaults entered as zero to prevent overwriting issues; remaining equipment based on project description

Off-road Equipment - Default equipment set to zero; remaining equipment based on project description

Trips and VMT - Vendor trips (MHDT) = pickup trucks and flatbed trucks. Trips estimated from project description (workers x 2 for number of trips).

Grading - No land would be disturbed; acreage set to zero.

Vehicle Trips - No daily operational emissions.

Energy Use -

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					
2012	4.59	20.57	16.28	0.03	0.75	1.23	1.98	0.03	1.23	1.26	0.00	2,750.22	0.00	0.41	0.00	2,758.89
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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					
2012	4.59	20.57	16.28	0.03	0.03	1.23	1.26	0.03	1.23	1.26	0.00	2,750.22	0.00	0.41	0.00	2,758.89
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Energy	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Mobile	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
Total	**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**

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	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Energy	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Mobile	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
Total	**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

3.1 Mitigation Measures Construction

3.2 Digital Displays - 2012

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					0.00	0.00	0.00	0.00	0.00	0.00						0.00
Off-Road	1.02	3.05	2.88	0.00		0.27	0.27		0.27	0.27		313.23		0.09		315.16
Total	**1.02**	**3.05**	**2.88**	**0.00**	**0.00**	**0.27**	**0.27**	**0.00**	**0.27**	**0.27**		**313.23**		**0.09**		**315.16**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.03	0.47	0.27	0.00	0.04	0.01	0.05	0.00	0.01	0.01		89.14		0.00		89.17
Worker	0.06	0.07	0.65	0.00	0.12	0.00	0.13	0.00	0.00	0.01		97.10		0.01		97.23
Total	**0.09**	**0.54**	**0.92**	**0.00**	**0.16**	**0.01**	**0.18**	**0.00**	**0.01**	**0.02**		**186.24**		**0.01**		**186.40**

3.2 Digital Displays - 2012

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					0.00	0.00	0.00	0.00	0.00	0.00						0.00
Off-Road	1.02	3.05	2.88	0.00		0.27	0.27		0.27	0.27	0.00	313.23		0.09		315.16
Total	**1.02**	**3.05**	**2.88**	**0.00**	**0.00**	**0.27**	**0.27**	**0.00**	**0.27**	**0.27**	**0.00**	**313.23**		**0.09**		**315.16**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.03	0.47	0.27	0.00	0.00	0.01	0.01	0.00	0.01	0.01		89.14		0.00		89.17
Worker	0.06	0.07	0.65	0.00	0.00	0.00	0.01	0.00	0.00	0.01		97.10		0.01		97.23
Total	**0.09**	**0.54**	**0.92**	**0.00**	**0.00**	**0.01**	**0.02**	**0.00**	**0.01**	**0.02**		**186.24**		**0.01**		**186.40**

3.3 Supergraphics - Frame installation - 2012

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					0.00	0.00	0.00	0.00	0.00	0.00						0.00
Off-Road	1.13	3.77	3.48	0.01		0.29	0.29		0.29	0.29		411.77		0.10		413.91
Total	**1.13**	**3.77**	**3.48**	**0.01**	**0.00**	**0.29**	**0.29**	**0.00**	**0.29**	**0.29**		**411.77**		**0.10**		**413.91**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.01	0.24	0.14	0.00	0.02	0.01	0.02	0.00	0.01	0.01		44.57		0.00		44.59
Worker	0.08	0.08	0.81	0.00	0.15	0.01	0.16	0.01	0.01	0.01		121.37		0.01		121.54
Total	**0.09**	**0.32**	**0.95**	**0.00**	**0.17**	**0.02**	**0.18**	**0.01**	**0.02**	**0.02**		**165.94**		**0.01**		**166.13**

3.3 Supergraphics - Frame installation - 2012

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					0.00	0.00	0.00	0.00	0.00	0.00						0.00
Off-Road	1.13	3.77	3.48	0.01		0.29	0.29		0.29	0.29	0.00	411.77		0.10		413.91
Total	**1.13**	**3.77**	**3.48**	**0.01**	**0.00**	**0.29**	**0.29**	**0.00**	**0.29**	**0.29**	**0.00**	**411.77**		**0.10**		**413.91**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.01	0.24	0.14	0.00	0.00	0.01	0.01	0.00	0.01	0.01		44.57		0.00		44.59
Worker	0.08	0.08	0.81	0.00	0.01	0.01	0.01	0.01	0.01	0.01		121.37		0.01		121.54
Total	**0.09**	**0.32**	**0.95**	**0.00**	**0.01**	**0.02**	**0.02**	**0.01**	**0.02**	**0.02**		**165.94**		**0.01**		**166.13**

3.4 Column Wrap - 2012

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					0.00	0.00	0.00	0.00	0.00	0.00						0.00
Off-Road	0.38	1.14	1.08	0.00		0.10	0.10		0.10	0.10		117.46		0.03		118.18
Total	**0.38**	**1.14**	**1.08**	**0.00**	**0.00**	**0.10**	**0.10**	**0.00**	**0.10**	**0.10**		**117.46**		**0.03**		**118.18**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.01	0.24	0.14	0.00	0.02	0.01	0.02	0.00	0.01	0.01		44.57		0.00		44.59
Worker	0.03	0.03	0.32	0.00	0.06	0.00	0.06	0.00	0.00	0.00		48.55		0.00		48.62
Total	**0.04**	**0.27**	**0.46**	**0.00**	**0.08**	**0.01**	**0.08**	**0.00**	**0.01**	**0.01**		**93.12**		**0.00**		**93.21**

3.4 Column Wrap - 2012

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					0.00	0.00	0.00	0.00	0.00	0.00						0.00
Off-Road	0.38	1.14	1.08	0.00		0.10	0.10		0.10	0.10	0.00	117.46		0.03		118.18
Total	**0.38**	**1.14**	**1.08**	**0.00**	**0.00**	**0.10**	**0.10**	**0.00**	**0.10**	**0.10**	**0.00**	**117.46**		**0.03**		**118.18**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.01	0.24	0.14	0.00	0.00	0.01	0.01	0.00	0.01	0.01		44.57		0.00		44.59
Worker	0.03	0.03	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00		48.55		0.00		48.62
Total	**0.04**	**0.27**	**0.46**	**0.00**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**		**93.12**		**0.00**		**93.21**

3.5 Passenger Boarding Bridge - 2012

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					0.00	0.00	0.00	0.00	0.00	0.00						0.00
Off-Road	0.38	1.14	1.08	0.00		0.10	0.10		0.10	0.10		117.46		0.03		118.18
Total	**0.38**	**1.14**	**1.08**	**0.00**	**0.00**	**0.10**	**0.10**	**0.00**	**0.10**	**0.10**		**117.46**		**0.03**		**118.18**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.01	0.24	0.14	0.00	0.02	0.01	0.02	0.00	0.01	0.01		44.57		0.00		44.59
Worker	0.03	0.03	0.32	0.00	0.06	0.00	0.06	0.00	0.00	0.00		48.55		0.00		48.62
Total	**0.04**	**0.27**	**0.46**	**0.00**	**0.08**	**0.01**	**0.08**	**0.00**	**0.01**	**0.01**		**93.12**		**0.00**		**93.21**

3.5 Passenger Boarding Bridge - 2012

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					0.00	0.00	0.00	0.00	0.00	0.00						0.00
Off-Road	0.38	1.14	1.08	0.00		0.10	0.10		0.10	0.10	0.00	117.46		0.03		118.18
Total	**0.38**	**1.14**	**1.08**	**0.00**	**0.00**	**0.10**	**0.10**	**0.00**	**0.10**	**0.10**	**0.00**	**117.46**		**0.03**		**118.18**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.01	0.24	0.14	0.00	0.00	0.01	0.01	0.00	0.01	0.01		44.57		0.00		44.59
Worker	0.03	0.03	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00		48.55		0.00		48.62
Total	**0.04**	**0.27**	**0.46**	**0.00**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**		**93.12**		**0.00**		**93.21**

3.6 Hanging Signs - 2012

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					0.00	0.00	0.00	0.00	0.00	0.00						0.00
Off-Road	0.38	1.14	1.08	0.00		0.10	0.10		0.10	0.10		117.46		0.03		118.18
Total	**0.38**	**1.14**	**1.08**	**0.00**	**0.00**	**0.10**	**0.10**	**0.00**	**0.10**	**0.10**		**117.46**		**0.03**		**118.18**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.03	0.03	0.32	0.00	0.06	0.00	0.06	0.00	0.00	0.00		48.55		0.00		48.62
Total	**0.03**	**0.03**	**0.32**	**0.00**	**0.06**	**0.00**	**0.06**	**0.00**	**0.00**	**0.00**		**48.55**		**0.00**		**48.62**

3.6 Hanging Signs - 2012

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					0.00	0.00	0.00	0.00	0.00	0.00						0.00
Off-Road	0.38	1.14	1.08	0.00		0.10	0.10		0.10	0.10	0.00	117.46		0.03		118.18
Total	**0.38**	**1.14**	**1.08**	**0.00**	**0.00**	**0.10**	**0.10**	**0.00**	**0.10**	**0.10**	**0.00**	**117.46**		**0.03**		**118.18**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.03	0.03	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00		48.55		0.00		48.62
Total	**0.03**	**0.03**	**0.32**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**		**48.55**		**0.00**		**48.62**

3.7 Existing Billboard removal - 2012

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					0.00	0.00	0.00	0.00	0.00	0.00						0.00
Off-Road	0.88	8.55	2.48	0.01		0.31	0.31		0.31	0.31		895.64		0.08		897.30
Total	**0.88**	**8.55**	**2.48**	**0.01**	**0.00**	**0.31**	**0.31**	**0.00**	**0.31**	**0.31**		**895.64**		**0.08**		**897.30**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.01	0.24	0.14	0.00	0.02	0.01	0.02	0.00	0.01	0.01		44.57		0.00		44.59
Worker	0.10	0.10	0.97	0.00	0.18	0.01	0.19	0.01	0.01	0.01		145.65		0.01		145.85
Total	**0.11**	**0.34**	**1.11**	**0.00**	**0.20**	**0.02**	**0.21**	**0.01**	**0.02**	**0.02**		**190.22**		**0.01**		**190.44**

3.7 Existing Billboard removal - 2012

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					0.00	0.00	0.00	0.00	0.00	0.00						0.00
Off-Road	0.88	8.55	2.48	0.01		0.31	0.31		0.31	0.31	0.00	895.64		0.08		897.30
Total	**0.88**	**8.55**	**2.48**	**0.01**	**0.00**	**0.31**	**0.31**	**0.00**	**0.31**	**0.31**	**0.00**	**895.64**		**0.08**		**897.30**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.01	0.24	0.14	0.00	0.00	0.01	0.01	0.00	0.01	0.01		44.57		0.00		44.59
Worker	0.10	0.10	0.97	0.00	0.01	0.01	0.01	0.01	0.01	0.01		145.65		0.01		145.85
Total	**0.11**	**0.34**	**1.11**	**0.00**	**0.01**	**0.02**	**0.02**	**0.01**	**0.02**	**0.02**		**190.22**		**0.01**		**190.44**

3.8 Supergraphics - Sign installation - 2012

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					0.00	0.00	0.00	0.00	0.00	0.00						0.00
Off-Road	1.76	17.11	4.95	0.02		0.62	0.62		0.62	0.62		1,791.28		0.16		1,794.59
Total	**1.76**	**17.11**	**4.95**	**0.02**	**0.00**	**0.62**	**0.62**	**0.00**	**0.62**	**0.62**		**1,791.28**		**0.16**		**1,794.59**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.01	0.24	0.14	0.00	0.02	0.01	0.02	0.00	0.01	0.01		44.57		0.00		44.59
Worker	0.05	0.05	0.48	0.00	0.09	0.00	0.10	0.00	0.00	0.01		72.82		0.00		72.92
Total	**0.06**	**0.29**	**0.62**	**0.00**	**0.11**	**0.01**	**0.12**	**0.00**	**0.01**	**0.02**		**117.39**		**0.00**		**117.51**

3.8 Supergraphics - Sign installation - 2012

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					0.00	0.00	0.00	0.00	0.00	0.00						0.00
Off-Road	1.76	17.11	4.95	0.02		0.62	0.62		0.62	0.62	0.00	1,791.28		0.16		1,794.59
Total	**1.76**	**17.11**	**4.95**	**0.02**	**0.00**	**0.62**	**0.62**	**0.00**	**0.62**	**0.62**	**0.00**	**1,791.28**		**0.16**		**1,794.59**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.01	0.24	0.14	0.00	0.00	0.01	0.01	0.00	0.01	0.01		44.57		0.00		44.59
Worker	0.05	0.05	0.48	0.00	0.00	0.00	0.01	0.00	0.00	0.01		72.82		0.00		72.92
Total	**0.06**	**0.29**	**0.62**	**0.00**	**0.00**	**0.01**	**0.02**	**0.00**	**0.01**	**0.02**		**117.39**		**0.00**		**117.51**

4.0 Mobile Detail

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	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
Unmitigated	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
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %		
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
Industrial Park	8.90	13.30	7.40	59.00	28.00	13.00

5.0 Energy Detail

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	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
NaturalGas Unmitigated	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	lb/day										lb/day					
Industrial Park	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Total		**0.00**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**0.00**		**0.00**	**0.00**	**0.00**

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	lb/day										lb/day					
Industrial Park	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Total		**0.00**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**0.00**		**0.00**	**0.00**	**0.00**

6.0 Area Detail

6.1 Mitigation Measures Area

	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	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Unmitigated	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	0.00					0.00	0.00		0.00	0.00						0.00
Consumer Products	0.00					0.00	0.00		0.00	0.00						0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Total	**0.00**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**0.00**		**0.00**		**0.00**

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	0.00					0.00	0.00		0.00	0.00						0.00
Consumer Products	0.00					0.00	0.00		0.00	0.00						0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Total	**0.00**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**0.00**		**0.00**		**0.00**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Vegetation

LAX Signs District

Phase	Equipment	Quantity	Notes	OFFROAD	Workers	Trucks
Digital Displays	Cherry Pickers	2		Aerial Lifts	8	4
	Pickup trucks	2				
Supergraphics	Lifts	2	Frame Installation	Aerial Lifts	10	2
	Portable lighting	1	Frame Installation	Signal Boards		
	Portable arrowboard	1	Frame Installation	Signal Boards		
	Flatbed truck	1	Sign delivery			
	Cranes	2	Sign installation	Cranes	6	2
	Pickup trucks	1	Sign installation			
Column Wrap	Lifts	1		Aerial Lifts	4	2
	Pickup trucks	1				
Passenger Boarding	Lifts	1		Aerial Lifts	4	2
	Pickup trucks	1				
Hanging Signs	Lifts	1		Aerial Lifts	4	
Existing Billboard Re	Cranes	1		Cranes	12	2
	Flatbed truck	1				

Notes:

Digital Displays

2 days
8 hrs/day
4 workers

Supergraphics (Frame Installation)

1 week
40 hours
5 workers

Supergraphics (Sign Installation)

3 workers

Column Wrap

2 workers
6 hours

Passenger Boarding Bridge

2 workers
6 hours

Hanging Signs

2 workers
6 hours

Existing Billboard Removal

2 days
8 hrs/day
6 workers

Highest (Most Conservative) EMFAC2007 (version 2.3)
Emission Factors for On-Road Heavy-Heavy-Duty Diesel Trucks

Projects in the SCAQMD (Scenario Years 2007 - 2026)

Derived from Peak Emissions Inventory (**Winter**, **Annual**, **Summer**)

Vehicle Class:

Heavy-Heavy-Duty Diesel Trucks (33,001 to 60,000 pounds)

The following emission factors were compiled by running the California Air Resources Board's EMFAC2007 (version 2.3) Burden Model and extracting the **Heavy-Heavy-Duty Diesel Truck (HHDT)** Emission Factors.

These emission factors can be used to calculate on-road mobile source emissions for the vehicle/emission categories listed in the tables below, by use of the following equation:

Emissions (pounds per day) = N x TL x EF

where N = number of trips, TL = trip length (miles/day), and EF = emission factor (pounds per mile)

The **HHDT-DSL** vehicle/emission category accounts for all emissions from heavy-heavy-duty diesel trucks, including start, running and idling exhaust. In addition, ROG emission factors account for diurnal, hot soak, running and resting emissions, and the PM10 & PM2.5 emission factors account for tire and brake wear.

The **HHDT-DSL, Exh** vehicle/emission category includes only the exhaust portion of PM10 & PM2.5 emissions from heavy-heavy-duty diesel trucks.

Scenario Year: **2007**

All model years in the range 1965 to 2007

HHDT-DSL (pounds/mile)	
CO	0.01446237
NOx	0.04718166
ROG	0.00372949
SOx	0.00003962
PM10	0.00230900
PM2.5	0.00204018
CO2	4.22184493

HHDT-DSL, Exh (pounds/mile)	
PM10	0.00216752
PM2.5	0.00199491

Scenario Year: **2008**

All model years in the range 1965 to 2008

HHDT-DSL (pounds/mile)	
CO	0.01361368
NOx	0.04458017
ROG	0.00351579
SOx	0.00004136
PM10	0.00215635
PM2.5	0.00189990
CO2	4.21067145
CH4	0.00016269

HHDT-DSL, Exh (pounds/mile)	
PM10	0.00201296
PM2.5	0.00185303

Scenario Year: **2009**

All model years in the range 1965 to 2009

HHDT-DSL (pounds/mile)	
CO	0.01282236
NOx	0.04184591
ROG	0.00329320
SOx	0.00004013
PM10	0.00199572
PM2.5	0.00175227
CO2	4.21080792
CH4	0.00015249

HHDT-DSL, Exh (pounds/mile)	
PM10	0.00185393
PM2.5	0.00170680

Scenario Year: **2010**

All model years in the range 1966 to 2010

HHDT-DSL (pounds/mile)	
CO	0.01195456
NOx	0.03822102
ROG	0.00304157
SOx	0.00004131
PM10	0.00183062
PM2.5	0.00160083
CO2	4.21120578
CH4	0.00014201

HHDT-DSL, Exh (pounds/mile)	
PM10	0.00168861
PM2.5	0.00155435

Highest (Most Conservative) EMFAC2007 (version 2.3)
Emission Factors for On-Road Heavy-Heavy-Duty Diesel Trucks

Projects in the SCAQMD (Scenario Years 2007 - 2026)

Derived from Peak Emissions Inventory (**Winter**, **Annual**, **Summer**)

Vehicle Class:
Heavy-Heavy-Duty Diesel Trucks (33,001 to 60,000 pounds)

Scenario Year: **2011**
All model years in the range 1967 to 2011

HHDT-DSL (pounds/mile)	
CO	**0.01112463**
NOx	**0.03455809**
ROG	**0.00279543**
SOx	**0.00003972**
PM10	**0.00166087**
PM2.5	**0.00144489**
CO2	**4.22045680**
CH4	**0.00012910**

HHDT-DSL, Exh (pounds/mile)	
PM10	**0.00151936**
PM2.5	**0.00139772**

Scenario Year: **2012**
All model years in the range 1968 to 2012

HHDT-DSL (pounds/mile)	
CO	**0.01021519**
NOx	**0.03092379**
ROG	**0.00252764**
SOx	**0.00004042**
PM10	**0.00149566**
PM2.5	**0.00129354**
CO2	**4.21590774**
CH4	**0.00011651**

HHDT-DSL, Exh (pounds/mile)	
PM10	**0.00135537**
PM2.5	**0.00124837**

Scenario Year: **2013**
All model years in the range 1969 to 2013

HHDT-DSL (pounds/mile)	
CO	**0.00931790**
NOx	**0.02742935**
ROG	**0.00226308**
SOx	**0.00004086**
PM10	**0.00133697**
PM2.5	**0.00114629**
CO2	**4.21518556**
CH4	**0.00010441**

HHDT-DSL, Exh (pounds/mile)	
PM10	**0.00119623**
PM2.5	**0.00109863**

Scenario Year: **2014**
All model years in the range 1970 to 2014

HHDT-DSL (pounds/mile)	
CO	**0.00846435**
NOx	**0.02418049**
ROG	**0.00201594**
SOx	**0.00004092**
PM10	**0.00118458**
PM2.5	**0.00100582**
CO2	**4.21279345**
CH4	**0.00009261**

HHDT-DSL, Exh (pounds/mile)	
PM10	**0.00104243**
PM2.5	**0.00096059**

Scenario Year: **2015**
All model years in the range 1971 to 2015

HHDT-DSL (pounds/mile)	
CO	**0.00766891**
NOx	**0.02122678**
ROG	**0.00178608**
SOx	**0.00004082**
PM10	**0.00104715**
PM2.5	**0.00087977**
CO2	**4.20902225**
CH4	**0.00008369**

HHDT-DSL, Exh (pounds/mile)	
PM10	**0.00090631**
PM2.5	**0.00083282**

Scenario Year: **2016**
All model years in the range 1972 to 2016

HHDT-DSL (pounds/mile)	
CO	**0.00704604**
NOx	**0.01887374**
ROG	**0.00161035**
SOx	**0.00003952**
PM10	**0.00094448**
PM2.5	**0.00078443**
CO2	**4.21063031**
CH4	**0.00007508**

HHDT-DSL, Exh (pounds/mile)	
PM10	**0.00080419**
PM2.5	**0.00073898**

Highest (Most Conservative) EMFAC2007 (version 2.3)
Emission Factors for On-Road Heavy-Heavy-Duty Diesel Trucks

Projects in the SCAQMD (Scenario Years 2007 - 2026)

Derived from Peak Emissions Inventory (**Winter**, **Annual**, **Summer**)

Vehicle Class:
Heavy-Heavy-Duty Diesel Trucks (33,001 to 60,000 pounds)

Scenario Year: **2017**
All model years in the range 1973 to 2017

HHDT-DSL (pounds/mile)	
CO	**0.00650533**
NOx	**0.01690387**
ROG	**0.00145203**
SOx	**0.00004033**
PM10	**0.00084894**
PM2.5	**0.00069721**
CO2	**4.20820129**
CH4	**0.00006722**

HHDT-DSL, Exh (pounds/mile)	
PM10	**0.00070873**
PM2.5	**0.00065111**

Scenario Year: **2018**
All model years in the range 1974 to 2018

HHDT-DSL (pounds/mile)	
CO	**0.00604721**
NOx	**0.01526414**
ROG	**0.00131697**
SOx	**0.00003934**
PM10	**0.00076808**
PM2.5	**0.00062383**
CO2	**4.20756838**
CH4	**0.00006182**

HHDT-DSL, Exh (pounds/mile)	
PM10	**0.00062758**
PM2.5	**0.00057700**

Scenario Year: **2019**
All model years in the range 1975 to 2019

HHDT-DSL (pounds/mile)	
CO	**0.00565433**
NOx	**0.01389113**
ROG	**0.00120235**
SOx	**0.00004032**
PM10	**0.00070198**
PM2.5	**0.00056085**
CO2	**4.20637830**
CH4	**0.00005499**

HHDT-DSL, Exh (pounds/mile)	
PM10	**0.00056085**
PM2.5	**0.00051320**

Scenario Year: **2020**
All model years in the range 1976 to 2020

HHDT-DSL (pounds/mile)	
CO	**0.00532242**
NOx	**0.01274755**
ROG	**0.00110621**
SOx	**0.00003957**
PM10	**0.00064574**
PM2.5	**0.00050904**
CO2	**4.20541416**
CH4	**0.00005216**

HHDT-DSL, Exh (pounds/mile)	
PM10	**0.00050364**
PM2.5	**0.00046227**

Scenario Year: **2021**
All model years in the range 1977 to 2021

HHDT-DSL (pounds/mile)	
CO	**0.00503726**
NOx	**0.01179977**
ROG	**0.00103095**
SOx	**0.00004033**
PM10	**0.00059437**
PM2.5	**0.00046287**
CO2	**4.21495573**
CH4	**0.00004734**

HHDT-DSL, Exh (pounds/mile)	
PM10	**0.00045411**
PM2.5	**0.00041729**

Scenario Year: **2022**
All model years in the range 1978 to 2022

HHDT-DSL (pounds/mile)	
CO	**0.00478830**
NOx	**0.01098794**
ROG	**0.00096142**
SOx	**0.00004106**
PM10	**0.00055427**
PM2.5	**0.00042597**
CO2	**4.21520828**
CH4	**0.00004448**

HHDT-DSL, Exh (pounds/mile)	
PM10	**0.00041399**
PM2.5	**0.00037807**

Highest (Most Conservative) EMFAC2007 (version 2.3)
Emission Factors for On-Road Heavy-Heavy-Duty Diesel Trucks

Projects in the SCAQMD (Scenario Years 2007 - 2026)
Derived from Peak Emissions Inventory (**Winter**, **Annual**, **Summer**)

Vehicle Class:
Heavy-Heavy-Duty Diesel Trucks (33,001 to 60,000 pounds)

Scenario Year: **2023**

All model years in the range 1979 to 2023

HHDT-DSL (pounds/mile)	
CO	0.00457902
NOx	0.01031407
ROG	0.00090210
SOx	0.00004009
PM10	0.00052122
PM2.5	0.00039592
CO2	4.21483461
CH4	0.00004176

HHDT-DSL, Exh (pounds/mile)	
PM10	0.00037922
PM2.5	0.00034915

Scenario Year: **2024**

All model years in the range 1980 to 2024

HHDT-DSL (pounds/mile)	
CO	0.00444444
NOx	0.00974372
ROG	0.00084009
SOx	0.00003930
PM10	0.00050766
PM2.5	0.00038320
CO2	4.19552935
CH4	0.00003930

HHDT-DSL, Exh (pounds/mile)	
PM10	0.00036682
PM2.5	0.00033735

Scenario Year: **2025**

All model years in the range 1981 to 2025

HHDT-DSL (pounds/mile)	
CO	0.00431086
NOx	0.00932573
ROG	0.00080206
SOx	0.00004018
PM10	0.00048541
PM2.5	0.00036326
CO2	4.19512979
CH4	0.00003697

HHDT-DSL, Exh (pounds/mile)	
PM10	0.00034397
PM2.5	0.00031664

Scenario Year: **2026**

All model years in the range 1982 to 2026

HHDT-DSL (pounds/mile)	
CO	0.00420297
NOx	0.00898990
ROG	0.00077178
SOx	0.00003946
PM10	0.00046717
PM2.5	0.00034564
CO2	4.19349747
CH4	0.00003630

HHDT-DSL, Exh (pounds/mile)	
PM10	0.00032670
PM2.5	0.00029830

Source:

http://www.aqmd.gov/ceqa/handbook/onroad/onroadEFHHDT07_26.xls

Highest (Most Conservative) EMFAC2007 (version 2.3)
Emission Factors for On-Road Passenger Vehicles & Delivery Trucks

Projects in the SCAQMD (Scenario Years 2007 - 2026)

Derived from Peak Emissions Inventory (**Winter**, **Annual**, **Summer**)

Vehicle Class:

Passenger Vehicles (<8500 pounds) & Delivery Trucks (>8500 pounds)

The following emission factors were compiled by running the California Air Resources Board's EMFAC2007 (version 2.3) Burden Model, taking the weighted average of vehicle types and simplifying into two categories: **Passenger Vehicles & Delivery Trucks.**

These emission factors can be used to calculate on-road mobile source emissions for the vehicle categories listed in the tables below, by use of the following equation:

Emissions (pounds per day) = N x TL x EF

where N = number of trips, TL = trip length (miles/day), and EF = emission factor (pounds per mile)

This methodology replaces the old EMFAC emission factors in Tables A-9-5-J-1 through A-9-5-L in Appendix A9 of the current SCAQMD CEQA Handbook. All the emission factors account for the emissions from start, running and idling exhaust. In addition, the ROG emission factors include diurnal, hot soak, running and resting emissions, and the PM10 & PM2.5 emission factors include tire and brake wear.

Scenario Year: **2007**

All model years in the range 1965 to 2007

Passenger Vehicles (pounds/mile)		Delivery Trucks (pounds/mile)	
CO	**0.01155158**	CO	**0.02407553**
NOx	**0.00121328**	NOx	**0.02508445**
ROG	**0.00118234**	ROG	**0.00323145**
SOx	**0.00001078**	SOx	**0.00002626**
PM10	**0.00008447**	PM10	**0.00091020**
PM2.5	**0.00005243**	PM2.5	**0.00078884**
CO2	**1.10672236**	CO2	**2.72245619**
CH4	**0.00010306**	CH4	**0.00016030**

Scenario Year: **2008**

All model years in the range 1965 to 2008

Passenger Vehicles (pounds/mile)		Delivery Trucks (pounds/mile)	
CO	**0.01054844**	CO	**0.02194915**
NOx	**0.00110288**	NOx	**0.02371258**
ROG	**0.00107919**	ROG	**0.00299270**
SOx	**0.00001075**	SOx	**0.00002565**
PM10	**0.00008505**	PM10	**0.00085607**
PM2.5	**0.00005293**	PM2.5	**0.00073933**
CO2	**1.09953226**	CO2	**2.71943400**
CH4	**0.00009465**	CH4	**0.00014769**

Scenario Year: **2009**

All model years in the range 1965 to 2009

Passenger Vehicles (pounds/mile)		Delivery Trucks (pounds/mile)	
CO	**0.00968562**	CO	**0.02016075**
NOx	**0.00100518**	NOx	**0.02236636**
ROG	**0.00099245**	ROG	**0.00278899**
SOx	**0.00001066**	SOx	**0.00002679**
PM10	**0.00008601**	PM10	**0.00080550**
PM2.5	**0.00005384**	PM2.5	**0.00069228**
CO2	**1.09755398**	CO2	**2.72330496**
CH4	**0.00008767**	CH4	**0.00013655**

Scenario Year: **2010**

All model years in the range 1966 to 2010

Passenger Vehicles (pounds/mile)		Delivery Trucks (pounds/mile)	
CO	**0.00826276**	CO	**0.01843765**
NOx	**0.00091814**	NOx	**0.02062460**
ROG	**0.00091399**	ROG	**0.00258958**
SOx	**0.00001077**	SOx	**0.00002701**
PM10	**0.00008698**	PM10	**0.00075121**
PM2.5	**0.00005478**	PM2.5	**0.00064233**
CO2	**1.09568235**	CO2	**2.73222199**
CH4	**0.00008146**	CH4	**0.00012576**

Highest (Most Conservative) EMFAC2007 (version 2.3)
Emission Factors for On-Road Passenger Vehicles & Delivery Trucks

Projects in the SCAQMD (Scenario Years 2007 - 2026)
Derived from Peak Emissions Inventory (**Winter**, **Annual**, **Summer**)

Vehicle Class:
Passenger Vehicles (<8500 pounds) & Delivery Trucks (>8500 pounds)

Scenario Year: **2011**
All model years in the range 1967 to 2011

	Passenger Vehicles (pounds/mile)		Delivery Trucks (pounds/mile)
CO	**0.00826276**	CO	**0.01693242**
NOx	**0.00084460**	NOx	**0.01893366**
ROG	**0.00085233**	ROG	**0.00241868**
SOx	**0.00001077**	SOx	**0.00002728**
PM10	**0.00008879**	PM10	**0.00070097**
PM2.5	**0.00005653**	PM2.5	**0.00059682**
CO2	**1.10235154**	CO2	**2.75180822**
CH4	**0.00007678**	CH4	**0.00011655**

Scenario Year: **2012**
All model years in the range 1968 to 2012

	Passenger Vehicles (pounds/mile)		Delivery Trucks (pounds/mile)
CO	**0.00765475**	CO	**0.01545741**
NOx	**0.00077583**	NOx	**0.01732423**
ROG	**0.00079628**	ROG	**0.00223776**
SOx	**0.00001073**	SOx	**0.00002667**
PM10	**0.00008979**	PM10	**0.00064975**
PM2.5	**0.00005750**	PM2.5	**0.00054954**
CO2	**1.10152540**	CO2	**2.76628414**
CH4	**0.00007169**	CH4	**0.00010668**

Scenario Year: **2013**
All model years in the range 1969 to 2013

	Passenger Vehicles (pounds/mile)		Delivery Trucks (pounds/mile)
CO	**0.00709228**	CO	**0.01407778**
NOx	**0.00071158**	NOx	**0.01577311**
ROG	**0.00074567**	ROG	**0.00206295**
SOx	**0.00001072**	SOx	**0.00002682**
PM10	**0.00009067**	PM10	**0.00059956**
PM2.5	**0.00005834**	PM2.5	**0.00050174**
CO2	**1.10087435**	CO2	**2.78163459**
CH4	**0.00006707**	CH4	**0.00009703**

Scenario Year: **2014**
All model years in the range 1970 to 2014

	Passenger Vehicles (pounds/mile)		Delivery Trucks (pounds/mile)
CO	**0.00660353**	CO	**0.01284321**
NOx	**0.00065484**	NOx	**0.01425162**
ROG	**0.00070227**	ROG	**0.00189649**
SOx	**0.00001069**	SOx	**0.00002754**
PM10	**0.00009185**	PM10	**0.00054929**
PM2.5	**0.00005939**	PM2.5	**0.00045519**
CO2	**1.10257205**	CO2	**2.79845465**
CH4	**0.00006312**	CH4	**0.00008798**

Scenario Year: **2015**
All model years in the range 1971 to 2015

	Passenger Vehicles (pounds/mile)		Delivery Trucks (pounds/mile)
CO	**0.00614108**	CO	**0.01169445**
NOx	**0.00060188**	NOx	**0.01285026**
ROG	**0.00066355**	ROG	**0.00173890**
SOx	**0.00001070**	SOx	**0.00002741**
PM10	**0.00009259**	PM10	**0.00050307**
PM2.5	**0.00006015**	PM2.5	**0.00041268**
CO2	**1.10192837**	CO2	**2.81247685**
CH4	**0.00005923**	CH4	**0.00008076**

Scenario Year: **2016**
All model years in the range 1972 to 2016

	Passenger Vehicles (pounds/mile)		Delivery Trucks (pounds/mile)
CO	**0.00575800**	CO	**0.01080542**
NOx	**0.00055658**	NOx	**0.01172881**
ROG	**0.00063254**	ROG	**0.00161521**
SOx	**0.00001071**	SOx	**0.00002767**
PM10	**0.00009392**	PM10	**0.00046606**
PM2.5	**0.00006131**	PM2.5	**0.00037868**
CO2	**1.10677664**	CO2	**2.83134285**
CH4	**0.00005623**	CH4	**0.00007355**

Highest (Most Conservative) EMFAC2007 (version 2.3)
Emission Factors for On-Road Passenger Vehicles & Delivery Trucks

Projects in the SCAQMD (Scenario Years 2007 - 2026)
Derived from Peak Emissions Inventory (**Winter**, **Annual**, **Summer**)

Vehicle Class:

Passenger Vehicles (<8500 pounds) & Delivery Trucks (>8500 pounds)

Scenario Year: **2017**

All model years in the range 1973 to 2017

Passenger Vehicles (pounds/mile)		Delivery Trucks (pounds/mile)	
CO	0.00537891	CO	0.00998101
NOx	0.00051297	NOx	0.01070034
ROG	0.00060109	ROG	0.00150242
SOx	0.00001079	SOx	0.00002723
PM10	0.00009446	PM10	0.00043131
PM2.5	0.00006192	PM2.5	0.00034605
CO2	1.10627489	CO2	2.84005015
CH4	0.00005300	CH4	0.00006663

Scenario Year: **2018**

All model years in the range 1974 to 2018

Passenger Vehicles (pounds/mile)		Delivery Trucks (pounds/mile)	
CO	0.00502881	CO	0.00923234
NOx	0.00047300	NOx	0.00979416
ROG	0.00057178	ROG	0.00139856
SOx	0.00001071	SOx	0.00002749
PM10	0.00009494	PM10	0.00040110
PM2.5	0.00006234	PM2.5	0.00031792
CO2	1.10562643	CO2	2.84646835
CH4	0.00005003	CH4	0.00006203

Scenario Year: **2019**

All model years in the range 1975 to 2019

Passenger Vehicles (pounds/mile)		Delivery Trucks (pounds/mile)	
CO	0.00471820	CO	0.00857192
NOx	0.00043716	NOx	0.00900205
ROG	0.00054654	ROG	0.00130563
SOx	0.00001072	SOx	0.00002706
PM10	0.00009523	PM10	0.00037393
PM2.5	0.00006259	PM2.5	0.00029276
CO2	1.10496100	CO2	2.85060182
CH4	0.00004743	CH4	0.00005619

Scenario Year: **2020**

All model years in the range 1976 to 2020

Passenger Vehicles (pounds/mile)		Delivery Trucks (pounds/mile)	
CO	0.00444247	CO	0.00799617
NOx	0.00040506	NOx	0.00831802
ROG	0.00052463	ROG	0.00122382
SOx	0.00001073	SOx	0.00002733
PM10	0.00009550	PM10	0.00035054
PM2.5	0.00006279	PM2.5	0.00027128
CO2	1.10456157	CO2	2.85148109
CH4	0.00004495	CH4	0.00005330

Scenario Year: **2021**

All model years in the range 1977 to 2021

Passenger Vehicles (pounds/mile)		Delivery Trucks (pounds/mile)	
CO	0.00421218	CO	0.00748303
NOx	0.00037757	NOx	0.00773500
ROG	0.00050573	ROG	0.00115568
SOx	0.00001073	SOx	0.00002755
PM10	0.00009640	PM10	0.00033125
PM2.5	0.00006364	PM2.5	0.00025331
CO2	1.11009559	CO2	2.86434187
CH4	0.00004322	CH4	0.00004905

Scenario Year: **2022**

All model years in the range 1978 to 2022

Passenger Vehicles (pounds/mile)		Delivery Trucks (pounds/mile)	
CO	0.00397866	CO	0.00699290
NOx	0.00035150	NOx	0.00722470
ROG	0.00048658	ROG	0.00108569
SOx	0.00001072	SOx	0.00002774
PM10	0.00009661	PM10	0.00031501
PM2.5	0.00006389	PM2.5	0.00023906
CO2	1.11019931	CO2	2.87006769
CH4	0.00004121	CH4	0.00004557

Highest (Most Conservative) EMFAC2007 (version 2.3)
Emission Factors for On-Road Passenger Vehicles & Delivery Trucks

Projects in the SCAQMD (Scenario Years 2007 - 2026)

Derived from Peak Emissions Inventory (**Winter**, **Annual**, **Summer**)

Vehicle Class:

Passenger Vehicles (<8500 pounds) & Delivery Trucks (>8500 pounds)

Scenario Year: **2023**

All model years in the range 1979 to 2023

Passenger Vehicles (pounds/mile)		Delivery Trucks (pounds/mile)	
CO	**0.00377527**	CO	**0.00658123**
NOx	**0.00032851**	NOx	**0.00679147**
ROG	**0.00046900**	ROG	**0.00102852**
SOx	**0.00001070**	SOx	**0.00002790**
PM10	**0.00009676**	PM10	**0.00030109**
PM2.5	**0.00006405**	PM2.5	**0.00022582**
CO2	**1.11023373**	CO2	**2.87466338**
CH4	**0.00003951**	CH4	**0.00004218**

Scenario Year: **2024**

All model years in the range 1980 to 2024

Passenger Vehicles (pounds/mile)		Delivery Trucks (pounds/mile)	
CO	**0.00358611**	CO	**0.00625076**
NOx	**0.00030721**	NOx	**0.00647083**
ROG	**0.00045136**	ROG	**0.00096578**
SOx	**0.00001080**	SOx	**0.00002807**
PM10	**0.00009676**	PM10	**0.00029407**
PM2.5	**0.00006410**	PM2.5	**0.00021880**
CO2	**1.11061572**	CO2	**2.88010717**
CH4	**0.00003781**	CH4	**0.00004019**

Scenario Year: **2025**

All model years in the range 1981 to 2025

Passenger Vehicles (pounds/mile)		Delivery Trucks (pounds/mile)	
CO	**0.00342738**	CO	**0.00595363**
NOx	**0.00028846**	NOx	**0.00615945**
ROG	**0.00043545**	ROG	**0.00092178**
SOx	**0.00001070**	SOx	**0.00002761**
PM10	**0.00009679**	PM10	**0.00028425**
PM2.5	**0.00006418**	PM2.5	**0.00020958**
CO2	**1.11078571**	CO2	**2.88143570**
CH4	**0.00003641**	CH4	**0.00003765**

Scenario Year: **2026**

All model years in the range 1982 to 2026

Passenger Vehicles (pounds/mile)		Delivery Trucks (pounds/mile)	
CO	**0.00328779**	CO	**0.00569435**
NOx	**0.00027141**	NOx	**0.00589869**
ROG	**0.00042052**	ROG	**0.00088403**
SOx	**0.00001076**	SOx	**0.00002716**
PM10	**0.00009687**	PM10	**0.00027657**
PM2.5	**0.00006415**	PM2.5	**0.00020187**
CO2	**1.11105829**	CO2	**2.88298299**
CH4	**0.00003518**	CH4	**0.00003581**

Source:

http://www.aqmd.gov/ceqa/handbook/onroad/onroadEF07_26.xls

APPENDIX B: GREENHOUSE GAS EMISSIONS WORKSHEETS AND CALCULATIONS

Construction Emissions Summary

	Emissions (metric tons/year)			
Season	CO2	CH4	N2O	CO2e
Billboard Operation	1,328	0.03	0.01	1,331
Maintenance	5	0.0002	0	5
Total Operation	1,333	0.03	0.01	1,336
Construction	4	0	0	4
Amortized Construction	0.1	0	0	0.1
Total	1,333	0.03	0.01	1,336
Threshold	n/a	n/a	n/a	10000
Significant?	n/a	n/a	n/a	No

Source:

SCAQMD. 2011. SCAQMD Air Quality Significance Thresholds. Accessed on: 02 08 2012. Available at: http://www.aqmd.gov/ceqa/handbook/signthres.pdf.

GWP	1	21	310

Project Lifetime 30 years

Annual kWh Consumption for a Digital Billboard:

Assumption for Billboard on at Full Power:

Billboard Size = 38,649 square feet

-Average Operating Wattage of a Digital Billboard: 7.04 W/sq. ft.

-Sign will be on at 100% operating power 24 hours a day.

272,089 watts

2,383,499 kWh/year

Source: Calculations prepared by K. Travis

GHG Emissions

Pollutant	Emission Factor	Unit	Ref.	Emissions MT/year	Emissions MTCO2e/year
CO2	1,227.89	lbs/MWh	1	1,327.54	1,327.54
CH4	30.24	lbs/GWh	2	0.03	0.69
N2O	8.08	lbs/GWh	2	0.01	2.71
				Total	1,330.93

GWP

CO2	1
CH4	21
N2O	310

References

1 California Climate Action Registry, Los Angeles Department of Water and Power, 2007 Annual Entity Emissions: Electric Power Generation/Electric Utility Sector.

2 U.S. Environmental Protection Agency, eGRID2010 Version 1.1, http://www.epa.gov/cleanenergy/energy-resources/egrid/index.html, October 27, 2011.
eGRID Subregion: CAMX -- WECC California

Maintenance Equipment

Boom lift	1	
Pickup/Utility Truck	1	
Crew	3	
Round-trip Distance	26.6	miles (based on CalEEMod default)

Source	Emissions (metric tons/year)			
	CO2	CH4	N2O	CO2e
Boom lift	2.03	0.00	n/a	2.04
Pickup/Utility Truck	1.34	0.00	n/a	1.34
Crew	1.59	0.00	n/a	1.60
Total	4.96	0.00	0.00	4.97
GWP	1	21	310	

Days per year

Digital Displays	0	(changed remotely)
Supergraphics	4	(once every 3 months)
Column Wrap	12	(once per month)
Passenger Boarding Bri	12	(once per month)
Hanging Signs	12	(as needed; assumed once per month)
Total	40	

LAX Sign District

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Industrial Park	0	1000sqft

1.2 Other Project Characteristics

Urbanization Urban

Wind Speed (m/s) 2.2

Utility Company Los Angeles Department of Water & Power

Climate Zone 11

Precipitation Freq (Days) 33

1.3 User Entered Comments

Project Characteristics - 2013 used as operational year to be later than construction year (2012).

Land Use - Land use type only used as a proxy - type will not be used in calculations.

Construction Phase - Phase type is used as proxy because project-specific equipment will be used. Start/end dates estimated based on when Initial Study was completed. Phases overlapped to the maximum extent feasible.

Off-road Equipment - Default equipment set to zero; remaining equipment based on project description.

Off-road Equipment - Default equipment entered as zero to prevent overwriting issues; other equipment based on project description.

Off-road Equipment - Default eqiupment set to zero; remaining equipment based on project description

Off-road Equipment - Default equipment set to zero; other equipment based on project description

Off-road Equipment - Default equipment set to zero; remaining equipment based on project description.

Off-road Equipment - Defaults entered as zero to prevent overwriting issues; remaining equipment based on project description

Off-road Equipment - Default equipment set to zero; remaining equipment based on project description

Trips and VMT - Vendor trips (MHDT) = pickup trucks and flatbed trucks. Trips estimated from project description (workers x 2 for number of trips).

Grading - No land would be disturbed; acreage set to zero.

Vehicle Trips - No daily operational emissions.

Energy Use -

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					
2012	0.01	0.04	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.27	4.27	0.00	0.00	4.28
Total	**0.01**	**0.04**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**4.27**	**4.27**	**0.00**	**0.00**	**4.28**

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					
2012	0.01	0.04	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.27	4.27	0.00	0.00	4.28
Total	**0.01**	**0.04**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**4.27**	**4.27**	**0.00**	**0.00**	**4.28**

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	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
Energy	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
Mobile	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
Waste						0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water						0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**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

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	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
Energy	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
Mobile	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
Waste						0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water						0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**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

3.1 Mitigation Measures Construction

3.2 Digital Displays - 2012

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					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.28	0.28	0.00	0.00	0.29
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.28**	**0.28**	**0.00**	**0.00**	**0.29**

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	0.00	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
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.08	0.00	0.00	0.08
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.09	0.00	0.00	0.09
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.17**	**0.17**	**0.00**	**0.00**	**0.17**

3.2 Digital Displays - 2012

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					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.28	0.28	0.00	0.00	0.29
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.28**	**0.28**	**0.00**	**0.00**	**0.29**

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	0.00	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
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.08	0.00	0.00	0.08
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.09	0.00	0.00	0.09
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.17**	**0.17**	**0.00**	**0.00**	**0.17**

3.3 Supergraphics - Frame installation - 2012

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					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	0.93	0.93	0.00	0.00	0.94
Total	**0.00**	**0.01**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.93**	**0.93**	**0.00**	**0.00**	**0.94**

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	0.00	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
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.10	0.00	0.00	0.10
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.28	0.00	0.00	0.28
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.38**	**0.38**	**0.00**	**0.00**	**0.38**

3.3 Supergraphics - Frame installation - 2012

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					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	0.93	0.93	0.00	0.00	0.94
Total	**0.00**	**0.01**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.93**	**0.93**	**0.00**	**0.00**	**0.94**

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	0.00	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
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.10	0.00	0.00	0.10
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.28	0.00	0.00	0.28
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.38**	**0.38**	**0.00**	**0.00**	**0.38**

3.4 Column Wrap - 2012

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					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.05	0.05	0.00	0.00	0.05
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.05**	**0.05**	**0.00**	**0.00**	**0.05**

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	0.00	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
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.00	0.00	0.02
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.00	0.00	0.02
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.04**	**0.04**	**0.00**	**0.00**	**0.04**

3.4 Column Wrap - 2012

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					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.05	0.05	0.00	0.00	0.05
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.05**	**0.05**	**0.00**	**0.00**	**0.05**

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	0.00	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
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.00	0.00	0.02
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.00	0.00	0.02
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.04**	**0.04**	**0.00**	**0.00**	**0.04**

3.5 Passenger Boarding Bridge - 2012

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					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.05	0.05	0.00	0.00	0.05
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.05**	**0.05**	**0.00**	**0.00**	**0.05**

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	0.00	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
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.00	0.00	0.02
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.00	0.00	0.02
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.04**	**0.04**	**0.00**	**0.00**	**0.04**

3.5 Passenger Boarding Bridge - 2012

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					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.05	0.05	0.00	0.00	0.05
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.05**	**0.05**	**0.00**	**0.00**	**0.05**

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	0.00	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
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.00	0.00	0.02
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.00	0.00	0.02
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.04**	**0.04**	**0.00**	**0.00**	**0.04**

3.6 Hanging Signs - 2012

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					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.05	0.05	0.00	0.00	0.05
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.05**	**0.05**	**0.00**	**0.00**	**0.05**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.00	0.00	0.02
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.02**	**0.02**	**0.00**	**0.00**	**0.02**

3.6 Hanging Signs - 2012

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					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.05	0.05	0.00	0.00	0.05
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.05**	**0.05**	**0.00**	**0.00**	**0.05**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.00	0.00	0.02
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.02**	**0.02**	**0.00**	**0.00**	**0.02**

3.7 Existing Billboard removal - 2012

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					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.41	0.41	0.00	0.00	0.41
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.41**	**0.41**	**0.00**	**0.00**	**0.41**

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	0.00	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
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.00	0.00	0.02
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.07	0.00	0.00	0.07
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.09**	**0.09**	**0.00**	**0.00**	**0.09**

3.7 Existing Billboard removal - 2012

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					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.41	0.41	0.00	0.00	0.41
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.41**	**0.41**	**0.00**	**0.00**	**0.41**

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	0.00	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
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.00	0.00	0.02
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.07	0.00	0.00	0.07
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.09**	**0.09**	**0.00**	**0.00**	**0.09**

3.8 Supergraphics - Sign installation - 2012

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					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.00	0.02	0.00	0.00		0.00	0.00		0.00	0.00	0.00	1.62	1.62	0.00	0.00	1.63
Total	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.62**	**1.62**	**0.00**	**0.00**	**1.63**

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	0.00	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
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.00	0.00	0.04
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.07	0.00	0.00	0.07
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.11**	**0.11**	**0.00**	**0.00**	**0.11**

3.8 Supergraphics - Sign installation - 2012

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					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.00	0.02	0.00	0.00		0.00	0.00		0.00	0.00	0.00	1.62	1.62	0.00	0.00	1.63
Total	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.62**	**1.62**	**0.00**	**0.00**	**1.63**

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	0.00	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
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.00	0.00	0.04
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.07	0.00	0.00	0.07
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.11**	**0.11**	**0.00**	**0.00**	**0.11**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

Category	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
	tons/yr										MT/yr					
Mitigated	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
Unmitigated	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
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %		
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
Industrial Park	8.90	13.30	7.40	59.00	28.00	13.00

5.0 Energy Detail

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						0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NaturalGas Mitigated	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
NaturalGas Unmitigated	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
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	tons/yr										MT/yr					
Industrial Park	0	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
Total		**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**

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	tons/yr										MT/yr					
Industrial Park	0	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
Total		**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**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Industrial Park	0					0.00	0.00	0.00	0.00
Total						**0.00**	**0.00**	**0.00**	**0.00**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Industrial Park	0					0.00	0.00	0.00	0.00
Total						**0.00**	**0.00**	**0.00**	**0.00**

6.0 Area Detail

6.1 Mitigation Measures Area

	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	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
Unmitigated	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
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	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
Total	**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**

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	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	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
Total	**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**

7.0 Water Detail

7.1 Mitigation Measures Water

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					0.00	0.00	0.00	0.00
Unmitigated					0.00	0.00	0.00	0.00
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Industrial Park	0 / 0					0.00	0.00	0.00	0.00
Total						**0.00**	**0.00**	**0.00**	**0.00**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Industrial Park	0 / 0					0.00	0.00	0.00	0.00
Total						**0.00**	**0.00**	**0.00**	**0.00**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated					0.00	0.00	0.00	0.00
Unmitigated					0.00	0.00	0.00	0.00
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Industrial Park	0					0.00	0.00	0.00	0.00
Total						**0.00**	**0.00**	**0.00**	**0.00**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Industrial Park	0					0.00	0.00	0.00	0.00
Total						**0.00**	**0.00**	**0.00**	**0.00**

9.0 Vegetation

Highest (Most Conservative) EMFAC2007 (version 2.3)
Emission Factors for On-Road Heavy-Heavy-Duty Diesel Trucks

Projects in the SCAQMD (Scenario Years 2007 - 2026)

Derived from Peak Emissions Inventory (**Winter**, **Annual**, **Summer**)

Vehicle Class:
Heavy-Heavy-Duty Diesel Trucks (33,001 to 60,000 pounds)

The following emission factors were compiled by running the California Air Resources Board's EMFAC2007 (version 2.3) Burden Model and extracting the **Heavy-Heavy-Duty Diesel Truck (HHDT)** Emission Factors.

These emission factors can be used to calculate on-road mobile source emissions for the vehicle/emission categories listed in the tables below, by use of the following equation:

Emissions (pounds per day) = N x TL x EF

where N = number of trips, TL = trip length (miles/day), and EF = emission factor (pounds per mile)

The **HHDT-DSL** vehicle/emission category accounts for all emissions from heavy-heavy-duty diesel trucks, including start, running and idling exhaust. In addition, ROG emission factors account for diurnal, hot soak, running and resting emissions, and the PM10 & PM2.5 emission factors account for tire and brake wear.

The **HHDT-DSL, Exh** vehicle/emission category includes only the exhaust portion of PM10 & PM2.5 emissions from heavy-heavy-duty diesel trucks.

Scenario Year: **2007**

All model years in the range 1965 to 2007

(pounds/mile)	
CO	**0.01446237**
NOx	**0.04718166**
ROG	**0.00372949**
SOx	**0.00003962**
PM10	**0.00230900**
PM2.5	**0.00204018**
CO2	**4.22184493**

(pounds/mile)	
PM10	**0.00216752**
PM2.5	**0.00199491**

Scenario Year: **2008**

All model years in the range 1965 to 2008

(pounds/mile)	
CO	**0.01361368**
NOx	**0.04458017**
ROG	**0.00351579**
SOx	**0.00004136**
PM10	**0.00215635**
PM2.5	**0.00189990**
CO2	**4.21067145**
CH4	**0.00016269**

(pounds/mile)	
PM10	**0.00201296**
PM2.5	**0.00185303**

Scenario Year: **2009**

All model years in the range 1965 to 2009

(pounds/mile)	
CO	**0.01282236**
NOx	**0.04184591**
ROG	**0.00329320**
SOx	**0.00004013**
PM10	**0.00199572**
PM2.5	**0.00175227**
CO2	**4.21080792**
CH4	**0.00015249**

(pounds/mile)	
PM10	**0.00185393**
PM2.5	**0.00170680**

Scenario Year: **2010**

All model years in the range 1966 to 2010

(pounds/mile)	
CO	**0.01195456**
NOx	**0.03822102**
ROG	**0.00304157**
SOx	**0.00004131**
PM10	**0.00183062**
PM2.5	**0.00160083**
CO2	**4.21120578**
CH4	**0.00014201**

(pounds/mile)	
PM10	**0.00168861**
PM2.5	**0.00155435**

Highest (Most Conservative) EMFAC2007 (version 2.3)
Emission Factors for On-Road Heavy-Heavy-Duty Diesel Trucks

Projects in the SCAQMD (Scenario Years 2007 - 2026)

Derived from Peak Emissions Inventory (**Winter**, **Annual**, **Summer**)

Vehicle Class:

Heavy-Heavy-Duty Diesel Trucks (33,001 to 60,000 pounds)

Scenario Year: **2011**

All model years in the range 1967 to 2011

(pounds/mile)	
CO	**0.01112463**
NOx	**0.03455809**
ROG	**0.00279543**
SOx	**0.00003972**
PM10	**0.00166087**
PM2.5	**0.00144489**
CO2	**4.22045680**
CH4	**0.00012910**

(pounds/mile)	
PM10	**0.00151936**
PM2.5	**0.00139772**

Scenario Year: **2012**

All model years in the range 1968 to 2012

(pounds/mile)	
CO	**0.01021519**
NOx	**0.03092379**
ROG	**0.00252764**
SOx	**0.00004042**
PM10	**0.00149566**
PM2.5	**0.00129354**
CO2	**4.21590774**
CH4	**0.00011651**

(pounds/mile)	
PM10	**0.00135537**
PM2.5	**0.00124837**

Scenario Year: **2013**

All model years in the range 1969 to 2013

(pounds/mile)	
CO	**0.00931790**
NOx	**0.02742935**
ROG	**0.00226308**
SOx	**0.00004086**
PM10	**0.00133697**
PM2.5	**0.00114629**
CO2	**4.21518556**
CH4	**0.00010441**

(pounds/mile)	
PM10	**0.00119623**
PM2.5	**0.00109863**

Scenario Year: **2014**

All model years in the range 1970 to 2014

(pounds/mile)	
CO	**0.00846435**
NOx	**0.02418049**
ROG	**0.00201594**
SOx	**0.00004092**
PM10	**0.00118458**
PM2.5	**0.00100582**
CO2	**4.21279345**
CH4	**0.00009261**

(pounds/mile)	
PM10	**0.00104243**
PM2.5	**0.00096059**

Scenario Year: **2015**

All model years in the range 1971 to 2015

(pounds/mile)	
CO	**0.00766891**
NOx	**0.02122678**
ROG	**0.00178608**
SOx	**0.00004082**
PM10	**0.00104715**
PM2.5	**0.00087977**
CO2	**4.20902225**
CH4	**0.00008369**

(pounds/mile)	
PM10	**0.00090631**
PM2.5	**0.00083282**

Scenario Year: **2016**

All model years in the range 1972 to 2016

(pounds/mile)	
CO	**0.00704604**
NOx	**0.01887374**
ROG	**0.00161035**
SOx	**0.00003952**
PM10	**0.00094448**
PM2.5	**0.00078443**
CO2	**4.21063031**
CH4	**0.00007508**

(pounds/mile)	
PM10	**0.00080419**
PM2.5	**0.00073898**

Highest (Most Conservative) EMFAC2007 (version 2.3)
Emission Factors for On-Road Heavy-Heavy-Duty Diesel Trucks

Projects in the SCAQMD (Scenario Years 2007 - 2026)

Derived from Peak Emissions Inventory (**Winter**, **Annual**, **Summer**)

Vehicle Class:

Heavy-Heavy-Duty Diesel Trucks (33,001 to 60,000 pounds)

Scenario Year: **2017**

All model years in the range 1973 to 2017

Scenario Year: **2018**

All model years in the range 1974 to 2018

(pounds/mile)	
CO	0.00650533
NOx	0.01690387
ROG	0.00145203
SOx	0.00004033
PM10	0.00084894
PM2.5	0.00069721
CO2	4.20820129
CH4	0.00006722

(pounds/mile)	
PM10	0.00070873
PM2.5	0.00065111

(pounds/mile)	
CO	0.00604721
NOx	0.01526414
ROG	0.00131697
SOx	0.00003934
PM10	0.00076808
PM2.5	0.00062383
CO2	4.20756838
CH4	0.00006182

(pounds/mile)	
PM10	0.00062758
PM2.5	0.00057700

Scenario Year: **2019**

All model years in the range 1975 to 2019

(pounds/mile)	
CO	0.00565433
NOx	0.01389113
ROG	0.00120235
SOx	0.00004032
PM10	0.00070198
PM2.5	0.00056085
CO2	4.20637830
CH4	0.00005499

(pounds/mile)	
PM10	0.00056085
PM2.5	0.00051320

Scenario Year: **2020**

All model years in the range 1976 to 2020

(pounds/mile)	
CO	0.00532242
NOx	0.01274755
ROG	0.00110621
SOx	0.00003957
PM10	0.00064574
PM2.5	0.00050904
CO2	4.20541416
CH4	0.00005216

(pounds/mile)	
PM10	0.00050364
PM2.5	0.00046227

Scenario Year: **2021**

All model years in the range 1977 to 2021

(pounds/mile)	
CO	0.00503726
NOx	0.01179977
ROG	0.00103095
SOx	0.00004033
PM10	0.00059437
PM2.5	0.00046287
CO2	4.21495573
CH4	0.00004734

(pounds/mile)	
PM10	0.00045411
PM2.5	0.00041729

Scenario Year: **2022**

All model years in the range 1978 to 2022

(pounds/mile)	
CO	0.00478830
NOx	0.01098794
ROG	0.00096142
SOx	0.00004106
PM10	0.00055427
PM2.5	0.00042597
CO2	4.21520828
CH4	0.00004448

(pounds/mile)	
PM10	0.00041399
PM2.5	0.00037807

Highest (Most Conservative) EMFAC2007 (version 2.3)
Emission Factors for On-Road Heavy-Heavy-Duty Diesel Trucks

Projects in the SCAQMD (Scenario Years 2007 - 2026)

Derived from Peak Emissions Inventory (**Winter**, **Annual**, **Summer**)

Vehicle Class:

Heavy-Heavy-Duty Diesel Trucks (33,001 to 60,000 pounds)

Scenario Year: **2023**

All model years in the range 1979 to 2023

(pounds/mile)	
CO	0.00457902
NOx	0.01031407
ROG	0.00090210
SOx	0.00004009
PM10	0.00052122

(pounds/mile)	
PM10	0.00037922
PM2.5	0.00034915

Scenario Year: **2024**

All model years in the range 1980 to 2024

(pounds/mile)	
CO	0.00444444
NOx	0.00974372
ROG	0.00084009
SOx	0.00003930
PM10	0.00050766

(pounds/mile)	
PM10	0.00036682
PM2.5	0.00033735

PM2.5	0.00039592
CO2	4.21483461
CH4	0.00004176

PM2.5	0.00038320
CO2	4.19552935
CH4	0.00003930

Scenario Year: **2025**

All model years in the range 1981 to 2025

(pounds/mile)	
CO	0.00431086
NOx	0.00932573
ROG	0.00080206
SOx	0.00004018
PM10	0.00048541
PM2.5	0.00036326
CO2	4.19512979
CH4	0.00003697

(pounds/mile)	
PM10	0.00034397
PM2.5	0.00031664

Scenario Year: **2026**

All model years in the range 1982 to 2026

(pounds/mile)	
CO	0.00420297
NOx	0.00898990
ROG	0.00077178
SOx	0.00003946
PM10	0.00046717
PM2.5	0.00034564
CO2	4.19349747
CH4	0.00003630

(pounds/mile)	
PM10	0.00032670
PM2.5	0.00029830

Source:

http://www.aqmd.gov/ceqa/handbook/onroad/onroadEFHHDT07_26.xls

Highest (Most Conservative) EMFAC2007 (version 2.3)
Emission Factors for On-Road Passenger Vehicles & Delivery Trucks

Projects in the SCAQMD (Scenario Years 2007 - 2026)

Derived from Peak Emissions Inventory (**Winter**, **Annual**, **Summer**)

Vehicle Class:

Passenger Vehicles (<8500 pounds) & Delivery Trucks (>8500 pounds)

The following emission factors were compiled by running the California Air Resources Board's EMFAC2007 (version 2.3) Burden Model, taking the weighted average of vehicle types and simplifying into two categories:

Passenger Vehicles & Delivery Trucks.

These emission factors can be used to calculate on-road mobile source emissions for the vehicle categories listed in the tables below, by use of the following equation:

Emissions (pounds per day) = N x TL x EF

where N = number of trips, TL = trip length (miles/day), and EF = emission factor (pounds per mile)

This methodology replaces the old EMFAC emission factors in Tables A-9-5-J-1 through A-9-5-L in Appendix A9 of the current SCAQMD CEQA Handbook. All the emission factors account for the emissions from start, running and idling exhaust. In addition, the ROG emission factors include diurnal, hot soak, running and resting emissions, and the PM10 & PM2.5 emission factors include tire and brake wear.

Scenario Year: **2007**

All model years in the range 1965 to 2007

Passenger Vehicles		Delivery Trucks	
CO	**0.01155158**	CO	**0.02407553**
NOx	**0.00121328**	NOx	**0.02508445**
ROG	**0.00118234**	ROG	**0.00323145**
SOx	**0.00001078**	SOx	**0.00002626**
PM10	**0.00008447**	PM10	**0.00091020**
PM2.5	**0.00005243**	PM2.5	**0.00078884**
CO2	**1.10672236**	CO2	**2.72245619**
CH4	**0.00010306**	CH4	**0.00016030**

Scenario Year: **2008**

All model years in the range 1965 to 2008

Passenger Vehicles		Delivery Trucks	
CO	**0.01054844**	CO	**0.02194915**
NOx	**0.00110288**	NOx	**0.02371258**
ROG	**0.00107919**	ROG	**0.00299270**
SOx	**0.00001075**	SOx	**0.00002565**
PM10	**0.00008505**	PM10	**0.00085607**
PM2.5	**0.00005293**	PM2.5	**0.00073933**
CO2	**1.09953226**	CO2	**2.71943400**
CH4	**0.00009465**	CH4	**0.00014769**

Scenario Year: **2009**

All model years in the range 1965 to 2009

Passenger Vehicles		Delivery Trucks	
CO	**0.00968562**	CO	**0.02016075**
NOx	**0.00100518**	NOx	**0.02236636**
ROG	**0.00099245**	ROG	**0.00278899**
SOx	**0.00001066**	SOx	**0.00002679**
PM10	**0.00008601**	PM10	**0.00080550**
PM2.5	**0.00005384**	PM2.5	**0.00069228**
CO2	**1.09755398**	CO2	**2.72330496**
CH4	**0.00008767**	CH4	**0.00013655**

Scenario Year: **2010**

All model years in the range 1966 to 2010

Passenger Vehicles		Delivery Trucks	
CO	**0.00826276**	CO	**0.01843765**
NOx	**0.00091814**	NOx	**0.02062460**
ROG	**0.00091399**	ROG	**0.00258958**
SOx	**0.00001077**	SOx	**0.00002701**
PM10	**0.00008698**	PM10	**0.00075121**
PM2.5	**0.00005478**	PM2.5	**0.00064233**
CO2	**1.09568235**	CO2	**2.73222199**
CH4	**0.00008146**	CH4	**0.00012576**

Highest (Most Conservative) EMFAC2007 (version 2.3)
Emission Factors for On-Road Passenger Vehicles & Delivery Trucks

Projects in the SCAQMD (Scenario Years 2007 - 2026)

Derived from Peak Emissions Inventory (**Winter**, **Annual**, **Summer**)

Vehicle Class:
Passenger Vehicles (<8500 pounds) & Delivery Trucks (>8500 pounds)

Scenario Year: **2011**
All model years in the range 1967 to 2011

Passenger Vehicles		Delivery Trucks	
CO	0.00826276	CO	0.01693242
NOx	0.00084460	NOx	0.01893366
ROG	0.00085233	ROG	0.00241868
SOx	0.00001077	SOx	0.00002728
PM10	0.00008879	PM10	0.00070097
PM2.5	0.00005653	PM2.5	0.00059682
CO2	1.10235154	CO2	2.75180822
CH4	0.00007678	CH4	0.00011655

Scenario Year: **2012**
All model years in the range 1968 to 2012

Passenger Vehicles		Delivery Trucks	
CO	0.00765475	CO	0.01545741
NOx	0.00077583	NOx	0.01732423
ROG	0.00079628	ROG	0.00223776
SOx	0.00001073	SOx	0.00002667
PM10	0.00008979	PM10	0.00064975
PM2.5	0.00005750	PM2.5	0.00054954
CO2	1.10152540	CO2	2.76628414
CH4	0.00007169	CH4	0.00010668

Scenario Year: **2013**
All model years in the range 1969 to 2013

Passenger Vehicles		Delivery Trucks	
CO	0.00709228	CO	0.01407778
NOx	0.00071158	NOx	0.01577311
ROG	0.00074567	ROG	0.00206295
SOx	0.00001072	SOx	0.00002682
PM10	0.00009067	PM10	0.00059956
PM2.5	0.00005834	PM2.5	0.00050174
CO2	1.10087435	CO2	2.78163459
CH4	0.00006707	CH4	0.00009703

Scenario Year: **2014**
All model years in the range 1970 to 2014

Passenger Vehicles		Delivery Trucks	
CO	0.00660353	CO	0.01284321
NOx	0.00065484	NOx	0.01425162
ROG	0.00070227	ROG	0.00189649
SOx	0.00001069	SOx	0.00002754
PM10	0.00009185	PM10	0.00054929
PM2.5	0.00005939	PM2.5	0.00045519
CO2	1.10257205	CO2	2.79845465
CH4	0.00006312	CH4	0.00008798

Scenario Year: **2015**
All model years in the range 1971 to 2015

Passenger Vehicles		Delivery Trucks	
CO	0.00614108	CO	0.01169445
NOx	0.00060188	NOx	0.01285026
ROG	0.00066355	ROG	0.00173890
SOx	0.00001070	SOx	0.00002741
PM10	0.00009259	PM10	0.00050307
PM2.5	0.00006015	PM2.5	0.00041268
CO2	1.10192837	CO2	2.81247685
CH4	0.00005923	CH4	0.00008076

Scenario Year: **2016**
All model years in the range 1972 to 2016

Passenger Vehicles		Delivery Trucks	
CO	0.00575800	CO	0.01080542
NOx	0.00055658	NOx	0.01172881
ROG	0.00063254	ROG	0.00161521
SOx	0.00001071	SOx	0.00002767
PM10	0.00009392	PM10	0.00046606
PM2.5	0.00006131	PM2.5	0.00037868
CO2	1.10677664	CO2	2.83134285
CH4	0.00005623	CH4	0.00007355

Highest (Most Conservative) EMFAC2007 (version 2.3)
Emission Factors for On-Road Passenger Vehicles & Delivery Trucks

Projects in the SCAQMD (Scenario Years 2007 - 2026)
Derived from Peak Emissions Inventory (**Winter**, **Annual**, **Summer**)

Vehicle Class:
Passenger Vehicles (<8500 pounds) & Delivery Trucks (>8500 pounds)

Scenario Year: **2017**

Scenario Year: **2018**

All model years in the range 1973 to 2017

Passenger Vehicles		Delivery Trucks	
CO	0.00537891	CO	0.00998101
NOx	0.00051297	NOx	0.01070034
ROG	0.00060109	ROG	0.00150242
SOx	0.00001079	SOx	0.00002723
PM10	0.00009446	PM10	0.00043131
PM2.5	0.00006192	PM2.5	0.00034605
CO2	1.10627489	CO2	2.84005015
CH4	0.00005300	CH4	0.00006663

All model years in the range 1974 to 2018

Passenger Vehicles		Delivery Trucks	
CO	0.00502881	CO	0.00923234
NOx	0.00047300	NOx	0.00979416
ROG	0.00057178	ROG	0.00139856
SOx	0.00001071	SOx	0.00002749
PM10	0.00009494	PM10	0.00040110
PM2.5	0.00006234	PM2.5	0.00031792
CO2	1.10562643	CO2	2.84646835
CH4	0.00005003	CH4	0.00006203

Scenario Year: **2019**

All model years in the range 1975 to 2019

Passenger Vehicles		Delivery Trucks	
CO	0.00471820	CO	0.00857192
NOx	0.00043716	NOx	0.00900205
ROG	0.00054654	ROG	0.00130563
SOx	0.00001072	SOx	0.00002706
PM10	0.00009523	PM10	0.00037393
PM2.5	0.00006259	PM2.5	0.00029276
CO2	1.10496100	CO2	2.85060182
CH4	0.00004743	CH4	0.00005619

Scenario Year: **2020**

All model years in the range 1976 to 2020

Passenger Vehicles		Delivery Trucks	
CO	0.00444247	CO	0.00799617
NOx	0.00040506	NOx	0.00831802
ROG	0.00052463	ROG	0.00122382
SOx	0.00001073	SOx	0.00002733
PM10	0.00009550	PM10	0.00035054
PM2.5	0.00006279	PM2.5	0.00027128
CO2	1.10456157	CO2	2.85148109
CH4	0.00004495	CH4	0.00005330

Scenario Year: **2021**

All model years in the range 1977 to 2021

Passenger Vehicles		Delivery Trucks	
CO	0.00421218	CO	0.00748303
NOx	0.00037757	NOx	0.00773500
ROG	0.00050573	ROG	0.00115568
SOx	0.00001073	SOx	0.00002755
PM10	0.00009640	PM10	0.00033125
PM2.5	0.00006364	PM2.5	0.00025331
CO2	1.11009559	CO2	2.86434187
CH4	0.00004322	CH4	0.00004905

Scenario Year: **2022**

All model years in the range 1978 to 2022

Passenger Vehicles		Delivery Trucks	
CO	0.00397866	CO	0.00699290
NOx	0.00035150	NOx	0.00722470
ROG	0.00048658	ROG	0.00108569
SOx	0.00001072	SOx	0.00002774
PM10	0.00009661	PM10	0.00031501
PM2.5	0.00006389	PM2.5	0.00023906
CO2	1.11019931	CO2	2.87006769
CH4	0.00004121	CH4	0.00004557

Highest (Most Conservative) EMFAC2007 (version 2.3)
Emission Factors for On-Road Passenger Vehicles & Delivery Trucks

Projects in the SCAQMD (Scenario Years 2007 - 2026)

Derived from Peak Emissions Inventory (**Winter**, **Annual**, **Summer**)

Vehicle Class:

Passenger Vehicles (<8500 pounds) & Delivery Trucks (>8500 pounds)

Scenario Year: **2023**

All model years in the range 1979 to 2023

Passenger Vehicles		Delivery Trucks	
CO	0.00377527	CO	0.00658123
NOx	0.00032851	NOx	0.00679147
ROG	0.00046900	ROG	0.00102852
SOx	0.00001070	SOx	0.00002790

Scenario Year: **2024**

All model years in the range 1980 to 2024

Passenger Vehicles		Delivery Trucks	
CO	0.00358611	CO	0.00625076
NOx	0.00030721	NOx	0.00647083
ROG	0.00045136	ROG	0.00096578
SOx	0.00001080	SOx	0.00002807

PM10	0.00009676	PM10	0.00030109
PM2.5	0.00006405	PM2.5	0.00022582
CO2	1.11023373	CO2	2.87466338
CH4	0.00003951	CH4	0.00004218

PM10	0.00009676	PM10	0.00029407
PM2.5	0.00006410	PM2.5	0.00021880
CO2	1.11061572	CO2	2.88010717
CH4	0.00003781	CH4	0.00004019

Scenario Year: **2025**

All model years in the range 1981 to 2025

Passenger Vehicles		**Delivery Trucks**	
CO	0.00342738	CO	0.00595363
NOx	0.00028846	NOx	0.00615945
ROG	0.00043545	ROG	0.00092178
SOx	0.00001070	SOx	0.00002761
PM10	0.00009679	PM10	0.00028425
PM2.5	0.00006418	PM2.5	0.00020958
CO2	1.11078571	CO2	2.88143570
CH4	0.00003641	CH4	0.00003765

Scenario Year: **2026**

All model years in the range 1982 to 2026

Passenger Vehicles		**Delivery Trucks**	
CO	0.00328779	CO	0.00569435
NOx	0.00027141	NOx	0.00589869
ROG	0.00042052	ROG	0.00088403
SOx	0.00001076	SOx	0.00002716
PM10	0.00009687	PM10	0.00027657
PM2.5	0.00006415	PM2.5	0.00020187
CO2	1.11105829	CO2	2.88298299
CH4	0.00003518	CH4	0.00003581

Source:

http://www.aqmd.gov/ceqa/handbook/onroad/onroadEF07_26.xls